Appendix L1 VMT Memorandum

Appendices

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FEHR PEERS

Memorandum

Date: February 12, 2024

To: Jay Bautista, P.E., T.E., City of Ontario

From: Paul Herrmann, T.E.
Brian Wolfe

Subject: DRAFT Ontario Ranch Sports Complex Vehicle Miles Traveled (VMT) Analysis

OC20-0741

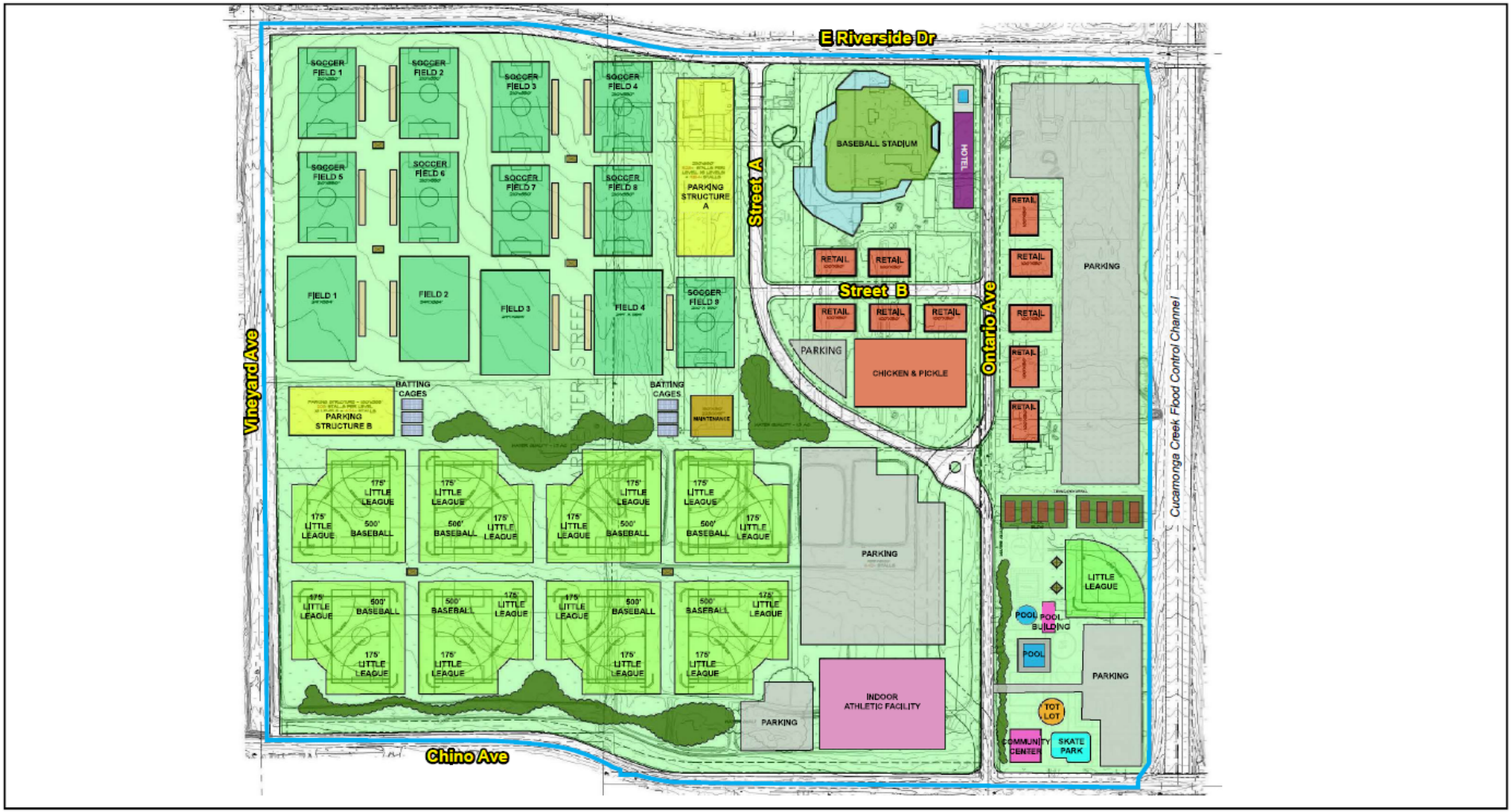
Fehr & Peers has completed quantifying Vehicle Miles Traveled (VMT) for the Ontario Ranch Sports Complex project ("Project") in Ontario, California. This VMT analysis is consistent with requirements of Senate Bill 743 (SB 743), the Office of Planning and Research's (OPR's) Technical Advisory, and the City of Ontario's adopted VMT Impact Analysis Resolution (No. 2020-071).

The remainder of this memorandum is divided into seven sections:

- Project Description
- Terminology
- Analysis Methodology
- VMT Estimates
- VMT Impact Assessment
- Mitigation Measures
- Conclusions

Project Description

The proposed Project is a 199-acre sports complex with an associated mixture of uses. The Project site is bounded by Riverside Drive to the north, Chino Avenue to the south, Cucamonga Creek Flood Control Channel to the east, and Vineyard Avenue to the west, as shown in **Figure 1**. There is an active dairy farm and nursery onsite while the fields on the western and southern portion of the site are currently fallow.



Project Boundary

0 500
Scale (Feet)

Source: RUM Design Group 2023; Ontario 2023.

Figure 1

Proposed Site Plan

The Project will consist of the following land uses:

- Planning Area (PA) 1: Semi-professional Minor League Baseball Stadium (6,000-person capacity)
- PA 2-4: Commercial Retail, Baseball Stadium Retail, Retail and Hospitality Areas
- PA 5: City Park (Outdoor Baseball/Softball, Soccer, and Multi-use Fields)
- PA 6: City Park (Indoor Athletic Facility)
- PA 7: Community Recreation Center

The Project will convert approximately 134.42 acres of Low Density Residential (LDR) and Medium Density Residential (MDR) zoning to Open Space-Parkland (OS-R) and approximately 51.57 acres of LDR zoning to Hospitality for a baseball stadium, ancillary/supportive retail, and lodging uses. The Project will comply with Senate Bill (SB) 330 and SB 166 by relocating the zoned units to adjacent parcels to the southwest on Vineyard Avenue (Vineyard Corridor) in the form of increased allowed density. The Project also includes onsite roadway/driveway improvements, site improvements, and landscaping and utility improvements.

Fehr & Peers was provided with information on proposed uses and events at the Project from the City of Ontario, developing a range of event/use scenarios for weekdays and weekends. While daily operations will vary depending on the scale of hosted sports tournaments and stadium events, it is expected that the recreational sports fields will be used regularly for weekday practices and weekend games or tournaments. The Minor Leage Baseball Stadium will primarily be used for minor league semi-professional baseball games; however, it is also assumed to serve as a major event space for the City that will hold concerts and other non-baseball events. The proposed event types, attendance projections, and event frequency were used to annualize Project trips and estimate VMT.

Development of the Project will be completed over multiple phases, with Project components opening between Spring 2025 and Fall 2027. The Project site can be accessed through Vineyard Avenue, Riverside Drive, and Chino Avenue. Vineyard Avenue and Ontario Avenue will extend through the Project site to provide access and internal circulation.

Terminology

The following are definitions for terms used throughout this document:

- **Vehicles Miles Traveled (VMT).** VMT measures the number of trips and the lengths of those trips for the total number of miles that vehicles will travel on a roadway system. It is used to better assess transportation impacts on greenhouse gas emissions, air quality, and energy. The number of miles of vehicle travel is an indicator of the travel levels on the roadway system by motor vehicles.

- **Total (Daily/Weekday/Weekend) VMT.** Total VMT represents all VMT generated by a project or in a defined area, such as a Traffic Analysis Zone (TAZ) or City boundary,on a typical day, weekday, or weekend.
- **VMT per Service Population.** Service population (SP) counts residents and employees. VMT/SP measures the transportation "efficiency" of a project or plan and is defined as VMT generated on a typical weekday/weekend per person who lives and/or works in a designated area.
- **VMT per Visitor.** An alternative metric provided for the unique land uses for the Project that generate a substantial amount of visitor traffic relative to the number of employees. This metric measures the approximate VMT generated per user of the Project, including players, coaches, spectators, etc. This metric is not used to determine significant impacts; however, it is provided for additional context and more accurately reflects expected project VMT per capita.
- **Origin-Destination (OD) VMT Method.** The OD method for calculating VMT sums all VMT generated by trips with at least one trip end in the study area and tracks those trips from their estimated origins to their estimated destinations. Origins are all vehicle trips that start in a defined area, and destinations are all vehicle trips that end in that defined area. The OD method accounts for special generator trips (e.g. Ontario Airport) and truck trips and provides a complete estimate of all VMT within the study area. The assessment below compares the Project OD VMT/SP to the Citywide average OD VMT/SP to assess potential project-level VMT impacts.
- **Boundary VMT Method.** The boundary method for calculating VMT sums all VMT on a roadway network within a designated boundary. Boundary method VMT estimates VMT by multiplying the number of trips on each roadway segment by the length of that segment. This approach includes all trips, including those trips that do not begin or end in the designated boundary and therefore captures the effect of cut-through and/or displaced traffic. The boundary utilized in the assessment below is the Ontario City Limits Boundary. The assessment below compares Citywide Boundary VMT with and without the Project to assess potential effect on VMT impacts.
- **Streetlight Data.** A digitally available data source that utilizes annonymous cell phone GPS and connected vehicle data to develop generalized trip characteristics for user-selected roadway segments or areas. This includes information on daily/hourly number of vehicles, average trip length, average speed, and vehicle type. This information was used to refine trip generation rates for various use scenarios and determine average trip length for recreation, entertainment, and hospitality uses.

Analysis Methodology

VMT for a project is calculated by multiplying the total trips generated by the project by the full length of those trips. The number of trips and the vehicle trip length can be estimated using different tools; travel surveys, Institute of Transportation Engineers (ITE) *Trip Generation Manual*, GPS data, travel demand forecasting models, air quality/GHG models, etc.; but the established best practice for estimating VMT as identified in the City of Ontario's VMT Impact Resolution is with a calibrated and validated travel demand forecasting model. The local validated and calibrated model for City of Ontario is the San Bernardino County Transportation Agency's (SBCTA) travel demand model (SBTAM).

Fehr & Peers tested SBTAM for sensitivity for use in this assessment specifically to verify if the model accurately projected the number of vehicle trips as well as whether the model accurately estimated vehicle trip lengths. Our review summary is noted below:

- **Trip Generation Review –** The unique land uses of the project (baseball stadium and active sports park uses) and variation in programming cannot be modeled in SBTAM without oversimplifying operational assumptions within the Project. Trips would be underestimated by the model as compared to empirically collected data at similar multi-purpose sports complexes as described in the next section.
- **Trip Length Review –** The unique land uses and region-wide draw of events proposed for the Project suggests that trip length is expected to be longer than the trip length modeled for recreation in SBTAM. Utilizing Streetlight's anonymous connected vehicle data for average trip length at sports and entertainment facilities in Southern California provides a more accurate representation of average trip length for this Project under various programming scenarios. The retail and office uses are expected to function similar to existing similar uses in the City; therefore, trip lengths for these uses can be estimated using SBTAM. Thus, a hybrid approach was chosen to estimate trip lengths as described below.

Since the Project recreation and entertainment uses are unique uses that our review identified are not accurately reflected by the SBTAM model, VMT was estimated off-model using more conservative, project-specific traffic count and GPS data to estimate trip generation and trip distance information. Moreover, VMT was annualized to determine average daily VMT estimates. Typically, VMT is considered on a per weekday basis; however, the variability of operations between weekday and weekend days, tournament and non-tournament weekends, and event sizes suggests that VMT generated will vary day-to-day. To compare the full potential impacts of the project against the City's threshold of significance, total annual VMT for the project was estimated and then divided by 365 days to generate an average daily VMT estimate.

The off-model estimations of the Project recreation, entertainment, and hospitality uses were added to the results from the SBTAM model that estimated VMT for the Project retail and office employment, resulting in a final estimation that reflects the entire Project.

Trip Generation

The number of weekday and weekend daily trips for each Project land use were estimated for the by using one of three methods:

1. **ITE Trip Generation Manual** – rates published in *Trip Generation, 11th Edition (Institute of Transportation Engineers [ITE], 2021)* were used for typical land uses with robust data in the ITE manual.
2. **Custom Trip Generation Rates Derived from Traffic Counts** – rates for various sports activity and stadium events were developed from 24-hour traffic counts collected at comparable facilities in San Bernardino, Riverside, and Orange Counties. These rates more accurately reflect local travel patterns for events as compared to rates published by ITE, as described in more detail below. Traffic counts were also collected at the Chicken 'n Pickle facility in San Antonio, Texas to develop a specific trip generation rate for the proposed entertainment use.
3. **Custom Trip Generation Rates Derived from Streetlight Zone Activity Data** – Fehr & Peers utilized Streetlight data (anonymous cell phone and GPS data) to collect traffic counts at driveways of comparable facilities in San Bernardino, Riverside, and Orange Counties. This data was compared against actual traffic count data to validate the big data counts. Streetlight data allowed for the development of tournament and non-tournament trip generation rates from a wider sample size than one-day counts. Streetlight data was also used to supplement land uses without ITE rates and for rates with outdated or limited data.

Fehr & Peers selected sites for Streetlight assessment with exclusive parking lots to ensure trips for separate land uses were not included; however, limited parking at some of these facilities may undercount overall demand. Physical traffic counts were used as the basis for rate development when Streetlight data appeared inconsistent with expected attendee projections.

Project land uses were grouped into the following four categories to estimate trip generations for the Project scenarios:

- Hospitality (Hotel and Shopping Plaza)
- Open Field/Recreation Uses
- Public Park Uses
- Minor League Baseball Stadium

Hospitality (Hotel and Shopping Plaza)

The Project includes a hotel and commercial buildings adjacent to the stadium. While most of the retail use is unknown and assumed to be partially restaurant and partially commercial retail, the

only known use is a proposed "Chicken 'n Pickle" restaurant and pickleball entertainment complex. This use is located in PA-4 and was grouped into the hospitality land uses.

Estimations for the "Chicken 'n Pickle" restaurant and entertainment complex were developed using driveway traffic count data at the existing Chicken 'n Pickle in San Antonio, Texas. This facility most closely matches the proposed use case for the Project compared to traditional ITE trip generation rates for restaurants and tennis courts.

The remaining 80 KSF[1] is assumed to be represented by 50 percent (40 KSF[1]) fast casual (quick service) restaurant and 50 percent (40 KSF[1]) retail plaza and will rely on traditional ITE rates for trip generation.

The following ITE trip generation rates were used to estimate trips for these land uses:

- ITE Code 310 – Hotel
- ITE Code 821 – Retail Plaza (40k-150k GSF, No Grocery Store)
- ITE Code 930 – Fast Casual Restaurant

There is expected to be a high rate of internalization between the hotel and recreation fields as the primary purpose of the hotel is to serve visiting teams for sports tournaments. Fehr & Peers estimated a weekend internalization rate of 50 percent for the hotel, based on the assumption that half of all hotel trips will stay onsite within the Project (i.e., accessing adjacent sports fields, Minor League Baseball Stadium and supportive entertainment uses). This rate is similar to the rates used for comparable mixed-use entertainment and sports complexes throughout California including the Acrisure Arena in Palm Desert and the proposed Major Leage Soccer Stadium in Sacramento. The weekday internalization rate is expected to be lower as there are typically no regional tournaments scheduled on weekdays. As such, Fehr & Peers assumed a weekday internalization rate of 20 percent (assuming one fifth of all hotel trips are to access on-site uses).

Internalization was also applied to the retail uses on the Project Site, as the retail is intended to support the Minor League Baseball Complex and sports fields. It is anticipated that most customers will be visiting the retail plaza before or after games, tournaments, and events. Therefore, an internalization rate of 33 percent was applied to all retail trips during the weekend. Similar to the hotel, internalization is expected to be lower during the weekday, with a rate of ten percent applied. Internalization was not applied to the Chicken 'n Pickle use as this is expected to be a large entertainment complex that will draw visitors regionally.

Fehr & Peers did not apply a pass-by reduction for the retail plaza, as the retail uses are expected to be largely contained within the Sports Complex and include services that specifically cater to Sports Complex visitors.

[1] KSF: Thousand Square Feet

Open Field/Recreation Uses

Trip generation rates for the various sporting uses will vary depending on programming (practices, games and tournaments). While the ITE Manual contains some trip generation information for sports fields/courts, it does not contain detailed daily rates for weekdays and weekends differentiated by practices, games and tournaments. It also does not have rates for most of the sports fields/courts proposed in this project. Therefore, Fehr & Peers developed custom trip generation rates for use in this study.

To account for the variation in activity, Fehr & Peers gathered data for each type of sporting event and type of field/court. Fehr & Peers collected 24-hour driveway counts and peak-hour field/court usage rates at the following facilities while practices, games, and tournaments were occurring:

- Soccer Fields: Silverlakes Sports Complex in Norco, CA (September 2023)
- Baseball Fields: Big League Dreams Baseball Fields in Jurupa Valley, CA (October 2023)
- Basketball Courts: Open Gym Premier in Ladera Ranch, CA (October 2023)

These counts were also compared against zone activity at the same facilities from big data vendor Streetlight. Several tournament and non-tournament dates were chosen in 2022, focusing on the time period before and after scheduled programming. Data from Streetlight for similar events in September and October 2022 at the Silverlakes Sports Complex, Big League Dreams in Jurupa Valley, and Open Gym Premier in Ladera Ranch show nearly identical driveway volumes for both daily and midday peak hours. In cases where Streetlight data significantly over or underestimated volumes compared to traffic counts, traffic counts were used due to their level of precision.

This data was used to develop trip generation estimates for each sport for the following scenarios:

- Weekday with Practices
- Weekend with Typcial Games (Baseball/Softball and Soccer Only)
- Weekend with a Tournament

Public Park and Other Recreational Uses

The Public Park and Other Recreational Uses are assumed to follow more regular scheduling without the seasonal variability seen in the sports fields/courts. Fehr & Peers referenced both ITE trip generation rates and Streetlight Zone Activity data to develop trip generation estimates for the following land uses:

- Tennis/Pickleball Courts
- Swimming Pool
- Recreation Community Center
- Skate Park
- Tot Lot

- Picnic Area
- Batting Cages

The following ITE trip generation rates were used to estimate trips for the corresponding land uses documented above:

- ITE Code 495 – Recreational Community Center
- ITE Code 433 – Batting Cages

To better reflect the other public park uses, Fehr & Peers referenced Streetlight Zone Activity data for several tennis/pickleball court complexes and public swimming pools throughout San Bernardino, Riverside, and Orange Counties. The intent of this data collection was to develop more current and locally specific trip generation rates compared to the ITE Trip Generation Manual. Trip generation rates for tennis/pickleball court facilities were found to be slightly higher than the rates reported by ITE Code 490 (Tennis Courts). No directly comparable ITE rate is available for swimming pools. As such, Fehr & Peers used the trip generation rates derived from Streetlight data as they more accurately reflect the characteristics of the proposed project.

Fehr & Peers grouped all remaining public park amenities (skate park, tot lot, picnic area) which total 11.21 acres and reviewed the ITE Code 411 for a public park. Applying this rate would only generate nine daily trips, far lower than anticipated given the density of amenities found in the project area. Fehr & Peers reviewed other established trip generation rates for public parks and used the Trip Generation Rate for a "City Developed Park" derived by the San Diego County Association of Governments (SANDAG). Using this rate results in an estimated 561 daily trips, commensurate with the park's densely planned amenities.

Minor League Baseball Stadium

Fehr & Peers reviewed ITE Code 462 (Professional Baseball Stadium) and determined the rate is not representative of the Project as it is based only on two major league baseball events during spring training. Therefore, Fehr & Peers developed custom trip generation rates for the minor league baseball stadium.

Driveway counts were collected at an Inland Empire 66ers home baseball game on a Saturday in September 2023. These counts were then converted into a per attendee daily trip generation rate. Fehr & Peers compared this custom trip generation rate to rates derived from Streetlight Zone Activity Data for the Rancho Cucamonga Quakes and Inland Empire 66ers during Spring 2022 home games (mid-April to mid-June). The per attendee rates were found to be almost identical between the two methods. Since the Streetlight data references two stadiums over a longer observation period, Fehr & Peers used the rates developed from Streetlight data.

The stadium will also employ 37 full-time and 6 part-time office workers (43 total employees). While the gameday trip generation estimates described above account for these workers, it is

assumed that the stadium will function most like a typical 43-employee office building on non-game days. Non-gameday trip generation considerations were included for daily trip generation estimates, utilizing ITE Code 710 (General Office Building).

Trip Length

Retail and Office Uses

Trip lengths for commercial retail uses (including Chicken 'n Pickle) and stadium employees were estimated by referencing average trip length data from the San Bernardino Transportation Analysis Model (SBTAM), consistent with recommendations in the City's adopted VMT Impact Analysis Resolution and determined to be the best available source for estimating potential automobile trip lengths to/from the site.

Modeling Methodology

The latest version of SBTAM was run to extract trip length data noted above for automobile trips. Retail employment and Office employment were coded into separate TAZs to represent the Project site in the base and future year models. The future year model included the housing relocation to the TAZs along the Vineyard Corridor, consistent with SB 330 and SB 166 requirements.

The SBTAM roadway network and socio-economic data within the City of Ontario were updated to be consistent with The Ontario Plan (TOP) Environmental Impact Report (EIR) scenario modeling for Base Year (2019) and General Plan Buildout (2050). Outside of the City of Ontario, this model assumes datasets consistent with the 2016 Southern California Association of Governments (SCAG) Regional Transportation Plan and Sustainable Communities Strategy (RTP/SCS) with a base year of 2012 and future year of 2040[2].

As recommended in the SBTAM model documentation, model assignment parameters were set to run up-to five loops with a minimum convergence criterion[3] of 0.01.

Recreation, Entertainment, and Hospitality Uses

For recreation, entertainment, and hospitality land uses where SBTAM trip length data is not available, average trip length was referenced from the big data vendor Streetlight which uses

[2] Please note that SBTAM does not have an available dataset consistent with the SCAG 2020 RTP/SCS. At the time of this analysis, SBTAM was in the process of being updated with the SCAG 2020 RTP/SCS data, but the data was not available. This analysis uses the most current, available SBTAM model version consistent with the City of Ontario's VMT Impact Resolution.

[3] Convergence criteria refers to the acceptable difference in the traffic volumes produced by different loops of the vehicle assignment. A convergence criteria of 0.01 indicates that the model is producing similar outputs with an allowance of 1% difference between each loop. This criterion is outlined in the model documentation as the recommended convergence criteria for the model.

anonymous connected vehicle GPS data to summarize trip characteristics for road and driveway segments. Daily vehicle activity data was pulled for the same comparable facilities used in the trip generation rate development process. Additional comparable facilities in the surrounding project area were collected for land uses that had trip generation estimates derived from ITE Trip Generation Rates or traffic counts. Most data were collected in 2022 to ensure a robust data set as, at the time of the analysis, Streetlight data only reported information up to April 2023. A list of comparable facilities and time periods analyzed for each of the Project's land uses is provided in **Appendix A.**

Annualization

Typically, VMT estimates are analyzed at the daily level. However, the significant variation in event programming and site attendance levels over the course of a year requires VMT estimations to be annualized to effectively evaluate the potential impacts of the Project. Fehr & Peers developed a range of use conditions for each Project land use, consistent with the information provided in the Project description and discussions with City and Recreation staff. Fehr & Peers also determined the expected number of occurrences for each use condition (**Table 1**). This information was used to calculate total annual VMT generation, which was divided by 365 days to estimate average daily VMT. Weekday and weekend averages were also developed to provide additional information on expected VMT.

Table 1: Project Land Use Scenario Frequency

Venue/Land Use	Use Type(s)	Usage Level	Number of Days/Year
Stadium	Baseball	Low (Weekday)	30
		Medium (Sunday)	11
		High (Fri/Sat/Holiday)	25
		Post-Season Games (High)	5
	Events	Low (100-500 Attendees)	13
		Medium (500-4,000 Attendees)	29
		High (4,000-6,000 Attendees)	4
	Office	Non-Game Weekdays	206
Soccer Fields	Practice	13 Fields (4 teams/field/day)	160
	Game	13 Fields (10 teams/field/day)	48
	Tournament	13 Fields (14 teams/field/day)	16
Baseball/Softball Fields	Practice	9 Fields (4 teams/field/day)	165
	Game	9 Fields (10 teams/field/day)	50
	Tournament	9 Fields (14 teams/field/day)	16
Indoor Athletic Gym	Basketball	Open Gym/Practice (8 courts)	75
		Tournament (8 courts)	20
	Volleyball	Open Gym/Practice (16 courts)	195
		Tournament (16 courts)	54
Public Park	Aquatics Facility Community Rec Center Tennis/Pickleball Tot Lot Skate Park	Weekday	261
		Weekend	104
Hotel	N/A	Weekday	261
		Weekend	104
Retail	Chicken 'n Pickle Other Retail Other Restaurant	Weekday	261
		Weekend	104

Source: Ontario Ranch Sports Complex Project Description, 2023.

VMT Estimates

Daily trip generation estimates for each land use scenario were multiplied by average trip lengths and the number of occurrences of each scenario per year to estimate the total annual VMT generated for each scenario. This information is provided in **Table 2**.

Table 2: Total Annual VMT Generated By Project, Cumulative Year (2050)

Venue/ Land Use	Use Type	Usage Level	No. of Days/Year	Daily Trip Generation Estimates	Average Trip Length (mi.)	Annual Total VMT Generated
Stadium	Baseball	Low (Weekday)	30	803	12.16	292,868
		Medium (Sunday)	11	1,115	13	159,467
		High (Friday/Holiday/Weekday Post Season)	15	2,038	13.24	404,803
		High (Saturday/Weekend Post Season)	15	2,038	13.24	404,803
	Events	Small (100 Attendees)	4	58	13	3,008
		Small (200 Attendees)	2	116	13	3,008
		Small (500 Attendees)	7	289	13	26,317
		Medium (2,000 Attendees)	9	1,157	24.75	257,677
		Medium (3,000 Attendees)	4	1,735	24.75	171,785
		Medium (4,000 Attendees)	16	2,314	24.75	916,186
		High (5,000 Attendees)	2	2,892	24.75	143,154
		High (6,000 Attendees)	2	3,470	24.75	171,785
	Office	Non-Game Weekdays	206	270	14.91	829,369
					Total Stadium:	**3,784,229**
Soccer Fields	Practice	13 Fields (4 teams/field)	160	1,993	7.47	2,382,380
	Game	13 Fields (10 teams/field)	48	4,549	11.01	2,404,034
	Tournament	13 Fields (14 teams/field)	16	6,755	21.05	2,274,929
					Total Soccer Fields:	**7,061,344**
Baseball/ Softball Fields	Practice	9 Fields (4 teams/field)	165	1,008	16.05	2,669,674
	Game	9 Fields (10 teams/field)	50	3,055	22.95	3,505,463
	Tournament	9 Fields (14 teams/field)	16	3,727	24.00	1,431,130
					Total Baseball/Softball Fields:	**7,606,267**
Indoor Athletic Gym	Basketball	Practice/Open Gym	75	612	10.00	458,700
		Tournament	20	1,112	27.43	610,043
	Volleyball	Practice/Open Gym	195	734	10.00	1,431,144
		Tournament	54	1,334	28.67	2,065,891
					Total Indoor Athletic Gym:	**4,565,779**
Public Park	Aquatics Facility	Weekday	261	289	5.80	438,033
		Weekend	104	370	7.80	299,820

Venue/ Land Use	Use Type	Usage Level	No. of Days/Year	Daily Trip Generation Estimates	Average Trip Length (mi.)	Annual Total VMT Generated
	Community Rec Center	Weekday	261	2,738	6.15	4,394,740
		Weekend	104	865	12.06	1,084,290
	Tennis/ Pickleball	Weekday	261	290	7.30	552,537
		Weekend	104	292	11.00	333,865
	Public Park Uses	Weekday	261	561	6.15	899,687
		Weekend	104	561	12.06	703,002
					Total Public Park:	**8,705,973**
Hotel	Weekday		261	799	12.80	2,135,439
	Weekend		104	807	13.70	574,907
					Total Hotel:	**2,710,346**
Retail	Chicken 'n Pickle	Weekday	261	1,493	10.38	4,044,264
		Weekend	104	2,856	10.38	3,083,109
	Other Retail	Weekday	261	2,701	10.38	6,585,258
		Weekend	104	3,243	10.38	1,155,220
	Other Restaurant	Weekday	261	3,886	10.38	9,474,111
		Weekend	104	3,886	10.38	1,384,212
					Total Retail:	**25,726,174**
					Annual Weekday VMT:	**36,993,008**
					Annual Weekend VMT:	**23,167,105**
					Total Annual VMT:	**60,160,113**

Notes:
1. Daily Trip Generation Estimates Include Internalization for Hotel and Retail Land Uses.
2. Assumes 261 weekday days and 104 weekend days per year.

Sources:
1. *ITE Trip Generation Manual, 11th Edition*.
2. Streetlight Zone Activity Data, 2023; Fehr & Peers, 2023.
3. Streetlight Average Trip Length Data, 2023.
4. SBTAM Future Year Plus Project Model Run, 2023.

To develop a daily average VMT forecast, annual VMT for each land use scenario was summed and divided by 365 days. Weekday average and weekend average forecasts were also developed by summing all weekday scenarios and all weekend scenarios and dividing by 261 days and 104 days, respectively. This information is provided in **Table 3.**

Table 3: Average Daily VMT Generated By Project, Cumulative Year (2050)

	Annual VMT	Number of Days	Daily Average VMT
Weekdays Only	36,993,008	261	**141,736**
Weekends Only	23,167,105	104	**222,761**
All Days	60,160,113	365	**164,822**

Source: Fehr & Peers, 2023.

VMT Impact Assessment

Fehr & Peers compared the Project VMT forecasts against the City's significance criteria to disclose potential significant impacts. Additionally, due to the unique nature of the recreation and entertainment land uses, an alternative metric (VMT per visitor) was developed for these uses to evaluate the potential VMT reduction of mitigation measures and to provide comparative context of the nature of travel to and from the Project.

City of Ontario Significant Criteria

The City of Ontario VMT Impact Resolution defines the following thresholds of significance for identifying significant transportation impacts related to VMT for land use projects:

- Project Threshold: A significant impact would occur if the project VMT/SP[4] exceeds the Citywide average for VMT/SP under General Plan Buildout Conditions.
- Cumulative Threshold:
    - A significant impact would occur if the project causes total daily VMT within the City to be higher than the no project alternative under cumulative conditions (i.e. a net increase in city-wide VMT). This analysis should be performed using the 'project effect' or 'boundary' method.
    - A significant impact would occur if the project is determined to be inconsistent with the RTP/SCS

Because the Project land use is not accounted for in the SBTAM model and the Project has no residential population and low employment, the City numeric cumulative threshold is substantially lower than the Project VMT impacts. As such, estimates on VMT per visitor are presented to further quantify potential impacts.

[4] SP = Service Population; the sum of population and employment in a given area.

Project-Level Analysis

SBTAM was utilized to estimate the Citywide average for VMT/SP under General Plan Buildout Conditions. VMT forecasts for the Project and Citywide average are presented in **Table 4**. As shown in the table, the Project is forecast to generate VMT/SP higher than the Citywide average for baseline and cumulative conditions. Therefore, **Project-Level VMT impacts are significant under the City's criteria.** VMT/SP for each land use is provided in **Appendix B.**

Table 4: Project Daily VMT Estimates Per Service Population

	Baseline Year (2023)	Cumulative Year (2050)	General Plan Buildout (2050) Citywide Average (Threshold of Significance)
Population	-	-	406,438
Weekday Avg. Employment	597	597	312,523
Weekend Avg. Employment	828	828	-
Total Avg. Employment	648	648	-
Weekday Avg. VMT	162,622	141,736	20,908,966
Weekend Avg. VMT	236,771	222,761	-
Total Avg. VMT	183,749	164,822	-
Weekday VMT/SP	**272.40**	**237.41**	29.1
Weekend VMT/SP	**285.96**	**269.03**	-
Total VMT/SP	**277.15**	**248.60**	-

Notes:
1. **Bold** indicates that the total VMT/SP is above the General Plan Buildout Citywide average (threshold of significance).
2. The threshold of significance (General Plan Buildout Citywide Average VMT/SP) is based on typical weekday VMT.
Source: SBTAM, 2023; Fehr & Peers, 2023.

It should be noted that the Citywide average was estimated in accordance with the City's VMT analysis requirements using the most current and available version of SBTAM consistent with the City's General Plan Buildout, while the Project VMT was estimated off-model using more conservative, Project-specific information. Furthermore, the project does not include any residential population and a relatively low employment population compared to the number of VMT generated (i.e. high level of visitors) and therefore results in a very high VMT/SP estimate.

To provide an additional perspective on the Project's VMT generation, an alternative metric, VMT per visitor, was developed for each major recreation and entertainment land use that had visitor estimates available. While this metric should not be used to determine if the Project does or does not have a significant impact, it provides useful information on expected VMT per user of the site.

Table 5 shows the VMT/Visitor for weekdays, weekends, and all days. Note that while average VMT is higher on weekends, the higher number of visitors and higher average vehicle occupancy on weekends results in a lower VMT per visitor. VMT/Visitor for each land use is provided in **Appendix B.** Information on how visitor rates were developed is provided in **Appendix C.**

Table 5: Project Daily VMT Estimates Per Visitor

	Baseline (2023)	Cumulative Year (2050)
Weekday Avg. Visitors	3,732	3,732
Weekend Avg. Visitors	13,718	13,718
Total Avg. Visitors	6,577	6,577
Weekday Avg. VMT	162,622	141,736
Weekend Avg. VMT	236,771	222,761
Total Avg. VMT	183,749	164,822
Weekday VMT/Visitor	**43.58**	**37.98**
Weekend VMT/Visitor	17.26	16.24
Total VMT/Visitor	27.94	25.06

Notes:
1. Bold indicates that the total VMT/Visitor is above the General Plan Buildout Citywide average VMT/SP (threshold of significance).
Source: SBTAM, 2023; Fehr & Peers, 2023.

Cumulative VMT Analysis

Project Effect on VMT Analysis

As noted in the development of Project VMT estimates, the available travel demand models for the region (SBTAM and the SCAG Model) are not appropriate for estimating trips, trip length or VMT associated with the Project's unique land uses and programming. While the best way to perform Boundary Method VMT forecasts consistent with the City's Adopted VMT Resolution would be with a travel demand model, given the model limitations noted above, the value in the results of the boundary method assessment to understand the project's effect on VMT would be erroneous for this project.

The OPR Technical Advisory recommends that, under certain circumstances, qualitative VMT assessments supported by substantial evidence may be acceptable. Generally, qualitative analyses should only be conducted when methods do not exist for undertaking a quantitative analysis, such as for the entertainment and recreation land uses of this Project.

A qualitative assessment of VMT is a compilation of substantial evidence that describes why the project would or would not have a significant impact on VMT. Qualitative assessments may be used for projects that have unique characteristics that cannot be accurately analyzed using SBTAM or the SCAG RTP/SCS model. Qualitative assessments can include economic or market analysis, socioeconomic or demographic data, or other substantial evidence to support the significance finding.

Fehr & Peers considered the three busiest typical trip generation scenarios – Weekday with Stadium Event, Weekend with Tournament, and Weekend with Stadium Event – and determined that significant modeling is not required to conclude that the Project would increase Citywide VMT on a daily level in the City of Ontario. The total daily trips and boundary VMT for each scenario is provided in **Table 6.**

Table 6: Project Daily VMT Within City Limits (Boundary VMT)

Scenario	Total Daily Trips	Total Added Daily VMT Within City Limits
Weekday with Stadium Event	16,477	**70,128**
Weekend with Tournament	21,286	**92,086**
Weekend with Stadium Event	20,956	**89,991**
City Threshold (net-zero VMT)	-	0

Notes:
1. Bold indicates that the total added daily VMT is above the City's threshold of significance.
Source: Fehr & Peers, 2023.

A project that would potentially add between 70,000 and 92,000 daily VMT will increase total cumulative year VMT in the City, and therefore has a **significant impact on cumulative VMT** according to the City's 2020 VMT guidelines.

RTP/SCS Review

Fehr & Peers conducted a review of SCAG land use forecasts consistent with the RTP/SCS in the Project area. Both SBTAM (consistent with the adopted City of Ontario General Plan land use forecast) and the SCAG Model (consistent with the 2020 RTP/SCS) show the Project site zoned for a mixture of single- and multi-family housing. Accounting for the shift in housing units to the Vineyard Corridor, the Project results in a net increase in the housing zoned. The Open Space-Recreation, Commercial, Stadium, and Hospitality land uses as part of the Project were not considered in the RTP. Therefore, **the project is not consistent with RTP/SCS land use projections**.

CEQA Guidelines Appendix G Discussion

CEQA Guidelines identify additional considerations that should be evaluated to determine overall Project environmental impact. These considerations are outlined in the *CEQA Appendix G Environmental Checklist Form*. For transportation/traffic, the following are to be considered for this Project:

- Would the project conflict with an applicable plan, ordinance, or policy addressing the circulation system including transit, roadway, bicycle, and pedestrian facilities?
- Would the project substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g. farm equipment)?
- Would the project result in inadequate emergency access?

Consistency With Plans, Ordinances and Policies

Less than significant impact. The Project is consistent with all goals and policies outlined in the Mobility Element of *The Ontario Plan*. Specifically, the Level of Service (LOS) Study for the Project addresses development-related traffic congestion by identifying needed improvements for affected roadways and intersections per the City's LOS criteria. The project also strives to reduce VMT to the extent possible through mitigation measures described below. The Project will be in alignment with the City-wide Active Transportation Master Plan, with a series of on- and off-street bike and pedestrian facilities proposed for the Project area. The Project will continue to be served by Omnitrans public transit, consistent with General Plan goals and policies regarding public transit. Finally, goods movement will be supported by the City's existing truck network. The low volume of freight for the Project does not necessitate changes to the freight network.

Geometric Design Hazards

Less than significant impact with mitigation incorporated. The Project and all study intersections are located on flat ground and generally follow a grid pattern with intersections that meet at 90 degrees. The LOS Study identifies existing unsignalized intersections that warrant the installation of a traffic signal to improve safety and access. Roadway and intersection design, including pavement markings and signange, will be consistent with City, State, and Federal guidelines and be reviewed by City engineering staff,

Potential safety concerns, including event traffic queueing and passenger pick-up/drop-off, will be accommodated for with additional turn lane pockets and on-site passenger pick-up/drop-off zones, as identified in the LOS Study. The Event Traffic Management Plan will also assist in managing queuing traffic and exiting vehicles after events. Proposed fencing along the perimeter of the outdoor athletic fields will discourage passenger drop-off/pick-up along perimeter roads.

Emergency Access

Less than significant impact with mitigation incorporated. The Project will provide multiple access points from Riverside Drive, Vineyard Avenue, and Chino Avenue. Ontario Avenue will also extend through the Project site to improve connectivity and maintain a through traffic route for emergency vehicles. Fire lanes and emergency vehicle staging areas will be provided and reviewed by the Ontario Fire Department and Ontario Police Department, ensuring access to all portions of the Project site.

Potential event congestion and traffic circulating for parking may impact emergency vehicle access. Additionally, vehicles may illegally park in fire lanes. To address this, the proposed Parking Study will ensure an adequate number of parking spaces are provided and appropriately distributed throughout the Project site, minimizing parking-related congestion. The Event Traffic Management Plan will also incorporate provisions for emergency vehicle access, consistent with the City's emergency response and evacuation plans. The Ontario Police Department shall enforce no parking zones during events to maintain emergency vehicle access.

Mitigation Measures

Fehr & Peers reviewed potential mitigation strategies that can be adopted for this project, recognizing that the most effective strategies will target Project employees and home-based-work VMT. Additionally, project-specific strategies were developed, focusing on promoting shared rides of event attendees and encouraging mode shift to the extent feasible.

The Project includes constructing pedestrian and bicycle facilities on adjacent streets and within the Project site to promote non-motorized access and internal circulation. While it is anticipated that these features and the active nature of the park will result in many visitors choosing to walk and bike to and within the site, no meaningful VMT reduction is anticipated due the regional nature of the project.

Mitigation strategies and their maximum VMT reduction are listed in **Table 8**.

Table 8: Potential Project VMT Impact Mitigation Measures by Land Use				
Strategy	**Description**	**Maximum VMT Reduction**		
		Stadium	**Recreation Uses**	**Retail/ Hospitality**
Home-Based-Work (HBW) Measures				
Implement Voluntary Commute Trip Reduction Program for Employees	A series of employer-provided services, infrastructure, and incentives to encourage alternative commute modes such as rideshare, discounted transit, bicycling, vanpool, and guaranteed ride home programs.	4% of Home-Based-Work VMT		
Implement Employee Parking Cash out	Employees who choose not to drive and utilize on-site parking are eligible to receive a cash-out equivalent to the cost of the parking space. This is designed to discourage single occupancy vehicles.	12% of Home-Based-Work VMT	N/A	12% of Home-Based-Work VMT
Home-Based-Other (HBO) and Non-Home-Based (NHB) Measures				
Implement Market Price Public Parking for Visitors[1]	Manage parking supply and discourage driving by charging higher prices during periods of high demand (i.e. tournament and game weekends). Increasing the cost of parking increases the total cost of driving, which incentivizes mode shift. Requires enforcement and mitigation of neighborhood impacts, to be addressed in TMP.	30% of Home-Based-Other and Non-Home-Based VMT	13% of Home-Based-Other and Non-Home-Based VMT	N/A

Table 8: Potential Project VMT Impact Mitigation Measures by Land Use				
Strategy	**Description**	**Maximum VMT Reduction**		
		Stadium	**Recreation Uses**	**Retail/ Hospitality**
Lower Parking Fees for Ultra-HOV Vehicles (HOV 5+)	Provide discounted parking rate for vehicles with five or more occupants during games, tournaments, and stadium events to encourage ride sharing between multiple households. HOV threshold must be set at 5+ to have any significant impact on VMT reduction.	2% of Home-Based-Other and Non-Home-Based VMT		N/A
Discounted Vanpool/Bus Rental Program for Tournament Attendees	Partner with area van rental companies/vanpool providers to rent passenger vans and other high-capacity vehicles to sports teams attending Sports Complex at a discounted rate. Discount can be set such that total cost of rental is less than the cost of each team member driving to the site separately.	N/A	2% of Home-Based-Other and Non-Home-Based VMT	N/A
All VMT Measures				
Extend Transit Network Coverage or Hours	Adding or modifying existing Omnitrans bus service to serve project site, particularly during events.	0.4% of all VMT		
Reduce Transit Fares[2]	Reduce transit fares on transit lines serving the Project. A reduction in transit fares creates incentives to shift travel to transit from single-occupancy vehicles. This could include bundling the cost of transit fares into admission tickets for stadium events and/or tournaments.	0.1% of all VMT	N/A	N/A

Table 8: Potential Project VMT Impact Mitigation Measures by Land Use				
Strategy	**Description**	**Maximum VMT Reduction**		
		Stadium	**Recreation Uses**	**Retail/ Hospitality**
Transportation Demand Management (TDM) Plan	The TDM plan will provide details on how selected TDM measures will be applied at each use, tracked, monitored, and adjusted throughout the life of the project.	No additional VMT reduction assumed. However, this measure ensures that the TDM measures will be implemented in an effective manner.		
Parking Management Plan	The development of a Parking Management Plan will provide details on parking cost structure, lot allocation, violation management, and retail policies to implement the parking TDM measures described above.	No additional VMT reduction assumed. However, this measure ensures that the TDM measures will be implemented in an effective manner.		

Notes: 1.) Paid parking applied only to stadium event attendees and weekend recreational sports game/tournament attendees. 2.) Reduced transit fares applied only to stadium event trips.
Source: California Air Pollution Control Officers Association (CAPCOA), 2022. Fehr & Peers, 2024.

Following consultation with City staff, Fehr & Peers has identified several mitigation measures to be implemented or overseen by the City, impacting the stadium, recreation, and retail/hospitality uses of the Project. Further evaluation and implementation guidance will be provided as part of the Transportation Demand Management Plan (TDM) and Parking and Event Traffic Management Plan (TMP) prepared for the Final Environmental Impact Report.

The City shall:

1. Implement a voluntary commute trip reduction program for recreation employees.
2. Implement paid public parking for visitors during soccer, baseball, softball, basketball, and volleyball games and tournaments. Cost structure, enforcement, and implementation will be detailed in the Parking Management Plan.
3. Incentivize carpooling by providing a discounted parking rate for vehicles with five or more occupants.
4. Incentivize vanpooling to and from sports games and tournaments by implementing a vanpooling program for recreational sports attendees that provides affordable van rentals for visiting sports teams.
5. Collaborate with Omnitrans to increase transit service in the Project area and reduce transit fares for stadium attendees.

The City shall require the baseball stadium operator to:

1. Implement a voluntary commute trip reduction program for stadium employees.
2. Implement an employee parking cash-out program for stadium employees.
3. Implement paid public parking for visitors during stadium events. Cost structure, enforcement, and implementation will be detailed in the Parking Management Plan.
4. Incentivize carpooling by providing a discounted parking rate for vehicles with five or more occupants.
5. Collaborate with the City to support transit service expansion and support efforts to lower transit fares for stadium attendees.

The City shall require the retail/hospitality developer to:

1. Implement a voluntary commute trip reduction program for stadium employees.
2. Implement an employee parking cash-out program for stadium employees.
3. Collaborate with the City to support transit service expansion.
4. Comply with requirements detailed in the Parking Management Plan, including providing parking validation for retail and hospitality visitors.

Table 9 shows the maximum reduction in VMT expected per mitigation measure by land use on an annual basis. **Table 10** shows the expected VMT/SP and VMT/Visitor with mitigation measures in place. As shown below, the proposed measures are anticipated to reduce VMT but not to a level that would reduce the Project VMT/SP below the City's threshold of significance.

Table 9: Maximum Reduction in VMT By Mitigation Measure and Land Use

Strategy	Percent Reduction in VMT	Annual Total VMT Reduction	Share of Total Project VMT
Stadium Use			
Implement Voluntary Commute Trip Reduction Program for Employees	4.0% of HBW VMT	51,258	0.09%
Implement Employee Parking Cash-Out	12.0% of HBW VMT	153,773	0.26%
Implement Market Price Public Parking for Visitors	30.0% of HBO and NHB VMT	750,837	1.25%
Lower Parking Fees for Ultra-HOV Vehicles (HOV 5+)	2.0% of HBO and NHB VMT	50,056	0.08%
Extend Transit Network Coverage or Hours	0.4% of all VMT	15,317	0.03%
Reduce Transit Fares	0.1% of all VMT	3,784	0.01%

Strategy	Percent Reduction in VMT	Annual Total VMT Reduction	Share of Total Project VMT
Duplicative Dampening:	*-0.5% of all VMT*	(18,921)	(0.03%)
Total Stadium VMT Reduction:	*26.6% of all VMT*	*1,005,923*	*1.67%*
Recreation/Sports Field Uses			
Implement Voluntary Commute Trip Reduction Program for Employees	4.0% of HBW VMT	39,848	0.07%
Implement Market Price Public Parking for Visitors[1]	13.0% of HBO and NHB VMT	3,502,611	5.82%
Lower Parking Fees for Ultra-HOV Vehicles (HOV 5+)[1]	2.0% of HBO and NHB VMT	538,863	0.90%
Discounted Vanpool/Bus Rental Program for Tournament Attendees	2.0% of HBO and NHB VMT	538,683	0.90%
Extend Transit Network Coverage or Hours	0.4% of all VMT	111,757	0.19%
Duplicative Dampening:	*-0.96% of all VMT*	*(269,432)*	*(0.45%)*
Total Recreation VMT Reduction:	*16.0% of all VMT*	*4,462,511*	*7.42%*
Retail/Hospitality Uses			
Implement Voluntary Commute Trip Reduction Program for Employees	4.0% of HBW VMT	133,968	0.22%
Implement Employee Parking Cash-Out	12% of HBW VMT	401,905	0.67%
Extend Transit Network Coverage or Hours	0.4% of all VMT	113,746	0.19%
Duplicative Dampening:	*-0.06% of all VMT*	*(16,746)*	*(0.03%)*
Total Retail/Hospitality VMT Reduction:	*2.2% of all VMT*	*632,874*	*1.05%*
	Total VMT Reduction:	**6,101,308**	**10.14%**

Notes: [1]Paid parking for recreation events will only be in effect during weekend events and not include community recreation uses (i.e. public park, community recreation center).
Source: California Air Pollution Control Officers Association, 2022; Fehr & Peers, 2024.

Table 10: Project with Mitigation VMT Estimates per Service Population and Visitor

	Annual Average Daily	Annual Average Weekday	Annual Average Weekend
Pre-Mitigation Daily VMT	164,822	141,736	222,761
Daily Reduction in VMT from Mitigation	(16,716)	(3,573)	(47,371)
Post-Mitigation Daily VMT	148,106	138,163	175,390
Pre-Mitigation Daily VMT/SP	**248.60**	**237.41**	**269.03**
Post-Mitigation Daily VMT/SP	**223.39**	**231.43**	**211.82**
Pre-Mitigation Daily VMT/Visitor	25.06	**37.98**	16.24
Post-Mitigation Daily VMT/Visitor	22.52	**37.02**	12.79
Citywide Threshold of Significance (VMT/SP)	29.10	-	-

Note: **Bolded** text indicates VMT estimate exceeds city threshold.
Source: Fehr & Peers, 2024

Conclusions

VMT forecasts for the unique Project land use were prepared using empirical data collected at a nearby similar uses, ITE Trip Generation Rates, SBTAM trip length information, and Streetlight Connected Vehicle average trip length information.

The Project-level VMT/SP is forecasted to be higher than the Citywide average (threshold of significance) under Baseline (2023), and Cumulative Conditions (2050).

For the cumulative VMT assessment, the Project is anticipated to increase Citywide daily VMT within the City boundary. The Project is also inconsistent with the SCAG RTP/SCS and General Plan land use forecasts as the entirety of the project is not assumed in the future land use growth forecasts. Therefore, cumulative VMT impacts are also considered significant.

Recommended mitigation measures focus on reducing single-occupancy-vehicle trips to the Project site. However, given the maximum reduction potential associated with the recommended mitigation measures, it is not anticipated that the Project will be able to reduce the impact to a less-than-significant level. For these reasons noted above, the Project is expected to result in a **significant and unavoidable** transportation impact related to VMT.

Appendix A: List of Comparable Facilities Where Streetlight Trip Length Data Was Collected

Project Land Use	Comparable Facility/Facilities	Dates of Data Collection
Baseball Stadium (Minor League Baseball Games)	Loan Mart Stadium, Rancho Cucamonga	4/12/22-6/5/22 (Home Games)
Baseball Stadium (Other Events/Concerts)	Loan Mart Stadium, Rancho Cucamonga Toyota Arena, Ontario	4/12/22-6/5/22 (Home Games) 11/12/22 (Concert)
Soccer Fields	SilverLakes Sports Complex, Norco	8/30/22 (Practice) 9/3/22 (Tournament) 10/8/2022 (Regular Games)
Baseball/Softball Fields	Big League Dreams, Jurupa Valley	Tuesdays 1/10/22-3/31/22 (Practice) 10/23/22 (Tournament) 11/6/22 (Regular Games)
Indoor Athletic Gym	Open Gym Premier, Ladera Ranch Momentous Sports Center, Irvine	3/9/22 (Tournament) 4/1/22-4/29/22 (Practice) 11/7/22-12/14/22 (Practice) 1/7/23 (Tournament)
Aquatics Facility	Heritage Pool, Fontana Palm Desert Aquatics Center, Palm Desert	4/1/22-4/30/22 1/2/22-3/31/22
Community Recreation Center	De Anza Park, Ontario	4/1/22-4/30/22
Tennis/Pickleball Courts	iTennis Andulka Park, Riverside Anaheim Tennis Center, Anaheim Tustin Hills Raquet Club, Santa Ana	4/1/22-4/30/22
Public Park Uses (tot lot, skate park, etc.)	De Anza Park, Ontario	4/1/22-4/30/22

Hotel	Hampton Inn, Ontario/Rancho Cucamonga	4/1/23-4/30/23

Appendix B: VMT/SP and VMT/Visitor By Land Use

Venue/Land Use	Weekday Avg Visitor	Weekend Avg Visitor	Annual Daily Avg Visitor	Weekday Avg Employees	Weekend Avg Employees	Annual Daily Avg Employees	Weekday Total VMT	Weekend Total VMT	Annual Total VMT	Weekday VMT/SP	Weekend VMT/SP	Avg Daily VMT/SP	Weekday VMT/Visitor	Weekend VMT/Visitor	Avg Daily VMT/Visitor
Baseball Stadium (Games)	322	644	414	68	60	66	1,458,158	510,296	1,968,454	81.97	82.27	82.05	17.37	7.61	13.04
Baseball Stadium (Events)	-	1,157	330	-	116	33	-	1,692,919	1,692,919	-	140.72	140.72	-	14.07	14.07
Baseball Stadium (ALL)	322	1,801	743	68	175	99	1,458,158	2,203,215	3,661,373	81.97	120.84	101.64	17.37	11.76	13.50
Soccer Fields	988	4,620	2,023	-	50	14	2,382,380	4,678,963	7,061,344	-	899.80	1,357.95	9.24	9.74	9.56
Baseball Fields	933	4,386	1,917	-	36	14	2,669,674	4,936,593	7,606,267	-	1,331.34	1,462.74	10.96	10.82	10.87
Indoor Athletic Gym	404	1,683	768	-	35	10	1,889,844	2,675,935	4,565,779	-	737.99	1,259.18	17.92	15.29	16.28
Public Park	1,044	1,160	1,077	83	83	83	6,284,997	2,420,976	8,705,973	290.13	280.47	287.37	-	-	-
Hotel	-	-	-	50	50	50	2,135,439	574,907	2,710,346	163.64	110.56	148.51	-	-	-
Retail	-	-	-	392	392	392	20,103,633	5,622,542	25,726,174	196.49	137.92	179.80	-	-	-
TOTAL	3,692	13,650	6,529	594	821	663	36,924,125	23,113,131	60,037,257	238.17	270.70	248.09	38.32	16.28	25.19

*Grayed cells indicate that VMT/Attendee was not calculated due to missing attendee/visitor information and/or the data not being useful for determining project impact or potential mitigation measures.

Appendix C: Visitor and Employee Assumptions Development

The total number of visitors and employees by land use were developed following consultation with City and Recreation staff and a review of typical youth and adult recreational sports organizations. **Table C1** provides details on how many teams, attendees, and employees are anticipated to utilize each land use. While operations will vary depending on the unique nature of each event, estimates were developed conservatively to ensure all typical events are accurately accounted for.

Table C1: Visitor and Employee Assumptions by Land Use and Event Type

Venue/ Land Use	Use Type	Usage Level	No. of Visitors/ Day	No. of Employees/ Day	Notes/Sources
Stadium	Baseball	Low (Weekday)	1,388	155	2023 Rancho Cucamonga Quakes Average Attendance Figures; Project Description
		Medium (Sunday)	1,928	155	
		High (Friday/ Holiday/Weekday Post Season)	3,524	346	
		High (Saturday/ Weekend Post Season)	3,524	346	
	Events	Small (100 Attendees)	100	10	Project Description; Assumed 10:1 Ratio of Visitors to Employees (consistent with Baseball Game ratio)
		Small (200 Attendees)	200	20	
		Small (500 Attendees)	500	50	
		Medium (2,000 Attendees)	2,000	200	
		Medium (3,000 Attendees)	3,000	300	
		Medium (4,000 Attendees)	4,000	400	
		High (5,000 Attendees)	5,000	500	

		High (6,000 Attendees)	6,000	600	
	Office	Non-Game Weekdays	-	43	Project Description
Soccer Fields	Practice	13 Fields (4 teams/field)	1,612	-	15 players/team 1 coach/team 1 spectator/player 4 teams/field/day
	Game	13 Fields (10 teams/field)	6,825	78	15 players/team 1 coach/team 2.5 spectators/player 10 teams/field/day (5 games) 6 employees/field/day
	Tournament	13 Fields (14 teams/field)	9,555	91	15 players/team 1 coach/team 2.5 spectators/player 14 teams/field/day (7 games) 7 employees/field/day
Baseball/ Softball Fields	Practice	9 Fields (4 teams/field)	1,476	-	20 players/team 1 coach/team 1 spectator/player 4 teams/field/day

	Game	9 Fields (10 teams/field)	6,300	54	20 players/team 1 coach/team 2.5 spectators/player 10 teams/field/day (5 games) 6 employees/field/day
	Tournament	9 Fields (14 teams/field)	8,820	63	20 players/team 1 coach/team 2.5 spectators/player 14 teams/field/day (7 games) 7 employees/field/day
Indoor Athletic Gym	Basketball	Practice/ Open Gym	200	-	12 players/team 1 coach/team 1 spectator/player 1 team/court/day
		Tournament	2,000	49	Project Description
	Volleyball	Practice/ Open Gym	464	-	14 players/team 1 coach/team 1 spectator/player 1 team/court/day
		Tournament	2,500	49	Project Description
Public Park Uses	Weekday		1,044	83	Project Description
	Weekend		1,160	83	
Hotel	Weekday		-	50	Project Description Visitor Info Not Available
	Weekend		-	50	
Retail	Chicken 'n Pickle	Weekday	-	285	Project Description Visitor Info Not Available
		Weekend	-	285	
	Other Retail	Weekday	-	54	

		Weekend	-	54	
	Other Restaurant	Weekday	-	53	
		Weekend	-	53	
		Weekday Average:	**3,692**	**594**	
		Weekend Average:	**13,650**	**821**	
		Daily Average:	**6,259**	**643**	

Appendix L2 Traffic Impact Analysis

Appendices

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Ontario Regional Sports Complex (ORSC) Transportation Impact Study

Prepared for:

City of Ontario

March 2024

OC20-0741

FEHR PEERS

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Appendices

Executive Summary

Fehr & Peers prepared this transportation study for the Ontario Regional Sports Complex (Project) in Ontario, California. The Project is a multi-purpose sports, recreation, entertainment, and retail complex proposed on a 199-acre site in the Ontario Ranch area. The project area is bordered by Riverside Drive to the North, Ontario Drive to the East, Chino Drive to the South, and Vineyard Drive to the West. The Project is being developed on land previously zoned for residential development under The Ontario Plan, the City's General Plan adopted in 2021.

This study evaluated 41 intersections to determine if the Project would be consistent with the Level of Service (LOS) policies in The Ontario Plan Mobility Element and the San Bernardino County Transportation Authority (SBCTA) Congestion Management Program (CMP). Project VMT analysis (consistent with the California Environmental Quality Act (CEQA) Senate Bill 743 (SB 743) requirements) and a review of off-ramp queueing along Caltrans facilities was also performed, with information summarized in other reports.

Project Description

The proposed Project consists of the following main components:

- Recreational Soccer and Baseball/Softball Fields
- Indoor Recreational Basketball/Volleyball Gymnasium
- Minor League Professional Baseball Stadium
- Commercial Retail, Restaurant, and Entertainment Uses
- Public Park Amenities
- Parking Structures/Lots and Internal Roadway Infrastructure

At full buildout, the Project is anticipated to have approximately 660 average daily on-site employees and 2.4 million annual visitors (approximately 6,600 average annual daily visitors).

Level of Service (LOS) Analysis

The following scenarios were analyzed for the LOS analysis:

- Existing Conditions (2023)
- Opening Year (2026) No Project
- Opening Year (2026) Plus Project
- Cumulative Year (2050) No Project
- Cumulative Year (2050) Plus Project

Traffic forecasts for each scenario were prepared and LOS was calculated to identify the operating conditions of each intersection. Existing (2023) operating conditions were calculated based on traffic counts collected at each intersection.

- Under Existing (2023) Conditions, all study intersections operate at LOS E or better except:
    - Bon View Avenue and Riverside Drive
    - Walker Avenue and Riverside Drive
    - Baker Avenue and Riverside Drive
    - 2929 Vineyard Avenue Driveway and Riverside Drive
    - Whispering Lakes Lane and Riverside Drive
    - Whispering Lakes Golf Course Driveway and Riverside Drive
    - Ontario Avenue and Riverside Drive
    - I-15 Northbound and Cantu-Galleano Ranch Road
- Under Opening Year (2026) Plus Project Conditions, 12 intersections operate below LOS F. The project adds delay to ten of the 12 intersections (listed below), which will require improvements prior to project opening to be brought to better than no-project conditions:
    - Campus Avenue and Riverside Drive
    - Bon View Avenue and Riverside Drive
    - Grove Avenue and Riverside Drive
    - Walker Avenue and Riverside Drive
    - Baker Avenue and Riverside Drive
    - Archibald Avenue and Riverside Drive
    - Haven Avenue and Riverside Drive
    - Euclid Avenue and Chino Avenue
    - Grove Avenue and Edison Avenue
    - Southbound I-15 and Cantu-Galleano Ranch Road
- Under Cumulative Year (2050) Plus Project Conditions, after accounting for programmed roadway improvements, the addition of project traffic is forecast to add delay at 13 intersections, resulting in LOS F (listed below). Improvements have been identified that will improve operating conditions at these intersections to acceptable conditions (LOS E or better).
    - Grove Avenue and Mission Boulevard[1]
    - Vineyard Avenue and Philadelphia Street
    - Euclid Avenue and Riverside Drive
    - Campus Avenue and Riverside Drive
    - Grove Avenue and Riverside Drive
    - Vineyard Avenue and Riverside Drive[1]
    - Archibald Avenue and Riverside Drive[1]
    - Haven Avenue and Riverside Drive
    - Euclid Avenue and Chino Avenue

[1] These intersections are recommended for additional study of alternatives due to right-of-way constraints.

- Whispering Lakes Lane and Chino Avenue
- Archibald Avenue and Chino Avenue
- Euclid Avenue and Edison Avenue
- Hamner Avenue and Ontario Ranch Road[1]

Consistency with Transportation Plans and Policies

The Project does not conflict with adopted policies, plans, or programs regarding transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities. Therefore, the Project would result in a **less-than-significant impact** related to active transportation.

Construction Traffic

The operations, duration, and intensity of construction conditions that would produce construction related traffic are less than the traffic forecast project operating conditions. Any deficiencies and improvements identified in the opening year analyses would be sufficient to alleviate construction-related activity.

1. Introduction

This report presents the analysis and findings of the transportation impact assessment prepared in support of the Ontario Regional Sports Complex (Project) located in Ontario, California. This chapter discusses the transportation study purpose, project description, and report organization.

The focus of this report is on a review of Level of Service[2] (LOS) analysis that was completed to provide information to decision makers and the public, and to assist the City staff in understanding the consistency of the proposed Project with The Ontario Plan (the City's General Plan) LOS policy and with the San Bernardino County Transportation Authority (SBCTA) Congestion Management Plan (CMP) Program, as required by the City of Ontario. The results of this study are intended to influence future infrastructure planning that will support the buildout traffic projections with the Project.

Per California Senate Bill 743 (SB 743), the Office of Planning and Research (OPR) has updated the *California Environmental Quality Act Statutes and Guidelines* to include new transportation-related evaluation metrics. For the purposes of CEQA, LOS can no longer be used to determine a project's environmental impact. The final proposed Guidelines include a new Section 15064.3 on Vehicle Miles of Travel (VMT) analysis and thresholds for land use developments. The Project's VMT assessment was completed as part of a separate report.

1.1 Project Description

The proposed Project is a 199-acre sports complex with an associated mixture of uses. The Project site is bounded by Riverside Drive to the north, Chino Avenue to the south, Cucamonga Creek Flood Control Channel to the east, and Vineyard Avenue to the west, as shown in **Figure 1**. There is an active dairy farm and nursery onsite while the fields on the western and southern portion of the site are currently fallow.

The Project will consist of the following land uses:

- Planning Area (PA) 1: Semi-professional Minor League Baseball Stadium (6,000-person capacity)
- PA 2-4: Commercial Retail, Baseball Stadium Retail, Retail and Hospitality Areas
- PA 5: City Park (Outdoor Baseball/Softball, Soccer, and Multi-use Fields)
- PA 6: City Park (Indoor Athletic Facility)
- PA 7: Community Recreation Center

The Project will convert approximately 134.42 acres of Low Density Residential (LDR) and Medium Density Residential (MDR) zoning to Open Space-Parkland (OS-R) and approximately 51.57 acres of LDR zoning to Hospitality for a baseball stadium, ancillary/supportive retail, and lodging uses. The Project will comply with Senate Bill (SB) 330 and SB 166 by relocating the zoned units to adjacent parcels to the southwest on Vineyard Avenue (Vineyard Corridor) in the form of increased allowed density.

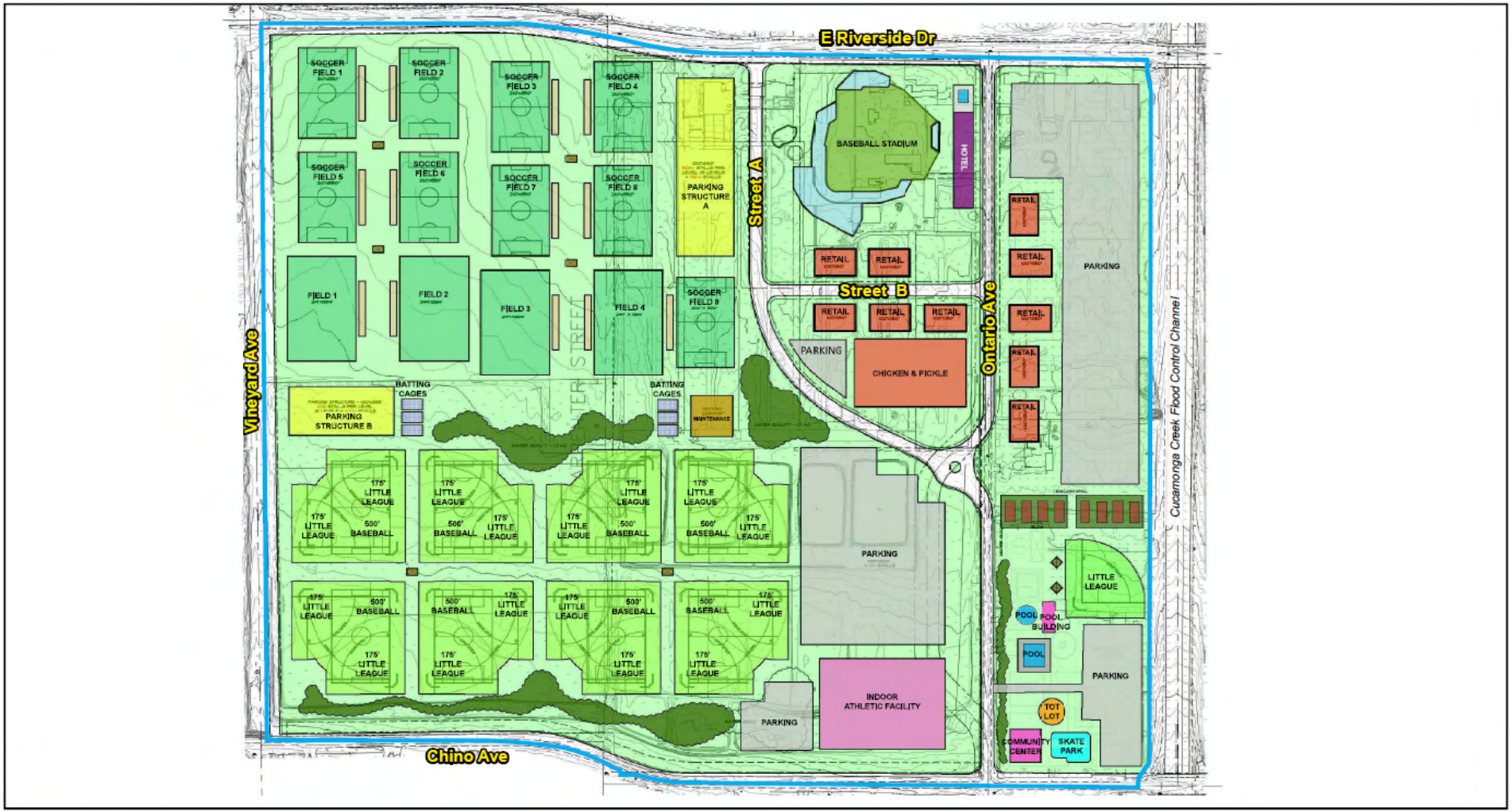
[2] Level of Service (LOS) is a qualitative description of traffic on a roadway facility or intersection.

The Project proposes the following roadway and infrastructure improvements along Vineyard Avenue, Riverside Drive, and Chino Avenue:

- Riverside Avenue widening to ultimate Right-of-Way (ROW) width (104')
- Chino Avenue widening to full ROW (88') between Vineyard Avenue and the Cucamonga Channel
- Ontario Avenue widening to full ROW (88')
- Extension on Vineyard Avenue from Riverside Drive to Chino Avenue and widening to 148' ROW.
- Construction of internal streets:
    - Street A between Parking Structure A and Stadium (88' ROW)
    - Street B between Stadium and PA 4 (66' ROW)
- Intersection improvements
- Relocation/extension of existing utilities

The proposed construction timeline is as follows:

- Phase 1A
    - Vineyard Avenue Extension – Complete by January 2026
    - Riverside Avenue Improvements – Complete by February 2025
    - Chino Avenue Improvements – Complete by October 2025
    - Internal Roadway Construction (Ontario Avenue, Street A, Street B) - Complete by May 2025
- Phase 1B
    - Baseball Stadium – Complete by December 2025
    - Parking Structure A – Complete by September 2025
    - PA 2 Retail Buildings – Complete by October 2025
    - PA 2 Surface Parking Lot – Complete by July 2025
    - PA 3 Retail Buildings – Complete by June 2025
    - PA 3 Hotel – Complete by September 2025
- Phase 2
    - PA 4 Retail Buildings – Complete by October 2025
    - PA 4 Surface Parking Lot – Complete by April 2025
    - PA 5 Parking Structure B – Complete by February 2026
    - PA 5 Multipurpose Fields – Complete by February 2026
    - PA 5 Surface Parking Lot – Complete by October 2025
- Phase 3
    - PA 6 Indoor Athletic Building and Parking Lot – Complete by November 2026
- Phase 4
    - PA 7 Community Center – Complete by September 2027



Project Boundary

0 500
Scale (Feet)

Source: RUM Design Group 2023; Ontario 2023.

Figure 1

Proposed Site Plan

1.2 Report Organization

The report is divided into the remaining chapters as described below:

Chapter 2 – Analysis Methodology describes the criteria used to analyze LOS and Queuing.

Chapter 3 – Existing Conditions describes the transportation system in the Project vicinity, including the surrounding roadway network, morning and evening peak period intersection turning movement volumes, and existing bicycle, pedestrian, and transit facilities.

Chapter 4 – Data Collection describes the data collected for this study which includes traffic counts, roadway classification counts, pending and approved development projects, and signal timing.

Chapter 5 – Project Characteristics presents relevant Project information, such as the Project components and Project trip generation, distribution, and assignment.

Chapter 6 – Level of Service (LOS) Analysis describes the LOS results for the Existing (2023), Opening Year (2026, and Cumulative Year (2050) analysis scenarios.

Chapter 7 – Active Transportation and Public Transportation Review describes the Project's consistency with goals and policies outlined in The Ontario Plan Mobility Element.

Chapter 8 – Construction Traffic assesses the potential effects of traffic generated during construction of the Project.

2. Analysis Methodology

The following is a discussion of the approach and analysis methodologies associated with traffic forecasting and LOS analysis.

2.1 Traffic Forecasting

The City of Ontario recommends the San Bernardino Transportation Analysis Model (SBTAM) as the most appropriate tool for testing changes in land use and roadway network in San Bernardino County; therefore, SBTAM was used to develop traffic volume forecasts for this study. This is based on consultations with the City and the approved Scoping Memorandum provided in **Appendix A**.

The latest version of SBTAM that was updated as part of The Ontario Plan (The City's General Plan Update) Environmental Impact Report (EIR) has a Base Year (2019) scenario model and a Future Year (2050) scenario model. Within the City of Ontario, the Base Year (2019) model assumes a roadway network and Socio-Economic Dataset (SED) consistent with year 2019 and the Future Year (2050) model represents the Adopted General Plan Buildout roadway network and SED; Outside of the City of Ontario, this model assumes datasets consistent with the 2016 Southern California Association of Governments (SCAG) Regional Transportation Plan and Sustainable Communities Strategy (RTP/SCS) with a base year of 2012 and future year of 2040[3].

2.1.1 Turning Movement Forecasts

The Base Year and Future year models produce link and intersection turning movement volumes.[4] National Cooperative Highway Research Program (NCHRP) Report 765 prescribes a variety of methods for developing intersection turning movement volume forecasts from travel demand model outputs. For typical applications, the Base Year and Future Year model outputs are compared to one another and used in conjunction with existing traffic counts to develop future traffic forecasts. In this study, the proportional difference between the Base Year and Future Year model outputs were utilized to interpolate Cumulative Year (2050) volume forecasts. This method is known as the difference method and is a state of the practice approach consistent with NCHRP Report 765.

SBTAM growth in the study area from base to future year was reviewed. A two percent ambient growth rate for intersections within the Ontario Ranch area and a one percent ambient growth rate for

[3] Please note that SBTAM does not have an available dataset consistent with the SCAG 2020 RTP/SCS. At the time of this analysis, SBTAM was in the process of being updated with the SCAG 2020 RTP/SCS data, but the data was not available.

[4] As recommended in the SBTAM model documentation, model assignment parameters were set to run up-to five loops with a minimum convergence criterion of 0.01. Convergence criteria refers to the acceptable difference in the traffic volumes produced by different loops of the vehicle assignment. A convergence criterion of 0.01 indicates that the model is producing similar outputs with an allowance of one percent difference between each loop. This criterion is outlined in the model documentation as the recommended convergence criteria for the model.

intersections outside the Ontario Ranch area was determined appropriate for forecasting Opening Year (2026) No Project conditions, in addition to the traffic volumes associated with pending and approved development projects.

Since SBTAM does not provide information on weekend traffic volumes, weekend midday and PM peak hour forecasts were prepared by comparing existing turning movement counts for the weekday PM peak hour and weekend midday and PM peak hours. Fehr & Peers also referenced Streetlight zone activity data along arterials in currently developed areas of Ontario, Rancho Cucamonga, and Eastvale that resemble planned land use in the Ontario Ranch area. Utilizing both data sources, Fehr & Peers developed a conversion rate to derive weekend midday and PM peak hour traffic volumes. Weekend midday and PM peak hour turning movement volumes are set at 90 percent and 80 percent of weekday PM peak hour volumes, respectively.

2.2 Analysis Scenarios

Fehr & Peers studied the intersection LOS at study intersections for the following scenarios, based on consultation with the City and as approved in the Scoping Memo provided in **Appendix A**:

- **Existing (2023) Conditions** – Based on traffic counts and lane geometries collected in Fall of 2023.
- **Project Opening Year (2026) No Project Conditions** – Ambient growth rate of two percent per year for intersections within the Ontario Ranch area and one percent per year for all other intersections, plus trips from pending and approved Projects in the study area at Project Opening Year will be added to Existing (2023) conditions.
- **Project Opening Year (2026) Plus Project Conditions** – Project traffic was added to the Project Opening Year No Project condition, using the opening year trip assignment.
- **Cumulative Year (2050) No Project Conditions** – Estimated using The Ontario Plan Model and the adopted general plan land use assumptions and funded improvements in the study area consistent with the 2020 SCAG RTP/SCS.
- **Cumulative Year (2050) Plus Project Conditions** – Project traffic was added to the No Project condition using the cumulative year trip assignment. Proposed housing units onsite were relocated to the Vineyard Corridor, consistent with SB 330 and SB 166 requirements.

2.3 LOS Analysis Methodology

Intersection operating conditions in the study area were evaluated using the *Highway Capacity Manual (HCM) 7th Edition* Transportation Research Board (TRB) methodology, which is considered the state-of-the-practice methodology for evaluating intersection operations and is consistent with the City of Ontario,

County of San Bernardino, and Caltrans analysis requirements. Traffic Ware's Synchro 11 software[5] was utilized to perform all delay estimates at study intersections.

The HCM 7th Edition methodology for signalized intersections estimates the average control delay for vehicles at the intersection. The HCM 7th Edition methodology for unsignalized intersections estimate the average control delay for vehicles at all-way stop-controlled intersections and the worst movement delay for side-street stop-controlled intersections. After the quantitative delay estimates are complete, the methodology assigns a qualitative letter grade that represents the operations of the intersection. These grades range from level of service (LOS) A (minimal delay) to LOS F (excessive congestion). LOS E represents at-capacity operations. Descriptions of the LOS letter grades for signalized and unsignalized intersections are provided in **Table 1**.

Table 1: Intersection Level of Service (LOS) Grades

Level of Service	Description	Signalized Volume-to-Capacity (V/C) Ratio	Signalized Delay (Seconds)	Unsignalized Delay (Seconds)
A	Operations with very low delay occurring with favorable progression and/or short cycle length	0.000-0.600	≤ 10.0	≤ 10.0
B	Operations with low delay occurring with good progression and/or short cycle lengths	0.601-0.700	> 10.0 to 20.0	> 10.0 to 15.0
C	Operations with average delays resulting from fair progression and/or longer cycle lengths. Individual cycle failures begin to appear	0.701-0.800	> 20.0 to 35.0	> 15.0 to 25.0
D	Operations with longer delays due to a combination of unfavorable progression, long cycle lengths, or high V/C ratios. Many vehicles stop and individual cycle failures are noticeable	0.801-0.900	> 35.0 to 55.0	> 25.0 to 35.0
E	Operations with high delay values indicating poor progression, long cycle lengths, and high V/C ratios. Individual cycle failures are frequent occurrences	0.901-1.000	> 55.0 to 80.0	> 35.0 to 50.0
F	Operation with delays unacceptable to most drivers occurring due to over saturation, poor progression, or very long cycle lengths	Greater than 1.000	> 80.0	> 50.0

Source: *Highway Capacity Manual 6th Edition* (Transportation Research Board, 2017).

As discussed in later chapters, Fehr & Peers consulted with the City to determine the most appropriate peak hours to analyze in the LOS assessment. In addition to studying the typical peak periods when

[5] Synchro 11 prepares delay estimates and reports referencing the HCM 6th Edition Methodology, which are consistent with HCM 7th Edition Methodology for isolated intersection analysis used in this study.

overall roadway volumes are highest (7:00-9:00 AM and 4:00-6:00PM), the Project's unique land use and weekend programming recommended the study of weekend midday (11:00 AM – 1:00 PM) and weekend PM (4:00 – 7:00 PM) peak hours. Plus Project weekday PM peak hour scenarios also distinguish days with and without stadium events, recognizing the stadium generates additional trips.

2.4 Intersection LOS Criteria

The following performance criteria and thresholds of significance were used to determine impacts at study facilities.

City of Ontario – The Mobility Element of The Ontario Plan (the City's General Plan) identifies LOS "E" as the minimum acceptable standard for intersection operations.

SBCTA CMP – SBCTA, as the congestion management agency for San Bernardino County, identifies LOS "E" as the minimum acceptable threshold for CMP facilities.

Caltrans – Caltrans no longer defines acceptable LOS standards with their latest adoption of the *Vehicle Miles Traveled-Focused Transportation Impact Study Guide (TISG), May 2020*. City of Ontario LOS "E" minimum was applied to Caltrans intersections.

The Project includes private roads analyzed using the City of Ontario's criteria.

2.4.1 LOS Analysis Assumptions

The following assumptions were applied to the intersection analysis consistent with recommendations in the SBCTA CMP:

- Peak Hour Factors (PHF) were based on traffic counts collected in the field in October 2021 and 2023 for all Existing Conditions and Opening Year Conditions analyses.
- PHF for all Cumulative Year (2050) analyses were set to 0.95.
- Heavy Vehicle Percentages were based on vehicle classification counts collected in the field in October 2023 for all Existing and Opening Year Conditions analyses.
- Heavy Vehicle Percentages for all Cumulative Year (2050) analyses were set to the HCM standard of 3% for all non-truck route intersections and 4% for all truck route intersections.
- Signal timings were based on data provided by the City of Ontario and Caltrans in October 2023 for all Existing Conditions and Opening Year Conditions analyses.
- Signal timings for all Cumulative Year analyses were optimized, recognizing the significant changes in traffic volumes and improvements planned for most intersections.

2.5 LOS Analysis Study Area

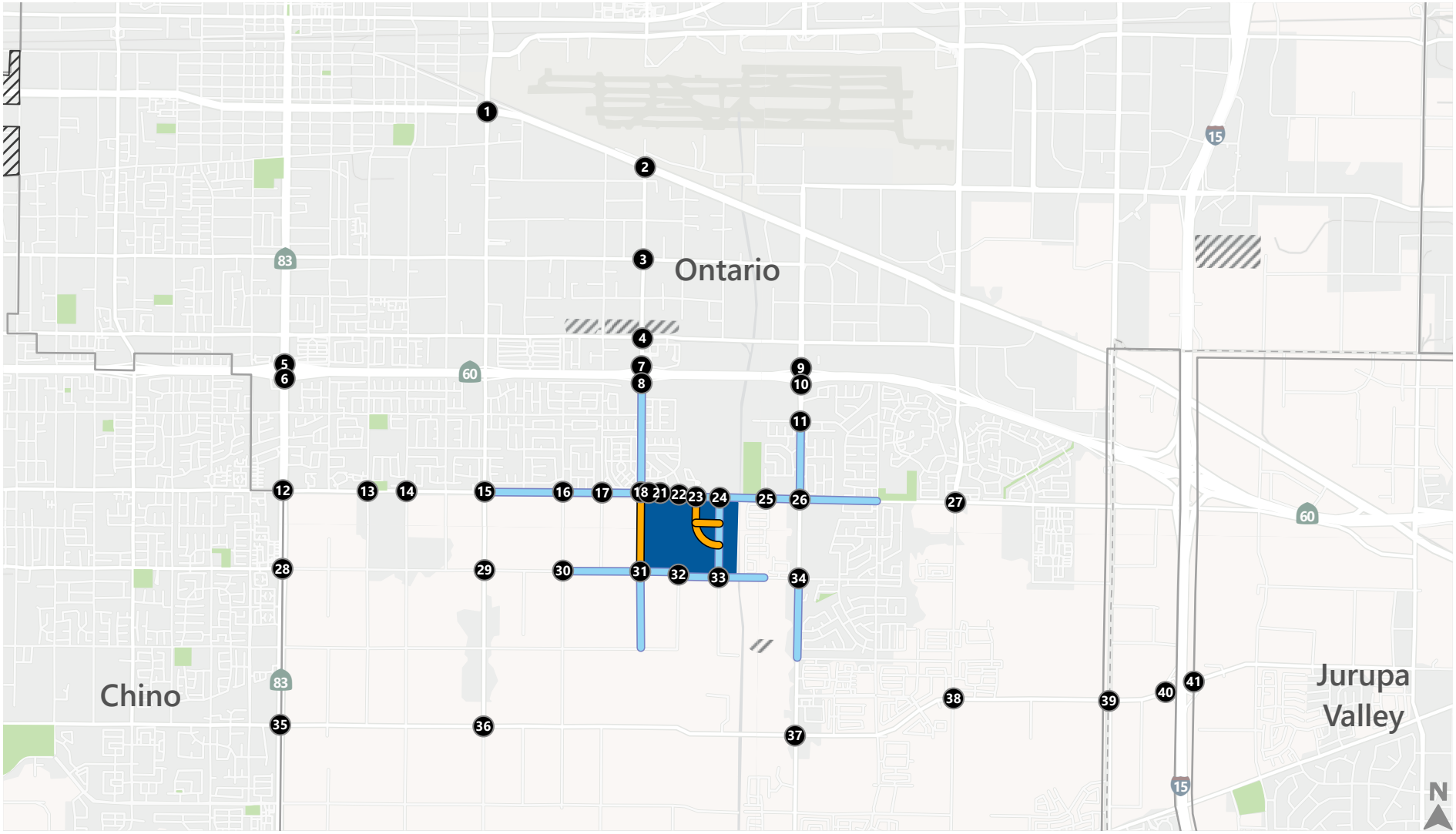
Project generation and trip distribution, discussed in detail later in this report, were used to identify study intersections. Consistent with San Bernardino County Congestion Management Plan (CMP) requirements, intersections classified as collectors or higher, which the Project is anticipated to add 50 or more peak

hour trips to, were selected as study locations and analyzed. This process is detailed further in the approved Scoping Agreement, provided as **Appendix A**.

Figure 2 shows the Project study area and study intersections. The Project's study intersections are either in the City of Ontario or Caltrans jurisdictions. The study locations for the Project are:

1. Grove Avenue and Mission Boulevard
2. Vineyard Avenue and Mission Boulevard
3. Vineyard Avenue and Francis Street
4. Vineyard Avenue and Philadelphia Street
5. Euclid Avenue and Westbound SR-60 On/Off Ramps
6. Euclid Avenue and Eastbound SR-60 On/Off Ramps
7. Vineyard Avenue and Westbound SR-60 On/Off Ramps
8. Vineyard Avenue and Eastbound SR-60 On/Off Ramps
9. Archibald Avenue and Westbound SR-60 On/Off Ramps
10. Archibald Avenue and Eastbound SR-60 On/Off Ramps
11. Archibald Avenue and Walnut Avenue
12. Euclid Avenue and Riverside Drive
13. Campus Avenue and Riverside Drive
14. Bon View Avenue and Riverside Drive
15. Grove Avenue and Riverside Drive
16. Walker Avenue and Riverside Drive
17. Baker Avenue and Riverside Drive
18. Vineyard Avenue and Riverside Drive
19. 2943 S Vineyard Avenue Driveway and Riverside Drive
20. 2929 S Vineyard Avenue Driveway and Riverside Drive
21. 1945 E Riverside Drive #20 Driveway and Riverside Drive
22. Whispering Lakes Lane and Riverside Drive
23. Whispering Lakes Golf Course Driveway and Riverside Drive
24. Ontario Avenue and Riverside Drive
25. Colonial Avenue and Riverside Drive
26. Archibald Avenue and Riverside Drive
27. Haven Avenue and Riverside Drive
28. Euclid Avenue and Chino Avenue
29. Grove Avenue and Chino Avenue
30. Walker Avenue and Chino Avenue
31. Vineyard Avenue and Chino Avenue
32. Whispering Lakes Lane and Chino Avenue
33. Ontario Avenue and Chino Avenue
34. Archibald Avenue and Chino Avenue
35. Euclid Avenue and Edison Avenue
36. Grove Avenue and Edison Avenue
37. Archibald Avenue and Ontario Ranch Road

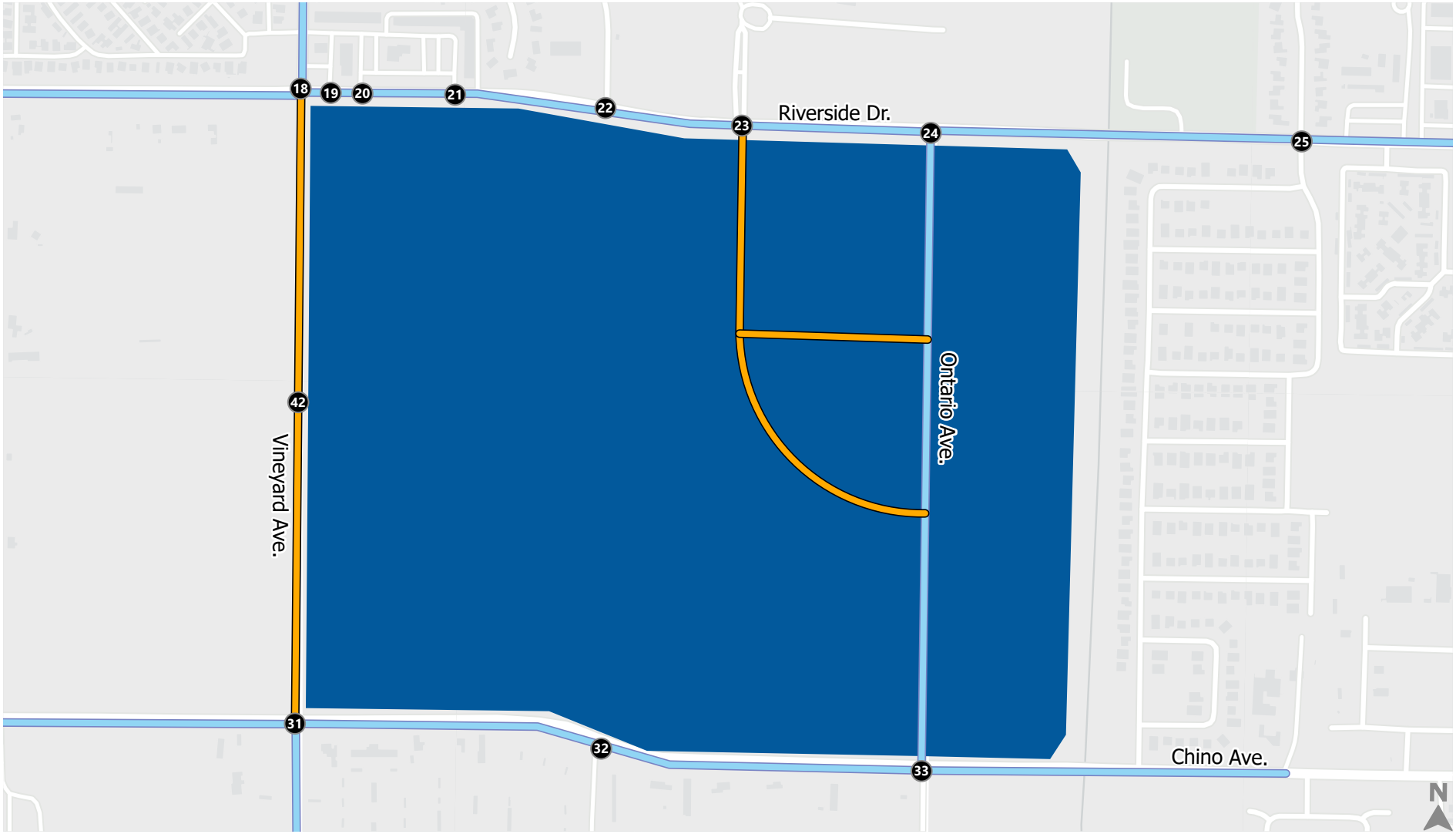
38. Haven Avenue and Ontario Ranch Road
39. Hamner Avenue and Ontario Ranch Road
40. Southbound I-15 Off Ramp and Cantu-Galleano Ranch Road
41. Northbound I-15 Off Ramp and Cantu-Galleano Ranch Road



Study Intersections
ADT Count Locations
Proposed Roadways
Project Site
City Boundaries

Figure 2a

Ontario Sports Park Study Locations



Study Intersections
ADT Count Locations
Proposed Roadways
Project Site

Figure 2b

Ontario Sports Park Study Locations

3. Existing Conditions

This chapter describes transportation facilities in the Project study area, including the roadway network, transit, pedestrian, and bicycle facilities in the Project site vicinity.

3.1 Roadway System

Regional access to the study area is provided from State Route 60 (SR-60) and Interstate 15 (I-15). Local access to the site is provided from Vineyard Avenue, Riverside Drive, Ontario Avenue, and Chino Avenue. The roadway system is shown in **Figure 3.**

State Route 60 (SR-60) is a major east-west highway in Southern California. SR-60 branches off from I-10 in Downtown Los Angeles, passes through East Los Angeles and continues east through Ontario, terminating at I-10 in the City of Beaumont. Within the city limits, the corridor has four lanes and one high occupancy vehicles lane in each direction with a posted speed limit of 65 miles per hour.

Interstate 15 (I-15) is a major north-south freeway that traverses through the states of Arizona, California, Idaho, Nevada, and Utah. Within the study area, I-15 is a ten-lane freeway with three general purpose lanes and two express lanes in each direction. Auxiliary lanes are also provided between the Cantu-Galleano Ranch Road and SR-60 interchanges. The posted speed limit is 65 miles per hour. The I-15 express lanes currently terminate at Cantu-Galleano Ranch Road/Riverside County line; however, an extension north to Duncan Canyon Road in the City of Fontana is currently under design.

Vineyard Avenue is a five-lane north-south principal arterial located in the City of Ontario. Vineyard Avenue begins at Mission Boulevard and continues south to East Riverside Drive with two through lanes in each direction and a center turn lane. Vineyard Avenue has a speed limit of 45 miles per hour east throughout the entire arterial. As planned in the Ontario Plan and proposed as part of the Project, Vineyard Avenue will be extended southerly to connect with Chino Avenue, with a full right-of-way of 100 feet (including 8 foot wide multi-use trail on the west side of Vineyard Avenue) and with six lanes (three in each direction).

Riverside Drive is an east-west arterial located in the City of Ontario that extends from the Chino City Limits east to Etiwanda Avenue in the City of Mira Loma. Riverside Drive is classified as a six-lane minor arterial according the Ontario Plan. Currently, half-width improvements have been completed with two westbound through lanes, one eastbound through lane, and a two-way center turn lane along most of the corridor. East of the Cucamonga Channel, the road widens to five lanes (two lanes in each direction with a center turn lane). Riverside Drive has a speed limit of 50 miles per hour. The Project includes widening the south side of Riverside Drive to a ROW of 90 feet with five lanes.

Ontario Avenue is currently a two-lane north-south local road that is classified as a collector roadway in The Ontario Plan. Ontario Avenue begins at an intersection with Riverside Drive and extends south, currently ending at Schaefer Avenue. There is no posted speed limit on Ontario Avenue. Primary Project access will be provided by Ontario Avenue, with the road bisecting the Project site. Roadway improvements and realignment along Ontario Avenue are proposed as part of the Project.

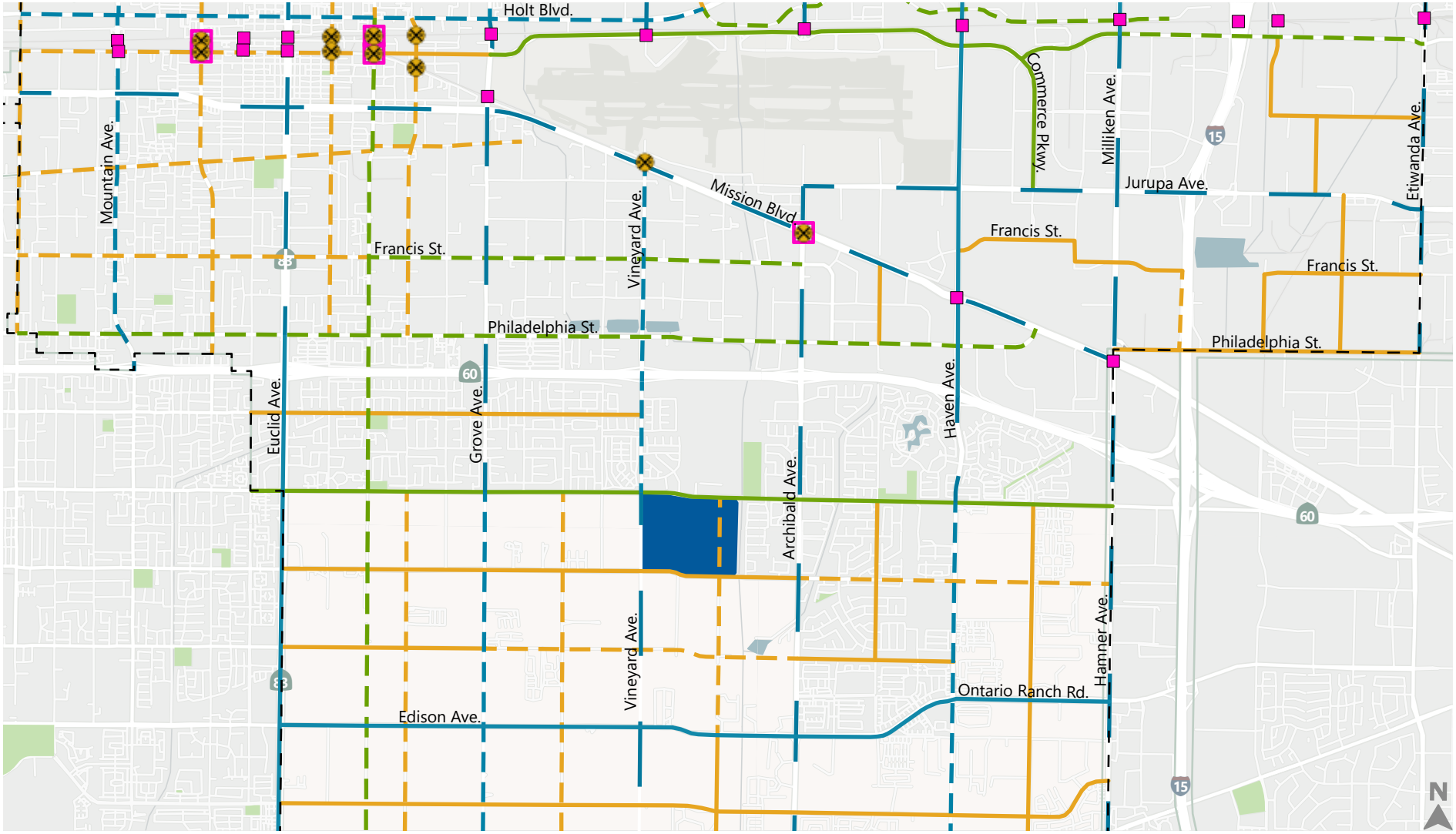
Chino Avenue is an east-west collector roadway located in the City of Ontario. Chino Avenue begins at an intersection with Chino Hills Parkway in the City of Diamond Bar, traveling through the cities of Chino Hills, Chino, and Ontario before ending at an intersection with Hamner Avenue. The posted speed limit is 40 MPH. Through the City of Ontario, the roadway is primarily two-lanes, with select segments towards the east where full- and half-width improvements have been made. Chino Avenue has a right-of-way buildout of 90 feet with five lanes. The Project includes full width improvements between Vineyard Avenue and the Cucamonga Channel.

Archibald Avenue is a six-lane north-south principal arterial located in the City of Ontario. Archibald Avenue begins at Lowell Street and continues south past SR-60 as River Road in the City of Corona. South of Riverside Drive, full buildout improvements are lacking in some segments, with the road narrowing down to two lanes in each direction for several segments. Archibald Avenue has a speed limit ranging between 40-45 miles per hour south of SR-60. Archibald Avenue is classified as a truck route by the City of Ontario.

Euclid Avenue/SR-83 is a north-south principal arterial extending from Mountain Avenue in the City of Upland to Butterfield Ranch Road and SR-71 in Chino Hills. Euclid Avenue is signed as State Highway 83 and is maintained by Caltrans south of I-10. The road currently has four lanes with a 25-foot-wide center median along most of its length. The Ontario Plan calls for a full buildout of eight lanes south of SR-60. Euclid Avenue has a speed limit of 40-55 miles per hour. Euclid Avenue is classified as a truck route by the City of Ontario.

Ontario Ranch Road is an east-west roadway extending from Grand Avenue in the City of Chino, where it is named Edison Avenue, to Hamner Avenue, where it continues as Cantu-Galleano Ranch Road two miles east of I-15 where it terminates in the City of Jurupa Valley. In the City of Ontario, Ontario Ranch Road is currently a two-lane roadway and is classified in the Ontario Plan as an eight-lane principal arterial at full buildout. Ontario Ranch Road has a speed limit of 50 miles per hour throughout the entire arterial.

Grove Avenue is a north-south principal arterial located in the City of Ontario. Grove Avenue begins at 15th Street in the City of Upland and continues south to Merrill Avenue in the City of Chino. The route serves major destinations including the Ontario International Airport and industrial development north of SR-60. Between SR-60 and Riverside Drive, Grove Avenue consists of two travel lanes in each direction with a center turn lane. South of Riverside Drive, the road narrows to two-lanes (one in each direction). Ultimate buildout calls for four lanes (two in each direction) south of Riverside Drive, with an additional lane in each direction north of Riverside Drive. The posted speed limit is 45-50 miles per hour.



Legend

Data Source: City of Ontario 2022

Principal
- 4 lanes
- 6 lanes
- 8 lanes

Arterial
- 4 lanes
- 6 lanes

Collector
- 2 lanes
- 4 lanes

Rail Crossings
- Existing Grade-Seperated Crossings
- Existing At-Grade Crossing
- Future Grade-Separated Crossing

- Project Site
- City Border

Figure 3

Ontario Sports Park Roadway Classification

Haven Avenue is a four-to eight-lane north-south principal arterial located in the City of Ontario. The arterial begins in the City of Rancho Cucamonga and ends at Citrus Street in the City of Eastvale. Haven Avenue provides access to the east side of Ontario International Airport and is primarily four lanes south of SR-60. Haven Avenue has a speed limit of 45 miles per hour in between south of SR-60.

3.2 Existing Pedestrian Facilities

Pedestrian facilities in the Project area include sidewalks, crosswalks, pedestrian signals, and multi-use trails. Most of the roadways are underdeveloped in the Ontario Ranch area and do not include pedestrian facilities. Surrounding the Project, the only pedestrian sidewalks are provided along the north side of Riverside Drive. The following key corridors contain gaps in pedestrian facilities:

- Chino Avenue
- Walker Avenue
- Grove Avenue
- Edison Avenue
- Euclid Avenue
- Portions of Archibald Avenue

3.3 Existing Bicycle Facilities

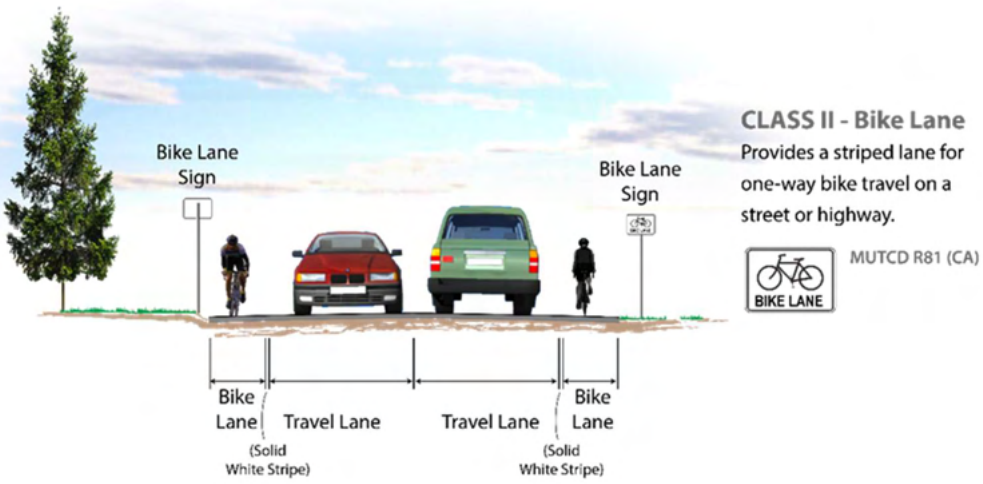
There are three bicycle facility classifications recognized by the City of Ontario and are classified as follows:

3.3.1 Class I Bikeways (Bike Paths)

Class I bicycle facilities are bicycle trails or paths that are off-street and separated from automobiles. They are a minimum of eight feet in width for two-way travel and include bike lane signage and designated street crossings where needed. A Class I Bike Path may parallel a roadway (within the parkway) or may be a completely separate right-of-way that meanders through a neighborhood or along a flood control channel or utility right-of-way.

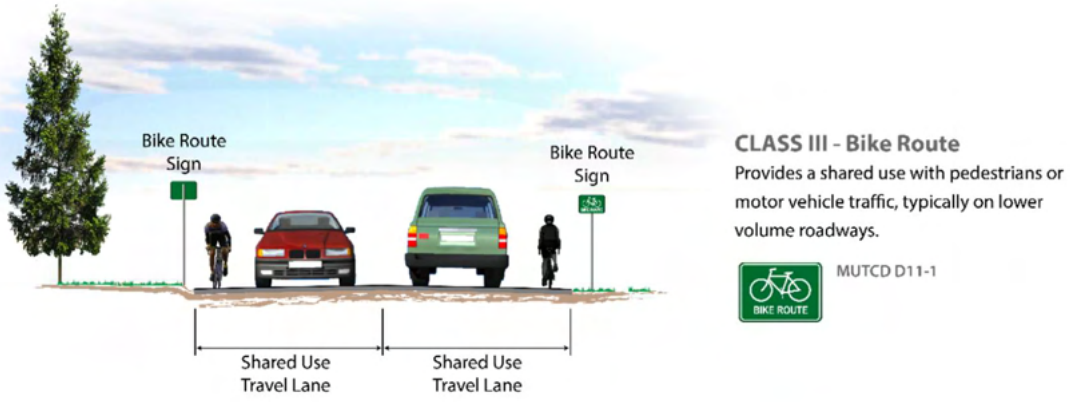
3.3.2 Class II Bikeways (Bike Lanes)

Class II bicycle facilities are striped lanes that provide bike travel and can be either located next to a curb or parking lane. If located next to a curb, a minimum width of five feet is recommended. However, a bike lane adjacent to a parking lane can be four feet in width. Bike lanes are exclusively for the use of bicycles and include bike lane signage, special lane lines, and pavement markings. A painted buffer can also be added to provide additional separation between motorists and cyclists.



3.3.3 Class III Bikeways (Bike Routes)

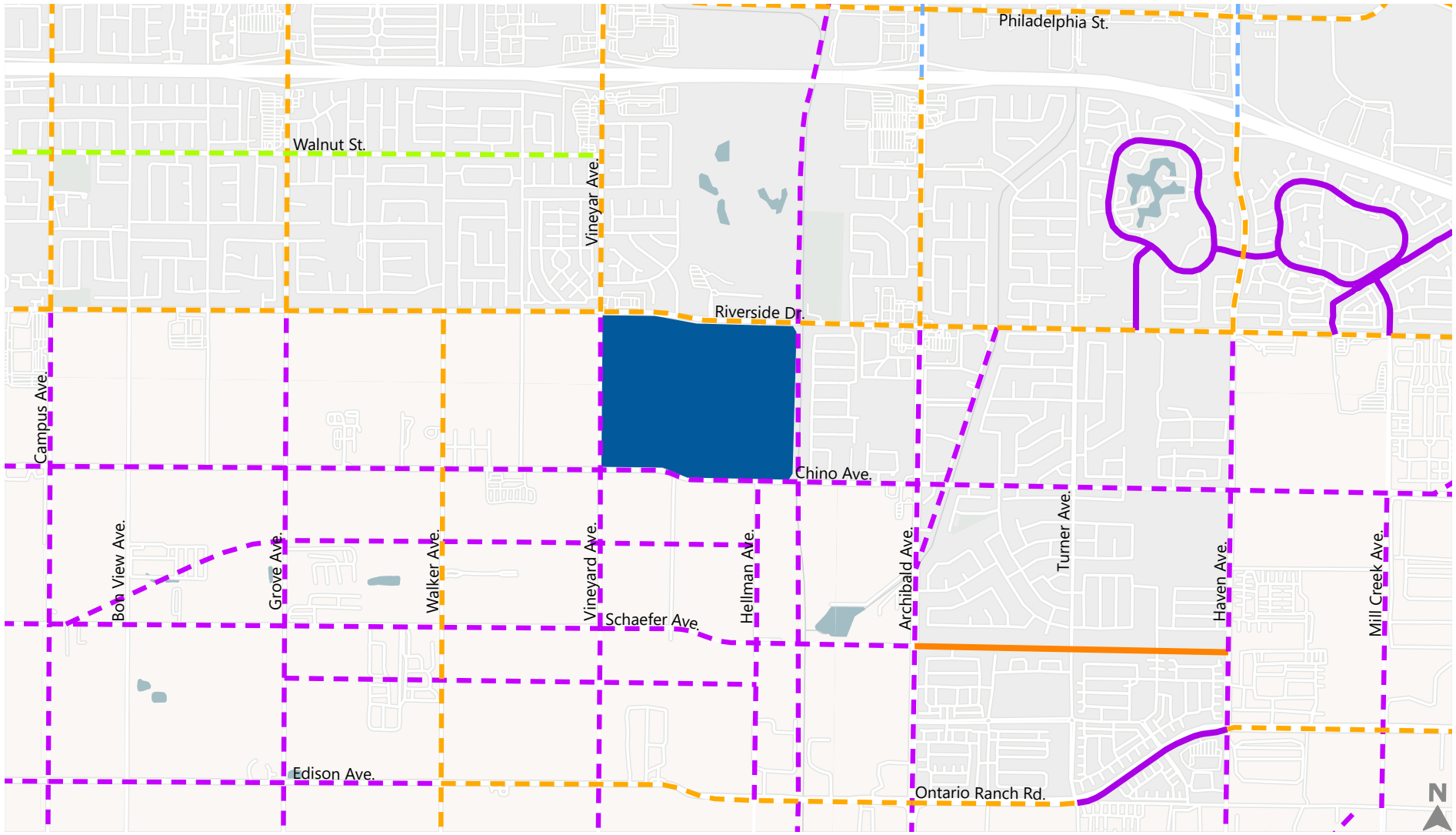
Class III Bikeways are streets providing for shared use by motor vehicles and bicyclists. While bicyclists have no exclusive use or priority, signage both by the side of the street and stenciled on the roadway surface alerts motorists to bicyclists sharing the roadway space and denotes that the street is an official bike route.



None of the roadways immediately adjacent to the Project site currently provide bike lanes (Class II) nor designated bike routes (Class III). The Ontario Plan (the City's General Plan) designates several proposed Class I (off street multi-purpose trail) and Class II (bike lane) facilities in the study area, connecting to the city's broader bicycle network. These improvements are shown as a map in **Figure 4**.

- Proposed Class I Multipurpose Trails:
    - Euclid Avenue between Merril Avenue and Riverside Drive
    - Campus Avenue between Merril Avenue and Riverside Drive
    - Grove Avenue between Merril Avenue and Riverside Drive
    - Vineyard Avenue between Merril Avenue and Riverside Drive
    - Cucamonga Channel Multipurpose Trail
    - Archibald Avenue between Eastvale City Limits and Riverside Drive
    - Haven Avenue between Eastvale City Limits and Riverside Drive
    - Hamner Avenue between Eastvale City Limits and I-15
    - Chino Avenue between Euclid Avenue and Hamner Avenue
    - Schaefer Avenue between Euclid Avenue and Archibald Avenue
    - Edison Avenue between Euclid Avenue and Vineyard Avenue
    - Eucalyptus Avenue between Euclid Avenue and Vineyard Avenue
    - Additional internal Class I trails as part of the Ontario Ranch development
- Proposed Class II On Street Bike Lanes
    - Merril Avenue between Euclid Avenue and Haven Avenue
    - Eucalyptus Avenue between Vineyard Avenue and Hamner Avenue
    - Edison Avenue between Vineyard Avenue and Cucamonga Channel
    - Ontario Ranch Road between Cucamonga Channel and Hamner Avenue
    - Schaefer Avenue between Archibald Avenue and Haven Avenue
    - Riverside Drive between Euclid Avenue and Milliken Avenue/Hamner Avenue
    - Campus Avenue between Riverside Drive and North of SR-60
    - Grove Avenue between Riverside Drive and North of SR-60 (buffered bike lane)
    - Vineyard Avenue between Riverside Drive and SR-60 (buffered bike lane)
    - Archibald Avenue between Riverside Drive and SR-60
    - Haven Avenue between Riverside Drive and SR-60

The Project will include bicycle infrastructure on roadways immediately adjacent to the Project site including a Class I multi-use trail along the west side of Vineyard Avenue and Class II bike lanes along Riverside Drive between Vineyard Avenue and the Cucamonga Channel.



Legend

Existing Bike Network
- Class I
- Class II
- Class III

Proposed Bike Network
- Class I
- Class II
- Class III
- Class II/Class III
- Additional Studies Required

- Project Site
- City Border

Data Source: City of Ontario 2022

Figure 4

Ontario Sports Park Bicycle Facilities

3.4 Existing Transit Service

There are bus and regional transit service options available to the City of Ontario. Existing transit services are shown in **Figure 5**. Along with those options, Amtrak provides rail service across the United States and has a station located in the City of Ontario.

3.4.1 Omnitrans

Omnitrans provides local and express services to San Bernardino County, which includes the City of Ontario. The following Omnitrans routes operate near the Project:

Route 87 operates Monday to Friday between 5:00 AM and 9:45 PM with 60-minute headways and provides service Rancho Cucamonga, Ontario, and Eastvale. On Saturday the route operates between 5:30 AM and 8:30 PM with 60-minute headways. No service is provided on Sundays. The route primarily operates on Vineyard Avenue, Riverside Drive, and Archibald Avenue withing the City of Ontario. Bus stops located that service Route 87 within the study area are located at intersections 14, 18, 20, 21, 22, 30, 33, 34, and 35.

Route 83 operates daily between 6:00 AM and 9:00 PM (8:00 PM on Sundays) with 30-60 minute headways on weekdays and hourly headways on weekends. Route 83 provides service to Ontario, Upland, and Chino via Euclid Avenue. Stops are provided at intersections eight, 24, and 31.

Connections to other Omnitrans bus routes can be made at the Ontario Civic Center and Chino Transit Centers and to Riverside Transit Agency in the City of Eastvale.

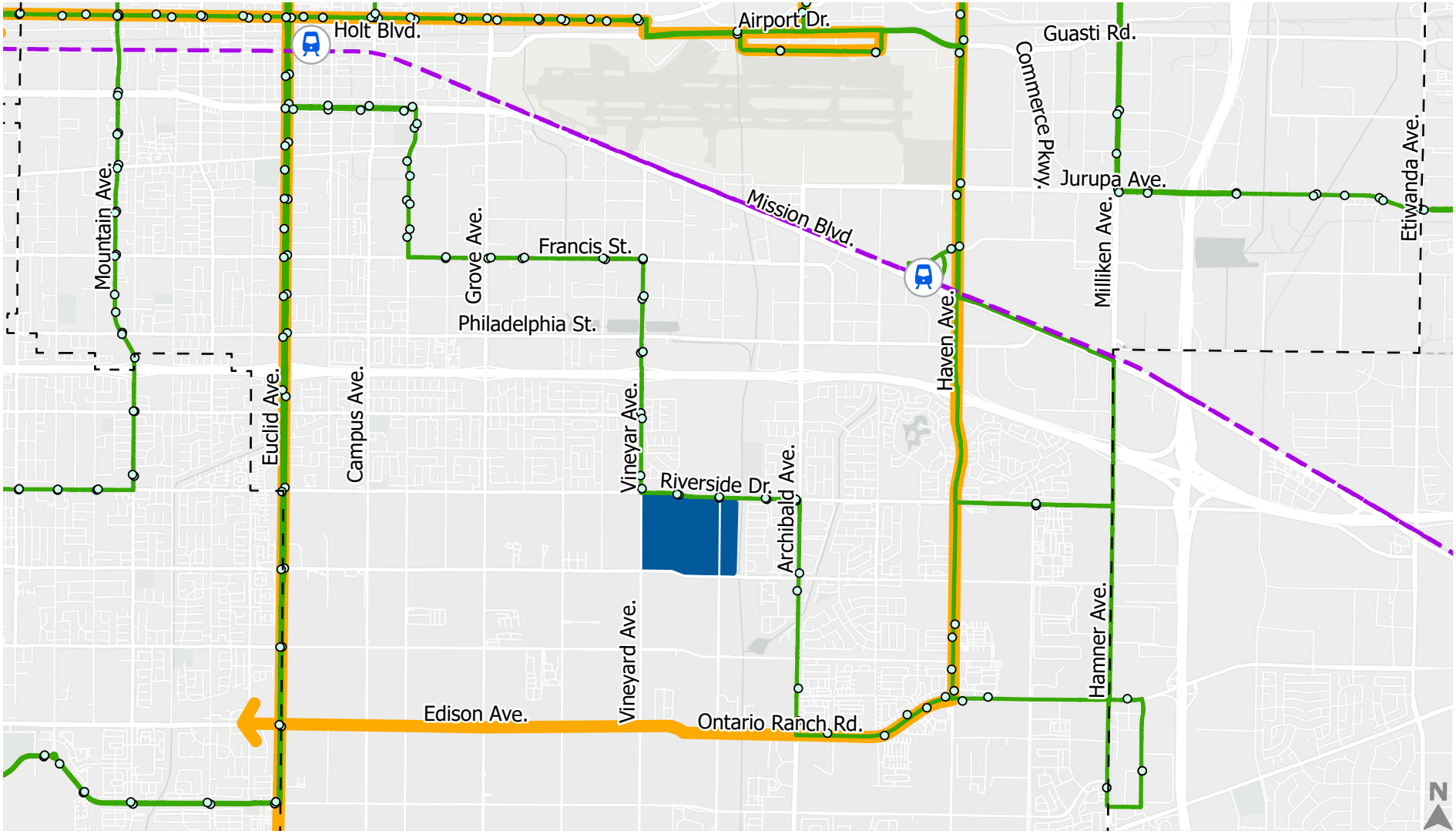
3.4.2 Metrolink

Commuter train service in the City of Ontario is provided by Metrolink, which provides service throughout the Southern California region. The Ontario-East Metrolink Station is located near the corner of Mission Boulevard and Haven Avenue, approximately two miles northeast of the Ontario Ranch Sports Complex. Ontario-East is served by the Riverside Line, which links downtown Riverside to Union Station in downtown Los Angeles with 11 total trains Monday-Friday. Metrolink also serves the Ontario Station located at Euclid Avenue and State Street, north of SR-60. The Metrolink San Bernardino Line provides train service every 30 minutes to two hours on weekdays and every one to two hours on weekends, connecting Los Angeles Union Station with other San Bernardino County cities, terminating in Redlands.

3.4.3 Amtrak

Sunset Limited Line provides intercity rail service three times per week between Los Angeles and New Orleans, Louisiana, with stops in Pomona and Ontario at the Ontario Train Station at 10:54 PM from Los Angeles.

Texas Eagle Line provides intercity rail service three times per week between Los Angeles and Chicago, Illinois, with stops in Pomona and Ontario at the Ontario Train Station at 10:54 PM from Los Angeles



Legend

- Project Site
- City Border
- Omnitrans Bus Stops
- Omnitrans Bus Routes
- Potential BRT Corridors
- Metrolink
- Metrolink & Amtrak Stations

Data Source: City of Ontario and Omnitrans 2024

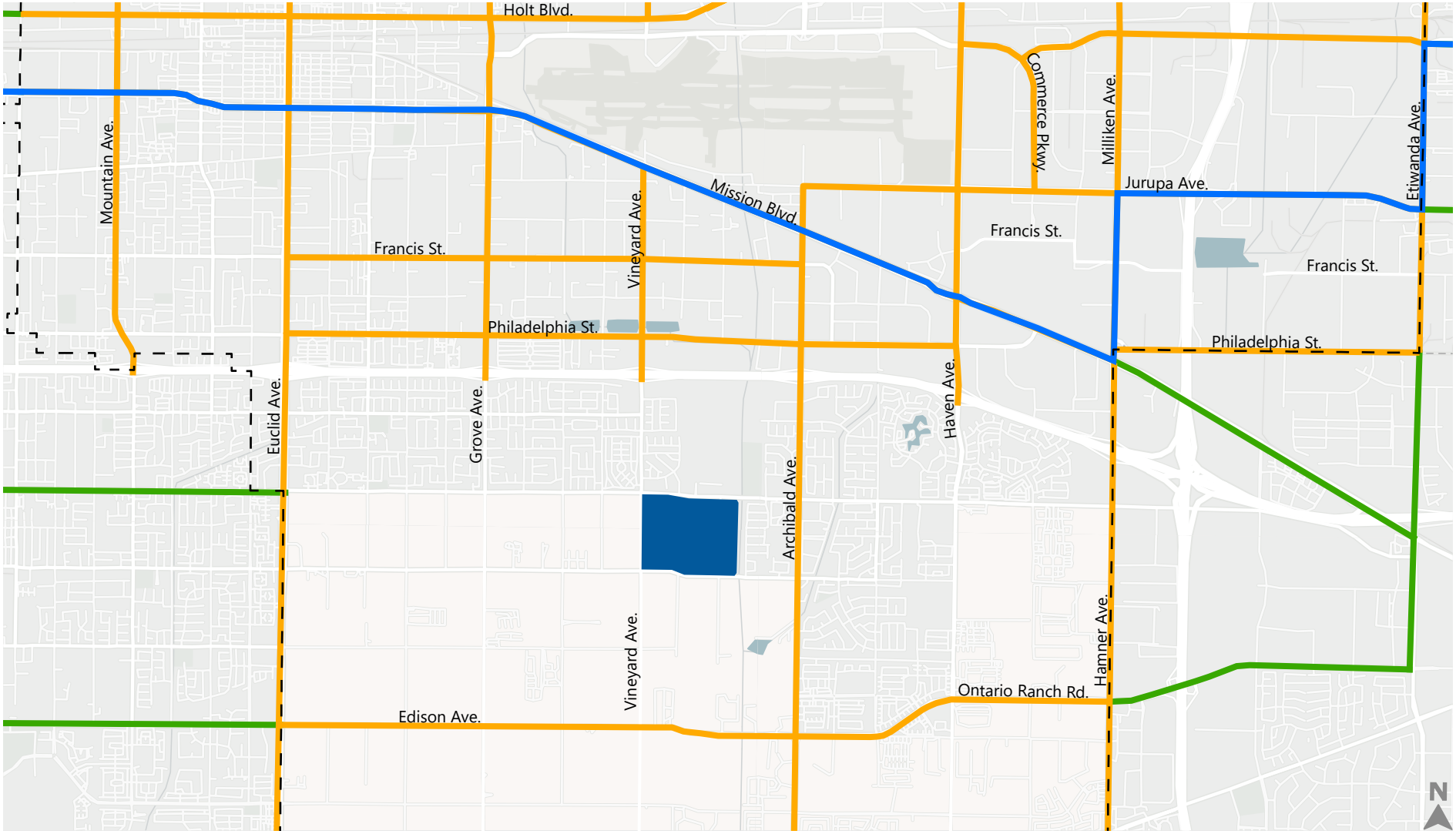
Figure 5

Existing and Proposed Public Transit

3.5 Freight

As shown in **Figure 6**, the City of Ontario has classified several roadways in the City as truck routes, which facilitate the movement of trucks and other freight vehicles. Within the Project area, there are several truck routes, primarily to the north of the Project site and SR-60:

- North/South Truck Routes:
    - Euclid Avenue (SR-83)
    - Grove Avenue (north of SR-60)
    - Vineyard Avenue (north of SR-60)
    - Archibald Avenue
    - Haven Avenue (north of SR-60)
    - Hamner Avenue/Milliken Avenue
- East/West Truck Routes:
    - Mission Boulevard
    - Francis Street
    - Philadelphia Street
    - Edison Avenue/Ontario Ranch Road/Cantu-Galleano Ranch Road



Legend

- Adjacent Agency Truck Route
- Truck Route
- State DOT Network
- Project Site
- City Border

Data Source: City of Ontario 2022

Figure 6

Ontario Sports Park Truck Routes

4. Data Collection

Fehr & Peers consulted with the City of Ontario to determine the study locations and time periods to collect traffic count data. As discussed in Chapter 2, typical weekday commute hours (7:00-9:00 AM and 4:00-6:00 PM) and weekend midday (11:00 AM – 1:00 PM) and evening (4:00 – 6:00 PM) were selected as the appropriate analysis periods to measure the Project's effect on traffic conditions. Based on the Project's expected sports and entertainment programming, it is anticipated that the Project will generate the most trips within hours outside of typical commute hours (7:00-9:00 AM and 4:00-7:00 PM), including high trip rates on the weekend. However, the Project is still anticipated to generate trips during typical commute hours when adjacent streets are most congested, particularly in the evening peak period. Data collection parameters, including time periods, number of days of collection, and study locations were confirmed with the City of Ontario and documented in the Scoping Agreement, provided in **Appendix A**.

Traffic counts were collected in October 2023 during weekday AM peak period (7:00-9:00 AM), weekday PM peak period (4:00-6:00 PM), weekend mid-day period (11:00 AM – 1:00 PM), and weekend evening period (4:00-7:00 PM) at the 36 of the 41 study intersections listed in Chapter 2. Consistent with industry standards and as identified in the San Bernardino CMP Guidelines, counts were collected over one day during fair weather, while school was in session, and during a typical (non-holiday) Tuesday and Saturday. The turning movement counts can be found in **Appendix B**. For study intersections 1-4, traffic counts were collected in October 2021 and grown to reflect 2023 conditions. The long-term road closure of Chino Avenue at Grove Avenue prevented us from collecting traffic counts at this study intersection and counts were estimated from adjacent intersections. Traffic counts were also reviewed at the SR-60 Eastbound and Archibald Avenue interchange; construction impacts resulted in the use of previously collected data that was scaled to reflect 2023 conditions.

Roadway segment volume and vehicle classification counts were also collected in October 2023 to determine heavy vehicle percentages for analysis purposes. The roadways selected provide a representative sample of the fleet mix that can be applied across all major corridors in the study. The roadway classification counts can be found in **Appendix C**. Roadway segment classification counts were collected at the following locations:

1. Riverside Drive west of Walker Avenue
2. Riverside Drive west of Vineyard Avenue
3. Vineyard Avenue north of Riverside Drive
4. Ontario Avenue south of Riverside Drive
5. Riverside Drive west of Ontario Avenue
6. Riverside Drive west of Archibald Avenue
7. Archibald Avenue north of Riverside Drive
8. Riverside Drive east of Archibald Avenue
9. Archibald Avenue south of Chino Avenue
10. Chino Avenue west of Vineyard Avenue

11. Chino Avenue east of Vineyard Avenue
12. Whispering Lakes Lane south of Riverside Drive

Existing (2023) traffic volumes are presented in **Figures 11 and 12** in Chapter 6 along with existing lane configurations and traffic control at study locations.

Fehr & Peers collected the following information during a field visit to the study area:

- Lane configurations
- Signal phasing
- Land uses in the study area
- Existing pedestrian and bicycle facilities
- On-street parking conditions
- Transit service

Fehr & Peers requested and reviewed the following information from the City of Ontario, surrounding jurisdictions, and Caltrans for use in the study:

- Traffic signal timing information at all signalized intersections
- All pending and approved development projects within a three-mile radius
- Major pending and approved development projects within a five-mile radius/projects that are anticipated to utilize roadways near Project.

5. Project Characteristics

This chapter provides an overview of the proposed Project components and addresses the proposed Project trip generation, distribution, and assignment characteristics, allowing for an evaluation of Project effects on the surrounding roadway network. The amount of traffic associated with the Project was estimated using a four-step process:

1. **Project Scenario Development** – Establishing *what typical operations would look like*, guiding development of trip generation.
2. **Trip Generation** – The *amount* of vehicle traffic entering/exiting the Project site was estimated.
3. **Trip Distribution** – The *direction* trips would use to approach and depart the site was projected.
4. **Trip Assignment** – Trips were then *assigned* to specific roadway segments and intersection turning movements.

5.1 Project Scenarios

Fehr & Peers reviewed Southern California youth sports and Minor Leage Baseball team schedules to develop an understanding of how the Project land uses would operate throughout the year. The various youth sports have seasonal variability with how often and how many practices, games, and tournaments occur per day throughout the year. Through coordination with City staff, Fehr & Peers analyzed the proposed programming schedules for the Project land uses and determined the following five trip generation scenarios should be analyzed in this assessment:

- **Typical Weekday AM with No Stadium Event** (reflective of weekday AM peak hours when baseball is not in season; includes general sports field use)
- **Typical Weekday PM with No Stadium Event** (reflective of weekday PM peak hours when baseball is not in season; includes general sports field use)
- **Weekday PM with Stadium Event** (reflective of PM peak hours when baseball is in season; includes general sports field use)
- **Weekend with Tournament, No Stadium Event** (weekend midday peak hour with one field tournament (baseball or soccer) occurring)
- **Weekend with Stadium Event, No Tournament** (reflective of evening peak hour during arrival time at stadium event with general sporting activity occurring during the day)

The intent of the transportation analysis is to evaluate typical daily traffic and commonly occuring events to appropriately size transportation infrastructure. It is expected that most weekends will host one regional tournament (from any one of the five sports) or stadium event; as such, a weekend scenario without a stadium event or tournament was not considered. Some worst-case events, such as multiple

tournamnets during a stadium event may occur infrequently, but these events will require major traffic control plans to assist in managing traffic and should not influence the design of everyday infrastructure. For these reasons, we selected peak scneraios representative of "85th Percentile" on-site activity.

5.2 Trip Generation

Trip generation refers to the process of estimating the amount of vehicular traffic a project would add to the surrounding roadway system. Estimates for the Project scenarios were created for the daily condition and for the peak one-hour period when traffic volumes on the adjacent streets are typically the highest. On weekdays, the peak one-hour period occurs during the morning and evening commutes. On weekends, the peak one-hour period occurs around midday on tournament weekends and in the evening on days with stadium events.

The number of weekday morning and evening and weekend midday and evening peak hour trips were estimated for the Project scenarios by using one of three methods:

1. **ITE Trip Generation Manual** – rates published in Trip Generation, 11th Edition (Institute of Transportation Engineers [ITE], 2021) were used for typical land uses with robust data in the ITE manual.

2. **Custom Trip Generation Rates Derived from Traffic Counts** – rates for various sports activity and stadium events were developed from 24-hour traffic counts collected at comparable facilities in San Bernardino, Riverside, and Orange Counties. These rates more accurately reflect local travel patterns for events as compared to rates published by ITE, as described in more detail below. Traffic counts were also collected at the Chicken 'n Pickle facility in San Antonio, Texas to develop a specific trip generation rate for the proposed entertainment use.

3. **Custom Trip Generation Rates Derived from Streetlight Zone Activity Data** – Fehr & Peers utilized Streetlight data (anonymous cell phone and GPS data) to collect traffic counts at driveways of comparable facilities in San Bernardino, Riverside, and Orange Counties. This data was compared against actual traffic count data to validate the big data counts. Streetlight data allowed for the development of tournament and non-tournament trip generation rates from a wider sample size than one-day counts. Streetlight data was also used for land uses without ITE rates and for rates with outdated or limited data.

Fehr & Peers selected sites for Streetlight assessment with exclusive parking lots to ensure trips for separate land uses were not included; however, limited parking at some of these facilities may undercount overall demand. Physical traffic counts were used as the basis for rate development when Streetlight data appeared inconsistent with expected attendee projections.

Project land uses were grouped into the following four categories to estimate trip generations for the Project scenarios:

- Hospitality (Hotel and Shopping Plaza)
- Open Field/Recreation Uses

- Public Park Uses
- Minor League Baseball Stadium

5.2.1.1 Hospitality (Hotel and Shopping Plaza)

The Project includes a hotel and commercial buildings adjacent to the stadium. While most of the retail use is unknown and assumed to be partially restaurant and partially commercial retail, the only known use is a proposed "Chicken 'n Pickle" restaurant and pickleball entertainment complex. This use is located in PA-4 and was grouped into the hospitality land uses.

Estimations for the "Chicken 'n Pickle" restaurant and entertainment complex were developed using driveway traffic count data at the existing Chicken 'n Pickle in San Antonio, Texas. This facility most closely matches the proposed use case for the Project compared to traditional ITE trip generation rates for restaurants and tennis courts.

The remaining 80 KSF[6] is assumed to be represented by 50 percent (40 KSF[1]) fast casual (quick service) restaurant and 50 percent (40 KSF[1]) retail plaza and will rely on traditional ITE rates for trip generation.

The following ITE trip generation rates were used to estimate trips for these land uses:

- ITE Code 310 – Hotel
- ITE Code 821 – Retail Plaza (40k-150k GSF, No Grocery Store)
- ITE Code 930 – Fast Casual Restaurant

There is expected to be a high rate of internalization between the hotel and recreation fields as the primary purpose of the hotel is to serve visiting teams for sports tournaments. Fehr & Peers estimated a weekend internalization rate of 50 percent for the hotel, based on the assumption that half of all hotel trips will stay onsite within the Project (i.e., accessing adjacent sports fields, Minor League Baseball Stadium and supportive entertainment uses). This rate is similar to the rates used for comparable mixed-use entertainment and sports complexes throughout California including the Acrisure Arena in Palm Desert and the proposed Major Leage Soccer Stadium in Sacramento. The weekday internalization rate is expected to be lower as there are typically no regional tournaments scheduled on weekdays. As such, Fehr & Peers assumed a weekday internalization rate of 20 percent (assuming one fifth of all hotel trips are to access on-site uses).

Internalization was also applied to the retail uses on the Project Site, as the retail is intended to support the Minor League Baseball Complex and sports fields. It is anticipated that most customers will be visiting the retail plaza before or after games, tournaments, and events. Therefore, an internalization rate of 33 percent was applied to all retail trips during the weekend. Similar to the hotel, internalization is expected to be lower during the weekday, with a rate of ten percent applied. Internalization was not applied to the Chicken 'n Pickle use as this is expected to be a large entertainment complex that will draw visitors regionally.

[6] KSF: Thousand Square Feet

Fehr & Peers did not apply a pass-by reduction for the retail plaza, as the retail uses are expected to be largely contained within the Sports Complex and include services that specifically cater to Sports Complex visitors.

5.2.1.2 Open Field/Recreation Uses

Trip generation rates for the various sporting uses will vary depending on programming (practices, games and tournaments). While the ITE Manual contains some trip generation information for sports fields/courts, it does not contain detailed daily, morning, midday, and evening rates for weekdays and weekends differentiated by practices, games and tournaments. It also does not have rates for most of the sports fields/courts proposed in this project. Therefore, Fehr & Peers developed custom trip generation rates for use in this study.

To account for the variation in activity, Fehr & Peers gathered data for each type of sporting event and type of field/court. Fehr & Peers collected peak hour driveway counts and field/court usage rates at the following facilities while practices, games, and tournaments were occurring:

- Soccer Fields: Silverlakes Sports Complex in Norco (September 2023)
- Baseball Fields: Big League Dreams Baseball Fields in Jurupa Valley (October 2023)
- Basketball Courts: Open Gym Premier in Ladera Ranch (October 2023)

These counts were also compared against zone activity at the same facilities from big data vendor Streetlight. Several tournament and non-tournament dates were chosen in 2022, focusing on the time period before and after scheduled programming. With the traffic counts received to date for the Silverlakes Sports Complex, data from Streetlight for a similar event in September 2022 shows nearly identical driveway volumes for both daily and midday peak hours. In cases where Streetlight data significantly over or underestimated volumes compared to live traffic counts, live traffic counts were used due to their increased precision.

This data was used to develop trip generation estimates for the following scenarios:

- Weekday with Practices
- Weekend with Typical Games (Baseball/Softball and Soccer Only)
- Weekend with a Tournament

Tournament rates were developed for all sport types and are included in the scoping memorandum in **Appendix A**. These rates were scaled using Streetlight data to develop non-tournament rates for all sport types. Estimated trip generation for soccer tournaments is higher than estimated trip generation for baseball/softball tournaments; therefore, Fehr & Peers analyzed a weekend scenario with a soccer tournament. All weekend scenarios will include either a basketball or volleyball tournament as the City anticipates using the indoor athletic facility for a total of 37 weekends annually.

5.2.1.3 Public Park and Other Recreational Uses

The Public Park and Other Recreational Uses are assumed to follow more regular scheduling without the seasonal variability seen in the sports fields/courts. Fehr & Peers referenced both ITE trip generation rates and Streetlight Zone Activity data to develop trip generation estimates for the following land uses:

- Tennis/Pickleball Courts
- Swimming Pool
- Recreation Community Center
- Batting Cages
- Skate Park
- Tot Lot
- Picnic Area

The following ITE trip generation rates were used to estimate trips for the corresponding land uses documented above:

- ITE Code 495 – Recreational Community Center
- ITE Code 433 – Batting Cages

To better reflect the other public park uses, Fehr & Peers referenced Streetlight Zone Activity data for several tennis/pickleball court complexes and public swimming pools throughout San Bernardino, Riverside, and Orange Counties. The intent of this data collection was to develop more current and locally specific trip generation rates compared to the ITE Trip Generation Manual. Trip generation rates for tennis/pickleball court facilities were found to be slightly higher than the rates reported by ITE Code 490 (Tennis Courts). No directly comparable ITE rate is available for swimming pools. As such, Fehr & Peers used these trip generation rates as they more accurately reflect the characteristics of the proposed project.

Fehr & Peers grouped all remaining public park amenities (skate park, tot lot, picnic area) which total 11.21 acres and reviewed the ITE Code 411 for a public park. Applying this rate would only generate nine daily trips, far lower than anticipated given the density of amenities found in the project area. Fehr & Peers reviewed other established trip generation rates for public parks and used the Trip Generation Rate for a "City Developed Park" derived by the San Diego County Association of Governments (SANDAG). Using this rate results in an estimated 561 daily trips, commensurate with the park's densely planned amenities.

5.2.1.4 Minor League Baseball Stadium

Fehr & Peers reviewed ITE Code 462 (Professional Baseball Stadium) and determined the rate is not representative of the Project as it is based only on two major league baseball events during spring training. Therefore, Fehr & Peers developed custom trip generation rates for the minor league baseball stadium.

Driveway counts were collected at an Inland Empire 66ers home baseball game on a Saturday in September 2023. These counts were then converted into a per attendee trip generation rate for daily and peak hour of arrival (5:00pm – 6:00pm) and peak hour of departure (9:00pm – 10:00pm). Fehr & Peers compared this custom trip generation rate to rates derived from Streetlight Zone Activity Data for the Rancho Cucamonga Quakes and Inland Empire 66ers during Spring 2022 home games (mid-April to mid-June). The per attendee rates were found to be almost identical between the two methods. Since the Streetlight data references two stadiums over a longer observation period, Fehr & Peers used the rates developed from Streetlight data.

The stadium will also employ 37 full-time and 6 part-time office workers (43 total employees). While the gameday trip generation estimates described above account for these workers, it is assumed that the stadium will function most like a typical 43-employee office building on non-game days. Non-gameday trip generation considerations were included for daily trip generation estimates, utilizing ITE Code 710 (General Office Building).

Trip Generation Estimates

As presented in **Tables 2-3,** the Project is expected to generate approximately 15,944 daily net external trips for weekdays without stadium events, including approximately 634 net external trips (376 inbound/259 outbound) during the morning peak hour, and approximately 1,527 net external trips (886 inbound/661 outbound) during the evening peak hour. Weekdays with stadium events are expected to generate approximately 16,477 daily net external trips, including 613 net external trips (358 inbound/256 outbound) during the morning peak hour, and approximately 1,546 net external trips (887 inbound/659 outbound) during the evening peak hour.

Weekend scenarios, presented in **Tables 4-5**, include days with heavy field usage and no stadium event (i.e. major youth sports tournament) and days with stadium events and moderate level sports field usage (i.e. local-level games). Weekend days with tournaments are expected to generate approximately 21,286 net external trips, including 2,441 net external trips (1,200 inbound/12,40 outbound) during the midday peak hour. Weekend days with stadium events and moderate field usage are expected to generate 20,956 net external trips including 2,364 net external trips (1,170 inbound/1,193 outbound) during the evening peak hour.

Table 2: Typical Weekday with No Stadium Event

Land Use	Data Source	Notes	Quantity	Unit	Trip Generation Rates							Estimated Trip Generation						
					Daily Rate	AM Peak			PM Peak			Daily Trips	AM Peak			PM Peak		
						Rate	% In	% Out	Rate	% In	% Out		In	Out	Total	In	Out	Total
Hotel	ITE Code 310 - Hotel	-	100.00	Keys	7.99	0.46	56%	44%	0.59	51%	49%	799	26	20	46	30	29	59
Shopping Plaza (PA 2, PA 3, PA 4)	ITE Code 821 - Shopping Plaza (40k-150 KSF, No Grocery)	45 KSF from PA 2, 21 KSF from PA 3, and remaining 14 KSF from PA 4; 50% operating as retail	40.00	KSF	67.52	1.73	62%	38%	5.19	49%	51%	2,701	43	26	69	102	106	208
Restaurants (PA 2, PA 3, PA 4)	ITE Code 930 - Fast Casual Restaurant	45 KSF from PA 2, 21 KSF from PA 3, and remaining 14 KSF from PA 4; 50% operating as quick service restaurant.	40.00	KSF	97.14	1.43	50%	50%	12.55	55%	45%	3,886	29	28	57	276	226	502
Chicken 'n Pickle Restaurant	Chicken 'n Pickle San Antonio Data Collection	100 KSF of retail from PA 4 operating as Chicken 'n Pickle Restaurant/Entertainment Complex. 12 total courts (4 indoor, 8 outdoor)	12.00	Courts	124.4	4.6	93%	7%	11.7	68%	32%	1,493	51	4	55	95	45	140
												Lodging and Retail	*8,879*	*149*	*78*	*227*	*503*	*406*	*909*
												Hotel Internalization Reduction (20% of Hotel Trips)	*-160*	*-5*	*-4*	*-9*	*-6*	*-6*	*-12*
												Retail Internalization Reduction (10% of Retail Trips)	*-659*	*-7*	*-5*	*-13*	*-38*	*-33*	*-71*
												Lodging and Retail Subtotal	**8,061**	**137**	**69**	**205**	**459**	**367**	**826**
Soccer Fields (Soccer Complex)	Silverlakes Data Collection	Observation of field usage from a Tuesday evening in September 2023. Assumes all fields in use w/ 4 teams/field/day)	13.00	Fields	153.33	4.88	31%	69%	17.04	74%	26%	1,993	20	43	63	165	57	222
Baseball Fields	Big League Dreams Sports Park Data Collection and Streetlight Data	Count data collected October 2023 during weekend local games scenario. Streetlight data pulled Tuesdays from 01/10/22-03/31/22 representing Tuesday Adult Softball/Little League Practice (~33% of weekend trip generation rate). No AM rate available; used same rate as Silverlakes Data Collection (assume very low trips in AM period). Total number of fields includes little league field on east side of project area	9.00	Fields	112.01	4.88	31%	69%	5.75	78%	22%	1,008	14	30	44	41	11	52
Batting Cages	-	Assume 100% internalization from baseball fields. Batting cages are not avaiilable for commercial use and are intended for practice/team warm ups.	12.00	Cages	0.00	0.00	0%	0%	0.00	0%	0%	0	0	0	0	0	0	0
Basketball Courts	Open Gym Premier Ladera Ranch Data Collection and Streetlight Data from Three Indoor Gymnasium Facilities in Organge County (MAP Sports, Garden Grove; Open Gym Premerier, Ladera Ranch; Momentous Sports Center, Irvine)	Count data collected October 2023 during local tournamnet scenario. Streetlight data pulled for the monthof April 2022 and used to scale rate to weekday open gym scenario (~55% of weekend trip rate). No AM data available but considered to be minimal	8.00	Courts	76.45	0	0%	0%	3.03	55%	45%	612	0	0	0	13	11	24
Volleyball Courts	Streetlight Data from Momentous Sports Center, Ivine	Data pulled for the month of April 2022. Period isolated to focus on volleyball only events. Volleyball per court trips = ~60% of basketball per court trips. No AM rate available (assume very low trips in AM period).	16.00	Courts	45.87	0	0%	0%	1.818	55%	45%	734	0	0	0	16	13	29
		Total Indoor Gymnasium Facility (assume higher of basketball or volleyball):										734	0	0	0	16	13	29
Tennis/Pickleball Courts	Streetlight Data from Three Tennis/Pickleball Facilities in Riverside and Orange Counties (Andulka Park, Anaheim Tennis Center, Tustin Hills Raquet Club)	Streetlight data compared against ITE Code 490 - Tennis Courts and was found to be slightly higher. Higher rate reflects pickleball courts more accurately.	8.00	Courts	36.25	1.95	93%	7%	4.27	55%	45%	290	15	1	16	19	15	34
Swimming Pool	Streetlight Data from Two Public Pools in San Bernardino and Riverside Counties (Fontana Heritage Pool, Palm Desert Aquatic Center)	Data pulled for the months of April 2022 (Fontana pools) and Jan-March 2022 (Palm Desert).	8.00	Pool Lanes	36.17	3.93	51%	49%	4.54	60%	40%	289	16	15	31	22	14	36
Recreational Community Center	ITE Code 495 - Recreational Community Center	Community Recreation Center includes 70,000 sq ft. community center and 25,000 sq ft. maintenance yard. Excludes 13,000 sq. ft. aquatics building (see Swimming Pool)	95.00	KSF	28.82	1.91	66%	34%	2.50	47%	53%	2,738	119	62	181	112	126	238
Public Park	SANDAG Vehicle Traffic Generation Rates for San Diego Region	Assumes general park amenities (i.e. skate park, tot lot, general open space, picnic areas) total 11.21 acres and act as a "City Developed Park." ITE Code for Public Park not used due to low reliability and extremely low rate that does not reflect uses found in this park.	11.21	Acres	50	6.5	50%	50%	4.5	50%	50%	561	37	36	73	25	25	50
												Recreational Subtotal	***7,613***	***221***	***187***	***408***	***400***	***261***	***661***
Minor League Baseball Stadium	-	Not in Use in this Scenario	1388	Avg Weekday Attendance	0	0	0%	0%	0	0%	0%	0	0	0	0	0	0	0
Minor League Baseball Stadium Office	ITE Code 710 - General Office Building	43 FTE employees working on-site for Quakes Team. Assumed to work in office on weekdays without games. Fitted curve used.	43	Employees	Ln(T)=0.76* Ln(X)+2.74	0.49	88%	12%	Ln(T)=0.74* Ln(X)+0.89	17%	83%	270	18	3	21	7	33	39
												Weekday no Event Total Trips	**15,944**	**376**	**259**	**634**	**866**	**661**	**1,527**

Notes:

1.KSF = 1,000 square feet

2. Sources: Trip Generation Manual 11th Edition (Institute of Transportation Engineers, 2021, Norco Silver Lakes Data Collection (Fehr & Peers 2023), Streetlight Data, 2022-2023, Big Leage Dreams Jurupa Valley Data Collection (Fehr & Peers, 2023), Chicken 'n Pickle San Antonio Data Collection (Fehr & Peers, 2023).

3. Internalization rate derived from similar mixed use sports entertainment projects in California and best practices from Fehr & Peers internal research.

Table 3: Typical Weekday with Stadium Event

Land Use	Data Source	Notes	Quantity	Unit	Trip Generation Rates						Estimated Trip Generation						
					Daily Rate	AM Peak			PM Peak			Daily Trips	AM Peak			PM Peak		
						Rate	% In	% Out	Rate	% In	% Out		In	Out	Total	In	Out	Total
Hotel	ITE Code 310 - Hotel	-	100.00	Keys	7.99	0.46	56%	44%	0.59	51%	49%	799	26	20	46	30	29	59
Shopping Plaza (PA 2, PA 3, PA 4)	ITE Code 821 - Shopping Plaza (40k-150 KSF, No Grocery)	45 KSF from PA 2, 21 KSF from PA 3, and remaining 14 KSF from PA 4; 50% operating as retail	40.00	KSF	67.52	1.73	62%	38%	5.19	49%	51%	2,701	43	26	69	102	106	208
Restaurants (PA 2, PA 3, PA 4)	ITE Code 930 - Fast Casual Restaurant	45 KSF from PA 2, 21 KSF from PA 3, and remaining 14 KSF from PA 4; 50% operating as quick service restaurant.	40.00	KSF	97.14	1.43	50%	50%	12.55	55%	45%	3,886	29	28	57	276	226	502
Chicken 'n Pickle Restaurant	Chicken 'n Pickle San Antonio Data Collection	100 KSF of retail from PA 4 operating as Chicken 'n Pickle Restaurant/Entertainment Complex. 12 total courts (4 indoor, 8 outdoor)	12.00	Courts	124.4	4.6	93%	7%	11.7	68%	32%	1,493	51	4	55	95	45	140
												Lodging and Retail	*8,879*	*149*	*78*	*227*	*503*	*406*	*909*
												Hotel Internalization Reduction (20% of Hotel Trips)	*-160*	*-5*	*-4*	*-9*	*-6*	*-6*	*-12*
												Retail Internalization Reduction (10% of Retail Trips)	*-659*	*-7*	*-5*	*-13*	*-38*	*-33*	*-71*
												Lodging and Retail Subtotal	**8,061**	**137**	**69**	**205**	**459**	**367**	**826**
Soccer Fields (Soccer Complex)	Silverlakes Data Collection	Observation of field usage from a Tuesday evening in September 2023. Assumes all fields in use w/ 4 teams/field/day)	13.00	Fields	153.33	4.88	31%	69%	17.04	74%	26%	1,993	20	43	63	165	57	222
Baseball Fields	Big League Dreams Sports Park Data Collection and Streetlight Data	Count data collected October 2023 during weekend local games scenario. Streetlight data pulled Tuesdays from 01/10/22-03/31/22 representing Tuesday Adult Softball/Little League Practice (~33% of weekend trip generation rate). No AM rate available; used same rate as Silverlakes Data Collection (assume very low trips in AM period). Total number of fields includes little league field on east side of project area	9.00	Fields	112.01	4.88	31%	69%	5.75	78%	22%	1,008	14	30	44	41	11	52
Batting Cages	-	Assume 100% internalization from baseball fields. Batting cages are not availlable for commercial use and are intended for practice/team warm ups.	12.00	Cages	0.00	0.00	0%	0%	0.00	0%	0%	0	0	0	0	0	0	0
Basketball Courts	Open Gym Premier Ladera Ranch Data Collection and Streetlight Data from Three Indoor Gymnasium Facilities in Organge County (MAP Sports, Garden Grove; Open Gym Premerier, Ladera Ranch; Momentous Sports Center, Irvine)	Count data collected October 2023 during local tournamnet scenario. Streetlight data pulled for the monthof April 2022 and used to scale rate to weekday open gym scenario (~55% of weekend trip rate). No AM data available but considered to be minimal	8.00	Courts	76.45	0	0%	0%	3.03	55%	45%	612	0	0	0	13	11	24
Volleyball Courts	Streetlight Data from Momentous Sports Center, Ivine	Data pulled for the month of April 2022. Period isolated to focus on volleyball only events. Volleyball per court trips = ~60% of basketball per court trips. No AM rate available (assume very low trips in AM period)	16.00	Courts	45.87	0	0%	0%	1.818	55%	45%	734	0	0	0	16	13	29
		Total Indoor Gymnasium Facility (assume higher of basketball or volleyball):										734	0	0	0	16	13	29
Tennis/Pickleball Courts	Streetlight Data from Three Tennis/Pickleball Facilities in Riverside and Orange Counties (Andulka Park, Anaheim Tennis Center, Tustin Hills Raquet Club)	Streetlight data compared against ITE Code 490 - Tennis Courts and was found to be slightly higher. Higher rate reflects pickleball courts more accurately.	8.00	Courts	36.25	1.95	93%	7%	4.27	55%	45%	290	15	1	16	19	15	34
Swimming Pool	Streetlight Data from Two Public Pools in San Bernardino and Riverside Counties (Fontana Heritage Pool, Palm Desert Aquatic Center)	Data pulled for the months of April 2022 (Fontana pools) and Jan-March 2022 (Palm Desert).	8.00	Pool Lanes	36.17	3.93	51%	49%	4.54	60%	40%	289	16	15	31	22	14	36
Recreational Community Center	ITE Code 495 - Recreational Community Center	Community Recreation Center includes 70,000 sq ft. community center and 25,000 sq ft. maintenance yard. Excludes 13,000 sq. ft. aquatics building (see Swimming Pool)	95.00	KSF	28.82	1.91	66%	34%	2.50	47%	53%	2,738	119	62	181	112	126	238
Public Park	SANDAG Vehicle Traffic Generation Rates for San Diego Region	Assumes general park amenities (i.e. skate park, tot lot, general open space, picnic areas) total 11.21 acres and act as a "City Developed Park." ITE Code for Public Park not used due to low reliability and extremely low rate that does not reflect uses found in this park.	11.21	Acres	50	6.5	50%	50%	4.5	50%	50%	561	37	36	73	25	25	50
												Recreational Subtotal	***7,613***	***221***	***187***	***408***	***400***	***261***	***661***
Minor League Baseball Stadium	Streetlight Data from Two MiLB Stadiums (Rancho Cucamonga Quakes, Inland Empire 66ers)	Data pulled during first half of 2022 Season (mid April - mid June) counting all home games. Assumes all games in evening (no AM peak). Average attendance data from 2023 Quakes season (excluding holidays).	1388	Avg Weekday Attendance	0.5784	0	0%	0%	0.043	48%	52%	803	0	0	0	28	31	59
Minor League Baseball Stadium Office	ITE Code 710 - General Office Building	43 FTE employees working on-site for Quakes Team. On weekdays with games, trips are accounted for in rate for stadium.	43	Employees	-	0.49	88%	12%	-	-	-	-	18	3	21	0	0	0
												Weekday w Event Total Trips	**16,477**	**358**	**256**	**613**	**887**	**659**	**1,546**

Notes:

1.KSF = 1,000 square feet

2. Sources: Trip Generation Manual 11th Edition (Institute of Transportation Engineers, 2021, Norco Silver Lakes Data Collection (Fehr & Peers 2023), Streetlight Data, 2022-2023, Big Leage Dreams Jurupa Valley Data Collection (Fehr & Peers, 2023), Chicken 'n Pickle San Antonio Data Collection (Fehr & Peers, 2023).

3. Internalization rate derived from similar mixed use sports entertainment projects in California and best practices from Fehr & Peers internal research.

Table 4: Weekend (Saturday) with One Tournament (No Baseball Stadium Use)

Land Use	Data Source	Notes	Quantity	Unit	Trip Generation Rates				Estimated Trip Generation			
					Daily Rate	Midday Peak Hour			Daily Trips	Midday Peak Hour		
						Rate	% In	% Out		In	Out	Total
Hotel	ITE Code 310 - Hotel	-	100.00	Keys	8.07	0.72	56%	44%	807	40	32	72
Shopping Plaza (PA 2, PA 3, PA 4)	ITE Code 821 - Shopping Plaza (40k-150 KSF, No Grocery)	45 KSF from PA 2, 21 KSF from PA 3, and remaining 14 KSF from PA 4; 50% operating as retail	40.00	KSF	81.07	6.22	52%	48%	3,243	129	120	249
Restaurants (PA 2, PA 3, PA 4)	ITE Code 930 - Fast Casual Restaurant	45 KSF from PA 2, 21 KSF from PA 3, and remaining 14 KSF from PA 4; 50% operating as quick service restaurant. No weekend daily rate available; weekday used.	40.00	KSF	97.14	32.64	55%	45%	3,886	718	588	1306
Chicken 'n Pickle Restaurant	Chicken 'n Pickle San Antonio Data Collection	100 KSF of retail from PA 4 operating as Chicken 'n Pickle Restaurant/Entertainment Complex. 12 total courts (4 indoor, 8 outdoor)	12.00	Courts	238.00	11.2	59%	41%	2,856	79	55	134
								Lodging and Retail Subtotal	*10,792*	*966*	*795*	*1,761*
								Hotel Internalization Reduction (50% of Hotel Trips)	*-404*	*-20*	*-16*	*-36*
								Retail/Entertainment Internalization Reduction (33% of Hotel Trips)	*-2,353*	*-280*	*-234*	*-513*
								Lodging and Retail Subtotal	**8,036**	**666**	**545**	**1,212**
Soccer Fields (Soccer Complex)	Silverlakes Data Collection	Data collected from September 2023 observation. Assumes all 13 full time soccer fields are in use for soccer tournament. 7 games/field/day.	13.00	Fields	519.58	50.96	38%	62%	6,755	252	410	662
Baseball Fields	Big League Dreams Data Collection	Data collected October 21, 2023 during a typical local weekend game series scenario with all fields in use. 5 games/field/day.	9.00	Fields	339.43	21.29	53%	47%	3,055	102	90	192
Batting Cages	-	Not in Use in this Scenario (no baseball occuring)	12.00	Cages	0.00	0.00	0%	0%	0	0	0	0
Basketball Courts	-	Not in Use in this Scenario (all courts in use for volleyball)	0.00	Courts					0	0	0	0
Volleyball Courts (Tournament)	Streetlight Data from Momentous Sports Center, Irvine	Streetlight Data collected during a volleyball tournament on Jan 7th, 2023 used to scale data collected from Open Gym Premier counts. Assume all 16 volleyball courts are in use (no basketball).	16.00	Courts	83.4	8.55	48%	52%	1,334	66	71	137
				Total Indoor Gymnasium Facility:					1,334	66	71	137
Tennis/Pickleball Courts	Streetlight Data from Three Tennis/Pickleball Facilities in Riverside and Orange Counties (Andulka Park, Anaheim Tennis Center, Tustin Hills Raquet Club)	Streetlight data compared against weekday data for ITE Code 490 - Tennis Courts and was found to be slightly higher. Higher rate reflects pickleball courts more accurately.	8.00	Courts	36.48	2.35	51%	49%	292	10	9	19
Swimming Pool	Streetlight Data from Two Public Pools in San Bernardino and Riverside Counties (Fontana Heritage Pool, Palm Desert Aquatic Center)	Data pulled for the months of April 2022 (Fontana pools) and Jan-March 2022 (Palm Desert).	8.00	Pool Lanes	46.2	4.99	24%	76%	370	10	30	40
Recreational Community Center	ITE Code 495 - Recreational Community Center	Community Recreation Center includes 70,000 sq ft. community center and 25,000 sq ft. maintenance yard. Excludes 13,000 sq. ft. aquatics building (see Swimming Pool)	95.00	KSF	9.1	1.07	54%	46%	865	55	47	102
Public Park	SANDAG Vehicle Traffic Generation Rates for San Diego Region	Assumes general park amenities (i.e. skate park, tot lot, general open space, picnic areas) total 11.21 acres and act as a "City Developed Park." ITE Code for Public Park not used due to low reliability and extremely low rate that does not reflect uses found in this park.	11.21	Acres	50	6.5	50%	50%	561	37	36	73
								Recreational Subtotal	***13,232***	***532***	***693***	***1,225***
Minor League Baseball Stadium	-	Not in Use in this Scenario	3659	Avg Sat Attendance	0	0	0%	0%	0	0	0	0
Minor League Baseball Stadium Office	ITE Code 710 - General Office Building	43 FTE employees working on-site for Quakes Team. On weekends without games, minimal trip activity is expected	43	Employees	0.43	0.09	54%	46%	18	2	2	4
								Weekday Tournamnet + No Stadium Total Trips	**21,286**	**1,200**	**1,240**	**2,441**

Notes:

1.KSF = 1,000 square feet

2. Sources: Trip Generation Manual 11th Edition (Institute of Transportation Engineers, 2021, Norco Silver Lakes Data Collection (Fehr & Peers 2023), Streetlight Data, 2022-2023, Big Leage Dreams Jurupa Valley Data Collection (Fehr & Peers, 2023), Chicken 'n Pickle San Antonio Data Collection (Fehr & Peers, 2023).

3. Internalization rate derived from similar mixed use sports entertainment projects in California and best practices from Fehr & Peers internal research.

Table 5: Weekend (Saturday) with Stadium Event (No Field Tournaments)

Land Use	Data Source	Notes	Quantity	Unit	Trip Generation Rates				Estimated Trip Generation			
					Daily Rate	Peak Hour of Arrival (5pm - 6pm)			Daily Trips	Peak Hour of Arrival (5pm - 6pm)		
						Rate	% In	% Out		In	Out	Total
Hotel	ITE Code 310 - Hotel	-	100.00	Keys	8.07	0.72	56%	44%	807	40	32	72
Shopping Plaza (PA 2, PA 3, PA 4)	ITE Code 821 - Shopping Plaza (40k-150 KSF, No Grocery)	45 KSF from PA 2, 21 KSF from PA 3, and remaining 14 KSF from PA 4; 50% operating as retail	40.00	KSF	81.07	6.22	52%	48%	3,243	129	120	249
Restaurants (PA 2, PA 3, PA 4)	ITE Code 930 - Fast Casual Restaurant	45 KSF from PA 2, 21 KSF from PA 3, and remaining 14 KSF from PA 4; 50% operating as quick service restaurant. No weekend daily rate available; weekday used.	40.00	KSF	97.14	32.64	55%	45%	3,886	718	588	1306
Chicken 'n Pickle Restaurant	Chicken 'n Pickle San Antonio Data Collection	100 KSF of retail from PA 4 operating as Chicken 'n Pickle Restaurant/Entertainment Complex. 12 total courts (4 indoor, 8 outdoor)	12.00	Courts	238.00	17.8	58%	42%	2,856	124	90	214
								Lodging and Retail Subtotal	*10,792*	*1,011*	*830*	*1,841*
								Hotel Internalization Reduction (50% of Hotel Trips)	*-404*	*-20*	*-16*	*-36*
								Retail/Entertainment Internalization Reduction (33% of Hotel Trips)	*-2,353*	*-280*	*-234*	*-513*
								Lodging and Retail Subtotal	**8,036**	**711**	**580**	**1,292**
Soccer Fields (Soccer Complex)	Silverlakes Data Collection	Observation of field usage from Saturday in September 2023. Assumes standard weekend of games (no Tournament with regional draw). 5 games/field/day.	13.00	Fields	349.92	37.00	35%	65%	4,549	168	313	481
Baseball Fields	Big League Dreams Sports Park Data Collection	Data collected October 21, 2023 during a typical local weekend game series scenario with all fields in use. 5 games/field/day.	9.00	Fields	339.43	17.43	59%	41%	3,055	93	64	157
Batting Cages	-	Assume 100% internalization from baseball fields. Batting cages are not avaiilable for commercial use and are intended for practice/team warm ups.	12.00	Cages	0.00	0.00	0%	0%	0	0	0	0
Basketball Courts (Tournament)	Open Gym Premier Ladera Ranch Data Collection	Data collected October 21, 2023 during a typical local youth weekend basketball tournament at Open Gym Premier in Ladera Ranch. Assume that all 8 basketball courts are in use (no volleyball).	8.00	Courts	139.00	5.5	25%	75%	1,112	11	33	44
Volleyball Courts	-	Not In Use In This Scenario (all courts in use for basketball)	0.00	Courts					0	0	0	0
				Total Indoor Gymnasium Facility:					1,112	11	33	44
Tennis/Pickleball Courts	Streetlight Data from Three Tennis/Pickleball Facilities in Riverside and Orange Counties (Andulka Park, Anaheim Tennis Center, Tustin Hills Raquet Club)	Streetlight data compared against weekday data for ITE Code 490 - Tennis Courts and was found to be slightly higher. Higher rate reflects pickleball courts more accurately.	8.00	Courts	36.48	2.35	51%	49%	292	10	9	19
Swimming Pool	Streetlight Data from Two Public Pools in San Bernardino and Riverside Counties (Fontana Heritage Pool, Palm Desert Aquatic Center)	Data pulled for the months of April 2022 (Fontana pools) and Jan-March 2022 (Palm Desert).	8.00	Pool Lanes	46.2	4.99	24%	76%	370	10	30	40
Recreational Community Center	ITE Code 495 - Recreational Community Center	Community Recreation Center includes 70,000 sq ft. community center and 25,000 sq ft. maintenance yard. Excludes 13,000 sq. ft. aquatics building (see Swimming Pool)	95.00	KSF	9.1	1.07	54%	46%	865	55	47	102
Public Park	SANDAG Vehicle Traffic Generation Rates for San Diego Region	Assumes general park amenities (i.e. skate park, tot lot, general open space, picnic areas) total 11.21 acres and act as a "City Developed Park." ITE Code for Public Park not used due to low reliability and extremely low rate that does not reflect uses found in this park.	11.21	Acres	50	6.5	50%	50%	561	37	36	73
								Recreational Subtotal	***10,804***	***384***	***532***	***916***
Minor League Baseball Stadium	Streetlight Data from Two MiLB Stadiums (Rancho Cucamonga Quakes, Inland Empire 66ers).	Data pulled during first half of 2022 Season (mid April - mid June) counting all home games. Similar rates as those derived from September 2023 traffic counts. Average attendance from 2023 Quakes season.	3659	Avg Sat Attendance	0.5784	0.0425	48%	52%	2,116	75	81	156
Minor League Baseball Stadium Office	ITE Code 710 - General Office Building	43 FTE employees working on-site for Quakes Team. On weekdays with games, trips are accounted for in rate for stadium.	43	Employees	-	-	-	-	0	0	0	0
								Weekday Stadium + No Tournament Total Trips	**20,956**	**1,170**	**1,193**	**2,364**

Notes:

1.KSF = 1,000 square feet

2. Sources: Trip Generation Manual 11th Edition (Institute of Transportation Engineers, 2021, Norco Silver Lakes Data Collection (Fehr & Peers 2023), Streetlight Data, 2022-2023, Big Leage Dreams Jurupa Valley Data Collection (Fehr & Peers, 2023), Chicken 'n Pickle San Antonio Data Collection (Fehr & Peers, 2023).

3. Internalization rate derived from similar mixed use sports entertainment projects in California and best practices from Fehr & Peers internal research.

5.3 Trip Distribution and Assignment

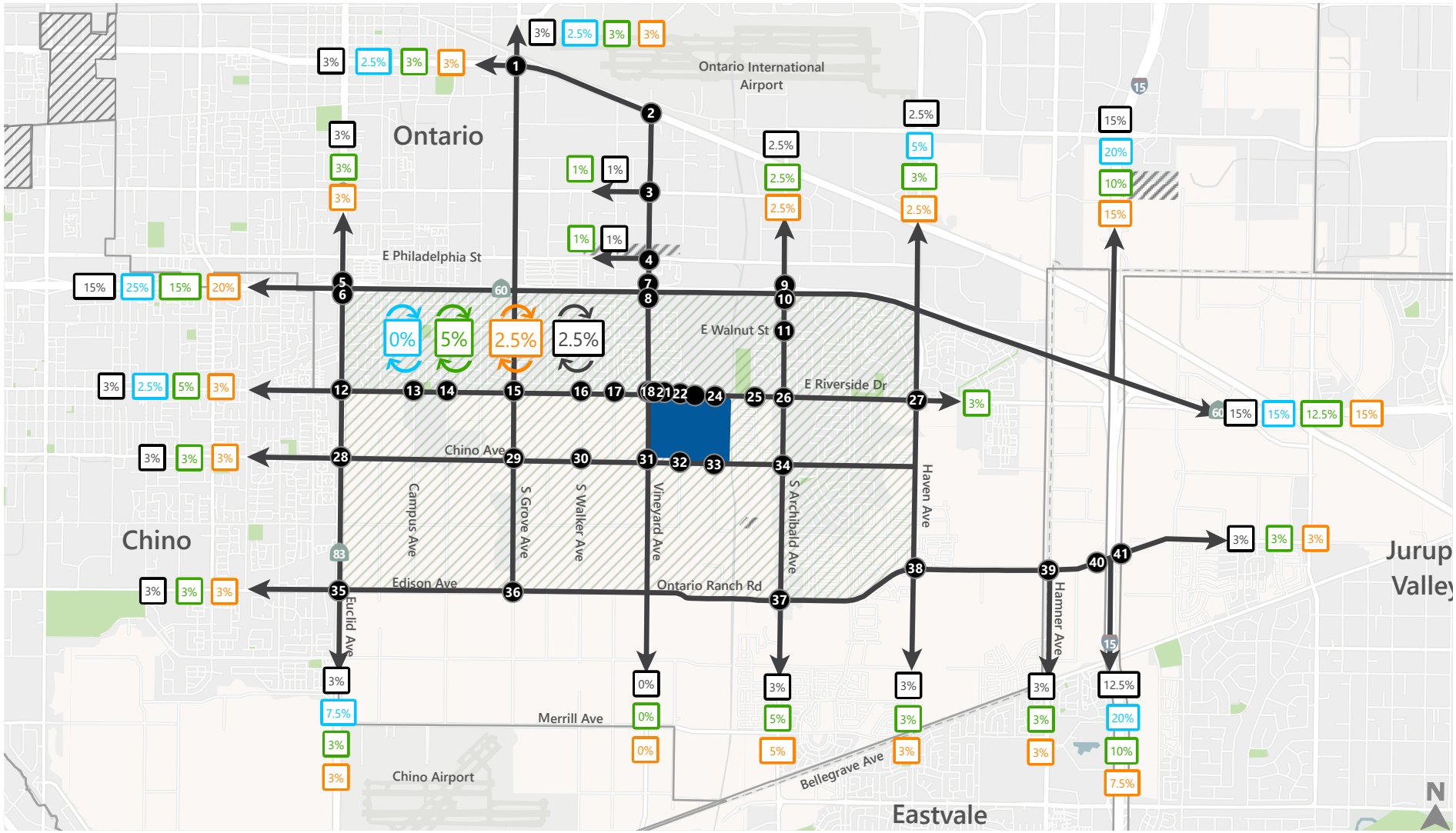
5.3.1 Trip Distribution

Project trip distribution refers to the directions of approach and departure that vehicles would use to travel to and from the Project site. Local knowledge of the study area, travel pattern data and statistics, The Ontario Plan travel demand model (SBTAM), and professional judgment were used to develop a Project trip distribution for the respective trip generators. Trip distribution was estimated for both opening year (2026) and cumulative year (2050) scenarios. The cumulative year trip distribution is expected to have a higher rate of trips originating and terminating in the area immediately surrounding the project site, reflecting the additional residential development zoned for the area. Currently, the adjacent land is largely agricultural and is not expected to generate many Project trips in the opening year.

Trips were grouped into four types for trip distribution purposes since each will have different capture audiences: stadium trips, retail trips, sports field trips, and hotel trips. The detailed trip distribution assumptions for each of the land use types are provided in **Figure 7** for Opening Year (2026) and **Figure 8** for Cumulative Year (2050) and are described below.

1. The stadium is anticipated to have a regional draw and trips are largely expected to utilize the SR-60 corridor. Trip distribution origin-destination patterns for the existing Rancho Cucamonga Quakes stadium in Rancho Cucamonga was referenced from Streetlight and from ticket purchase data to prepare the distribution assumptions.
2. The Retail trip distribution is anticipated to be more localized (for trips not already attending the events at the stadium or sports fields). A select zone model run was prepared using SBTAM to assist in determining the retail trip distribution and is provided as **Appendix D**.
3. The Sports Fields are anticipated to serve both the local Ontario community as well as the regional community throughout the Inland Empire, Orange County and broader SCAG region on a weekly basis. It is also anticipated that many tournaments on site will draw competitors from around the country.
4. The Hotel is anticipated to serve regional, longer-distance trips that are assumed to travel mostly by freeway and to and from Ontario International Airport.

The opening year (2026) Project only trip assignment for Weekdays (AM, PM, and PM with Stadium Event) and Weekends (Midday with Tournament and PM with Stadium Event) are presented in **Figure 9** and **Figure 10**, respectively. Project trip assignment for cumulative year (2050) weekday and weekend scenarios are provided in **Figure 11** and **Figure 12**, respectively.



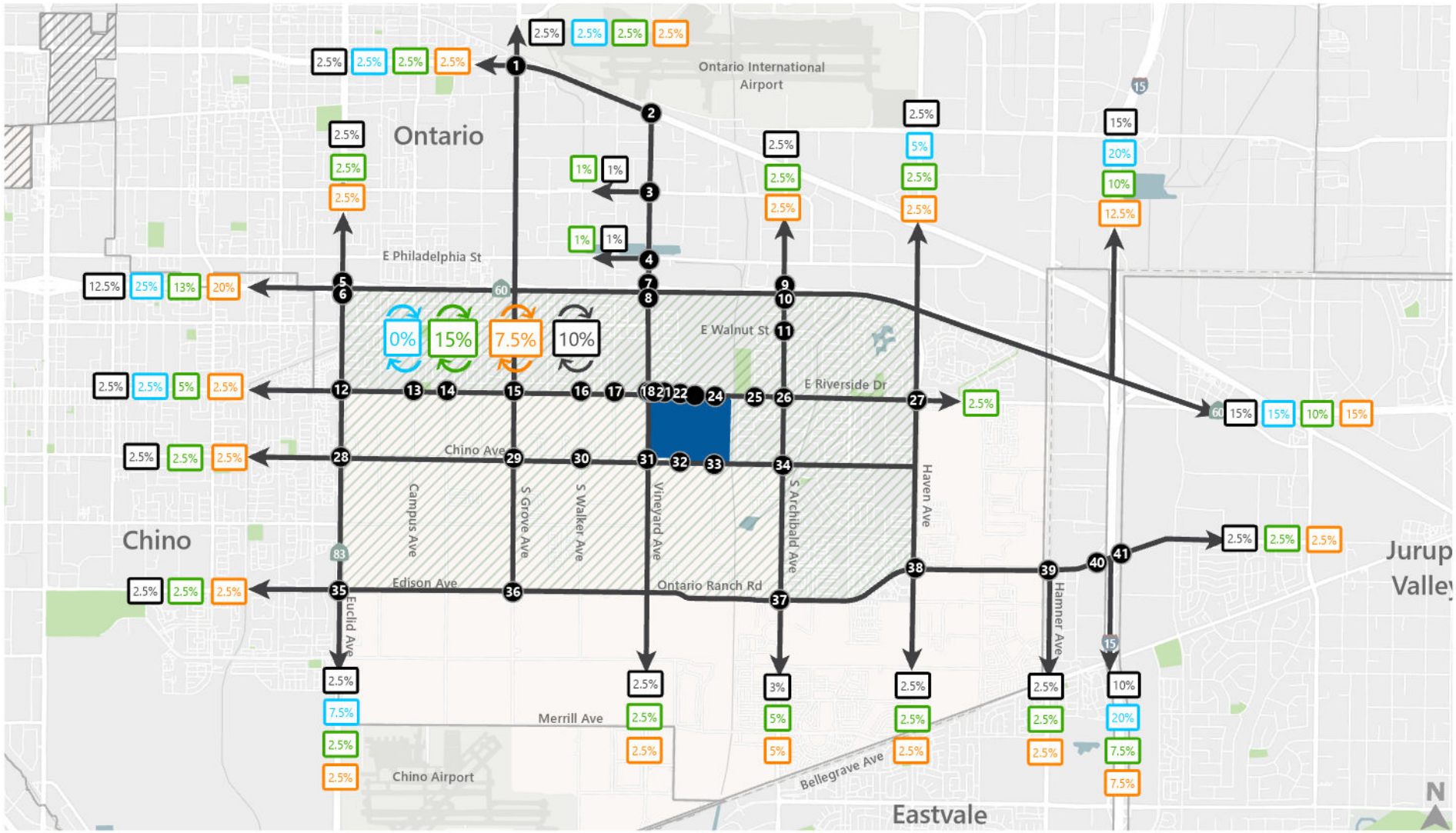
Project Site
City Boundaries
Study Intersections
Unincorporated San Bernardino County

x% Stadium Trips
x% Hotel Trips
x% Retail Trips
x% Recreation/Sports Field Trips

Surrounding Project Area
Travel Routes
Trips Beginning/Ending within Surrounding Project Area

Figure 7

Ontario Sports Park Trip Distribution (Opening Year, 2026)



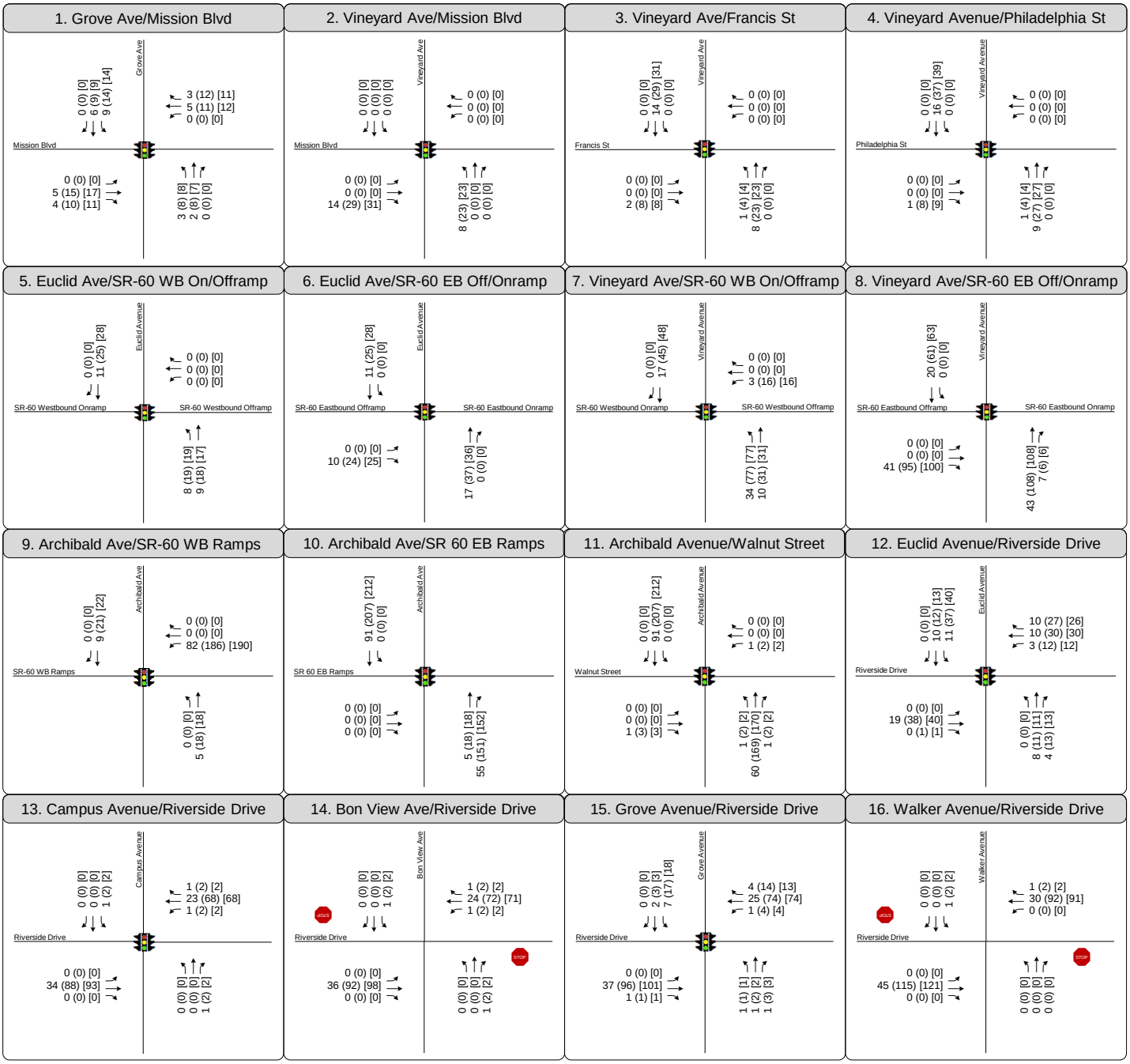
Project Site
City Boundaries
Study Intersections
Unincorporated San Bernardino County

x% Stadium Trips
x% Hotel Trips
x% Retail Trips
x% Recreation/Sports Field Trips

Surrounding Project Area
Travel Routes
Trips Beginning/Ending within Surrounding Project Area

Figure 8

Ontario Sports Park Trip Distribution (Cumulative Year, 2050)



LEGEND

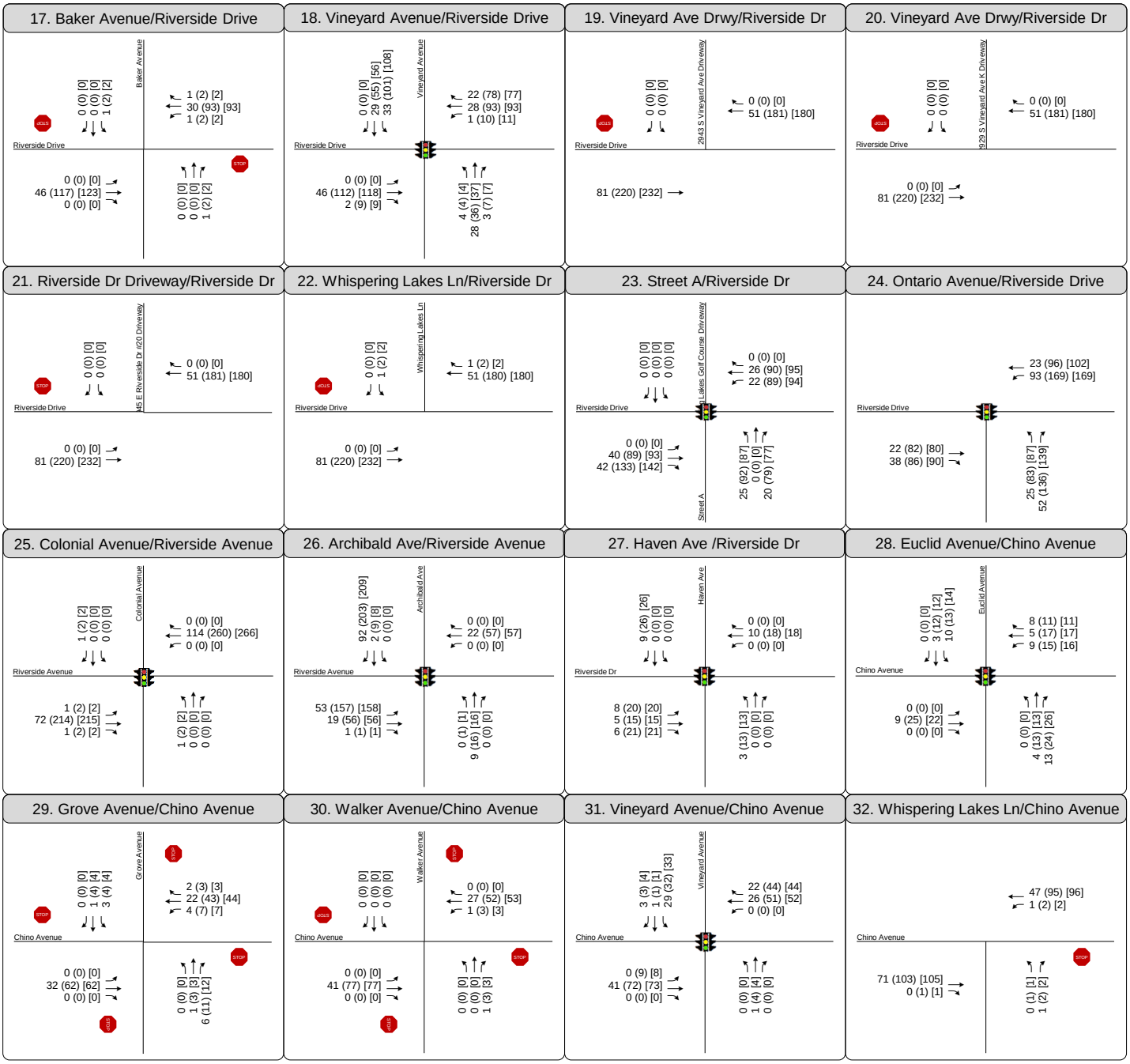
##	Weekday AM
(##)	Weekday PM
[##]	Weekday PM Stadium Event
	Movement
	Stop Sign
	Signalized

Figure 9

Traffic Volumes

Opening Year Weekday AM, PM, and PM with Stadium Event

Intersections 1-16



LEGEND

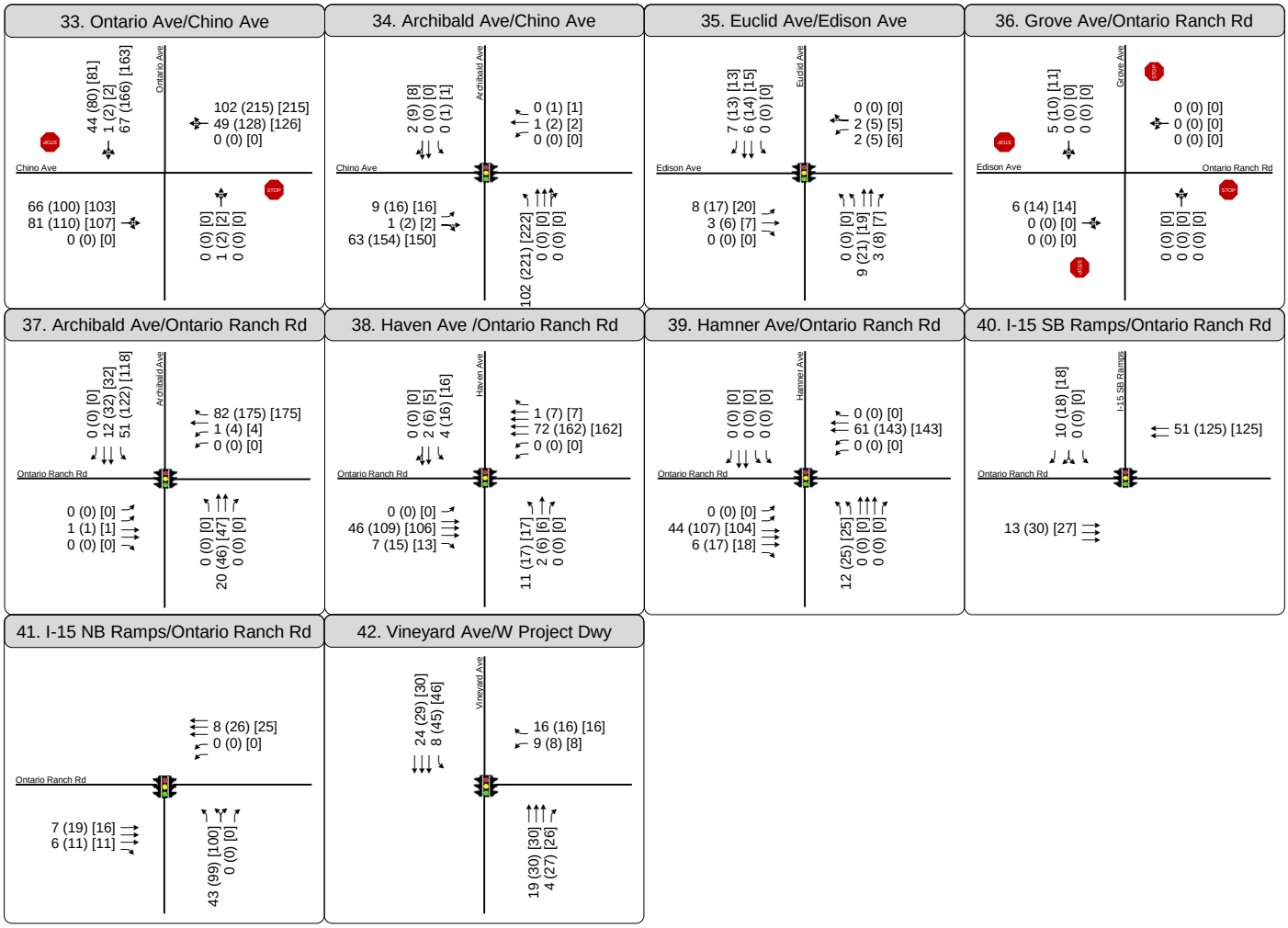
##	Weekday AM
(##)	Weekday PM
[##]	Weekday PM Stadium Event
	Movement
	Stop Sign
	Signalized

Figure 9

Traffic Volumes

Opening Year Weekday AM, PM, and PM with Stadium Event

Intersections 17-32



LEGEND

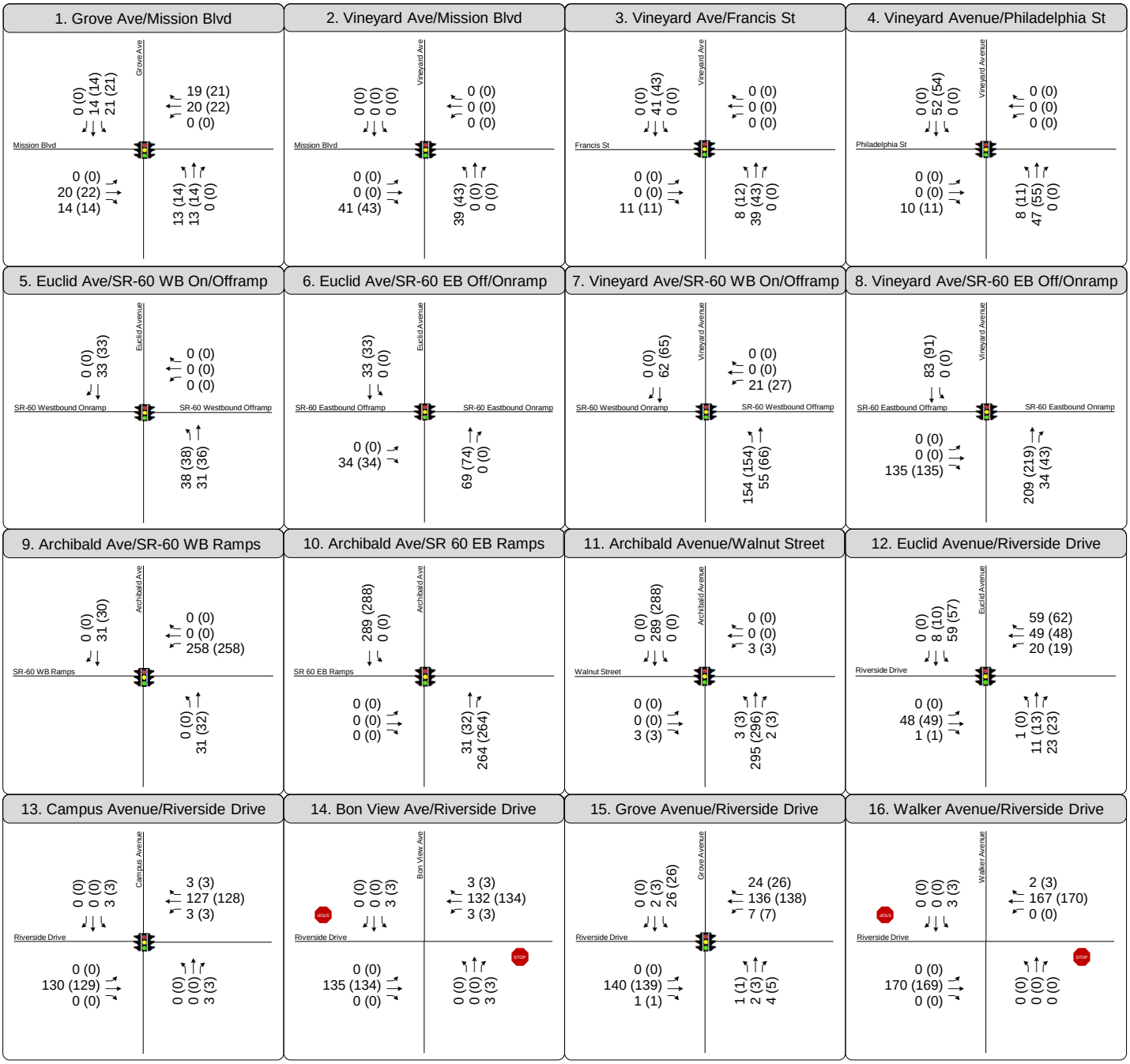
##	Weekday AM
(##)	Weekday PM
[##]	Weekday PM Stadium Event
	Movement
	Stop Sign
	Signalized

Figure 9

Traffic Volumes

Opening Year AM, PM, and PM with Stadium

Intersections 33-42



LEGEND

(##) Weekend MD w/ Tournament

Weekend PM w/ stadium Event

Movement

Stop Sign

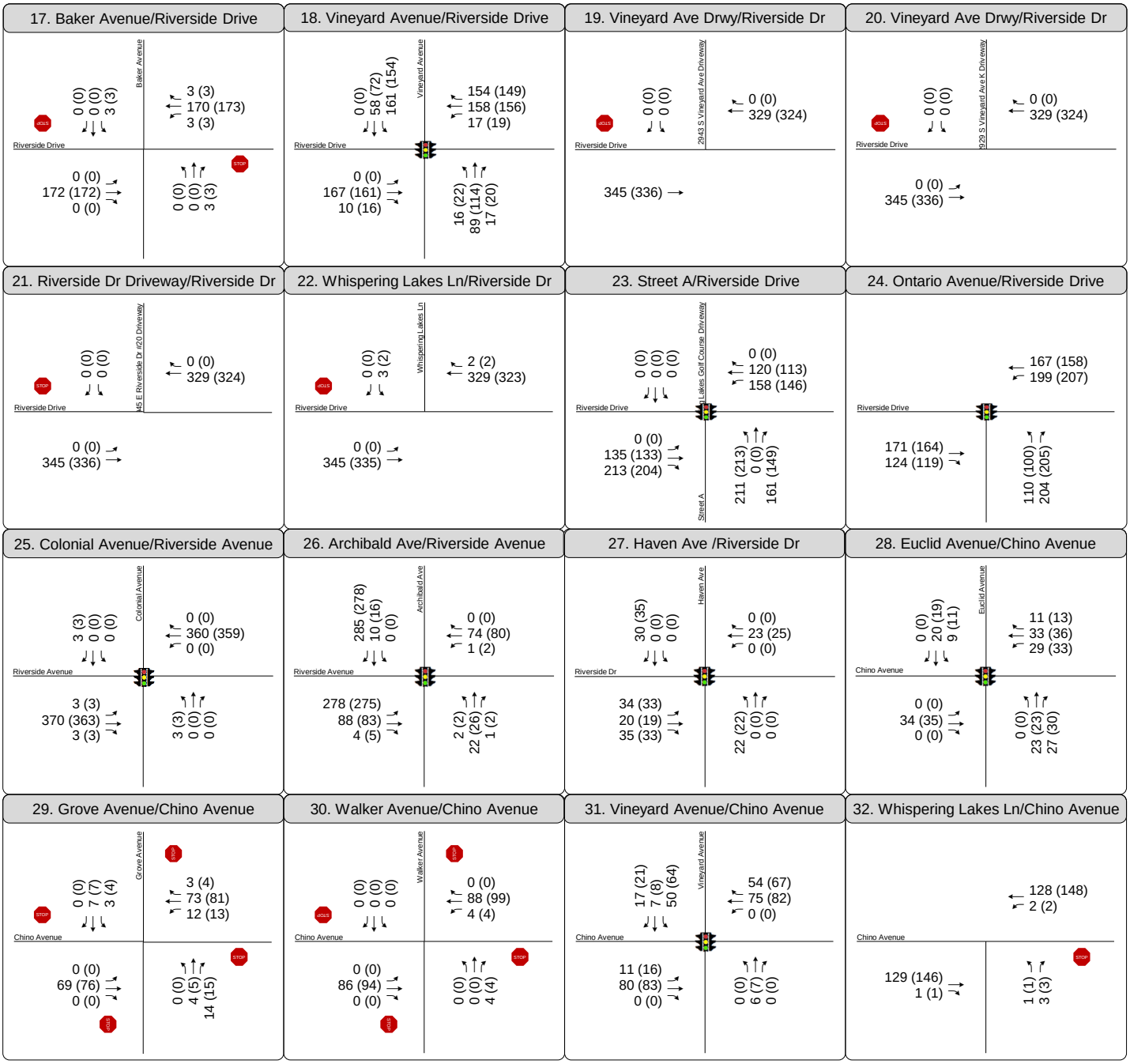
Signalized

Figure 10

Traffic Volumes

Opening Year Weekend PM with Stadium Event and MD with Tournament

Intersections 1-16



LEGEND

(##) Weekend MD w/ Tournament

Weekend PM w/ Stadium Event

Movement

Stop Sign

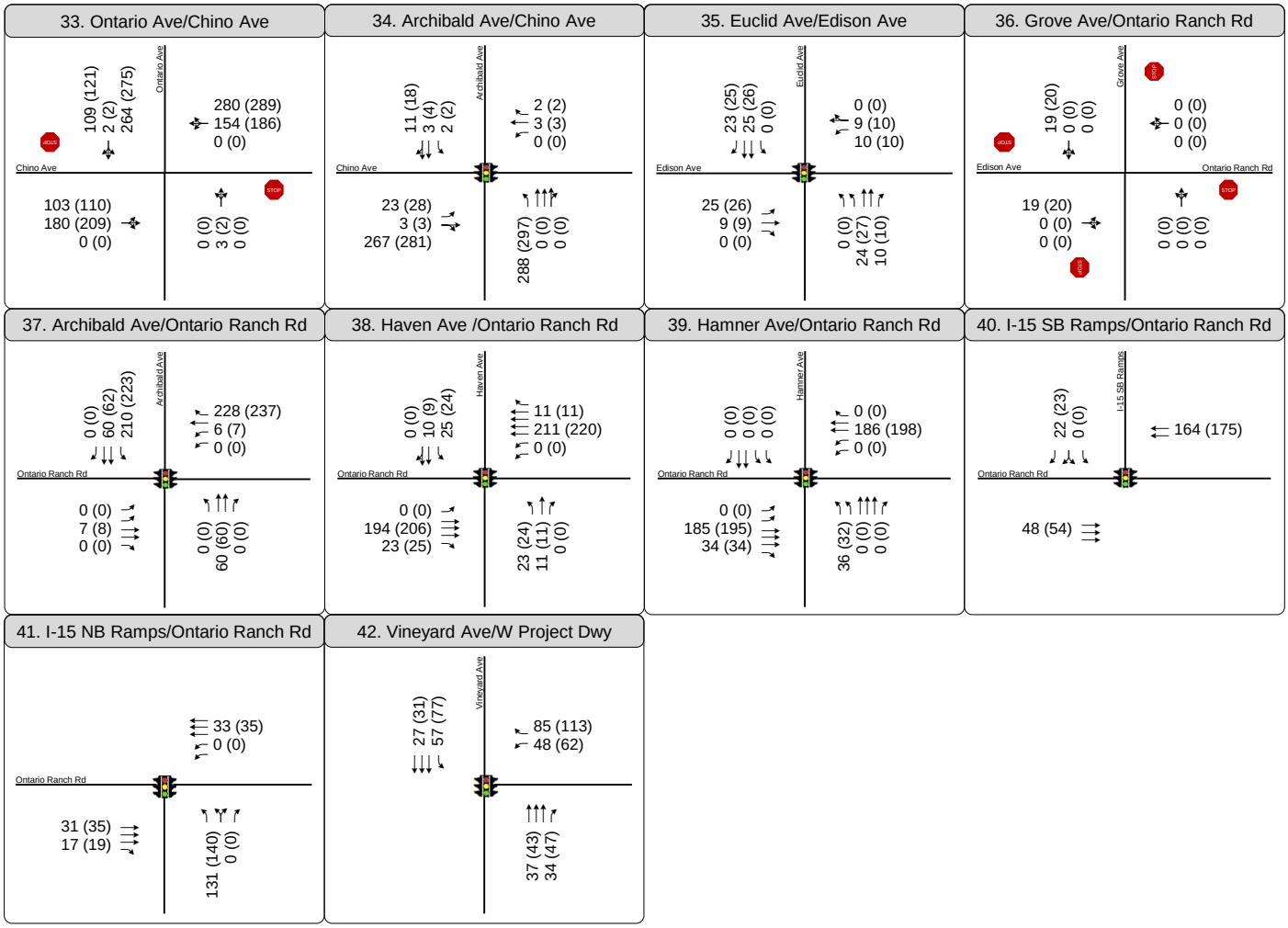
Signalized

Figure 10

Traffic Volumes

Opening Year Weekend PM with Stadium Event and MD with Tournament

Intersections 17-32



LEGEND

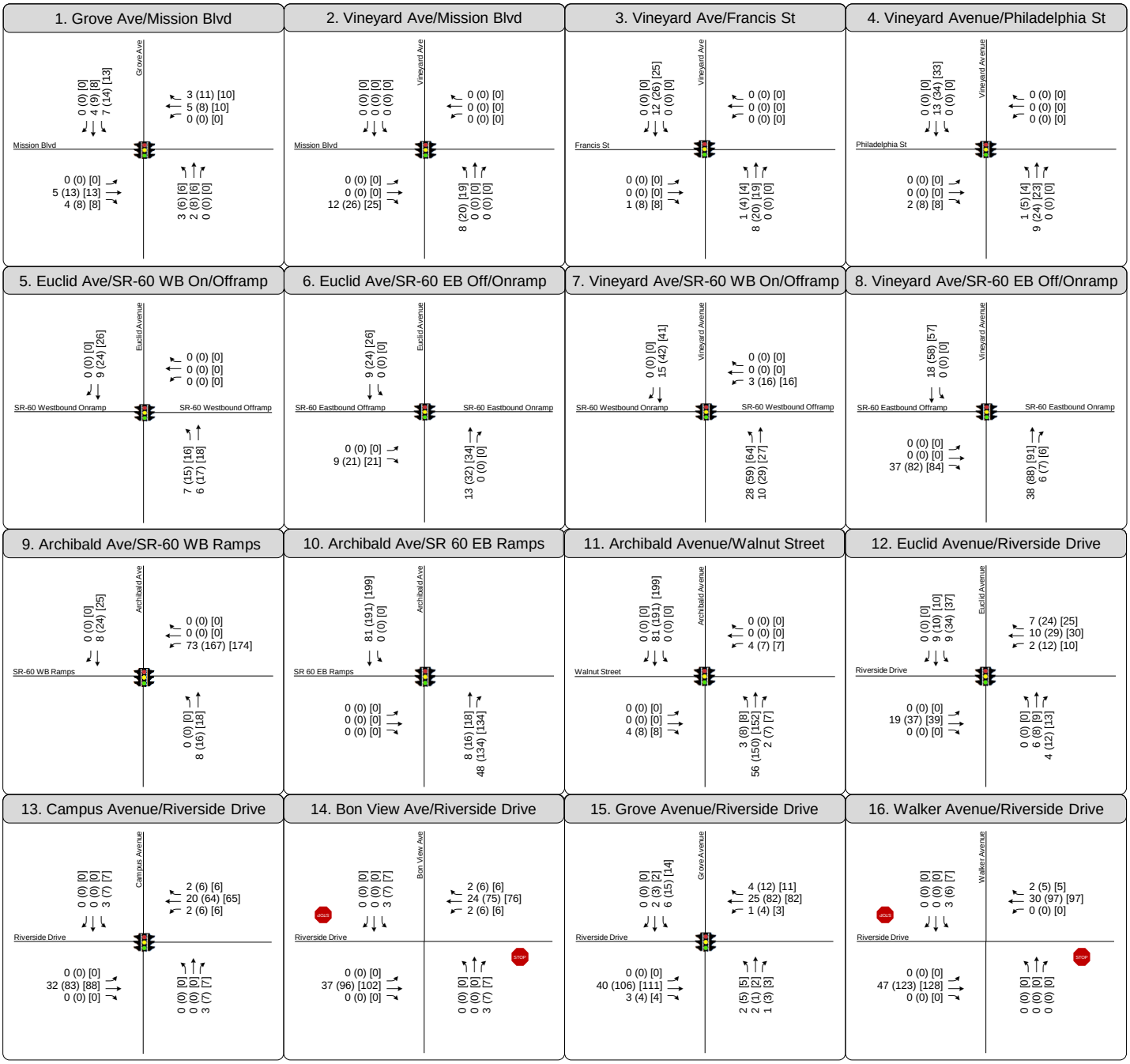
(##)	Weekend MD w/ Tournament
##	Weekend PM w/ Stadium Event
	Movement
	Stop Sign
	Signalized

Figure 10

Traffic Volumes

Opening Year Weekend PM with Stadium Event and MD with Tournament

Intersections 33-42



LEGEND

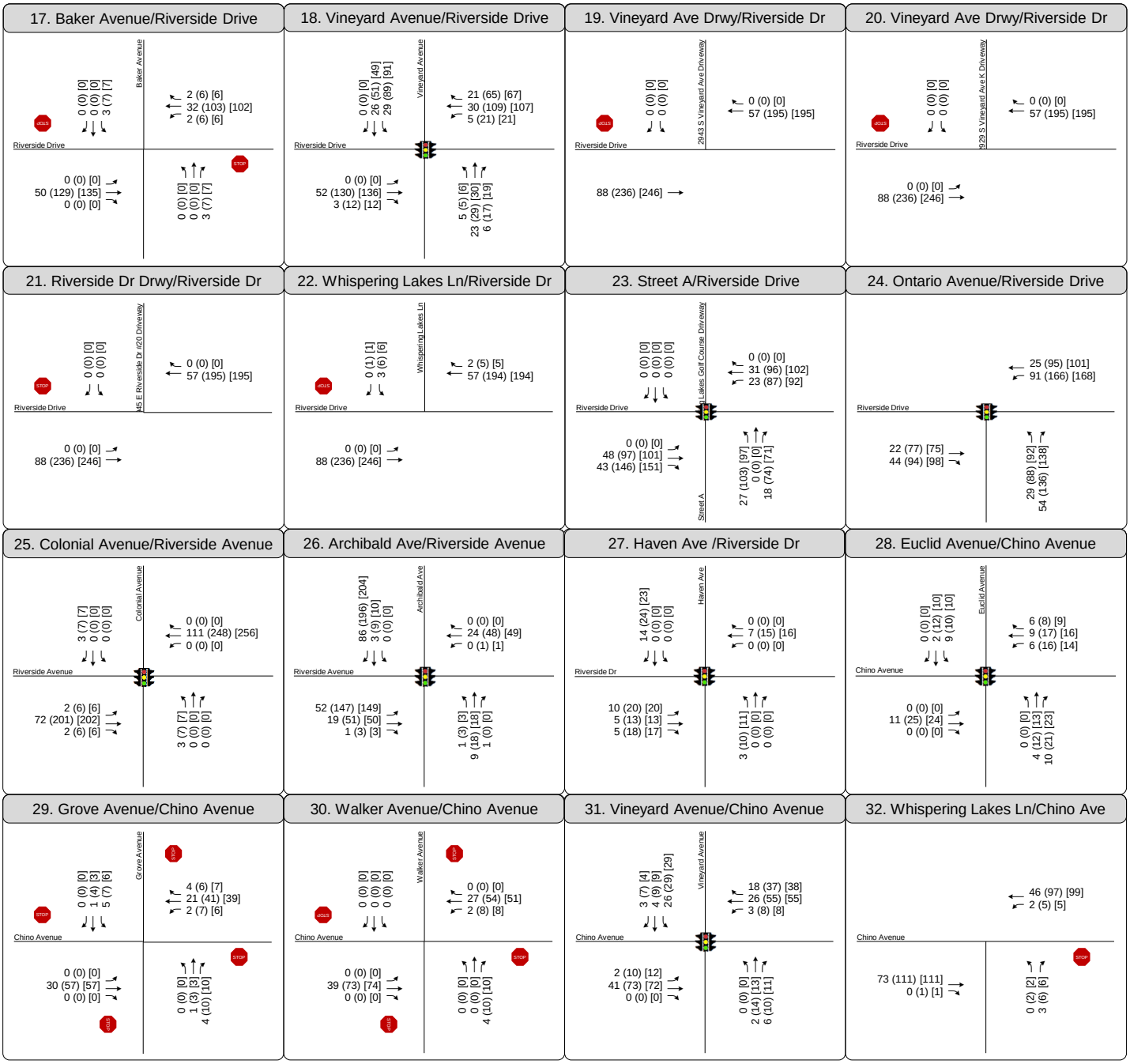
##	Weekday AM
(##)	Weekday PM
[##]	Weekday PM Stadium Event
	Movement
	Stop Sign
	Signalized

Figure 11

Traffic Volumes

Cumulative Year Weekday AM, PM, and PM with Stadium Event

Intersections 1-16



LEGEND

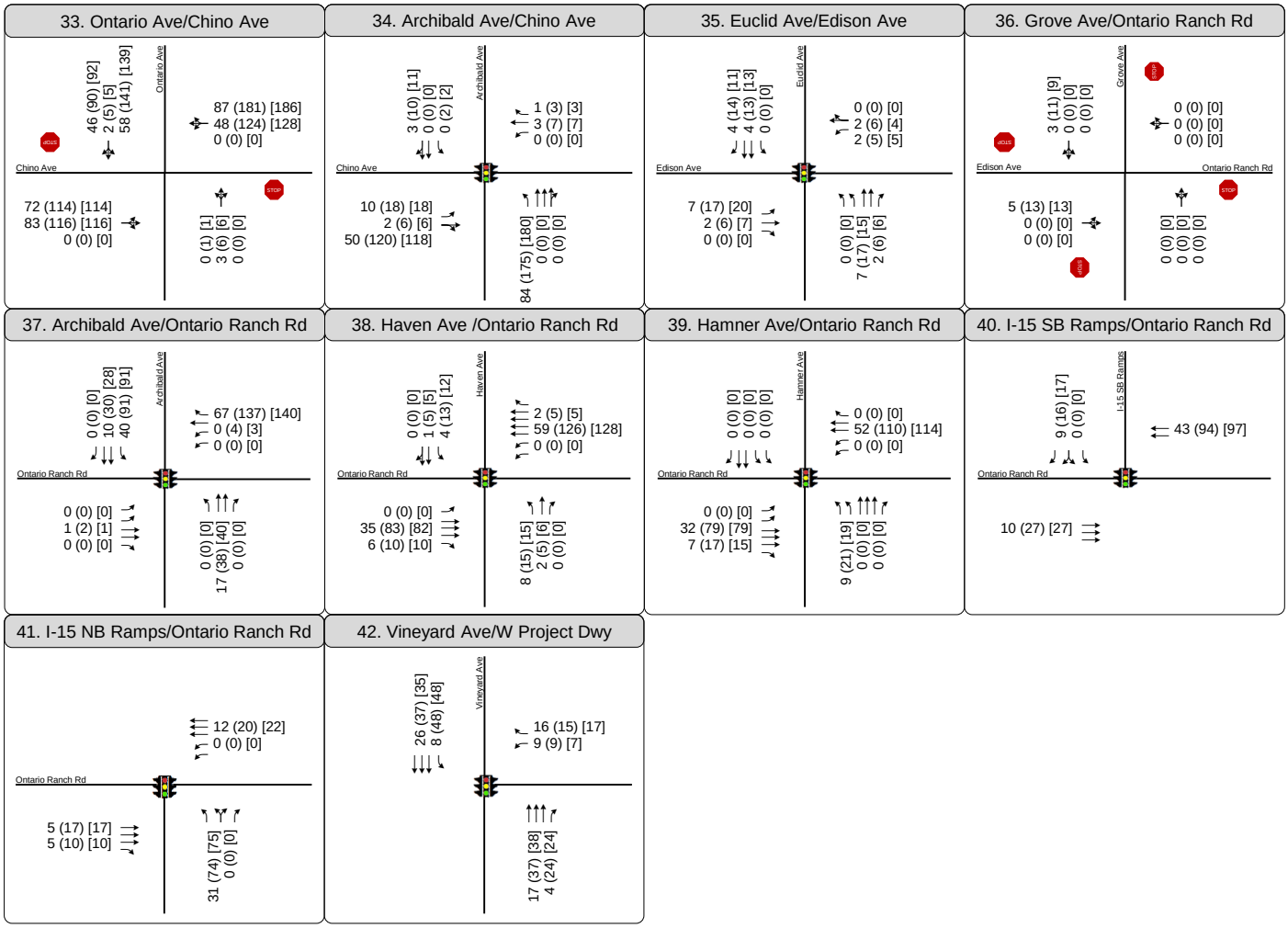
##	Weekday AM
(##)	Weekday PM
[##]	Weekday PM Stadium Event
	Movement
	Stop Sign
	Signalized

Figure 11

Traffic Volumes

Cumulative Year Weekday AM, PM, and PM with Stadium Event

Intersection 17-32



LEGEND

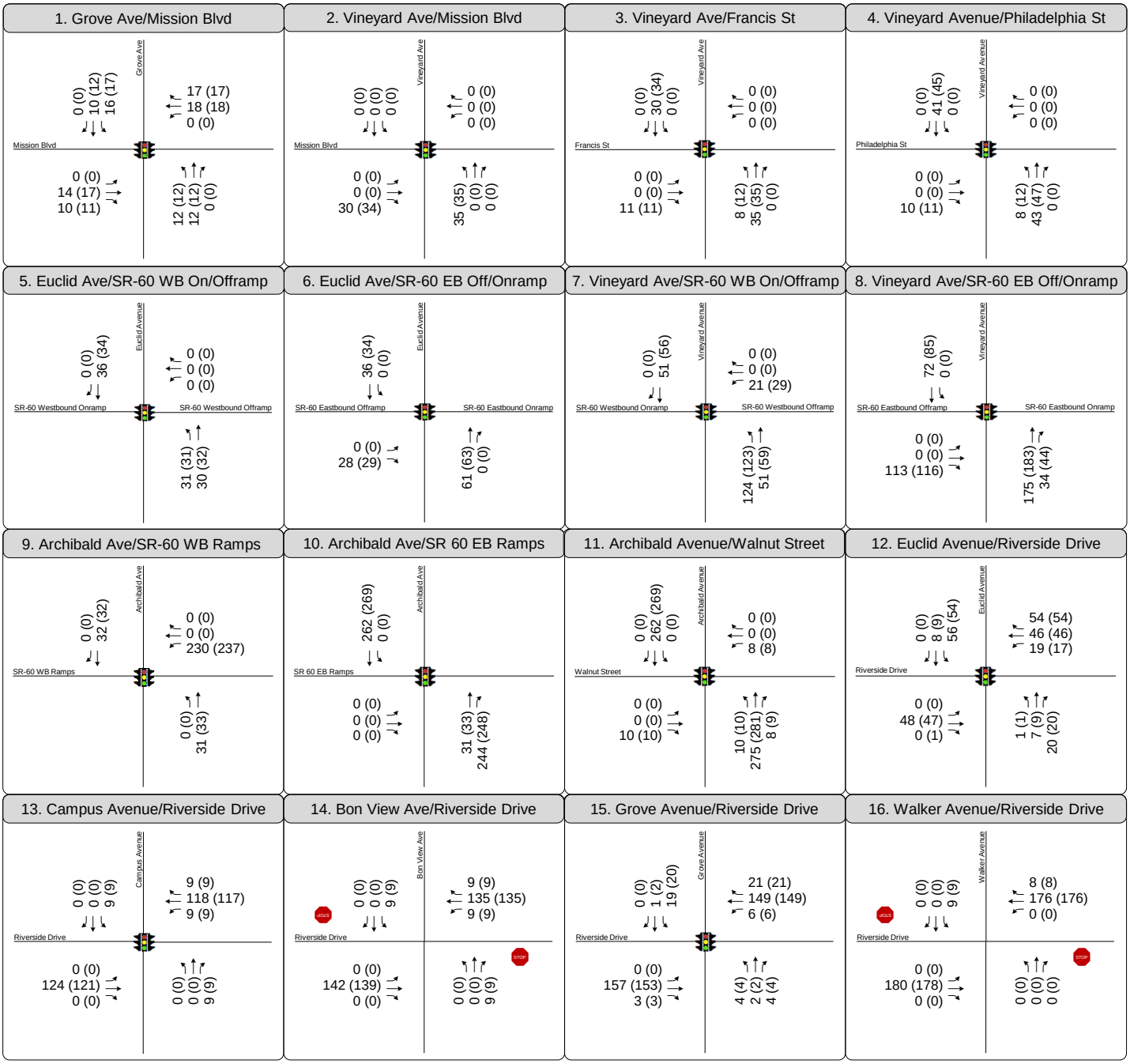
##	Weekday AM
(##)	Weekday PM
[##]	Weekday PM Stadium Event
	Movement
	Stop Sign
	Signalized

Figure 11

Traffic Volumes

Cumulative Year Weekday AM, PM, and PM with Stadium Event

Intersection 33-42



LEGEND

(##) Weekend MD w/ Tournament

Weekend PM Stadium Event

Movement

Stop Sign

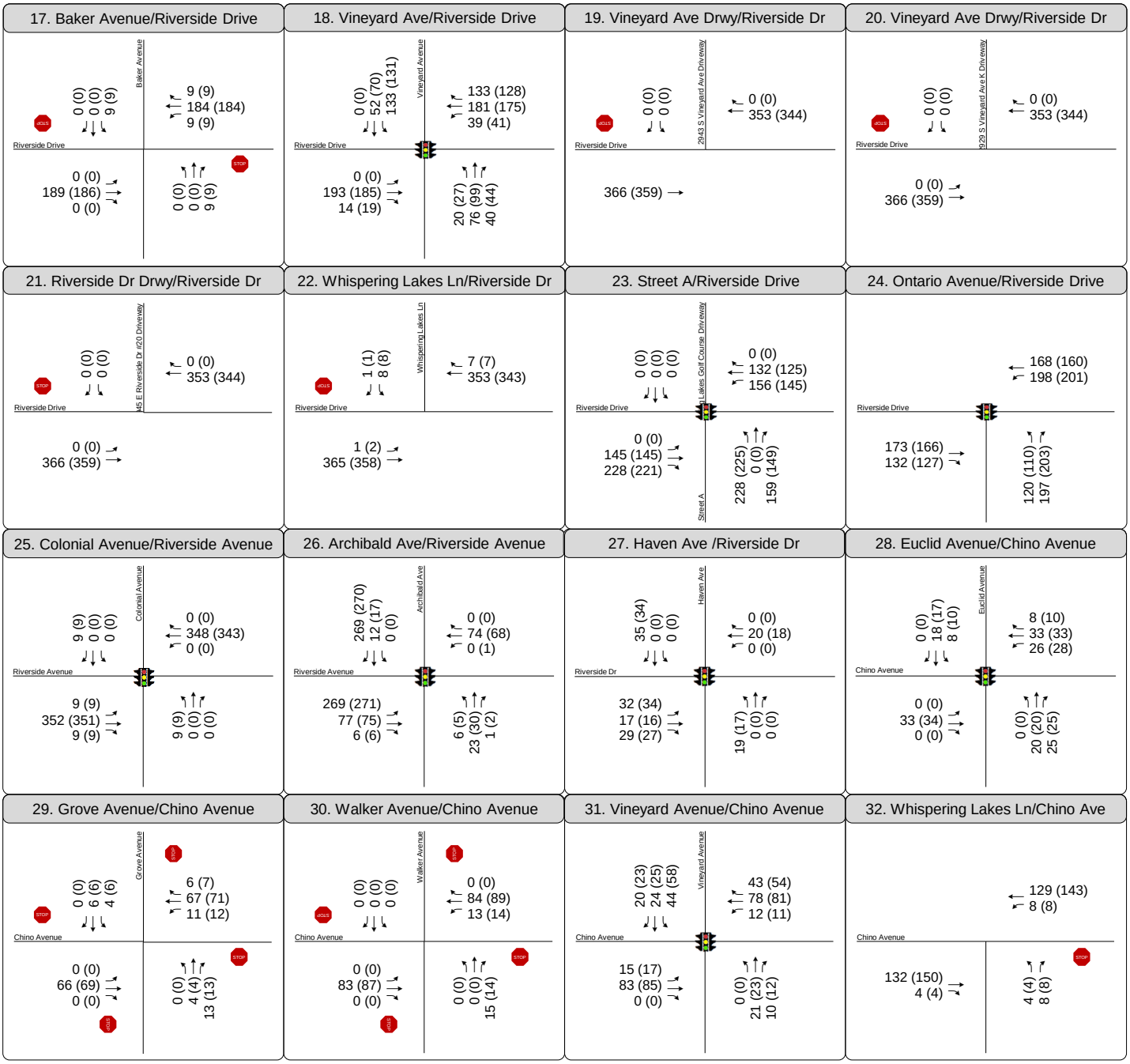
Signalized

Figure 12

Traffic Volumes

Cumulative Year Weekend PM with Stadium Event and MD with Tournament

Intersections 1-16



LEGEND

(##) Weekend MD w/ Tournament

Weekend PM Stadium Event

Movement

Stop Sign

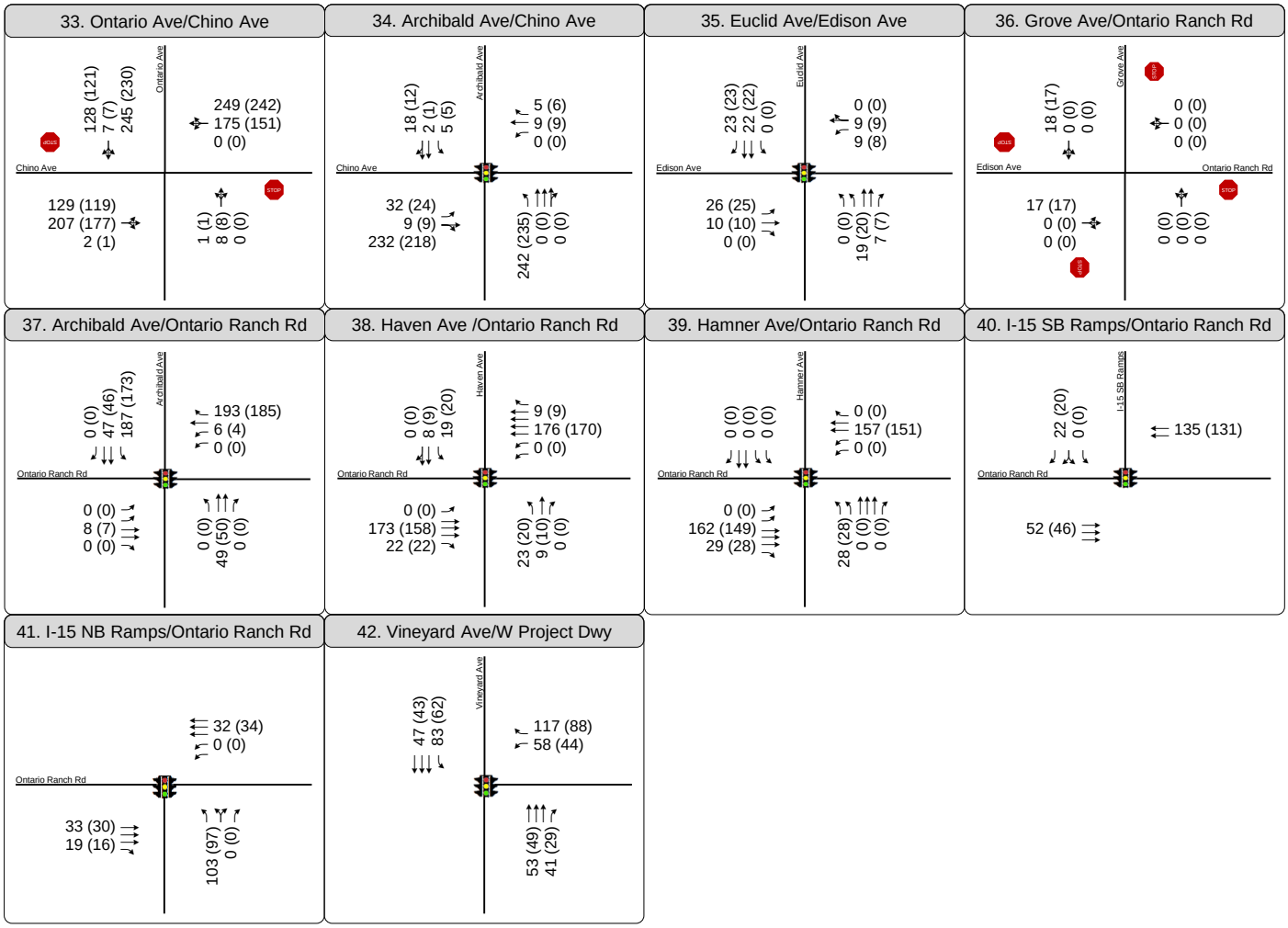
Signalized

Figure 12

Traffic Volumes

Cumulative Year Weekend PM with Stadium Event and MD with Tournament

Intersections 17-32



LEGEND

MD (PM) Peak Hour Traffic Volume

Lane Configuration

Stop Sign

Signalized

Figure 12

Traffic Volumes

Cumulative Year Weekend PM with Stadium Event and MD with Tournament

Intersections 33-42

6. Level of Service (LOS) Analysis

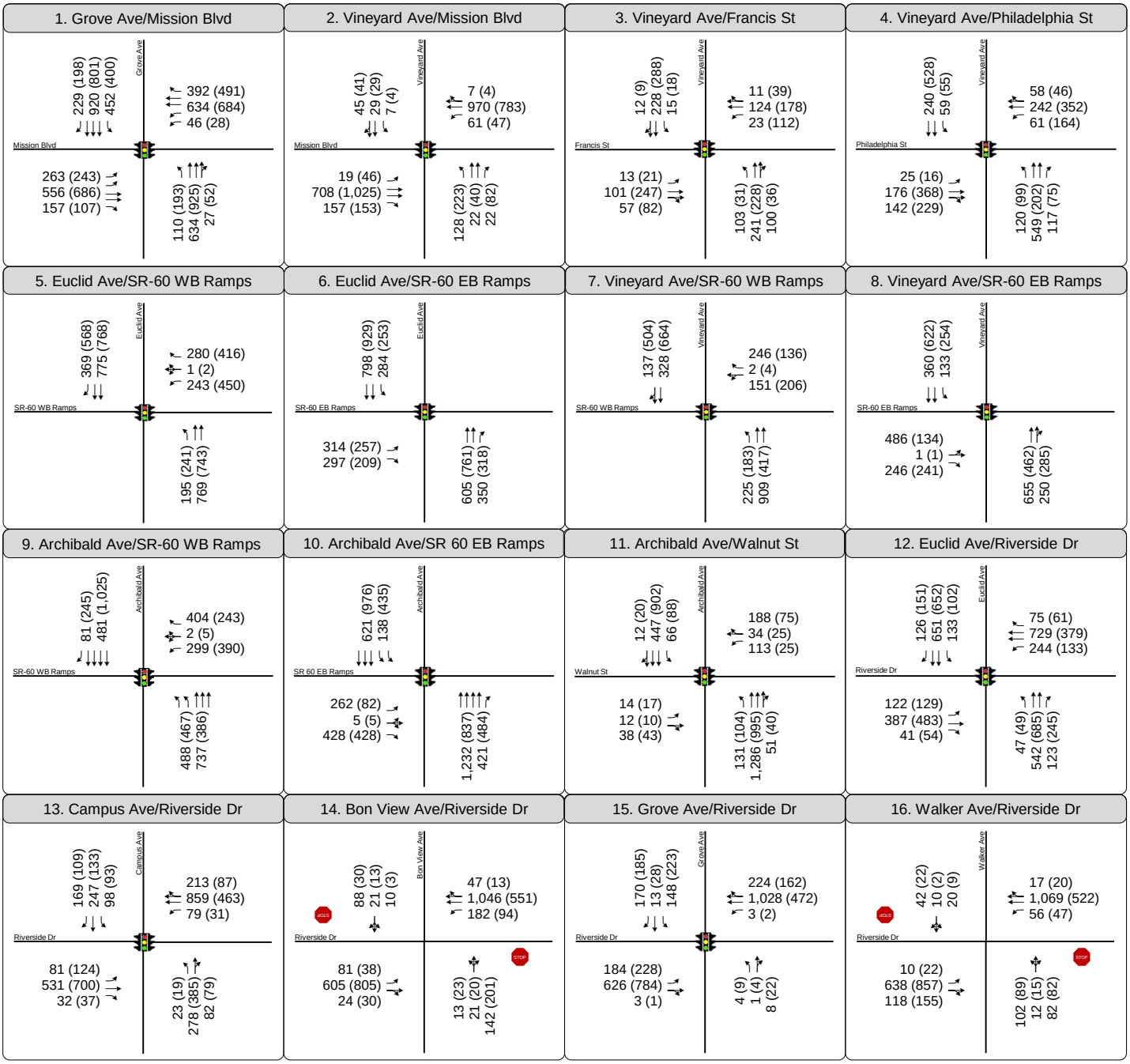
6.1 Existing (2023) Conditions Intersection Operations Analysis

This chapter summarizes the study area operations under Existing (2023) Conditions. The Existing (2023) No Project traffic volumes developed in Chapter 4 are presented in **Figure 13** (Weekday AM and PM) and **Figure 14** (Weekend Midday and PM). These traffic volumes along with existing intersection lane configurations were used to calculate the LOS for the study intersections during each peak hour. The findings of this analysis are presented in **Table 6** and detailed intersection LOS worksheets are presented in **Appendix F**.

Under Existing (2023) conditions, all intersections operate at LOS E or better on the weekends during midday and PM peak hours and most intersections operate at LOS E or better during typical AM and PM peak hours except for the following intersections that currently operate at LOS F:[7]

14. Bon View Avenue and Riverside Drive (Weekday PM)
16. Walker Avenue and Riverside Drive (Weekday AM and Weekday PM)
17. Baker Avenue and Riverside Drive (Weekday AM)
20. 2929 Vineyard Avenue Driveway and Riverside Drive (Weekday AM and Weekday PM)
22. Whispering Lakes Lane and Riverside Drive (Weekday AM and Weekday PM)
23. Whispering Lakes Golf Course Driveway and Riverside Drive (Weekday AM)
24. Ontario Avenue and Riverside Drive (Weekday PM)
41. I-15 Northbound and Cantu-Galleano Ranch Road (Weekday AM and Weekday PM)

[7] Except for Intersection 41. I-15 Northbound and Cantu-Galleano Ranch Road, the intersections operating at LOS F are side-street stop-controlled intersections, where the worst delay is reported.



LEGEND

AM (PM) Peak Hour Traffic Volume

Lane Configuration

Stop Sign

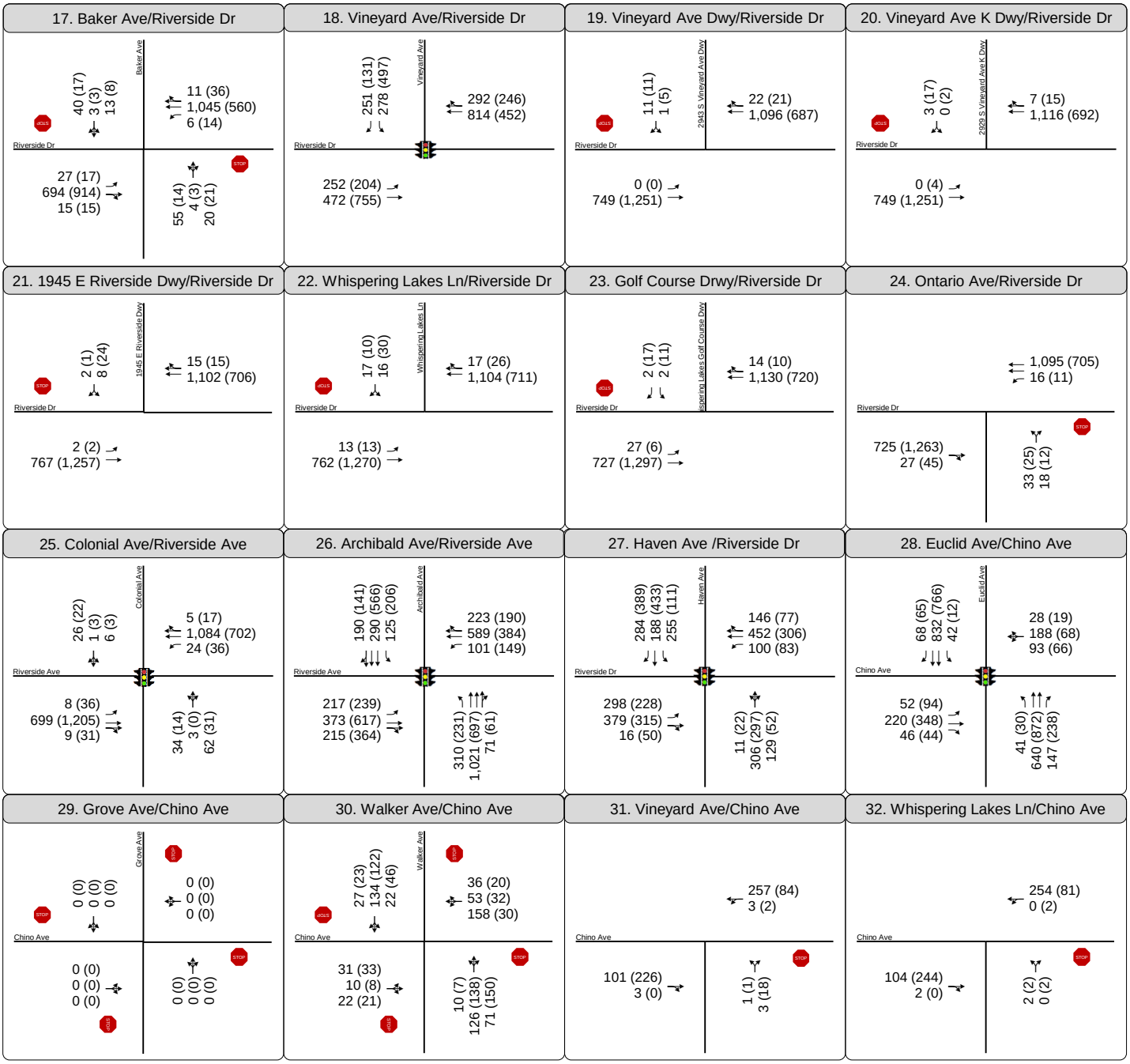
Signalized

Figure 13

Traffic Volumes

Existing Weekday AM and PM

Intersections 1-16



LEGEND

AM (PM) Peak Hour Traffic Volume

Lane Configuration

Stop Sign

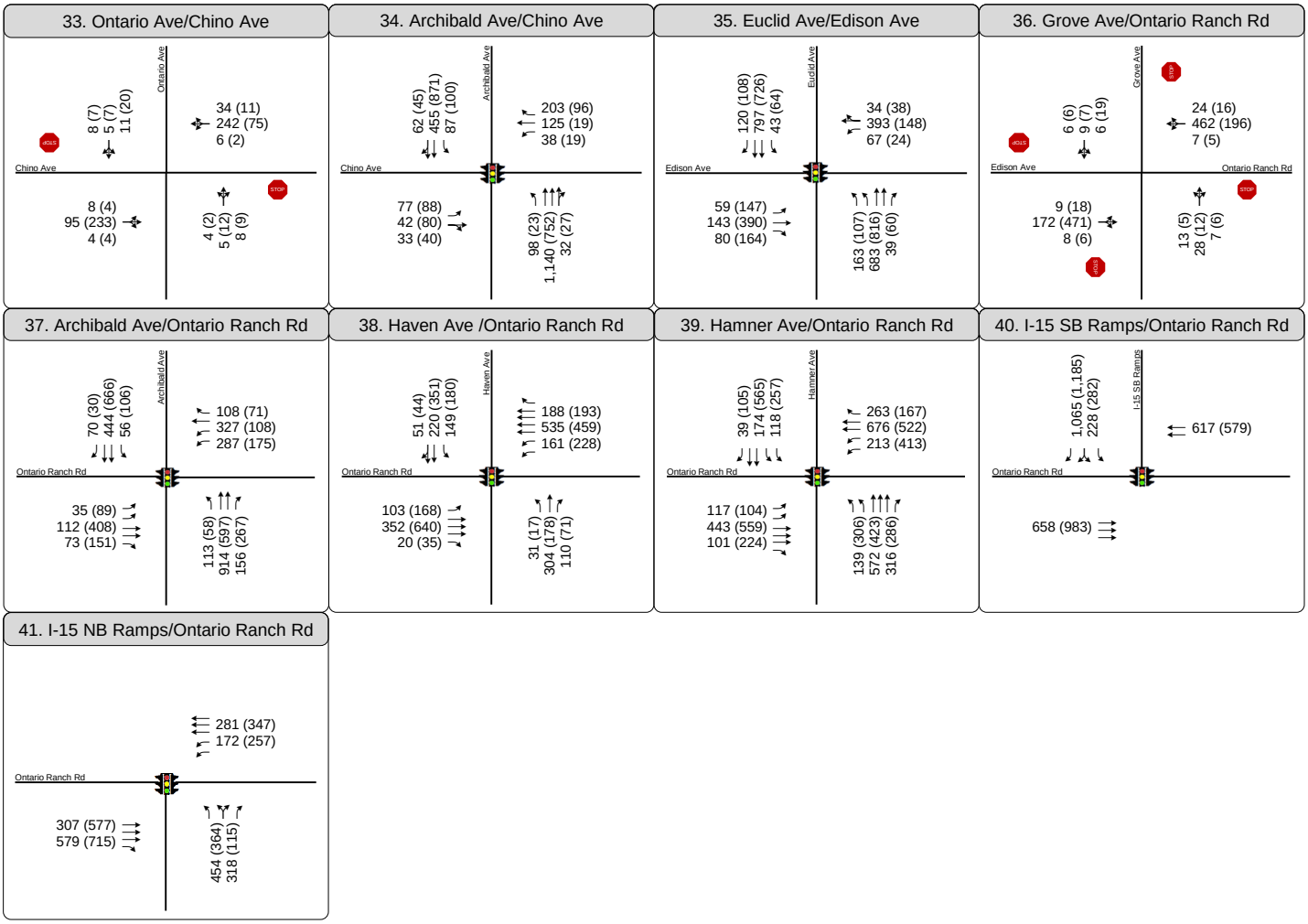
Signalized

Figure 13

Traffic Volumes

Existing Weekday AM and PM

Intersections 17-32



LEGEND

AM (PM)	Peak Hour Traffic Volume
	Lane Configuration
STOP	Stop Sign
	Signalized

Figure 13

Traffic Volumes

Existing Weekday AM and PM

Intersections 33-41

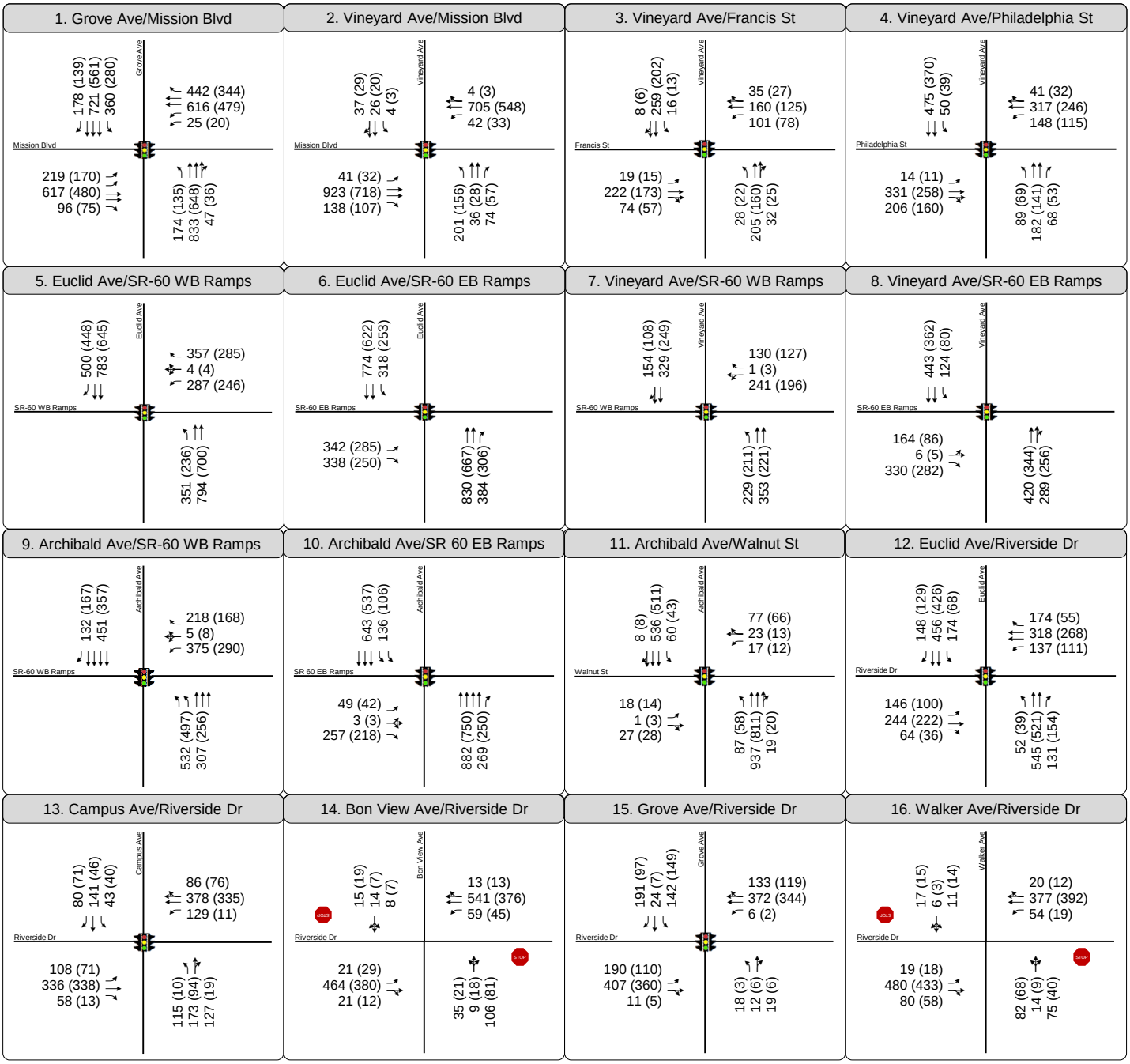
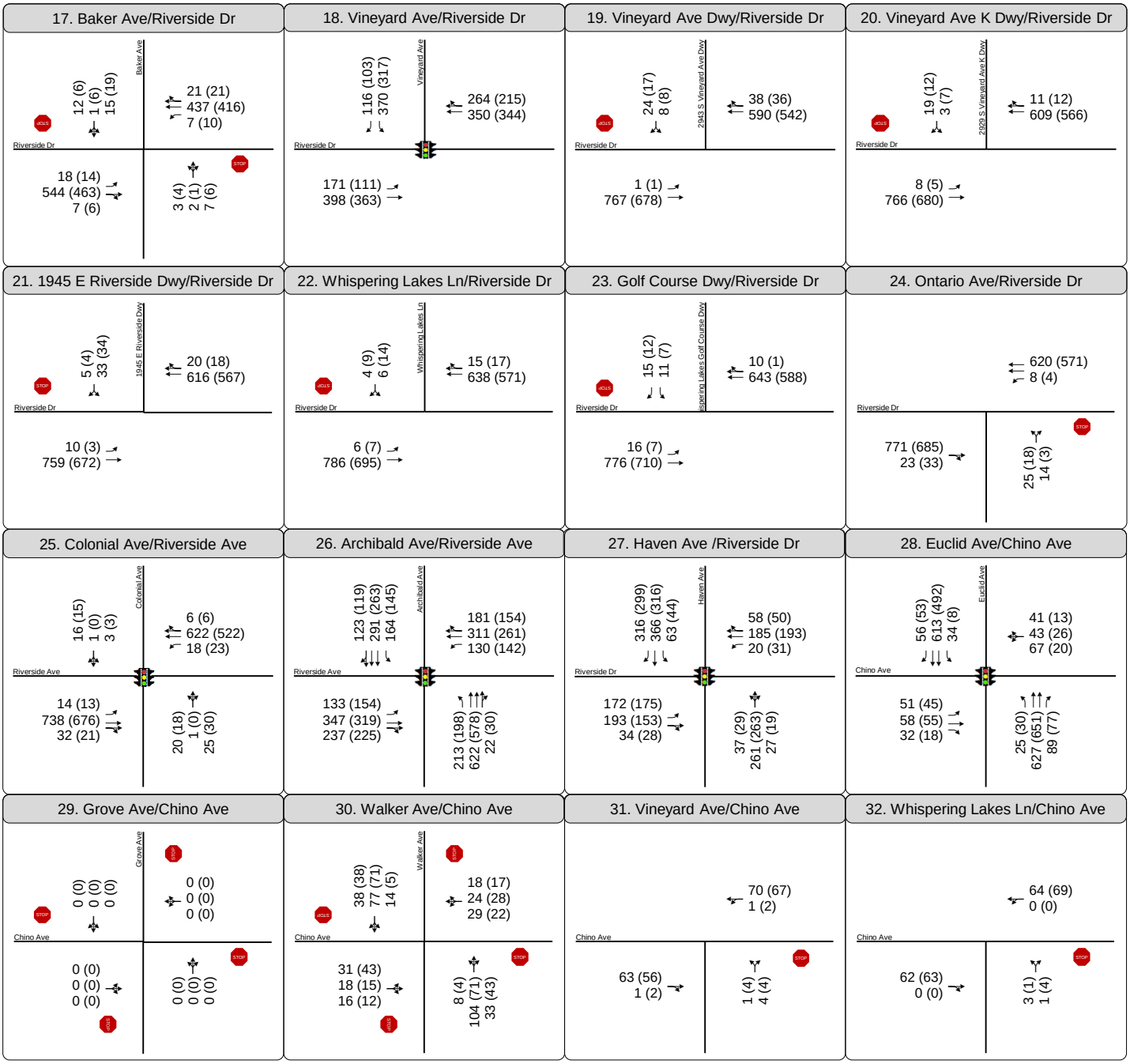


Figure 14

Traffic Volumes

Existing Weekend MD and PM

Intersections 1-16



LEGEND

AM (PM) Peak Hour Traffic Volume

Lane Configuration

Stop Sign

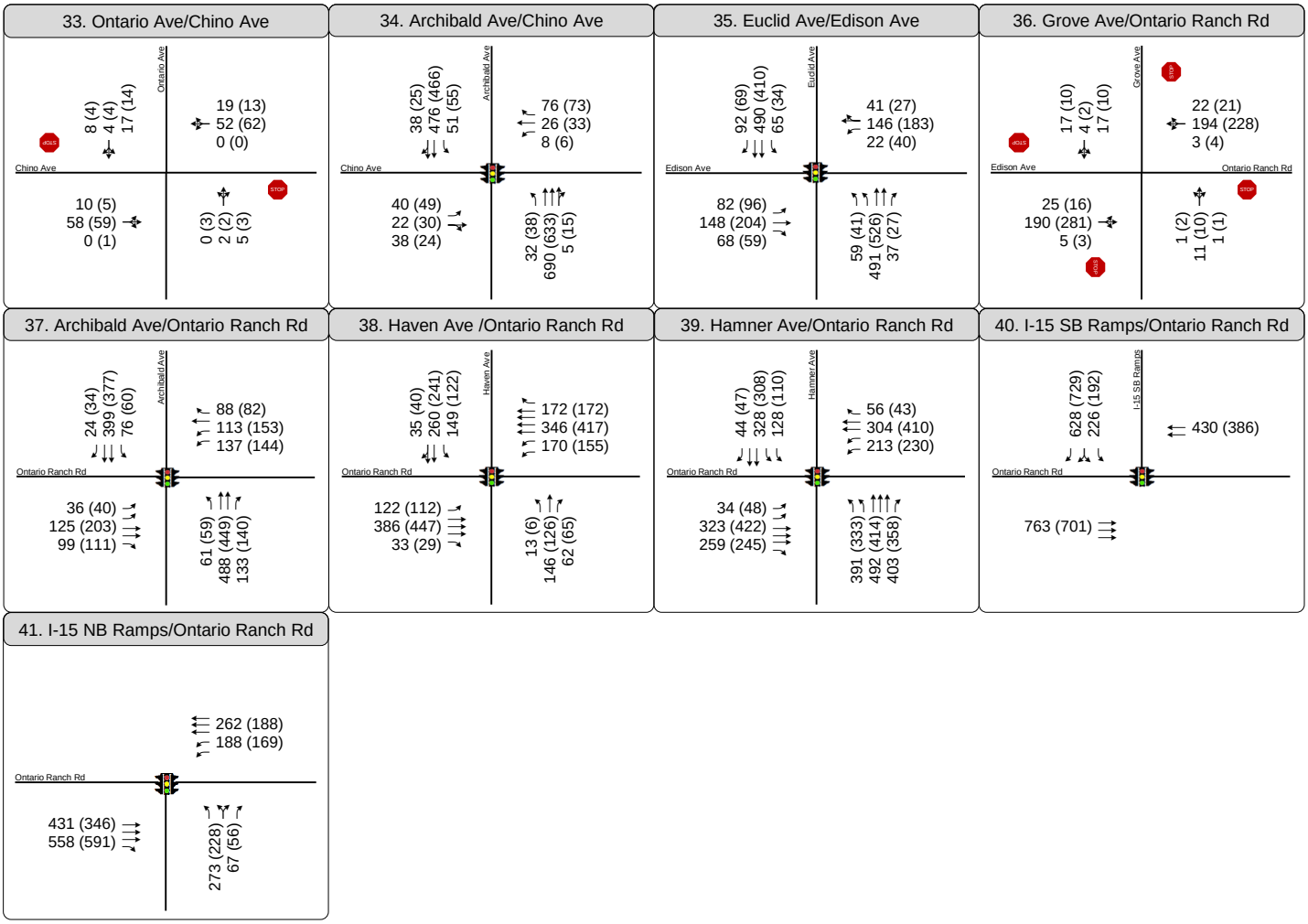
Signalized

Figure 14

Traffic Volumes

Existing Weekend MD and PM

Intersection 17-32



LEGEND

AM (PM) Peak Hour Traffic Volume

Lane Configuration

Stop Sign

Signalized

Figure 14

Traffic Volumes

Existing Weekend MD and PM

Intersections 33-41

Table 6: Existing (2023) Intersection Level of Service

Intersection Number	Intersection	Existing Control	Peak Hour	Existing Conditions LOS	Existing Conditions Delay (s)
1	Grove Avenue and Mission Boulevard	Signalized	AM	E	56.2
			PM	D	55
			PM Stadium	-	-
			Weekend MD	D	51.9
			Weekend PM	D	37.2
2	Vineyard Avenue and Mission Boulevard	Signalized	AM	B	15.9
			PM	B	19.2
			PM Stadium	-	-
			Weekend MD	B	18
			Weekend PM	B	15.1
3	Vineyard Avenue and Francis Street	Signalized	AM	B	17.7
			PM	C	20.3
			PM Stadium	-	-
			Weekend MD	B	19.2
			Weekend PM	B	18
4	Vineyard Avenue and Philadelphia Street	Signalized	AM	C	23.2
			PM	C	33.2
			PM Stadium	-	-
			Weekend MD	C	28.3
			Weekend PM	C	24.6
5	Euclid Avenue and Westbound SR-60 On/Off Ramps	Signalized	AM	C	20.8
			PM	C	20.7
			PM Stadium	-	-
			Weekend MD	B	18.9
			Weekend PM	B	14.8
6	Euclid Avenue and Eastbound SR-60 On/Off Ramps	Signalized	AM	C	21
			PM	C	25.4
			PM Stadium	-	-
			Weekend MD	C	24.1
			Weekend PM	B	17.8
7	Vineyard Avenue and Westbound SR-60 On/Off Ramps	Signalized	AM	B	12.6
			PM	B	18.4
			PM Stadium	-	-
			Weekend MD	C	25.1
			Weekend PM	B	14.2
8	Vineyard Avenue and Eastbound SR-60 On/Off Ramps	Signalized	AM	C	32
			PM	B	19.3
			PM Stadium	-	-
			Weekend MD	B	13.4
			Weekend PM	B	11.7
9	Archibald Avenue and Westbound SR-60 On/Off Ramps	Signalized	AM	C	26.9
			PM	C	23.7
			PM Stadium	-	-
			Weekend MD	C	22.9
			Weekend PM	C	20.4

Table 6: Existing (2023) Intersection Level of Service

Intersection Number	Intersection	Existing Control	Peak Hour	Existing Conditions LOS	Existing Conditions Delay (s)
10	Archibald Avenue and Eastbound SR-60 On/Off Ramps	Signalized	AM	C	20.2
			PM	C	28
			PM Stadium	-	-
			Weekend MD	C	23.1
			Weekend PM	C	22.5
11	Archibald Avenue and Walnut Avenue	Signalized	AM	B	19.1
			PM	B	15.3
			PM Stadium	-	-
			Weekend MD	B	13.6
			Weekend PM	B	12.3
12	Euclid Avenue and Riverside Drive	Signalized	AM	D	37.3
			PM	D	36.9
			PM Stadium	-	-
			Weekend MD	C	29.6
			Weekend PM	C	25.4
13	Campus Avenue and Riverside Drive	Signalized	AM	D	37.8
			PM	D	48.9
			PM Stadium	-	-
			Weekend MD	C	21.4
			Weekend PM	B	15.3
14	Bon View Avenue and Riverside Drive	SSSC	AM	**F**	**>120**
			PM	**F**	**>120**
			PM Stadium	-	-
			Weekend MD	D	33.6
			Weekend PM	C	17.7
15	Grove Avenue and Riverside Drive	Signalized	AM	E	63.7
			PM	D	51.5
			PM Stadium	-	-
			Weekend MD	C	26.8
			Weekend PM	C	25.3
16	Walker Avenue and Riverside Drive	SSSC	AM	**F**	**>120**
			PM	**F**	**>120**
			PM Stadium	-	-
			Weekend MD	D	34.2
			Weekend PM	C	21.4
17	Baker Avenue and Riverside Drive	SSSC	AM	**F**	**>120**
			PM	E	39.3
			PM Stadium	-	-
			Weekend MD	C	20.6
			Weekend PM	C	22.7
18	Vineyard Avenue and Riverside Drive	Signalized	AM	C	33.9
			PM	C	33.5
			PM Stadium	-	-
			Weekend MD	C	20.7
			Weekend PM	B	17.7

Table 6: Existing (2023) Intersection Level of Service

Intersection Number	Intersection	Existing Control	Peak Hour	Existing Conditions LOS	Existing Conditions Delay (s)
19	2943 S Vineyard Avenue Driveway and Riverside Drive	SSSC	AM	B	14.8
			PM	C	16.4
			PM Stadium	-	-
			Weekend MD	B	13.1
			Weekend PM	B	12
20	2929 S Vineyard Avenue Driveway and Riverside Drive	SSSC	AM	B	13.4
			PM	B	12.9
			PM Stadium	-	-
			Weekend MD	B	11.9
			Weekend PM	B	13.3
21	1945 E Riverside Drive #20 Driveway and Riverside Drive	SSSC	AM	D	25.7
			PM	D	29.6
			PM Stadium	-	-
			Weekend MD	C	19.5
			Weekend PM	C	18.6
22	Whispering Lakes Lane and Riverside Drive	SSSC	AM	C	23.5
			PM	D	28.6
			PM Stadium	-	-
			Weekend MD	C	15.8
			Weekend PM	C	15.7
23	Whispering Lakes Golf Course Driveway and Riverside Drive	SSSC	AM	**F**	**50.4**
			PM	E	42.9
			PM Stadium	-	-
			Weekend MD	C	23
			Weekend PM	C	19.4
24	Ontario Avenue and Riverside Drive	SSSC	AM	E	35.2
			PM	**F**	**67.8**
			PM Stadium	-	-
			Weekend MD	C	23.2
			Weekend PM	C	21.9
25	Colonial Avenue and Riverside Drive	Signalized	AM	B	10.5
			PM	B	10.3
			PM Stadium	-	-
			Weekend MD	A	9.8
			Weekend PM	A	9.5
26	Archibald Avenue and Riverside Drive	Signalized	AM	D	48.7
			PM	D	42.7
			PM Stadium	-	-
			Weekend MD	C	27.9
			Weekend PM	C	27.6
27	Haven Avenue and Riverside Drive	Signalized	AM	E	71.7
			PM	E	59.4
			PM Stadium	-	-
			Weekend MD	D	36.4
			Weekend PM	C	32.1

Table 6: Existing (2023) Intersection Level of Service

Intersection Number	Intersection	Existing Control	Peak Hour	Existing Conditions LOS	Existing Conditions Delay (s)
28	Euclid Avenue and Chino Avenue	Signalized	AM	C	30.5
			PM	C	30.8
			PM Stadium	-	-
			Weekend MD	B	14.7
			Weekend PM	B	13.6
29	Grove Avenue and Chino Avenue	AWSC	AM	-	-
			PM	-	-
			PM Stadium	-	-
			Weekend MD	-	-
			Weekend PM	-	-
30	Walker Avenue and Chino Avenue	AWSC	AM	B	10.6
			PM	A	9.7
			PM Stadium	-	-
			Weekend MD	A	8.4
			Weekend PM	A	8.2
31	Vineyard Avenue and Chino Avenue	SSSC	AM	A	9.5
			PM	A	9.8
			PM Stadium	-	-
			Weekend MD	A	8.9
			Weekend PM	A	9.2
32	Whispering Lakes Lane and Chino Avenue	SSSC	AM	B	11
			PM	B	10.2
			PM Stadium	-	-
			Weekend MD	A	9.2
			Weekend PM	A	9
33	Ontario Avenue and Chino Avenue	SSSC	AM	B	11.5
			PM	B	11.3
			PM Stadium	-	-
			Weekend MD	A	9.7
			Weekend PM	A	9.8
34	Archibald Avenue and Chino Avenue	Signalized	AM	C	24
			PM	C	20.9
			PM Stadium	-	-
			Weekend MD	B	18
			Weekend PM	B	18.6
35	Euclid Avenue and Edison Avenue	Signalized	AM	C	25.3
			PM	C	22.1
			PM Stadium	-	-
			Weekend MD	B	16.6
			Weekend PM	B	16.6
36	Grove Avenue and Edison Avenue	AWSC	AM	B	12.4
			PM	B	14.2
			PM Stadium	-	-
			Weekend MD	A	9.3
			Weekend PM	A	9.7

Table 6: Existing (2023) Intersection Level of Service

Intersection Number	Intersection	Existing Control	Peak Hour	Existing Conditions LOS	Existing Conditions Delay (s)
37	Archibald Avenue and Ontario Ranch Road	Signalized	AM	C	21.7
			PM	C	21.6
			PM Stadium	-	-
			Weekend MD	B	14.4
			Weekend PM	B	15.3
38	Haven Avenue and Ontario Ranch Road	Signalized	AM	C	26.8
			PM	C	27.1
			PM Stadium	-	-
			Weekend MD	C	23.1
			Weekend PM	C	22.5
39	Hamner Avenue and Ontario Ranch Road	Signalized	AM	C	28.9
			PM	D	37.1
			PM Stadium	-	-
			Weekend MD	C	27.4
			Weekend PM	C	29.4
40	Southbound I-15 On/Off Ramp and Cantu-Galleano Ranch Road	Signalized	AM	B	12.6
			PM	B	18.1
			PM Stadium	-	-
			Weekend MD	A	8.5
			Weekend PM	A	8.4
41	Northbound I-15 On/Off Ramp and Cantu-Galleano Ranch Road	Signalized	AM	**F**	**>120**
			PM	**F**	**115.7**
			PM Stadium	-	-
			Weekend MD	B	12.2
			Weekend PM	B	11.9

Notes:

1. AWSC = All Way Stop Controlled.
2. SSSC = Side Street Stop Controlled
3. MD = Midday
4. Red cells indicate intersection operates below adopted LOS Standards

Source: Fehr & Peers, 2024.

6.2 Opening Year (2026) Conditions Intersection Operations Analysis

This section analyzes Opening Year (2026) Traffic Conditions and compares the LOS results of Opening Year (2026) Without Project and With Project. The findings of our analysis are presented in **Table 7**.

6.2.1 Pending and Approved Development Projects

The City of Ontario identified nearby approved and pending development projects within five miles of the Project site that could affect study intersections. A list of approved development projects can be found in **Appendix E**. Trip generation rates were applied for each approved project using their respective approved Transportation Impact Analysis Study or from *Trip Generation, 11th Edition* (Institute of Transportation Engineers [ITE], 2021). The trips were assigned to the study area based on professional judgement, and knowledge of the land uses and their typical peak hour travel patterns. The forecast trip assignments are shown in **Appendix E**. All considered pending and approved development projects provided by the City of Ontario were assumed to be in operation by Opening Year (2026).

6.2.2 Planned Roadway Improvements

The City's Capital Improvement Program (CIP) does not include any capacity related roadway projects affecting any of the 41 study intersections or roadway segments that would be completed in advance of the Project opening date. Therefore, the opening year condition will maintain the same roadway conditions and signal timing as those used for existing conditions analysis.

The following roadway improvements and changes are expected to be completed by Opening Year (2026) as part of the Project:

- Extension of Vineyard Avenue between Riverside Drive and Chino Avenue with six lanes. This includes improvements to the intersections of Riverside Drive and Vineyard Avenue and Chino Avenue and Vineyard Avenue.
- Full width improvements and widening from two to four lanes along Chino Avenue between Vineyard Avenue and the Cucamonga Channel.
- Half-width improvements and widening from three to four lanes along Riverside Drive from just west of Vineyard Avenue to the Cucamonga Channel.
- Installation of traffic signals and intersection improvements at Riverside Drive and Street A/Whispering Lakes Golf Course, Riverside Drive and Ontario Avenue, Chino Avenue and Vineyard Avenue, and Chino Avenue and Ontario Avenue.
- Installation of a signalized intersection at Vineyard Avenue and the Western Project Parking Structure Driveway with single dedicated turn lanes in all directions. A peak hour signal warrant analysis was performed for this intersection and cumulative year conditions warrant a traffic signal.

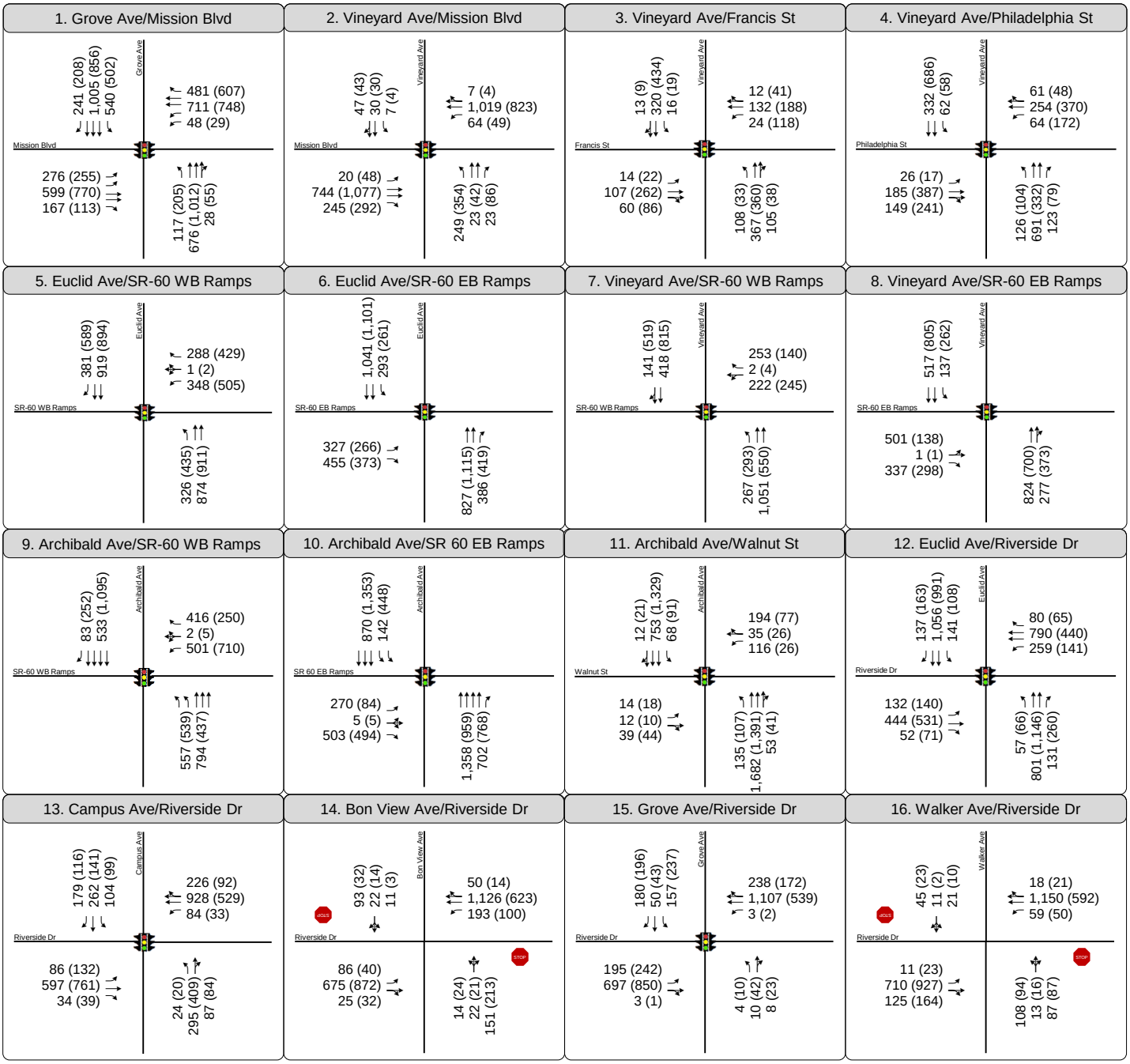
- Conversion of adjacent development driveways (study intersections #19 and #20) to right-in, right-out only due to implementation of the dual westbound left-turn lanes at Vineyard Avenue and Riverside Drive. Intersections #21 and #22 will maintain full access.

6.2.3 Opening Year (2026) No Project Conditions

As described in Chapter 2, the traffic volumes for Opening Year (2026) consist of existing counts plus the addition of growth derived from SBTAM (ambient growth rate of two percent per year for the Ontario Ranch Area and one percent per year for all other areas) and the addition of pending and approved development projects. **Figure 15** and **Figure 16** present the traffic forecasts utilized for Opening Year (2026) No Project Conditions for weekday and weekend scenarios.

The Opening Year (2026) No Project Conditions peak hour volumes were used to calculate LOS for the study intersections during each peak hour. Detailed intersection LOS worksheets are presented in **Appendix F**. As shown in **Table 7**, the following intersections are projected to operate at LOS F under Opening Year (2026) conditions:

14. Bon View Avenue and Riverside Drive (Weekday AM, Weekday PM, Weekend MD, Weekend PM)
15. Grove Avenue and Riverside Drive (Weekday AM)
16. Walker Avenue and Riverside Drive (Weekday AM, Weekday PM, Weekend MD, Weekend PM)
17. Baker Avenue and Riverside Drive (Weekday AM, Weekday PM)
23. Whispering Lakes Golf Course and Riverside Drive (Weekday AM, Weekday PM)
24. Ontario Avenue and Riverside Drive (Weekday PM)
27. Haven Avenue and Riverside Drive (Weekday AM, Weekday PM, Weekend MD)
36. Grove Avenue and Edison Avenue (Weekday AM, Weekday PM, Weekend MD)
40. Southbound I-15 and Cantu-Galleano Ranch Road (Weekday PM)
41. Northbound I-15 and Cantu-Galleano Ranch Road (Weekday AM, Weekday PM)



LEGEND

AM (PM) Peak Hour Traffic Volume

Lane Configuration

Stop Sign

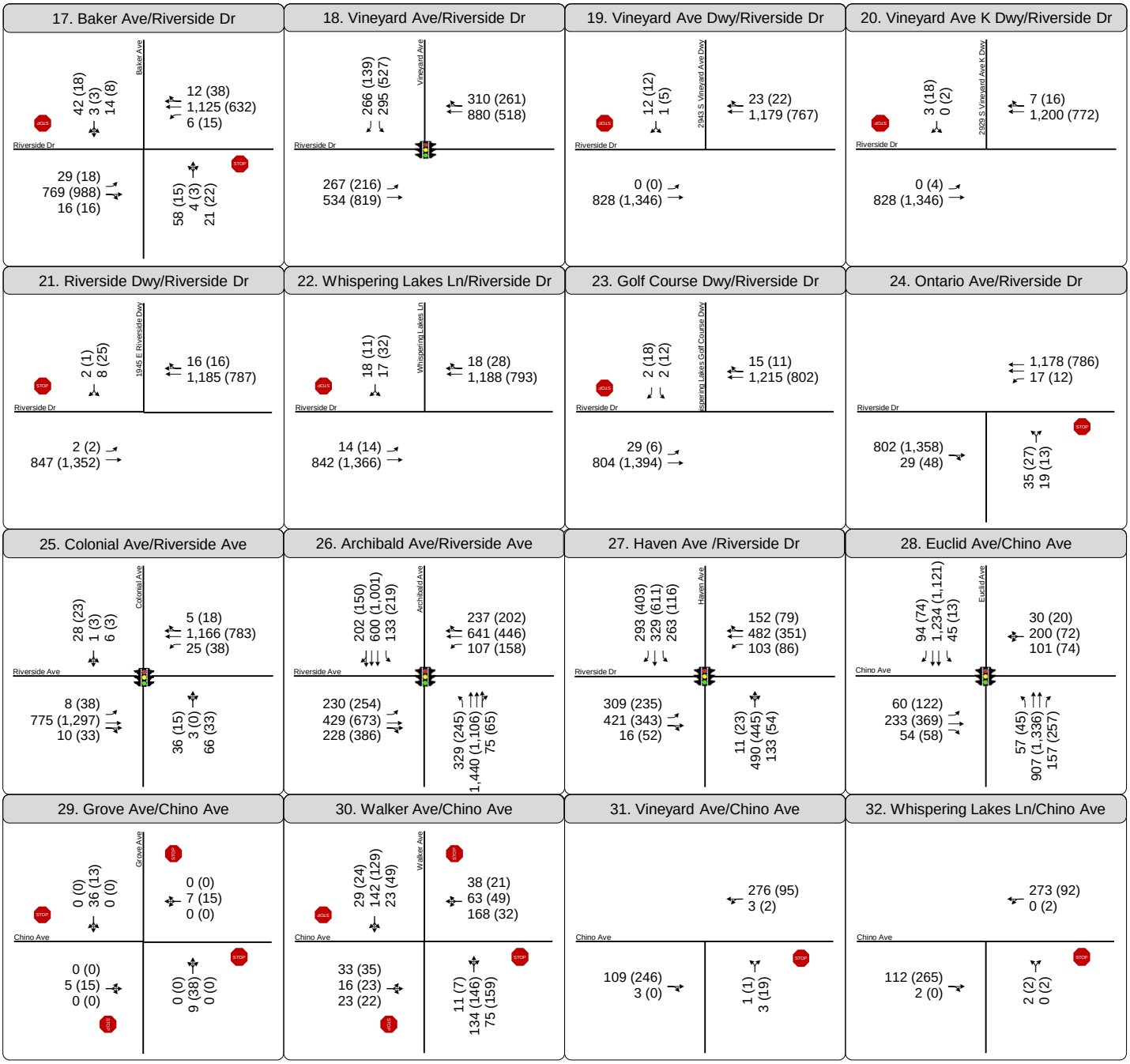
Signalized

Figure 15

Traffic Volumes

Opening Year No Project Weekday AM and PM

Intersections 1-16



LEGEND

AM (PM) Peak Hour Traffic Volume

Lane Configuration

Stop Sign

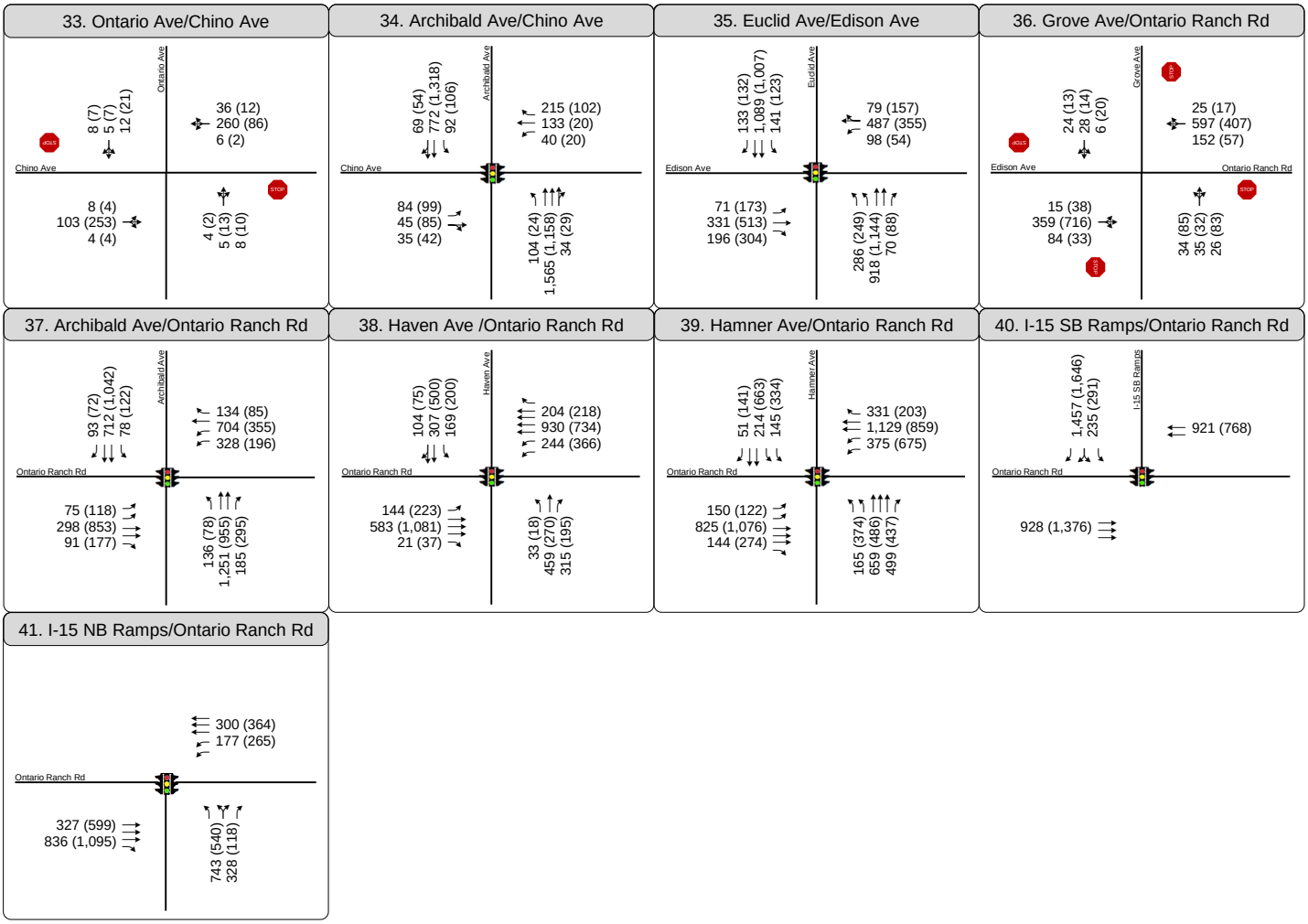
Signalized

Figure 15

Traffic Volumes

Opening Year No Project Weekday AM and PM

Intersections 17-32



LEGEND

AM (PM) Peak Hour Traffic Volume

Lane Configuration

Stop Sign

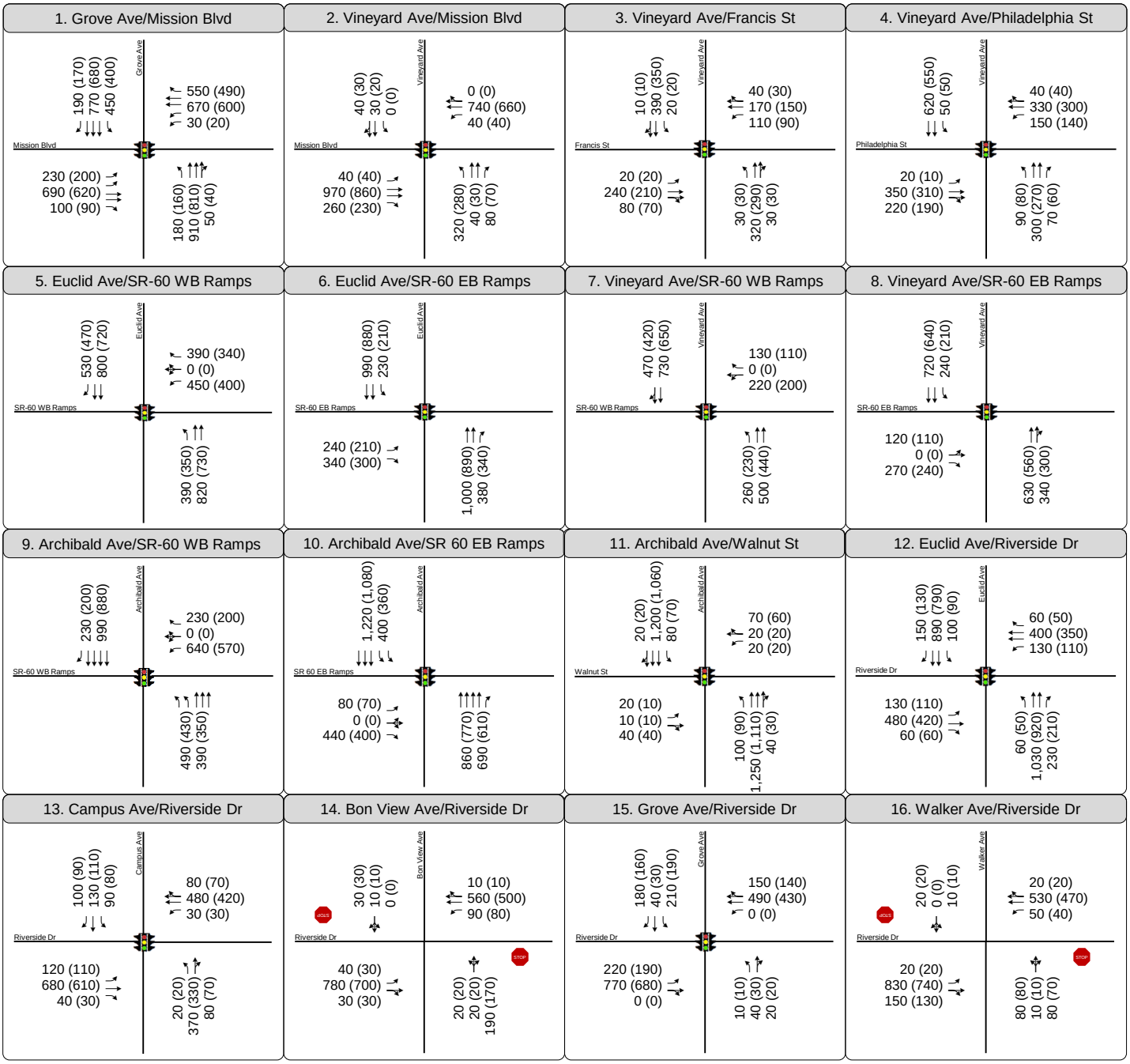
Signalized

Figure 15

Traffic Volumes

Opening Year No Project Weekday AM and PM

Intersections 33-41



LEGEND

MD (PM) Peak Hour Traffic Volume

Lane Configuration

Stop Sign

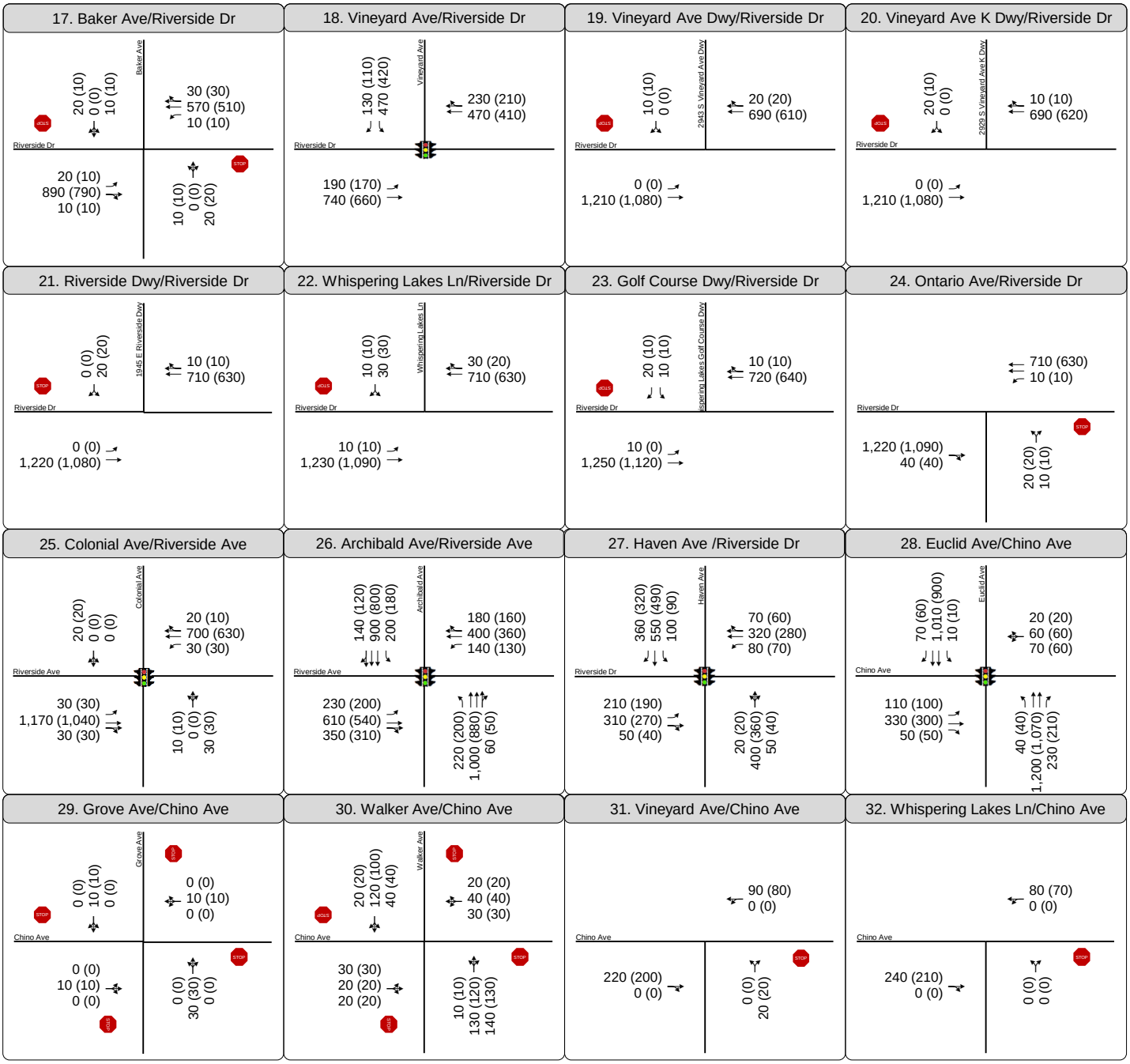
Signalized

Figure 16

Traffic Volumes

Opening Year No Project Weekend MD and PM

Intersections 1-16



LEGEND

MD (PM) Peak Hour Traffic Volume

Lane Configuration

Stop Sign

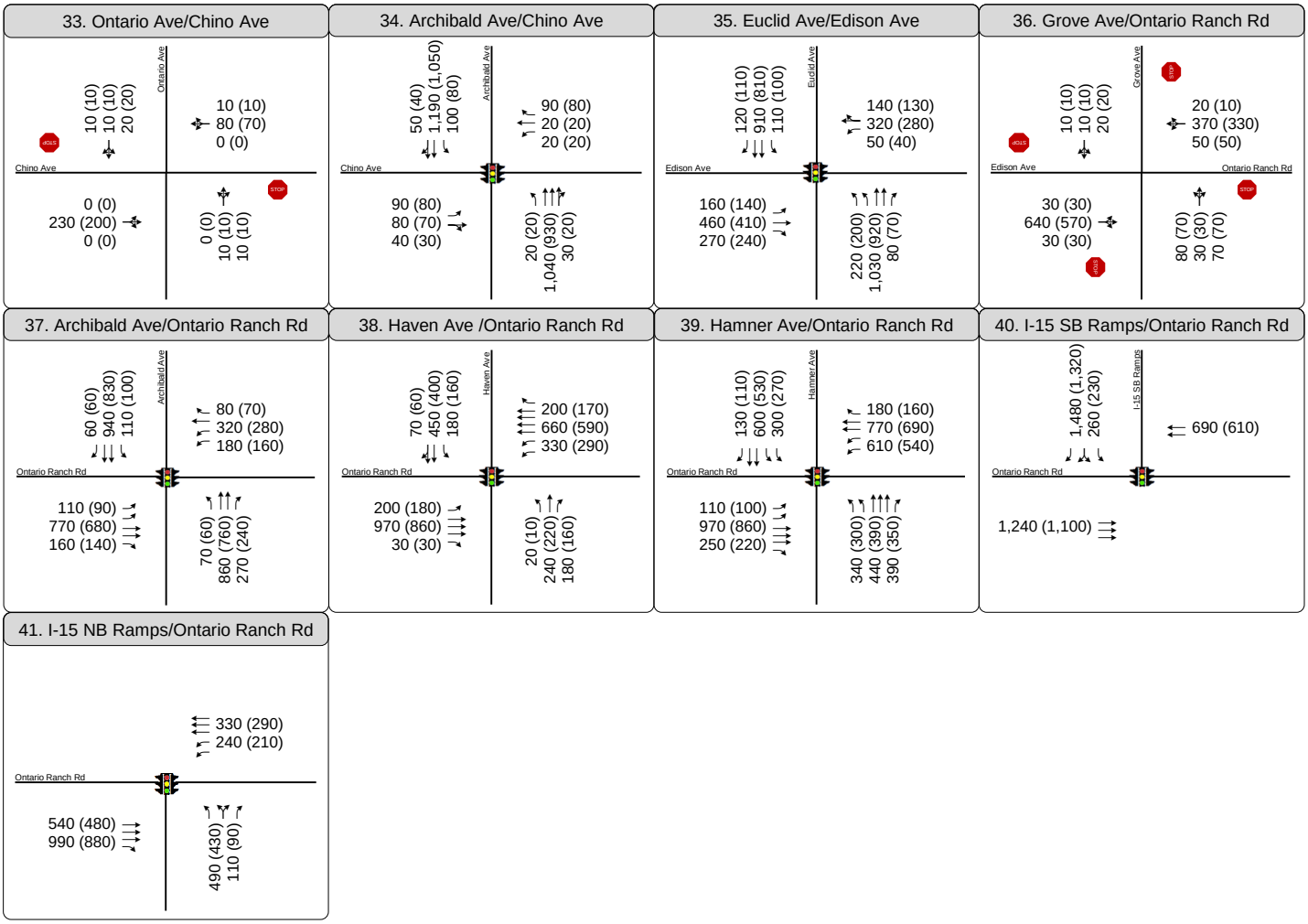
Signalized

Figure 16

Traffic Volumes

Opening Year No Project Weekend MD and PM

Intersection 17-32



LEGEND

MD (PM)	Peak Hour Traffic Volume
	Lane Configuration
STOP	Stop Sign
	Signalized

Figure 16

Traffic Volumes

Opening Year No Project Weekend MD and PM

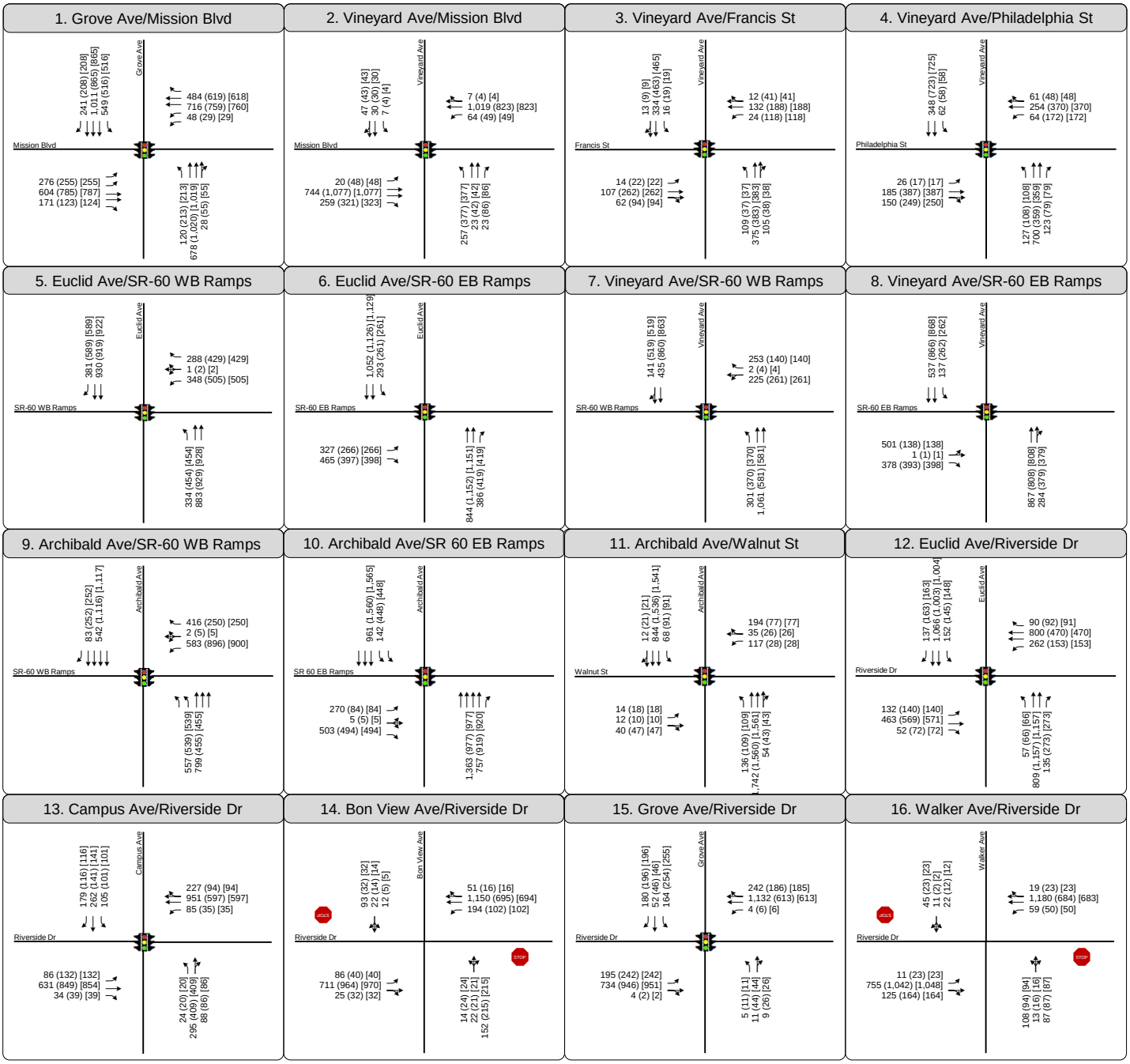
Intersections 33-41

6.2.4 Opening Year (2026) Plus Project Conditions

Figures 17 and 18 present the traffic forecasts utilized for Opening Year (2026) Plus Project Conditions. Detailed intersection LOS worksheets are presented in **Appendix F**. As shown in **Table 7**, the following intersections are projected to operate at LOS F under Opening Year (2026) Plus Project Conditions:

13. Campus Avenue and Riverside Drive (Weekday PM)
14. Bon View Avenue and Riverside Drive (Weekday AM, Weekday PM, Weekend MD, Weekend PM)
15. Grove Avenue and Riverside Drive (Weekday AM, Weekday PM)
16. Walker Avenue and Riverside Drive (Weekday AM, Weekday PM, Weekend MD, Weekend PM)
17. Baker Avenue and Riverside Drive (Weekday AM, Weekday PM, Weekend MD, Weekend PM)
26. Archibald Avenue and Riverside Drive (Weekday AM, Weekday PM, Weekend MD)
27. Haven Avenue and Riverside Drive (Weekday AM, Weekday PM, Weekend MD)
28. Euclid Avenue and Chino Avenue (Weekday PM)
36. Grove Avenue and Edison Avenue (Weekday AM, Weekday PM, Weekend MD)
40. Southbound I-15 and Cantu-Galleano Ranch Road (Weekday PM)
41. Northbound I-15 and Cantu-Galleano Ranch Road (Weekday AM, Weekday PM)

The Project is expected to add additional delay at ten of the twelve intersections listed above compared to Opening Year (2026) No Project Conditions. Recommendations to improve intersection operations to acceptable (LOS E) or better than no project conditions (i.e. no additional delay) are described in **Section 6.5.**



LEGEND

##	Weekday AM
(##)	Weekday PM
[##]	Weekday PM Stadium Event
	Movement
	Stop Sign
	Signalized

Figure 17

Traffic Volumes

Opening Year Plus Project Weekday AM, PM, and PM with Stadium Event

Intersections 1-16

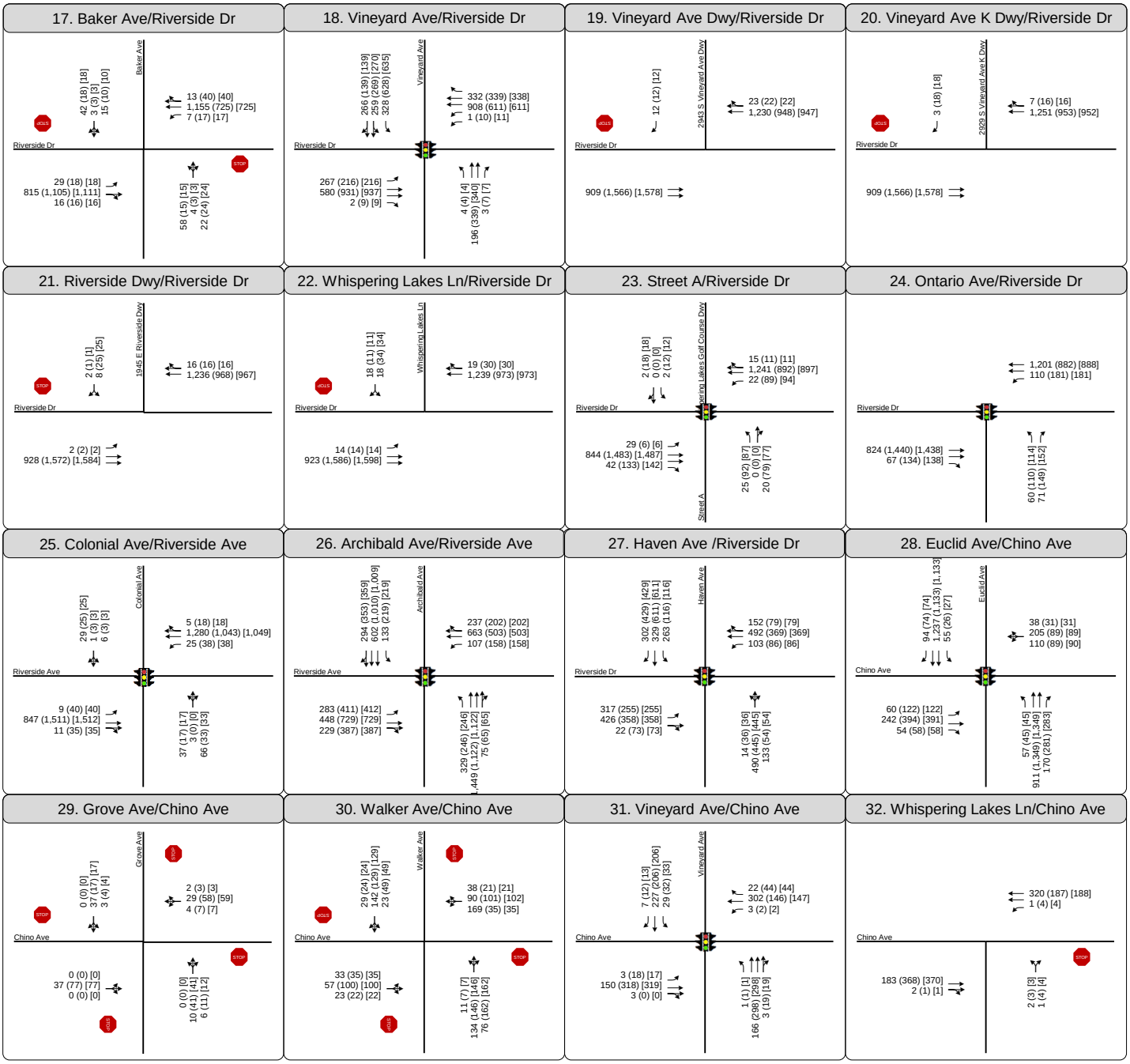
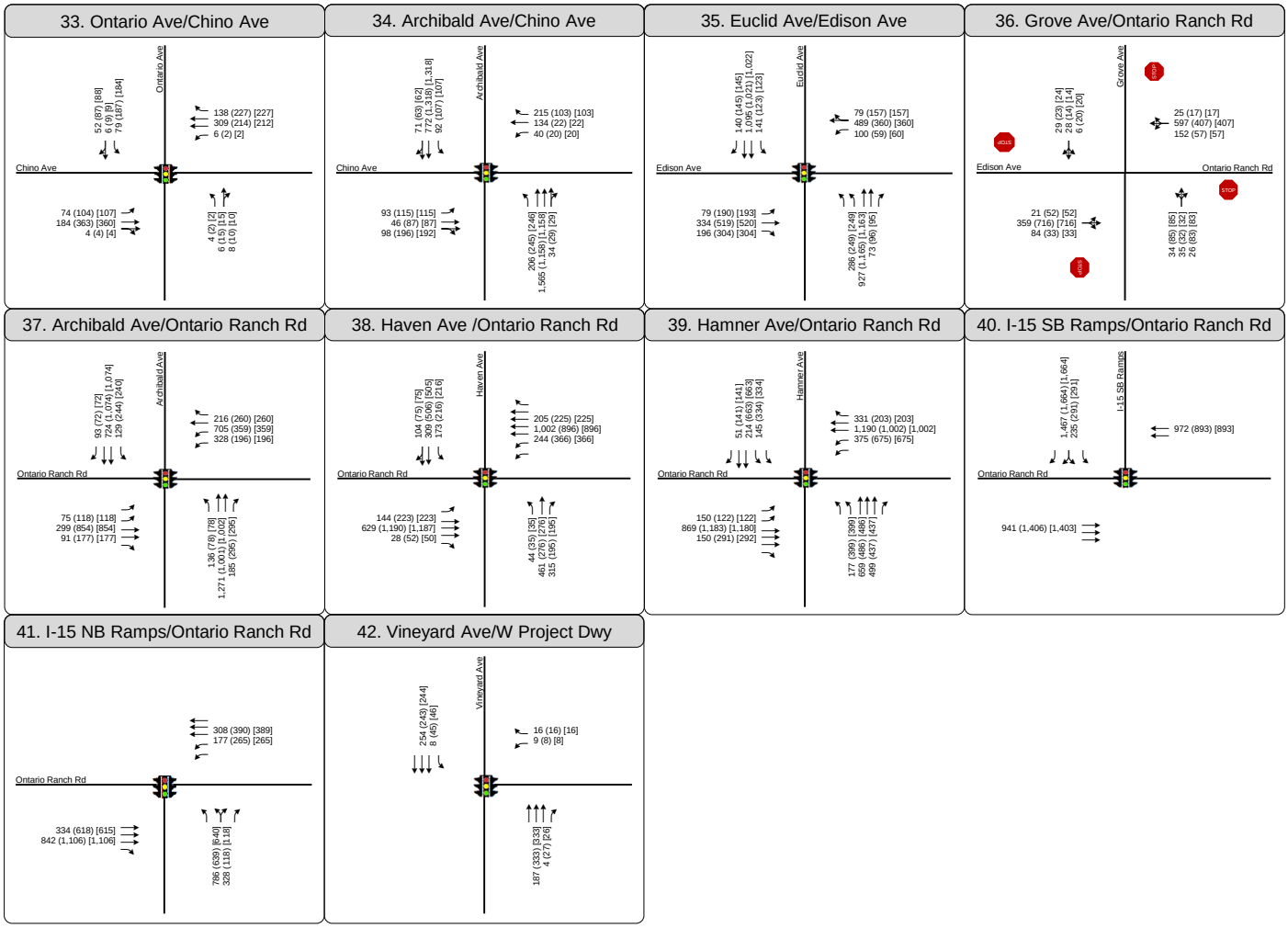


Figure 17

Traffic Volumes

Opening Year Plus Project Weekday AM, PM, and PM with Stadium Event

Intersections 17-32



LEGEND

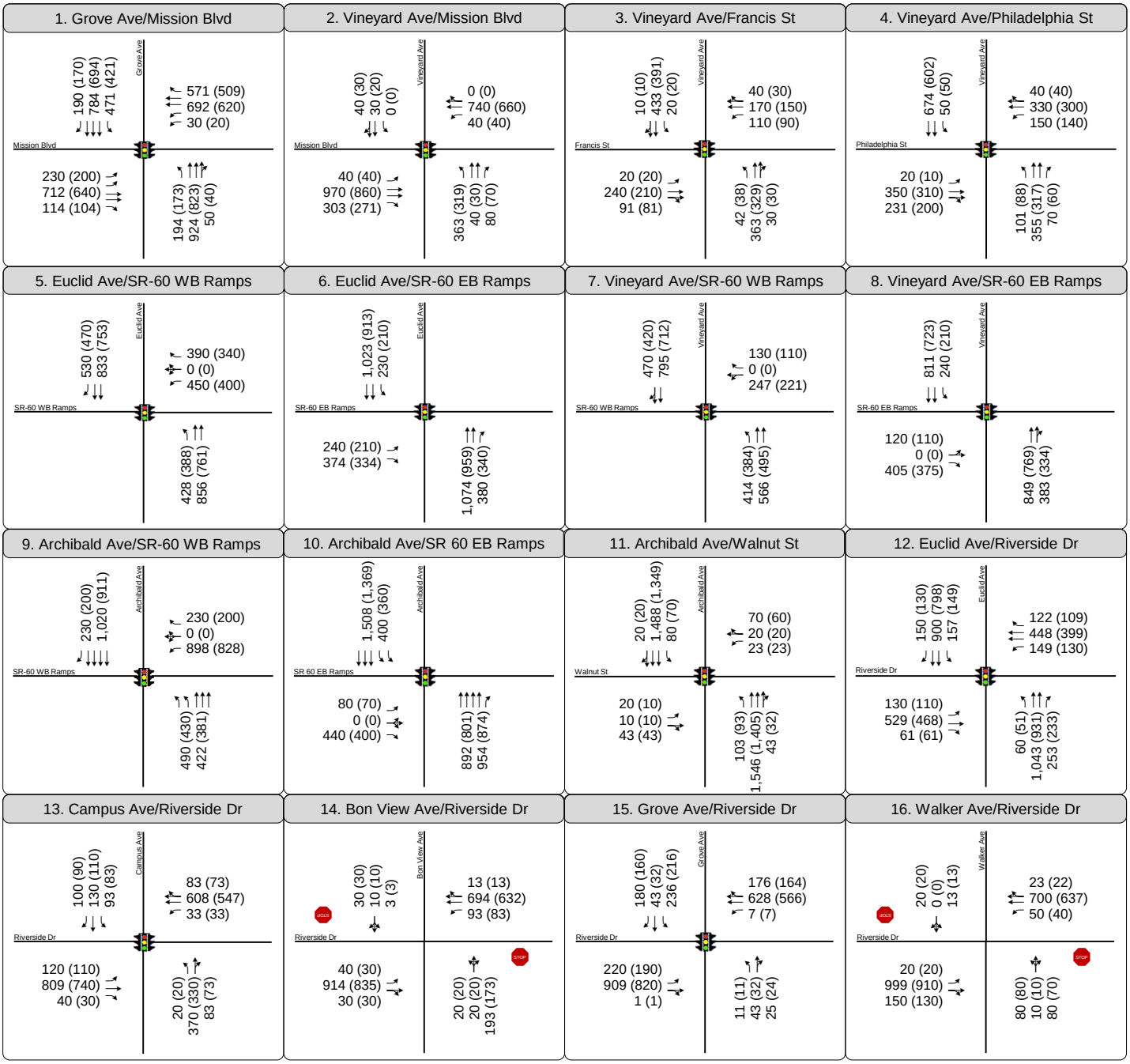
##	Weekday AM
(##)	Weekday PM
[##]	Weekday PM Stadium Event
	Movement
	Stop Sign
	Signalized

Figure 17

Traffic Volumes

Opening Year Plus Project Weekday AM, PM, and PM with Stadium Event

Intersections 33-42



LEGEND

MD (PM) Peak Hour Traffic Volume

Lane Configuration

Stop Sign

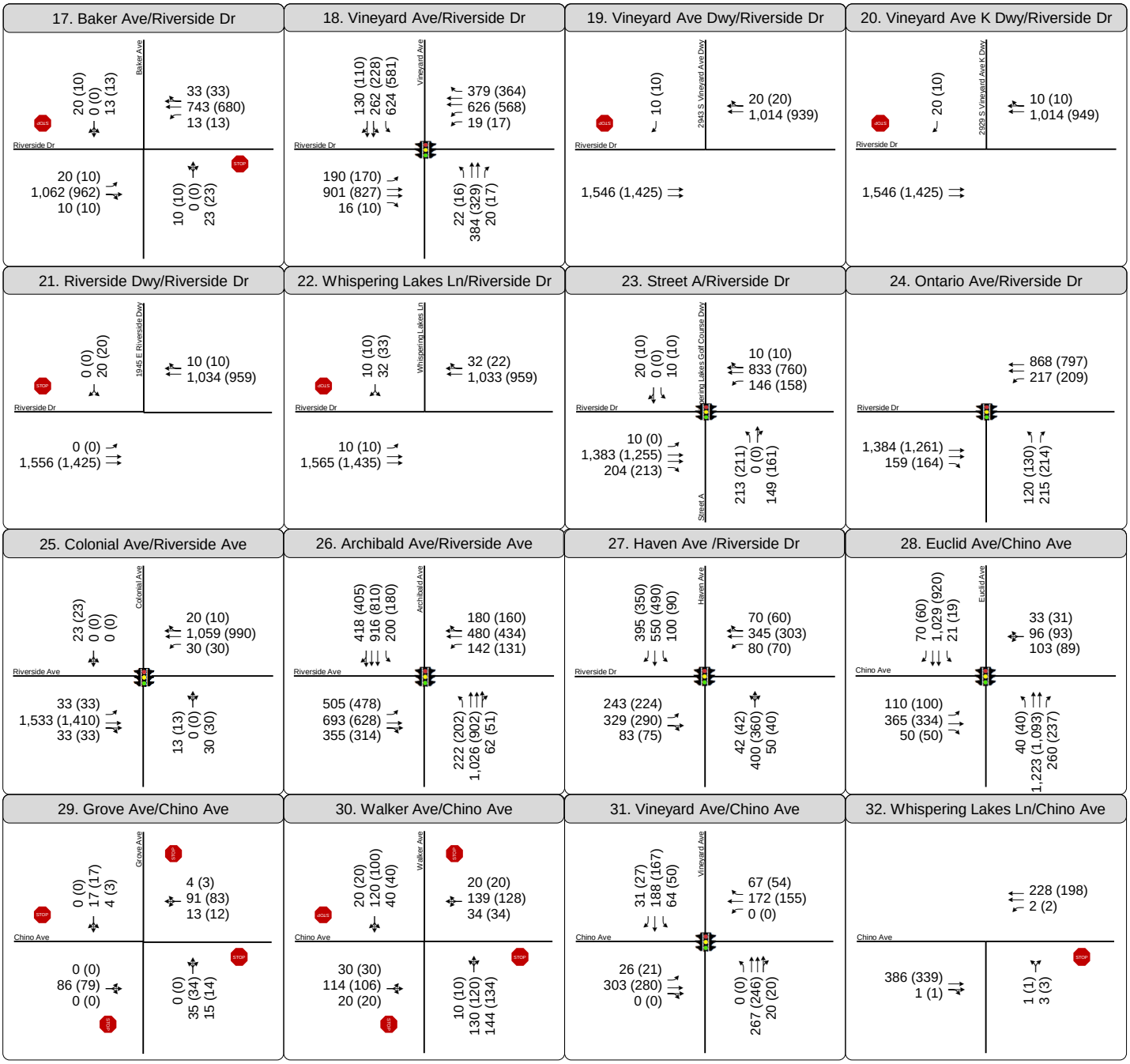
Signalized

Figure 18

Traffic Volumes

Opening Year Plus Project Weekend MD and PM

Intersections 1-16



LEGEND

MD (PM) Peak Hour Traffic Volume

Lane Configuration

Stop Sign

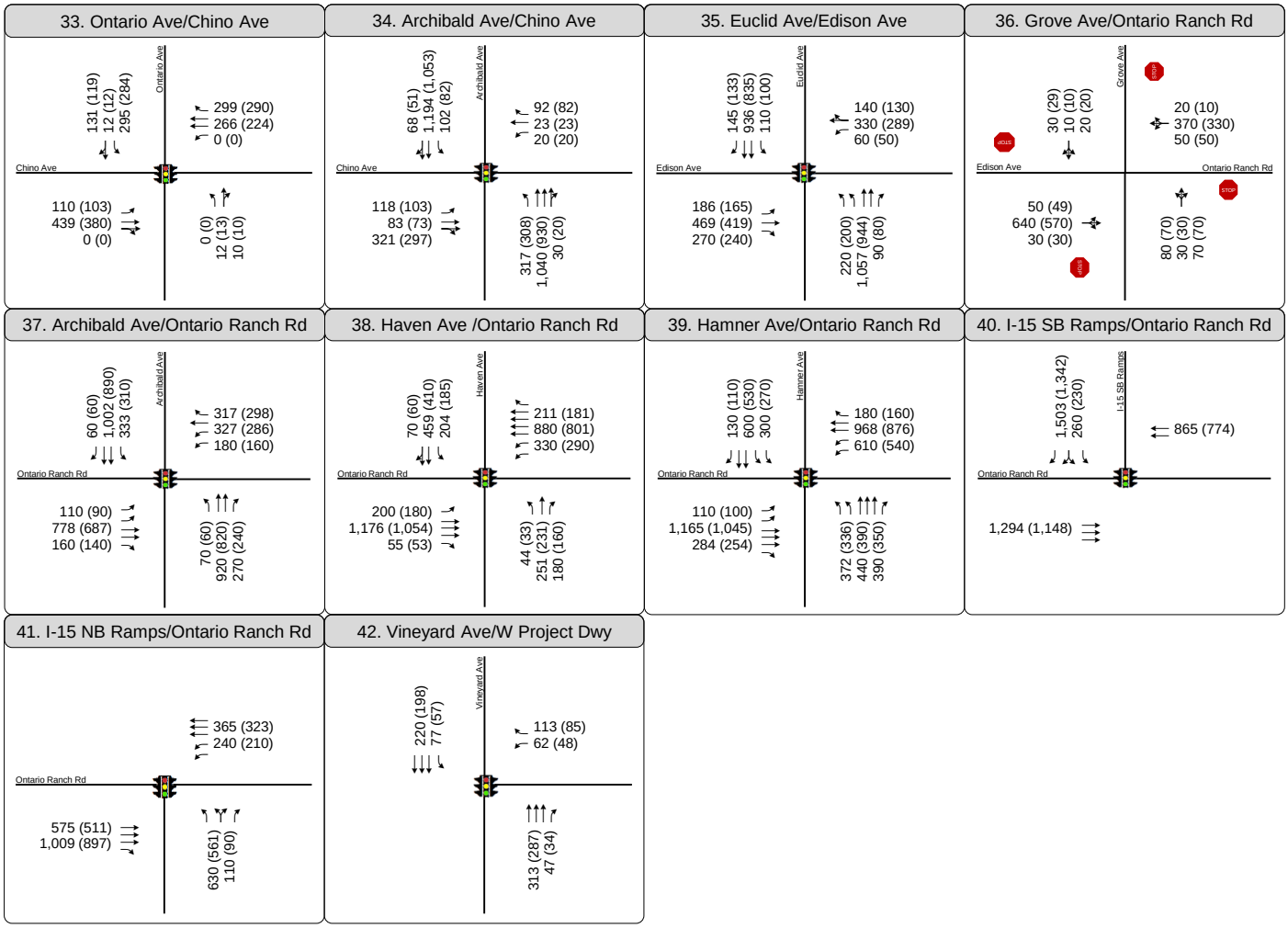
Signalized

Figure 18

Traffic Volumes

Opening Year Plus Project Weekend MD and PM

Intersections 17-32



LEGEND

MD (PM) Peak Hour Traffic Volume

Lane Configuration

Stop Sign

Signalized

Figure 18

Traffic Volumes

Opening Year Plus Project Weekend MD and PM

Intersections 33-42

Table 7: Opening Year (2026) Intersection Level of Service

Intersection Number	Intersection	Opening Year Control	Peak Hour	OYNP LOS	OYNP Delay (s)	OYPP LOS	OYPP Delay (s)
1	Grove Avenue and Mission Boulevard	Signalized	AM	E	72.8	E	74.1
			PM	E	75.6	E	79.8
			PM Stadium	-	-	E	79.9
			Weekend MD	E	68.6	E	75.1
			Weekend PM	D	53.1	E	56.9
2	Vineyard Avenue and Mission Boulevard	Signalized	AM	C	22.1	C	22.5
			PM	C	25.2	C	26
			PM Stadium	-	-	C	26
			Weekend MD	C	23.2	C	24.5
			Weekend PM	C	20.1	C	21.8
3	Vineyard Avenue and Francis Street	Signalized	AM	B	18.3	B	18.3
			PM	C	22	C	22.4
			PM Stadium	-	-	C	22.4
			Weekend MD	C	20.7	C	21.2
			Weekend PM	B	19.9	C	20.3
4	Vineyard Avenue and Philadelphia Street	Signalized	AM	C	23.7	C	23.7
			PM	D	35.8	D	36.4
			PM Stadium	-	-	D	36.5
			Weekend MD	C	30.3	C	30.8
			Weekend PM	C	26.6	C	26.7
5	Euclid Avenue and Westbound SR-60 On/Off Ramps	Signalized	AM	C	25	C	25.3
			PM	D	35.5	D	38.7
			PM Stadium	-	-	D	38.8
			Weekend MD	C	25	C	29
			Weekend PM	B	20	C	22.1
6	Euclid Avenue and Eastbound SR-60 On/Off Ramps	Signalized	AM	C	25.6	C	26.6
			PM	C	28	C	30.1
			PM Stadium	-	-	C	30.1
			Weekend MD	B	18.6	C	21.1
			Weekend PM	B	16.1	B	17.7
7	Vineyard Avenue and Westbound SR-60 On/Off Ramps	Signalized	AM	B	13.4	B	13.6
			PM	C	32.1	D	48.4
			PM Stadium	-	-	D	48.6
			Weekend MD	C	26.3	D	43.9
			Weekend PM	B	18.1	C	33.2
8	Vineyard Avenue and Eastbound SR-60 On/Off Ramps	Signalized	AM	D	37.5	D	40
			PM	C	21.4	C	29.2
			PM Stadium	-	-	C	29.7
			Weekend MD	B	14.2	C	23
			Weekend PM	B	13.5	B	17
9	Archibald Avenue and Westbound SR-60 On/Off Ramps	Signalized	AM	C	29.1	C	30.3
			PM	C	29.5	D	50.9
			PM Stadium	-	-	D	51.6
			Weekend MD	C	27.1	D	36.5
			Weekend PM	C	26.2	C	33.5
10	Archibald Avenue and Eastbound SR-60 On/Off Ramps	Signalized	AM	C	20.6	C	22.6
			PM	C	32.5	D	51.4
			PM Stadium	-	-	D	51.6
			Weekend MD	C	27	C	35
			Weekend PM	C	26.4	C	31.4
11	Archibald Avenue and Walnut Avenue	Signalized	AM	C	20	C	20.3
			PM	B	16.1	B	16.8
			PM Stadium	-	-	B	16.8
			Weekend MD	B	14.8	B	15.6
			Weekend PM	B	14.1	B	14.6

Table 7: Opening Year (2026) Intersection Level of Service

Intersection Number	Intersection	Opening Year Control	Peak Hour	OYNP LOS	OYNP Delay (s)	OYPP LOS	OYPP Delay (s)
12	Euclid Avenue and Riverside Drive	Signalized	AM	E	66.3	E	70
			PM	E	62.2	E	76.1
			PM Stadium	-	-	E	76.6
			Weekend MD	D	49.3	E	66.7
			Weekend PM	D	37.1	D	42.6
13	Campus Avenue and Riverside Drive	Signalized	AM	D	48.2	D	54
			PM	E	64.6	**F**	**85.9**
			PM Stadium	-	-	**F**	**87.4**
			Weekend MD	D	42.6	E	69.4
			Weekend PM	C	32.8	D	53.1
14	Bon View Avenue and Riverside Drive	SSSC	AM	**F**	**>120**	**F**	**>120**
			PM	**F**	**>120**	**F**	**>120**
			PM Stadium	-	-	**F**	**>120**
			Weekend MD	**F**	**>120**	**F**	**>120**
			Weekend PM	**F**	**78.1**	**F**	**>120**
15	Grove Avenue and Riverside Drive	Signalized	AM	**F**	**85.1**	**F**	**93.5**
			PM	E	60.8	E	78.8
			PM Stadium	-	-	**F**	**80**
			Weekend MD	C	32.4	E	74.2
			Weekend PM	C	28	E	59.9
16	Walker Avenue and Riverside Drive	SSSC	AM	**F**	**>120**	**F**	**>120**
			PM	**F**	**>120**	**F**	**>120**
			PM Stadium	-	-	**F**	**>120**
			Weekend MD	**F**	**>120**	**F**	**>120**
			Weekend PM	**F**	**93.1**	**F**	**>120**
17	Baker Avenue and Riverside Drive	SSSC	AM	**F**	**>120**	**F**	**>120**
			PM	**F**	**52.7**	**F**	**114.7**
			PM Stadium	-	-	**F**	**117.7**
			Weekend MD	D	30.1	**F**	**71.9**
			Weekend PM	D	31.3	**F**	**72.2**
18	Vineyard Avenue and Riverside Drive	Signalized	AM	D	42.5	E	62.1
			PM	D	41.6	D	48.6
			PM Stadium	-	-	D	49.1
			Weekend MD	C	30.7	E	66.1
			Weekend PM	C	23.9	D	48
19	2943 S Vineyard Avenue Driveway and Riverside Drive	SSSC	AM	C	15.6	B	14.7
			PM	C	17.4	B	12.4
			PM Stadium	-	-	B	12.4
			Weekend MD	B	11	B	12.8
			Weekend PM	B	10.7	B	12.4
20	2929 S Vineyard Avenue Driveway and Riverside Drive	SSSC	AM	B	14	B	14.5
			PM	B	13.5	B	12.5
			PM Stadium	-	-	B	12.5
			Weekend MD	B	11.1	B	13
			Weekend PM	B	10.6	B	12.4
21	1945 E Riverside Drive #20 Driveway and Riverside Drive	SSSC	AM	D	28.7	D	26.7
			PM	D	33.9	D	26.8
			PM Stadium	-	-	D	26.9
			Weekend MD	D	28.6	D	27.9
			Weekend PM	D	25.9	D	26.6
22	Whispering Lakes Lane and Riverside Drive	SSSC	AM	D	26.4	D	25.8
			PM	D	33.4	D	27.1
			PM Stadium	-	-	D	27.3
			Weekend MD	D	26.6	D	27
			Weekend PM	C	24.5	D	26.5

Table 7: Opening Year (2026) Intersection Level of Service

Intersection Number	Intersection	Opening Year Control	Peak Hour	OYNP LOS	OYNP Delay (s)	OYPP LOS	OYPP Delay (s)
23	Whispering Lakes Golf Course Driveway and Riverside Drive	NP: SSSC PP: Signalized	AM	**F**	**66.2**	B	12.2
			PM	**F**	**60.6**	B	15.4
			PM Stadium	-	-	B	15.5
			Weekend MD	E	39.1	C	25.1
			Weekend PM	E	43	C	24.6
24	Ontario Avenue and Riverside Drive	NP: SSSC PP: Signalized	AM	E	45.9	A	9.5
			PM	**F**	**99.5**	B	17
			PM Stadium	-	-	B	17.2
			Weekend MD	E	49.7	B	17.7
			Weekend PM	E	42.5	B	18.4
25	Colonial Avenue and Riverside Drive	Signalized	AM	B	10.7	B	11.1
			PM	B	10.8	B	12.7
			PM Stadium	-	-	B	12.7
			Weekend MD	A	9.9	B	14
			Weekend PM	A	9.7	B	11.2
26	Archibald Avenue and Riverside Drive	Signalized	AM	E	71	**F**	**85.9**
			PM	E	61.9	**F**	**89.3**
			PM Stadium	-	-	**F**	**89.8**
			Weekend MD	D	48.4	**F**	**86.2**
			Weekend PM	D	41.2	E	72
27	Haven Avenue and Riverside Drive	Signalized	AM	**F**	**>120**	**F**	**>120**
			PM	**F**	**>120**	**F**	**>120**
			PM Stadium	-	-	**F**	**>120**
			Weekend MD	**F**	**101.3**	**F**	**114.7**
			Weekend PM	E	68.6	E	79.6
28	Euclid Avenue and Chino Avenue	Signalized	AM	D	43.8	D	48.1
			PM	E	78.7	**F**	**81.1**
			PM Stadium	-	-	**F**	**81.1**
			Weekend MD	C	21.6	C	29.8
			Weekend PM	C	20.3	C	27.2
29	Grove Avenue and Chino Avenue	AWSC	AM	A	7.2	A	7.4
			PM	A	7.2	A	7.7
			PM Stadium	-	-	A	7.7
			Weekend MD	A	7.2	A	7.9
			Weekend PM	A	7.2	A	7.8
30	Walker Avenue and Chino Avenue	AWSC	AM	B	11.3	B	12.2
			PM	B	10.3	B	11.9
			PM Stadium	-	-	B	11.9
			Weekend MD	A	9.6	B	11.6
			Weekend PM	A	9.5	B	11.3
31	Vineyard Avenue and Chino Avenue	NP: SSSC PP: Signalized	AM	A	9.6	C	21.1
			PM	B	10	B	19.7
			PM Stadium	-	-	B	19.7
			Weekend MD	B	10	B	18.3
			Weekend PM	A	9.9	B	17.7
32	Whispering Lakes Lane and Chino Avenue	SSSC	AM	B	11.2	B	10.5
			PM	B	10.4	B	10.8
			PM Stadium	-	-	B	10.8
			Weekend MD	B	10.1	B	10.7
			Weekend PM	B	10.2	B	10.8
33	Ontario Avenue and Chino Avenue	NP: SSSC PP: Signalized	AM	B	11.8	B	17
			PM	B	11.6	C	24.7
			PM Stadium	-	-	C	24.2
			Weekend MD	B	11.3	C	23
			Weekend PM	B	11.2	C	20.9

Table 7: Opening Year (2026) Intersection Level of Service

Intersection Number	Intersection	Opening Year Control	Peak Hour	OYNP LOS	OYNP Delay (s)	OYPP LOS	OYPP Delay (s)
34	Archibald Avenue and Chino Avenue	Signalized	AM	C	28	C	30.9
			PM	C	24.7	D	40.8
			PM Stadium	-	-	D	40.8
			Weekend MD	C	23.9	D	52.2
			Weekend PM	C	20.6	D	35.9
35	Euclid Avenue and Edison Avenue	Signalized	AM	D	45.1	D	46.9
			PM	D	49.8	E	56.8
			PM Stadium	-	-	E	57.4
			Weekend MD	D	36.5	D	41.9
			Weekend PM	C	31.6	D	35.6
36	Grove Avenue and Edison Avenue	AWSC	AM	**F**	**68**	**F**	**69.5**
			PM	**F**	**>120**	**F**	**>120**
			PM Stadium	-	-	**F**	**>120**
			Weekend MD	**F**	**110.6**	**F**	**>120**
			Weekend PM	E	40.6	E	49.1
37	Archibald Avenue and Ontario Ranch Road	Signalized	AM	E	56.1	E	67
			PM	D	40.2	D	52.3
			PM Stadium	-	-	D	52
			Weekend MD	C	31.4	D	46.2
			Weekend PM	C	28.6	D	37.9
38	Haven Avenue and Ontario Ranch Road	Signalized	AM	D	39.8	D	41.4
			PM	D	41.2	D	45
			PM Stadium	-	-	B	44.9
			Weekend MD	C	34.2	D	39.5
			Weekend PM	C	30.1	C	33.8
39	Hamner Avenue and Ontario Ranch Road	Signalized	AM	D	38.1	D	40.9
			PM	E	63.2	E	71.2
			PM Stadium	-	-	E	71
			Weekend MD	D	52.2	E	59.8
			Weekend PM	D	49.3	E	56.1
40	Southbound I-15 On/Off Ramp and Cantu-Galleano Ranch Road	Signalized	AM	D	38.2	D	43.5
			PM	**F**	**91.9**	**F**	**98.4**
			PM Stadium	-	-	**F**	**98.3**
			Weekend MD	C	31.9	D	42
			Weekend PM	B	18.2	C	21.3
41	Northbound I-15 On/Off Ramp and Cantu-Galleano Ranch Road	Signalized	AM	**F**	**>120**	**F**	**>120**
			PM	**F**	**>120**	**F**	**>120**
			PM Stadium	-	-	**F**	**>120**
			Weekend MD	C	24.2	C	24.3
			Weekend PM	B	16.6	B	17.7
42	Vineyard Ave and Western Project Driveway	Signalized	AM	-	-	A	5.5
			PM	-	-	A	6.7
			PM Stadium	-	-	A	6.7
			Weekend MD	-	-	A	9.5
			Weekend PM	-	-	A	8.8

Notes:

1. AWSC = All Way Stop Controlled.
2. SSSC = Side Street Stop Controlled
3. MD = Midday
4. Red cells indicate intersection operates below adopted LOS Standards

Source: Fehr & Peers, 2024.

6.3 Cumulative Year (2050) Conditions Intersection Operations Analysis

This section analyzes the Cumulative Year (2050) Traffic Conditions and compares the LOS results with No Project and Plus Project. "No Project" conditions assume development at the Project site is consistent with approved low- and medium-density residential land uses in the Ontario Plan. Plus Project conditions include the relocation of previously zoned housing units to parcels along the Vineyard Corridor between Chino Avenue and Ontario Ranch Road. Note that signal timings were optimized at all signalized intersections, consistent with San Bernardino County CMP guidelines and recognizing significant changes to traffic volumes and lane geometry noted herein.

The findings of our analysis for Cumulative Year No Project and Cumulative Year Plus Project are presented in **Table 8**.

6.3.1 Pending and Approved Development Projects

Fehr & Peers reviewed the SBTAM Cumulative Year land use data set for all pending and approved development projects provided by the City of Ontario. Pending and approved development that was not reflected in the land use data set was updated accordingly to incorporate these land use changes. 16,051 industrial, 450 retail, and 187 educational employees were added within the City of Ontario TAZs.

6.3.2 Planned Roadway Improvements

The following planned roadway improvements are assumed to be in place by Cumulative Year (2050), consistent with the financially constrained project list in the 2020 SCAG RTP/SCS, as projects in this list have funding allocated and they are reasonably anticipated to be completed by 2050:

- RTP ID 4160070: Widen Walker Avenue from Riverside Drive to Merrill Avenue from two to four lanes
- RTP ID 4A04189: Widen Archibald Avenue from Edison Avenue to South Ontario City Limits from two to six lanes
- RTP ID 4A04190: Widen Archibald Avenue from Riverside Drive to Edison Avenue from two to six lanes
- RTP ID 4A04193: Widen Campus Avenue from Riverside Drive to Merrill Avenue from two to four lanes
- RTP ID 4A04194: Widen Chino Avenue from Euclid Avenue to Milliken Boulevard from two to four lanes
- RTP ID 4A04196: Widen Ontario Ranch Road (Edison Avenue) from Mill Creek Avenue to Milliken Avenue from two to eight lanes
- RTP ID 4A04197: Widen Ontario Ranch Road (Edison Avenue) from Euclid Avenue to Walker Avenue from two to eight lanes

- RTP ID 4A04198: Widen Ontario Ranch Road (Edison Avenue) from Vineyard Avenue to Mill Creek Avenue from two to eight lanes
- RTP ID 4A04199: Widen Ontario Ranch Road (Edison Avenue) from Walker Avenue to Vineyard Avenue from two to eight lanes
- RTP ID 4A04201: Widen Euclid Avenue from Riverside Drive to Merrill Avenue from four to eight lanes
- RTP ID 4A04206: Widen Grove Avenue from Riverside Drive to Merrill Avenue from two to four lanes
- RTP ID 4A04208: Widen Haven Avenue from Riverside Drive to Bellegrave Avenue from two to four lanes
- RTP ID 4A04218: Widen Ontario Avenue from Riverside Drive to Bellegrave Avenue from zero to two/four lanes
- RTP ID 4A04219: Widen Riverside Drive from Euclid Avenue to Milliken Avenue from two to four lanes
- RTP ID 4A04223: Widen Vineyard Avenue from Riverside Drive to Merrill Avenue from zero to six lanes
- RTP ID 4A07267: Construct bridge on Riverside Drive over Cucamonga Creek and widen from four to six lanes
- RTP ID 4160010: SR-60 at Vineyard Avenue Interchange Reconstruction
- RTP ID 4160012: SR-60 at Euclid Avenue Interchange Improvements
- RTP ID 4A07233: Widen Mission Boulevard from Benson to Milliken Avenue from four to six lanes

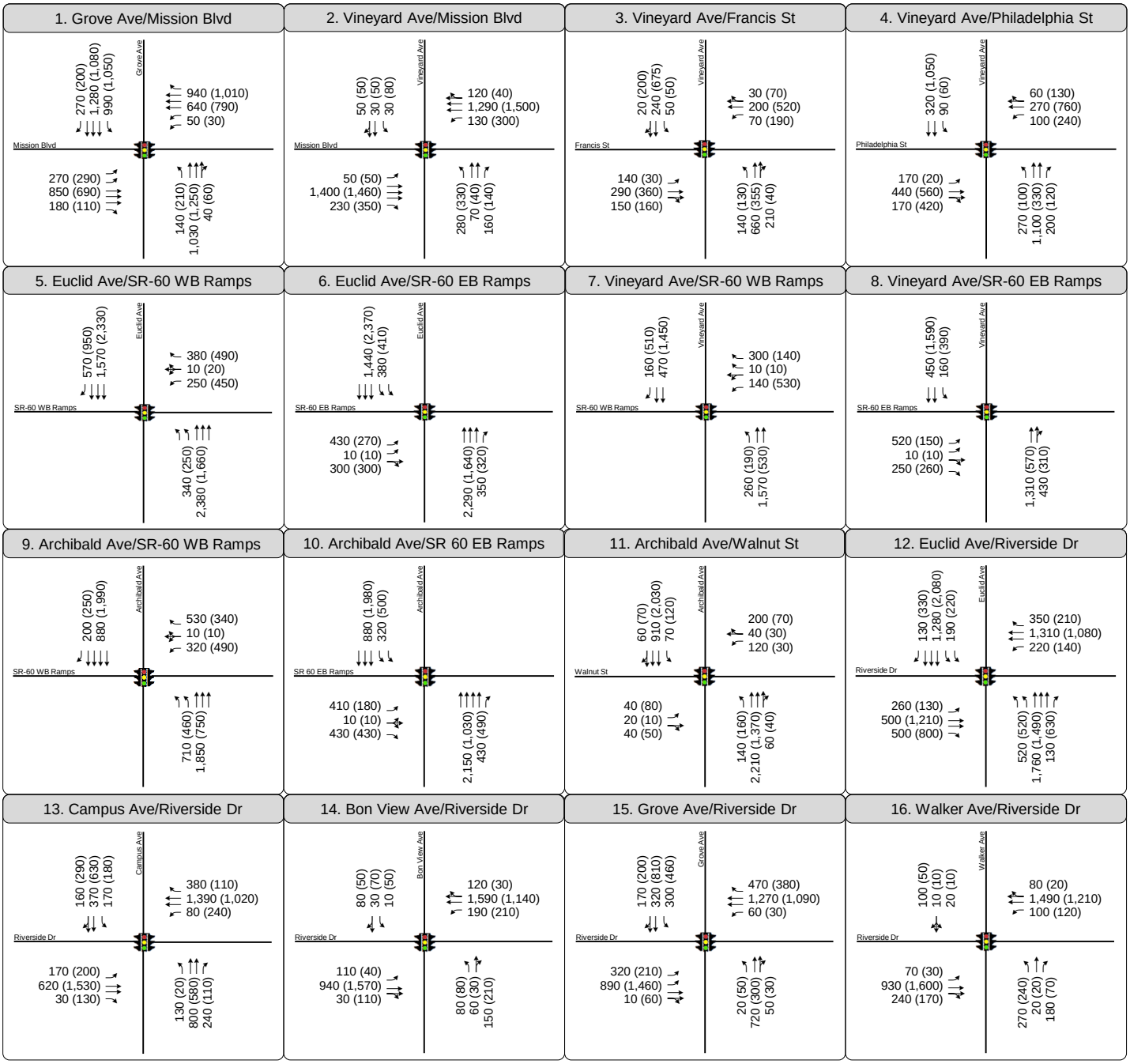
Furthermore, it is assumed that roadways within the study area would be improved to their ultimate build-out width by the year 2050 as stated in The Ontario Plan, consistent with forecasted development in the Ontario Ranch Area. These improvements are summarized in **Figures 19 and 20**, and are listed below:

- Additional improvements necessary to increase LOS to E or above (e.g. dual left turn lanes, dedicated right turn lanes, etc.), where improvements are programmed under the RTP
- Updated and optimized signal timing at all intersections
- New signalized intersections at:
    - Bon View Avenue and Riverside Drive
    - Walker Avenue and Riverside Drive
    - Baker Avenue and Riverside Drive
    - Ontario Avenue and Riverside Drive
    - Grove Avenue and Chino Avenue
    - Walker Avenue and Chino Avenue
    - Vineyard Avenue and Chino Avenue
    - Ontario Avenue and Chino Avenue
    - Grove Avenue and Edison Avenue

6.3.3 Cumulative Year (2050) No Project Conditions

As described in Chapter 2, the traffic volumes for Cumulative Year (2050) consist of forecasts derived using the difference method from SBTAM model runs to represent 2050 conditions. **Figures 19 and 20** presents the traffic forecast utilized for Cumulative Year (2050) No Project Conditions. Detailed LOS worksheets can be found in **Appendix F**. As shown in **Table 8**, the following intersections are projected to operate at LOS F in Year (2050) No Project Conditions:

1. Grove Avenue and Mission Avenue (Weekday AM, Weekday PM, Weekend MD, Weekend PM)
4. Vineyard Avenue and Philadelphia Street (Weekday PM)
12. Euclid Avenue and Riverside Drive (Weekday AM, Weekday PM, Weekend MD)
13. Campus Avenue and Riverside Drive (Weekday AM, Weekday PM)
15. Grove Avenue and Riverside Drive (Weekday AM, Weekday PM)
18. Vineyard Avenue and Riverside Drive (Weekday AM, Weekday PM, Weekend MD)
22. Whispering Lakes Lane and Riverside Drive (Weekday AM, Weekday PM)
23. Whispering Lakes Lane Golf Course Driveway (Weekday AM, Weekday PM, Weekend MD, Weekend PM)
26. Archibald Avenue and Riverside Drive (Weekday AM, Weekday PM)
27. Haven Avenue and Riverside Drive (Weekday AM, Weekday PM)
28. Euclid Avenue and Chino Avenue (Weekday AM, Weekday PM)
32. Whispering Lakes Lane and Chino Avenue (Weekday AM, Weekday PM, Weekend MD)
34. Archibald Avenue and Chino Avenue (Weekday AM, Weekday PM)
35. Euclid Avenue and Edison Avenue (Weekday PM)
39. Hamner Avenue and Ontario Ranch Road (Weekday PM)



LEGEND

AM (PM) Peak Hour Traffic Volume

Lane Configuration

Stop Sign

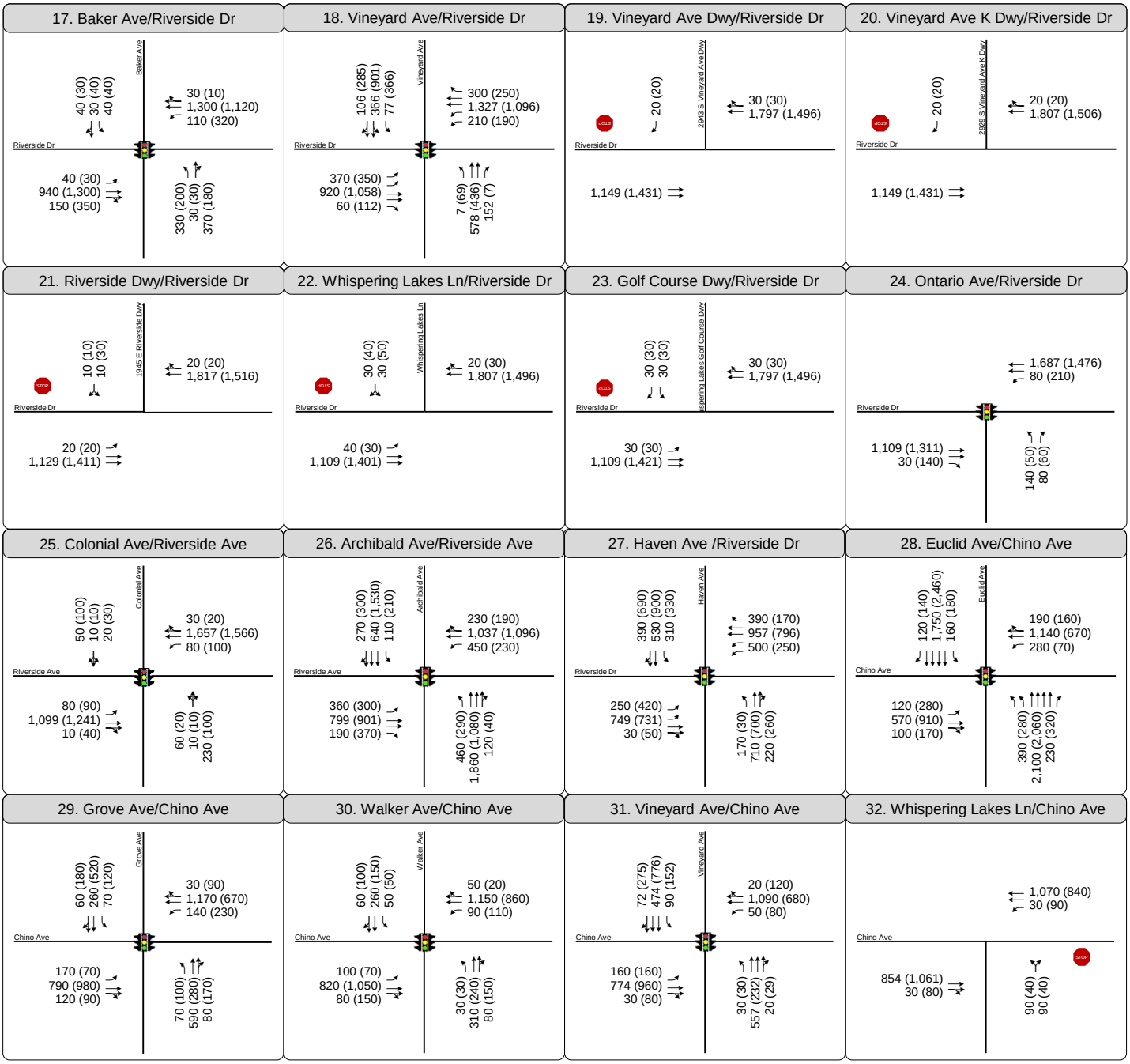
Signalized

Figure 19

Traffic Volumes

Cumulative Year No Project Weekday AM and PM

Intersections 1-16



LEGEND

AM (PM) Peak Hour Traffic Volume

Lane Configuration

Stop Sign

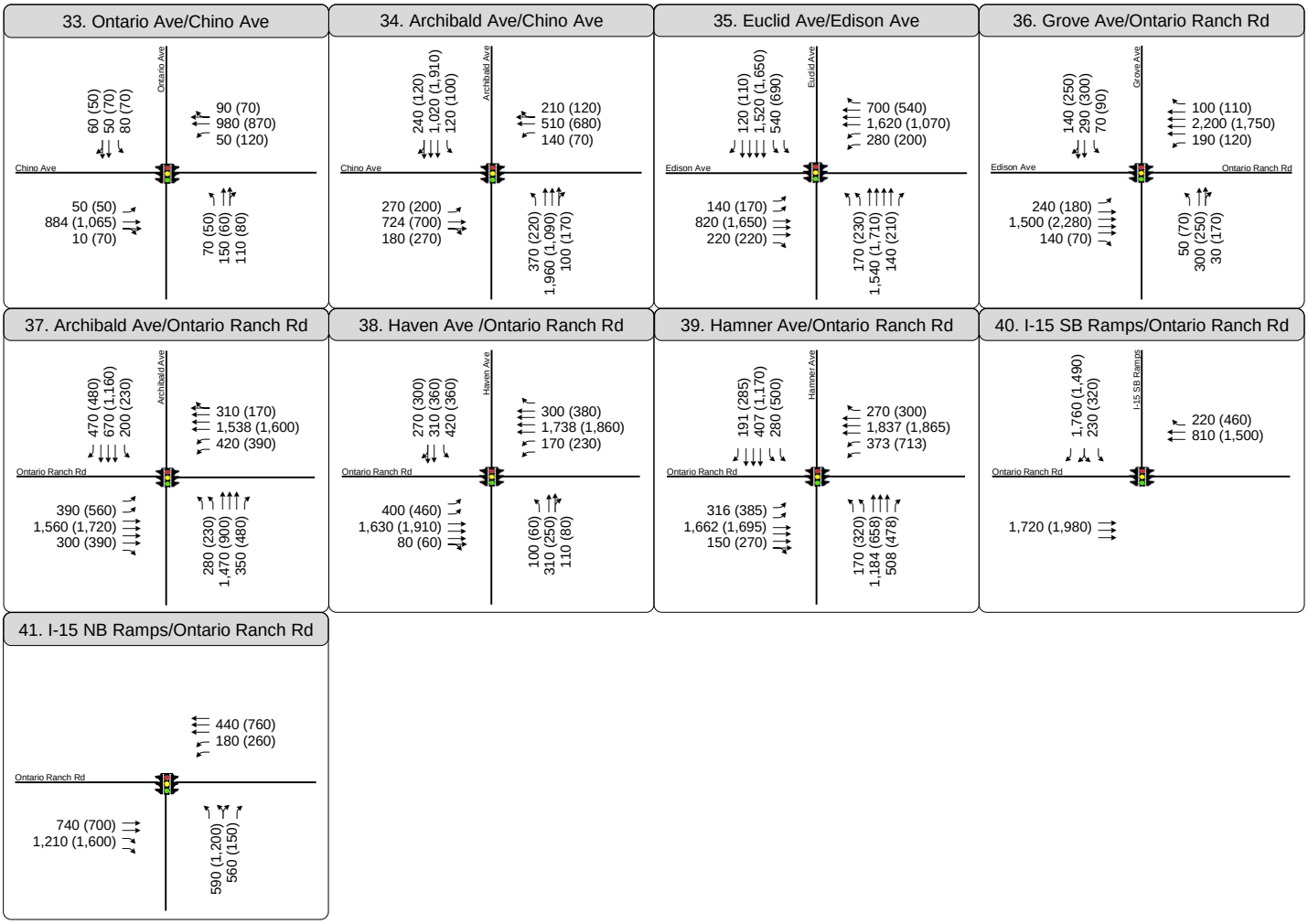
Signalized

Figure 19

Traffic Volumes

Cumulative Year No Project Weekday AM and PM

Intersections 17-32



LEGEND

AM (PM) Peak Hour Traffic Volume

Lane Configuration

Stop Sign

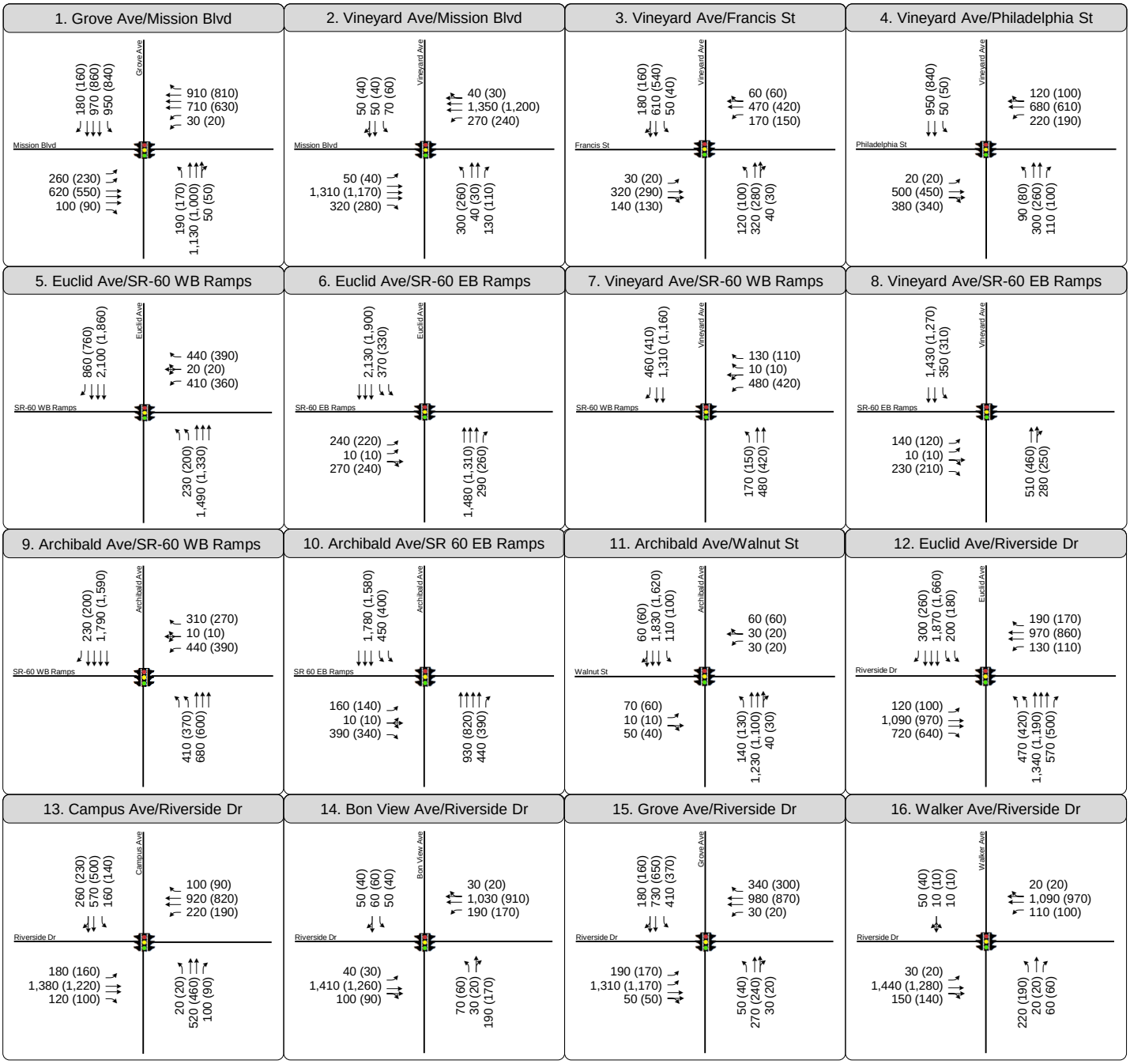
Signalized

Figure 19

Traffic Volumes

Cumulative Year No Project Weekday AM and PM

Intersections 33-41



LEGEND

MD (PM) Peak Hour Traffic Volume

Lane Configuration

Stop Sign

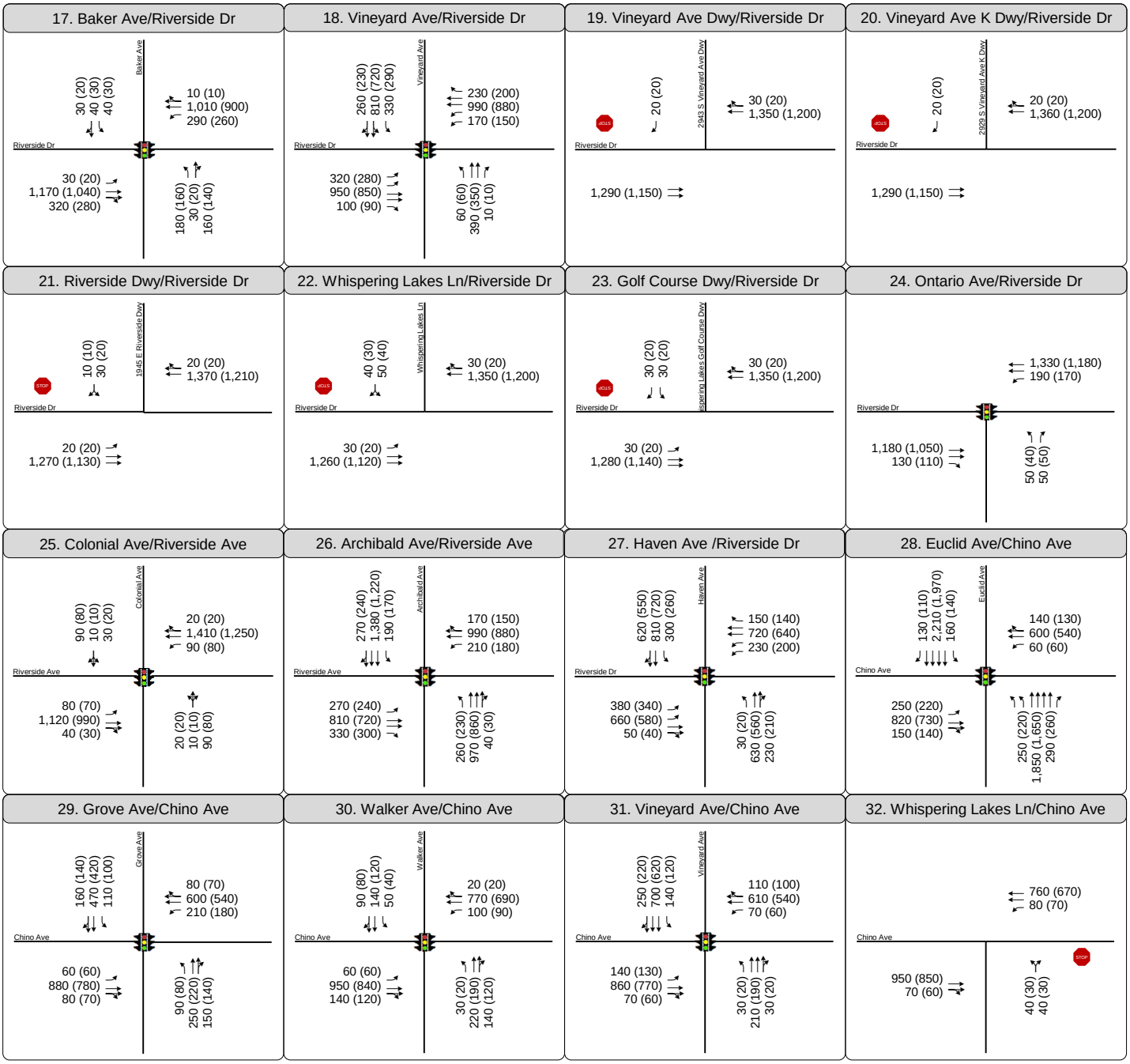
Signalized

Figure 20

Traffic Volumes

Cumulative Year No project Weekend AM and PM

Intersections 1-16



LEGEND

MD (PM) Peak Hour Traffic Volume

Lane Configuration

Stop Sign

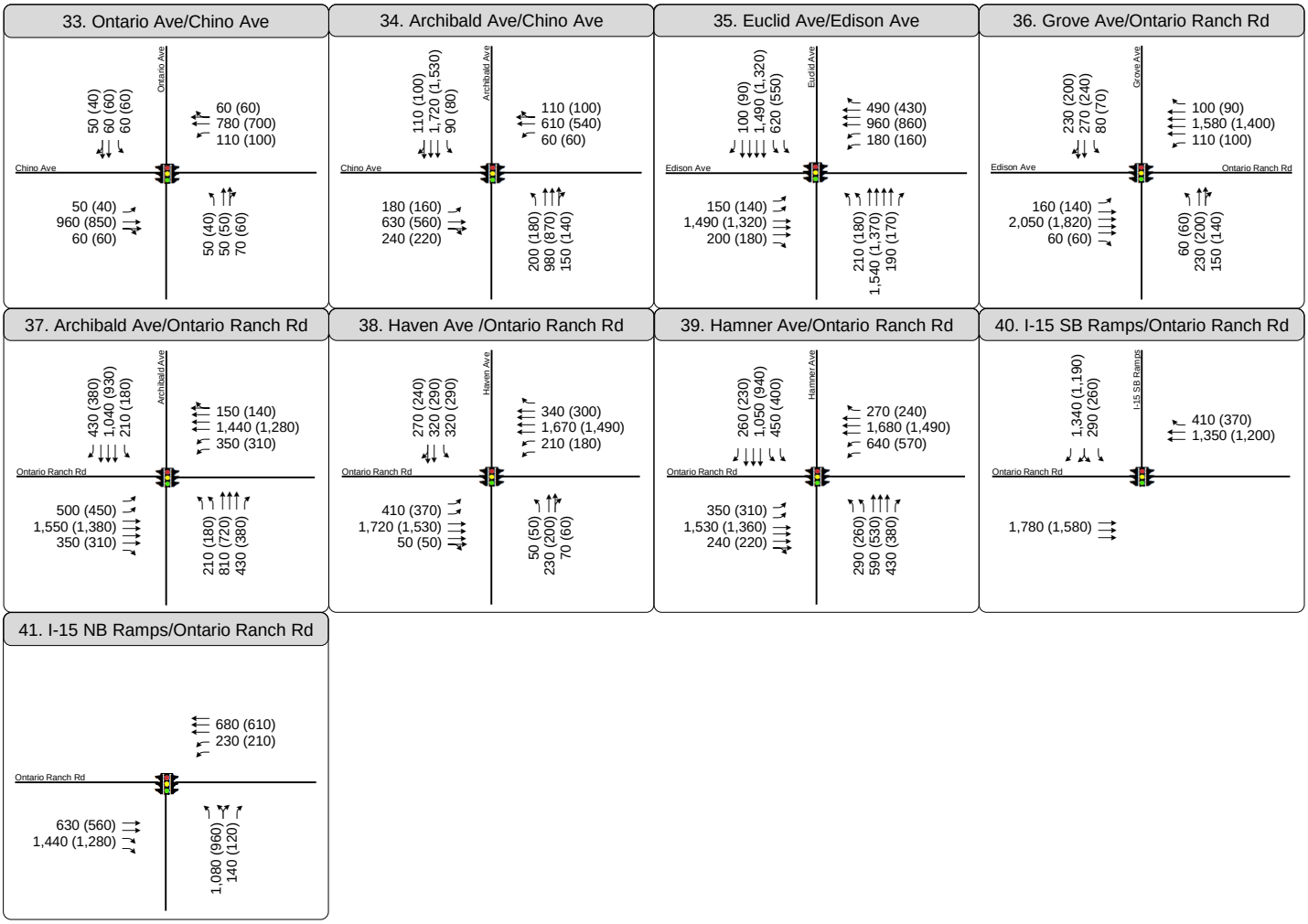
Signalized

Figure 20

Traffic Volumes

Cumulative Year No Project Weekend AM and PM

Intersections 17-32



LEGEND

MD (PM)	Peak Hour Traffic Volume
	Lane Configuration
STOP	Stop Sign
	Signalized

Figure 20

Traffic Volumes

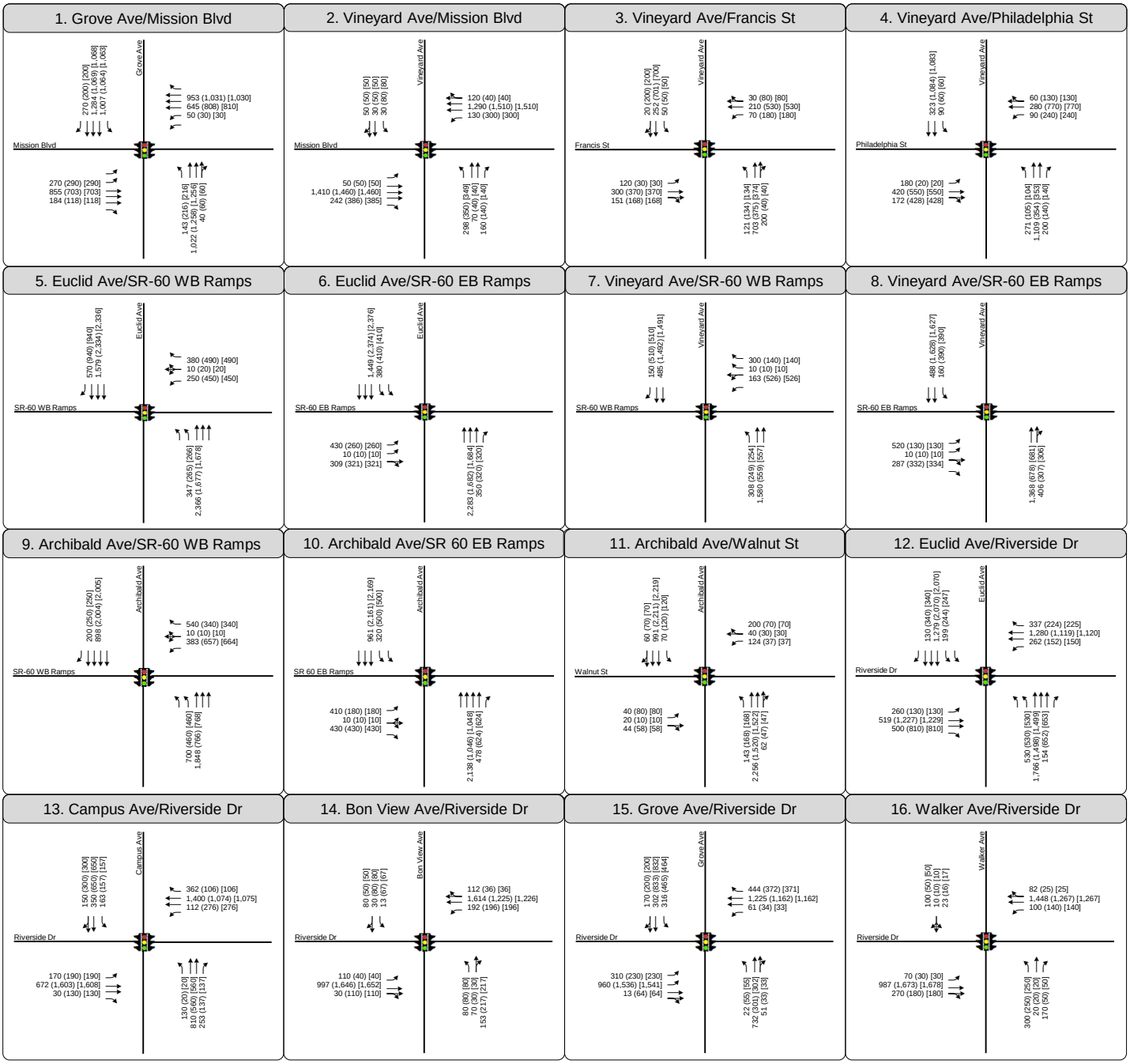
Cumulative Year No Project Weekend AM and PM

Intersections 33-41

6.3.4 Cumulative Year (2050) Plus Project Conditions

Figure 21 and 22 presents the traffic forecast utilized for Cumulative Year (2050) Plus Project Conditions. As shown in **Table 8**, the following intersections are projected to operate at LOS F in Cumulative Year (2050) Plus Project Conditions:

1. Grove Avenue and Mission Avenue (Weekday AM, Weekday PM, Weekend MD, Weekend PM)
4. Vineyard Avenue and Philadelphia Street (Weekday PM)
12. Euclid Avenue and Riverside Drive (Weekday AM, Weekday PM, Weekend MD)
13. Campus Avenue and Riverside Drive (Weekday AM, Weekday PM, Weekend MD)
15. Grove Avenue and Riverside Drive (Weekday AM, Weekday PM)
18. Vineyard Avenue and Riverside Drive (Weekday AM, Weekday PM, Weekend MD, Weekend PM)
21. 1945 Riverside Drive Driveway (Weekday PM, Weekend MD)
22. Whispering Lakes Lane and Riverside Drive (Weekday AM, Weekday PM, Weekend MD, Weekend PM)
26. Archibald Avenue and Riverside Drive (Weekday AM, Weekday PM, Weekend MD, Weekend PM)
27. Haven Avenue and Riverside Drive (Weekday PM)
28. Euclid Avenue and Chino Avenue (Weekday AM, Weekday PM)
32. Whispering Lakes Lane and Chino Avenue (Weekday AM, Weekday PM, Weekend MD, Weekend PM)
34. Archibald Avenue and Chino Avenue (Weekday AM, Weekday PM, Weekend MD, Weekend PM)
35. Euclid Avenue and Edison Avenue (Weekday PM)
39. Hamner Avenue and Ontario Ranch Road (Weekday PM, Weekend MD)



LEGEND

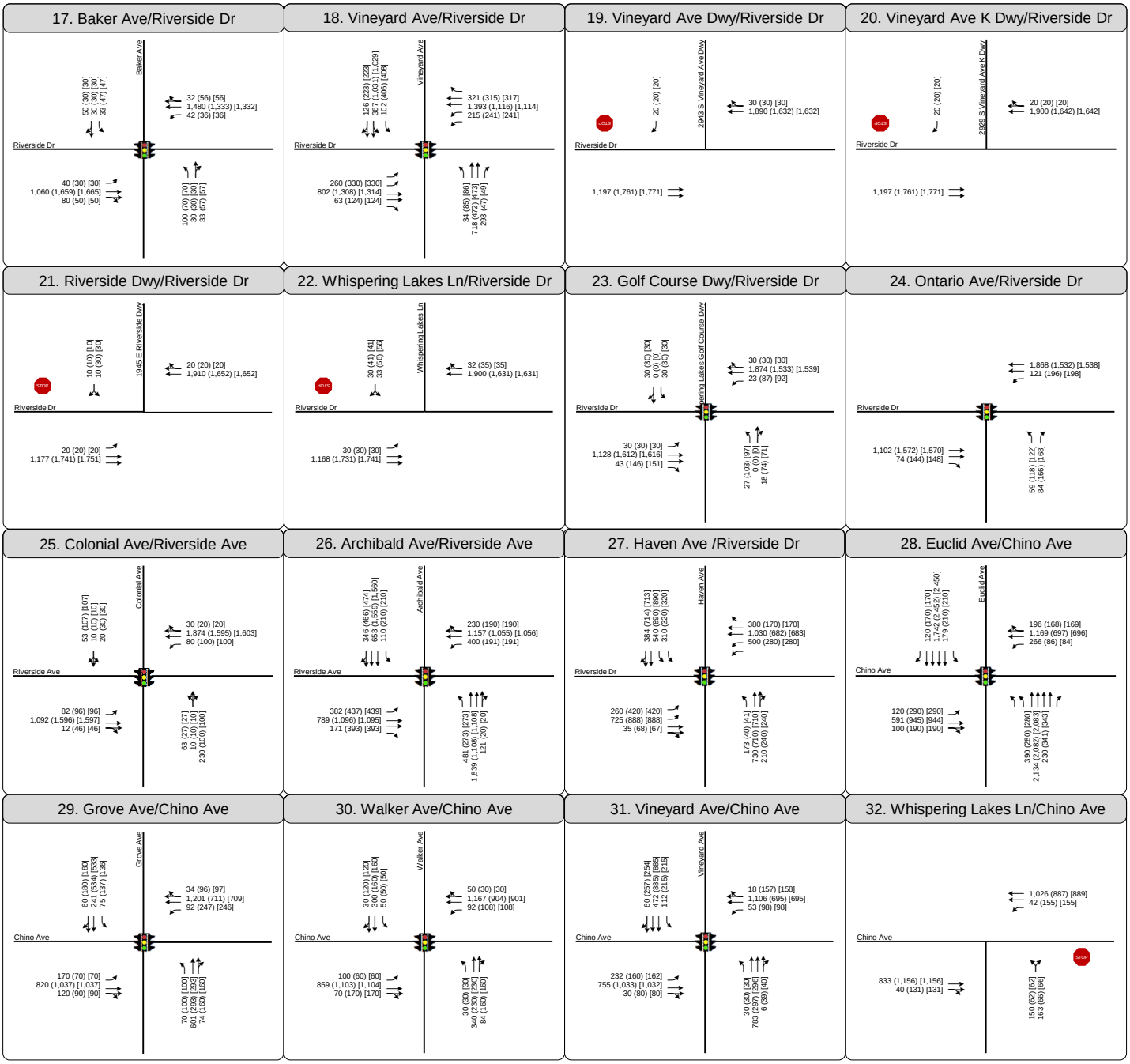
##	Weekday AM
(##)	Weekday PM
[##]	Weekday PM Stadium Event
	Movement
	Stop Sign
	Signalized

Figure 21

Traffic Volumes

Cumulative Year Plus Project Weekday AM, PM, and PM with Stadium Event

Intersections 1-16



LEGEND

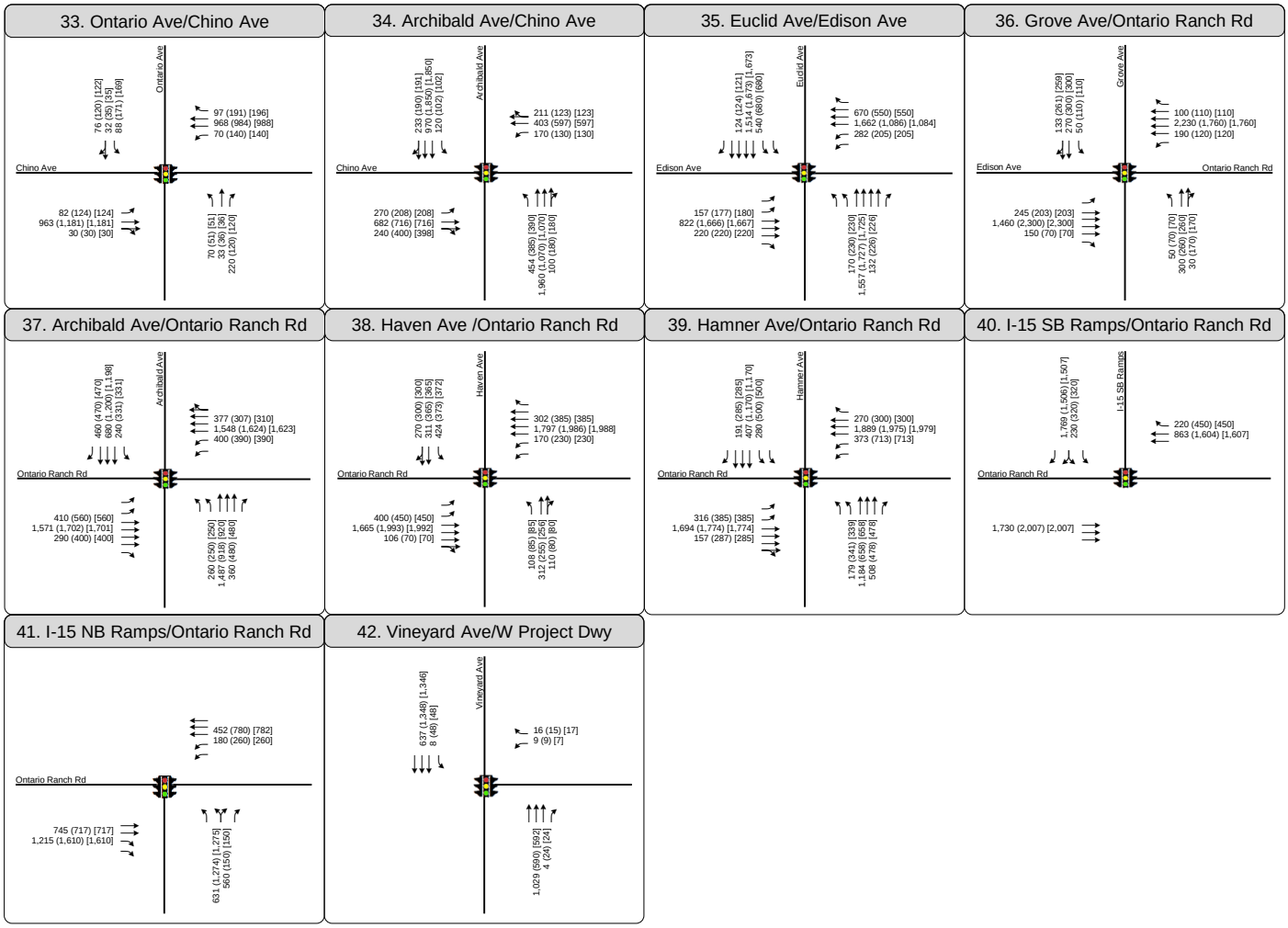
##	Weekday AM
(##)	Weekday PM
[##]	Weekday PM Stadium Event
	Movement
	Stop Sign
	Signalized

Figure 21

Traffic Volumes

Cumulative Year Plus Project Weekday AM, PM, and PM with Stadium Event

Intersections 17-32



LEGEND

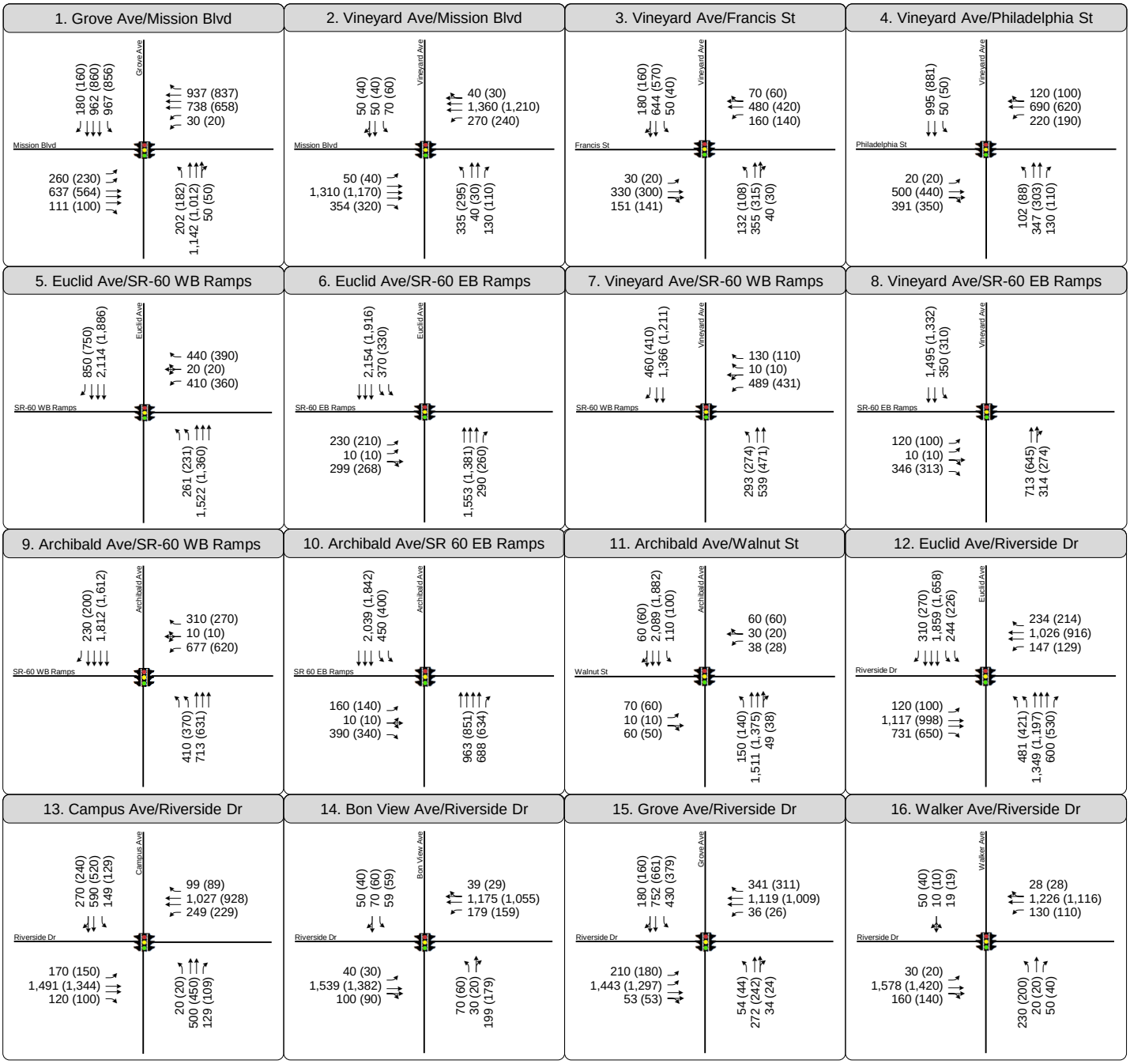
##	Weekday AM
(##)	Weekday PM
[##]	Weekday PM Stadium Event
	Movement
STOP	Stop Sign
	Signalized

Figure 21

Traffic Volumes

Cumulative Year Plus Project Weekday AM, PM, and PM with Stadium Event

Intersections 33-42



LEGEND

MD (PM) Peak Hour Traffic Volume

Lane Configuration

Stop Sign

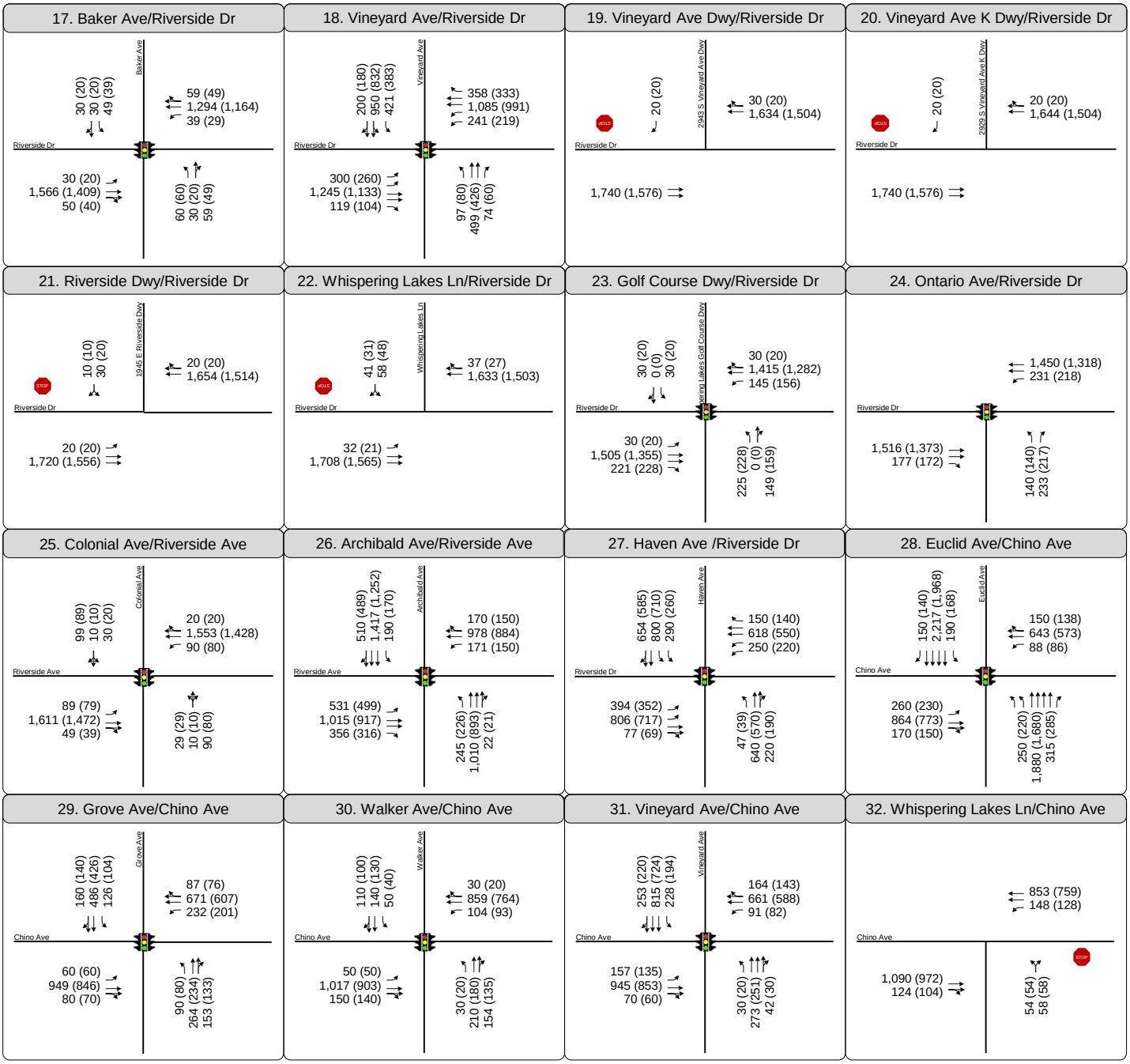
Signalized

Figure 22

Traffic Volumes

Cumulative Year Plus Project Weekend MD and PM

Intersections 1-16



LEGEND

MD (PM) Peak Hour Traffic Volume

Lane Configuration

Stop Sign

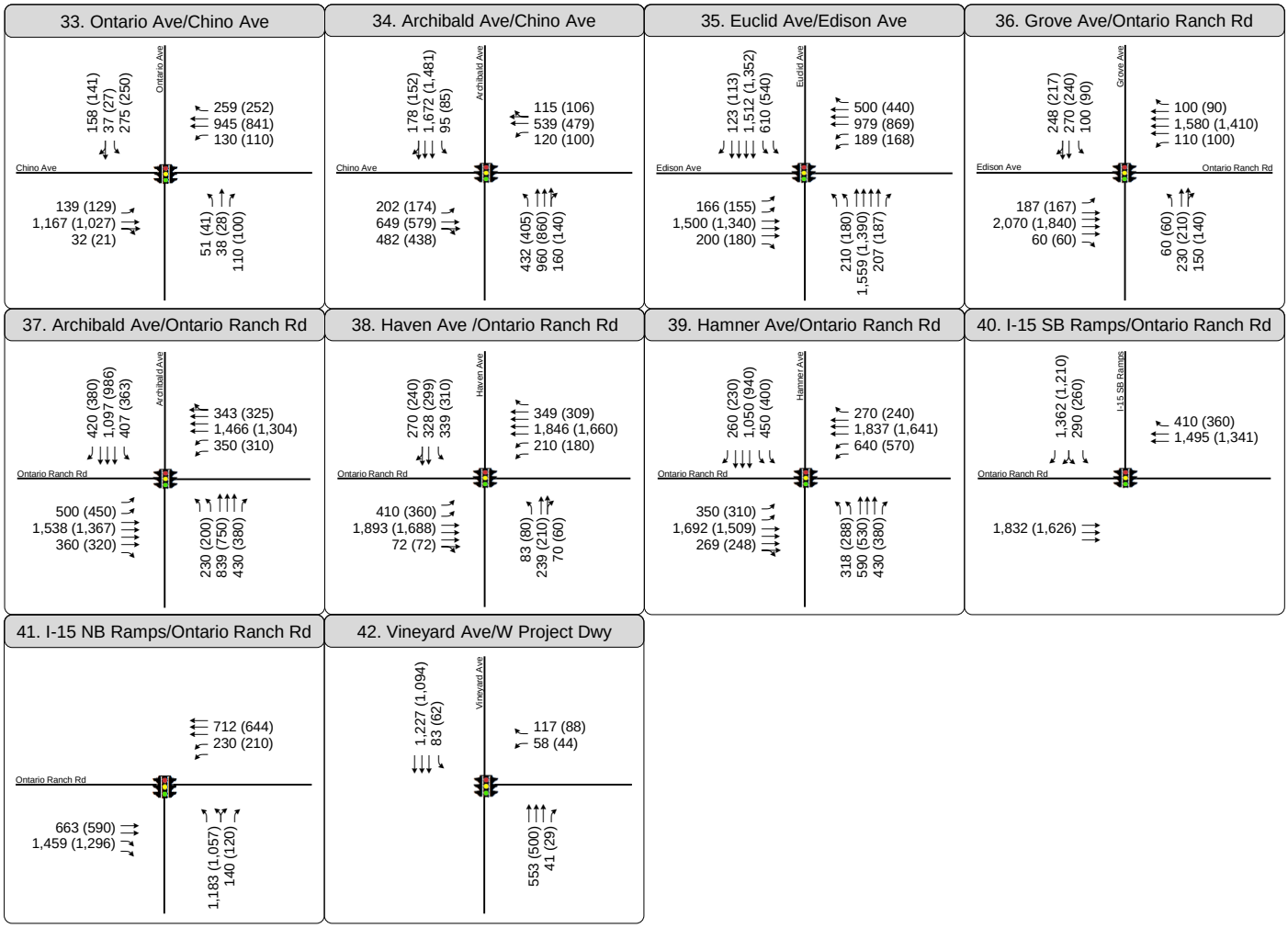
Signalized

Figure 22

Traffic Volumes

Cumulative Year Plus Project Weekend MD and PM

Intersections 17-32



LEGEND

MD (PM) Peak Hour Traffic Volume

Lane Configuration

Stop Sign

Signalized

Figure 22

Traffic Volumes

Cumulative Year Plus Project Weekend MD and PM

Intersections 33-42

Table 8: Cumulative Year (2050) Intersection Level of Service

Intersection Number	Intersection	Cumulative Year Control	Peak Hour	CYNP LOS	CYNP Delay (s)	CYPP (No Imp) LOS	CYPP (No Imp) Delay (s)
1	Grove Avenue and Mission Boulevard	Signalized	AM	**F**	**>120**	**F**	**>120**
			PM	**F**	**>120**	**F**	**>120**
			PM Stadium	-	-	**F**	**>120**
			Weekend MD	**F**	**>120**	**F**	**>120**
			Weekend PM	**F**	**>120**	**F**	**>120**
2	Vineyard Avenue and Mission Boulevard	Signalized	AM	C	25.1	C	25.6
			PM	D	40	D	40.4
			PM Stadium	-	-	D	40.4
			Weekend MD	C	30.8	C	34
			Weekend PM	C	24.7	C	26.8
3	Vineyard Avenue and Francis Street	Signalized	AM	C	25.9	C	26.8
			PM	C	31	C	32
			PM Stadium	-	-	C	31.9
			Weekend MD	C	27.6	C	28.5
			Weekend PM	C	25.2	C	25.8
4	Vineyard Avenue and Philadelphia Street	Signalized	AM	C	23.6	C	23.3
			PM	**F**	**97.3**	**F**	**97.2**
			PM Stadium	-	-	**F**	**97.2**
			Weekend MD	E	73	E	73.8
			Weekend PM	D	45.5	D	47
5	Euclid Avenue and Westbound SR-60 On/Off Ramps	Signalized	AM	C	21.8	C	21.8
			PM	C	33.1	C	33.2
			PM Stadium	-	-	C	33.3
			Weekend MD	C	23.3	C	23.7
			Weekend PM	B	19.4	B	19.9
6	Euclid Avenue and Eastbound SR-60 On/Off Ramps	Signalized	AM	C	29.3	C	29.6
			PM	C	26.8	C	28.2
			PM Stadium	-	-	C	28.2
			Weekend MD	B	19.8	C	21.3
			Weekend PM	B	16.5	B	18.2
7	Vineyard Avenue and Westbound SR-60 On/Off Ramps	Signalized	AM	A	9.4	A	10
			PM	C	26.3	C	32.7
			PM Stadium	-	-	C	33
			Weekend MD	C	21.9	C	34
			Weekend PM	B	19.1	C	23.6
8	Vineyard Avenue and Eastbound SR-60 On/Off Ramps	Signalized	AM	D	51.5	D	54.3
			PM	B	16.4	B	17.5
			PM Stadium	-	-	B	17.5
			Weekend MD	B	15.2	B	13.8
			Weekend PM	B	13.4	B	16.3
9	Archibald Avenue and Westbound SR-60 On/Off Ramps	Signalized	AM	C	24.6	C	26.2
			PM	C	24.9	C	27.5
			PM Stadium	-	-	C	27.6
			Weekend MD	C	22.7	C	25.9
			Weekend PM	C	21.8	C	23.6
10	Archibald Avenue and Eastbound SR-60 On/Off Ramps	Signalized	AM	C	27.2	C	27.1
			PM	C	29	C	24
			PM Stadium	-	-	C	24
			Weekend MD	C	27.8	C	27
			Weekend PM	C	26.2	C	25.5
11	Archibald Avenue and Walnut Avenue	Signalized	AM	D	39.1	D	40.6
			PM	C	23.6	D	50.6
			PM Stadium	-	-	D	50.6
			Weekend MD	C	21.3	C	23.3
			Weekend PM	B	20	C	21.4

Table 8: Cumulative Year (2050) Intersection Level of Service

Intersection Number	Intersection	Cumulative Year Control	Peak Hour	CYNP LOS	CYNP Delay (s)	CYPP (No Imp) LOS	CYPP (No Imp) Delay (s)
12	Euclid Avenue and Riverside Drive	Signalized	AM	**F**	**112.9**	**F**	**111.8**
			PM	**F**	**>120**	**F**	**>120**
			PM Stadium	-	-	**F**	**>120**
			Weekend MD	**F**	**89.3**	**F**	**95.7**
			Weekend PM	E	63.1	E	67.6
13	Campus Avenue and Riverside Drive	Signalized	AM	**F**	**80.2**	**F**	**80.7**
			PM	**F**	**100.1**	**F**	**111.8**
			PM Stadium	-	-	**F**	**112.4**
			Weekend MD	E	73.7	**F**	**88.3**
			Weekend PM	D	53.2	E	64.7
14	Bon View Avenue and Riverside Drive	Signalized	AM	C	24.8	C	27.1
			PM	C	33.2	D	37.2
			PM Stadium	-	-	D	37.5
			Weekend MD	C	27.7	C	32.4
			Weekend PM	C	22.9	C	24.8
15	Grove Avenue and Riverside Drive	Signalized	AM	**F**	**91.7**	**F**	**91.3**
			PM	**F**	**83.8**	**F**	**96.6**
			PM Stadium	-	-	**F**	**96.7**
			Weekend MD	E	62.9	E	75.9
			Weekend PM	D	49.7	E	55.7
16	Walker Avenue and Riverside Drive	Signalized	AM	D	35.4	D	38.7
			PM	D	36.6	D	43.8
			PM Stadium	-	-	D	44.1
			Weekend MD	C	29.4	C	34.7
			Weekend PM	C	22.7	C	25.8
17	Baker Avenue and Riverside Drive	Signalized	AM	D	40.2	C	23
			PM	E	73.5	C	22.3
			PM Stadium	-	-	C	22.4
			Weekend MD	D	53.8	C	21.9
			Weekend PM	D	39.3	B	19.3
18	Vineyard Avenue and Riverside Drive	Signalized	AM	**F**	**111.4**	**F**	**>120**
			PM	**F**	**>120**	**F**	**>120**
			PM Stadium	-	-	**F**	**>120**
			Weekend MD	**F**	**118.2**	**F**	**>120**
			Weekend PM	E	70.9	**F**	**101.6**
19	2943 S Vineyard Avenue Driveway and Riverside Drive	SSSC	AM	C	20.7	C	22
			PM	C	17.1	C	18.5
			PM Stadium	-	-	C	18.5
			Weekend MD	C	15.7	C	18.5
			Weekend PM	B	14.3	C	17
20	2929 S Vineyard Avenue Driveway and Riverside Drive	SSSC	AM	C	20.7	C	22
			PM	C	17	C	18.5
			PM Stadium	-	-	C	18.5
			Weekend MD	C	15.7	C	18.5
			Weekend PM	B	14.3	C	17
21	1945 E Riverside Drive #20 Driveway and Riverside Drive	SSSC	AM	E	43.6	E	48.7
			PM	E	48.3	**F**	**64**
			PM Stadium	-	-	**F**	**64**
			Weekend MD	E	38.4	**F**	**64**
			Weekend PM	D	27.1	E	41.4
22	Whispering Lakes Lane and Riverside Drive	SSSC	AM	**F**	**75.9**	**F**	**101.4**
			PM	**F**	**67.5**	**F**	**123.2**
			PM Stadium	-	-	**F**	**123.2**
			Weekend MD	E	48	**F**	**130.1**
			Weekend PM	D	30.8	**F**	**64.4**

Table 8: Cumulative Year (2050) Intersection Level of Service

Intersection Number	Intersection	Cumulative Year Control	Peak Hour	CYNP LOS	CYNP Delay (s)	CYPP (No Imp) LOS	CYPP (No Imp) Delay (s)
23	Whispering Lakes Golf Course Driveway and Riverside Drive	NP: SSSC PP: Signalized	AM	**F**	**>120**	B	11.9
			PM	**F**	**>120**	B	17.1
			PM Stadium	-	-	B	16.9
			Weekend MD	**F**	**>120**	C	28
			Weekend PM	**F**	**68**	C	25.6
24	Ontario Avenue and Riverside Drive	Signalized	AM	B	12.2	B	10.3
			PM	B	12.4	B	16.5
			PM Stadium	-	-	B	16.8
			Weekend MD	B	11.6	B	19
			Weekend PM	B	11	B	16.9
25	Colonial Avenue and Riverside Drive	Signalized	AM	C	24.2	C	31.6
			PM	C	20.7	C	21
			PM Stadium	-	-	C	21.1
			Weekend MD	B	17.2	C	20.3
			Weekend PM	B	14.6	B	19.8
26	Archibald Avenue and Riverside Drive	Signalized	AM	**F**	**>120**	**F**	**>120**
			PM	**F**	**105.5**	**F**	**>120**
			PM Stadium	-	-	**F**	**>120**
			Weekend MD	E	79.4	**F**	**>120**
			Weekend PM	E	57.4	**F**	**116.3**
27	Haven Avenue and Riverside Drive	Signalized	AM	**F**	**92.6**	E	78.5
			PM	**F**	**96.3**	**F**	**99.8**
			PM Stadium	-	-	**F**	**99.8**
			Weekend MD	E	73.2	E	76.1
			Weekend PM	E	57.5	E	59.2
28	Euclid Avenue and Chino Avenue	Signalized	AM	**F**	**>120**	**F**	**>120**
			PM	**F**	**94.5**	**F**	**102**
			PM Stadium	-	-	**F**	**101.9**
			Weekend MD	E	64.6	E	72.8
			Weekend PM	D	52.6	E	57.6
29	Grove Avenue and Chino Avenue	Signalized	AM	E	56	E	56.6
			PM	E	62.5	E	66.2
			PM Stadium	-	-	E	66
			Weekend MD	D	51.9	E	57
			Weekend PM	D	54.2	E	64.4
30	Walker Avenue and Chino Avenue	Signalized	AM	D	36.1	D	37.8
			PM	C	34.4	C	33
			PM Stadium	-	-	C	33.1
			Weekend MD	C	31.8	C	30.5
			Weekend PM	C	26.7	C	28
31	Vineyard Avenue and Chino Avenue	Signalized	AM	D	41.6	D	53.4
			PM	E	58.4	E	56.1
			PM Stadium	-	-	E	56.3
			Weekend MD	D	44.5	D	51.4
			Weekend PM	D	35.4	D	51.7
32	Whispering Lakes Lane and Chino Avenue	SSSC	AM	**F**	**>120**	**F**	**>120**
			PM	**F**	**117**	**F**	**>120**
			PM Stadium	-	-	**F**	**>120**
			Weekend MD	**F**	**64.4**	**F**	**>120**
			Weekend PM	D	34.9	**F**	**>120**
33	Ontario Avenue and Chino Avenue	Signalized	AM	C	27	C	25.4
			PM	C	27.1	C	29.4
			PM Stadium	-	-	C	29.4
			Weekend MD	C	24.9	D	41.8
			Weekend PM	C	22.9	D	36.5

Table 8: Cumulative Year (2050) Intersection Level of Service

Intersection Number	Intersection	Cumulative Year Control	Peak Hour	CYNP LOS	CYNP Delay (s)	CYPP (No Imp) LOS	CYPP (No Imp) Delay (s)
34	Archibald Avenue and Chino Avenue	Signalized	AM	**F**	**94.6**	**F**	**117**
			PM	**F**	**96.8**	**F**	**>120**
			PM Stadium	-	-	**F**	**>120**
			Weekend MD	E	70.5	**F**	**>120**
			Weekend PM	D	54	**F**	**115.2**
35	Euclid Avenue and Edison Avenue	Signalized	AM	E	72	E	73.6
			PM	**F**	**87.6**	**F**	**88.1**
			PM Stadium	-	-	**F**	**88.2**
			Weekend MD	E	58.3	E	58.8
			Weekend PM	D	49.6	D	50.1
36	Grove Avenue and Edison Avenue	Signalized	AM	D	46.2	D	45.3
			PM	D	42.4	D	45.9
			PM Stadium	-	-	D	45.9
			Weekend MD	D	35.5	D	37.2
			Weekend PM	C	32.3	C	32
37	Archibald Avenue and Ontario Ranch Road	Signalized	AM	E	58.5	E	66.3
			PM	D	53.7	E	64.9
			PM Stadium	-	-	E	65
			Weekend MD	D	44.3	E	63.7
			Weekend PM	D	36	D	49
38	Haven Avenue and Ontario Ranch Road	Signalized	AM	E	65.8	E	68.7
			PM	E	62.3	E	67.9
			PM Stadium	-	-	E	68
			Weekend MD	D	49.5	E	55.6
			Weekend PM	D	40.4	D	45.3
39	Hamner Avenue and Ontario Ranch Road	Signalized	AM	E	75.1	E	77.5
			PM	**F**	**103.9**	**F**	**113.3**
			PM Stadium	-	-	**F**	**113.2**
			Weekend MD	E	76.2	**F**	**88**
			Weekend PM	E	61.1	E	66.8
40	Southbound I-15 On/Off Ramp and Cantu-Galleano Ranch Road	Signalized	AM	E	60.3	E	62.6
			PM	E	62.5	E	69
			PM Stadium	-	-	E	69.4
			Weekend MD	D	39	D	47.9
			Weekend PM	C	25.7	C	30.5
41	Northbound I-15 On/Off Ramp and Cantu-Galleano Ranch Road	Signalized	AM	C	26.6	C	20.9
			PM	D	35.3	D	38.9
			PM Stadium	-	-	D	39
			Weekend MD	C	29	C	34.4
			Weekend PM	C	24.1	C	27.3
42	Vineyard Ave and Western Project Driveway	Signalized	AM	-	-	A	5.4
			PM	-	-	A	5
			PM Stadium	-	-	A	5
			Weekend MD	-	-	A	7.5
			Weekend PM	-	-	A	6.9

Notes:

1. AWSC = All Way Stop Controlled.
2. SSSC = Side Street Stop Controlled
3. MD = Midday
4. Red cells indicate intersection operates below adopted LOS Standards

Source: Fehr & Peers, 2024.

6.4 Recommended Improvements

Improvements are provided below for study locations affected by the addition of Project traffic to maintain operating conditions at these intersections consistent with the applicable performance standards. The improvements are consistent with The Ontario Plan and programmed roadway improvements in the RTP/SCS described above. Several intersections are designated as enhanced intersections[8] in The Ontario Plan and will receive improvements, which may require the removal of the existing median so the improvements can be completed within the existing ROW. Several intersections are within both the City of Ontario and Caltrans jurisdiction and the improvements will require cooperation with Caltrans, which is standard engineering practice. The City will be responsible for implementing the improvement when needed. The identified improvements would improve intersection operations to better than pre-project conditions in the Opening Year (2026) and to acceptable conditions in the Cumulative Year (2050).

6.4.1 Opening Year (2026) Plus Project Intersection Improvements

As discussed earlier in Chapter 6, additional delay is added to ten intersections that are expected to operate below adopted LOS standards under the Opening Year (2026) No Project Conditions. Improvements are identified that would improve intersection operations to better than no-project conditions. The improvements and changes in LOS and delay are shown in **Table 9.** LOS reports are provided in **Appendix F**.

Four intersections (Bon View Avenue and Riverside Drive, Walker Avenue and Riverside Drive, Baker Avenue and Riverside Drive, and Grove Avenue and Edison Avenue) are currently controlled by stop signs and meet peak hour signal warrant under Opening Year No Project and Opening Year Plus Project conditions. Traffic signals are recommended at these four intersections. Other alternatives such as converting intersections to right-in/right-out may be considered in lieu of a traffic signal.

The opening year improvements are described below and should be completed prior to the opening of the baseball stadium:

Intersection 13: Campus Avenue and Riverside Drive

- Re-optimize signal timing.

Intersection 14: Bon View Avenue and Riverside Drive

- Install traffic signal.

[8] Enhanced intersection as classified by The Ontario Plan allow flexibility from the standard intersection configuration to increase capacity, improve operation, and respond to local conditions. Enhancements may include additional lanes, reduced median width, increased right-of-way width, removal of on-street bike lanes, or reduction of parkway width. Detailed engineering studies are necessary to identify the most effective types of improvements.

Intersection 15: Grove Avenue and Riverside Drive

- Re-optimize signal timing.

Intersection 16: Walker Avenue and Riverside Drive

- Install traffic signal.

Intersection 17: Baker Avenue and Riverside Drive

- Install traffic signal.

Intersection 26: Archibald Avenue and Riverside Drive

- Add dedicated southbound right turn lane.
- Add eastbound left turn lane (two left-turn lanes in total).

This improvement may require additional right-of-way.

Intersection 27: Haven Avenue and Riverside Drive

- Add eastbound left turn lane (two left-turn lanes in total).
- Add overlap phase for existing southbound right turn lane.
- Re-optimize signal timing.

This improvement may require additional right-of-way.

Intersection 28: Euclid Avenue and Chino Avenue

- Add dedicated westbound left turn lane.
- Convert existing single westbound lane into a shared westbound through/right turn lane.

This improvement would require additional right-of-way and falls within the jurisdiction of Caltrans. The City is responsible for coordinating these improvements.

Intersection 36: Grove Avenue and Edison Avenue

- Install traffic signal.
- Add eastbound and westbound dedicated left turn lanes to allow for protected eastbound/westbound left turns.

This improvement would require additional right-of-way.

Intersection 40: Southbound I-15 On/Off Ramp and Cantu Galleano Ranch Road

- Add one westbound through lane (three through lanes total; within existing ROW)
- Re-optimize signal timing.

This intersection falls within the jurisdiction of Caltrans and will require coordination for improvements. The City is responsible for coordinating these improvements.

Table 9: Opening Year (2026) Intersection Improvement Recommendations

Intersection Number	Intersection	OYNP Control	OYPP Control	Peak Hour	NP LOS	NP Delay	PP (No Improvements) LOS	PP (No Improvements) Delay	Opening Year Improvements	PP (With Improvements) LOS	PP (With Improvements) Delay
13	Campus Avenue and Riverside Drive	Signalized	Signalized	AM	D	48.2	D	54	Re-optimize signal timing	D	52.9
				PM	E	64.6	F	85.9		E	61.1
				PM Stadium	-	-	F	87.4		E	62
				Weekend MD	D	42.6	E	69.4		D	47.6
				Weekend PM	C	32.8	D	53.1		D	38.7
14	Bon View Avenue and Riverside Drive	Signalized	Signalized	AM	F	>120	F	>120	Install traffic signal	B	18.8
				PM	F	>120	F	>120		C	20.1
				PM Stadium	-	-	F	>120		C	20.9
				Weekend MD	F	>120	F	>120		B	17.5
				Weekend PM	F	78.1	F	>120		D	52.4
15	Grove Avenue and Riverside Drive	Signalized	Signalized	AM	F	85.1	F	93.5	Re-optimize signal timing	D	47.1
				PM	E	60.8	E	78.8		D	50.5
				PM Stadium	-	-	F	80		D	51.1
				Weekend MD	C	32.4	E	74.2		D	46.6
				Weekend PM	C	28	E	59.9		D	39.6
16	Walker Avenue and Riverside Drive	Signalized	Signalized	AM	F	>120	F	>120	Install traffic signal	C	23
				PM	F	>120	F	>120		C	32.8
				PM Stadium	-	-	F	>120		C	33.5
				Weekend MD	F	>120	F	>120		C	23.8
				Weekend PM	F	93.1	F	>120		B	19.6
17	Baker Avenue and Riverside Drive	Signalized	Signalized	AM	F	>120	F	>120	Install traffic signal	B	10.5
				PM	F	52.7	F	114.7		A	9.7
				PM Stadium	-	-	F	117.7		A	9.9
				Weekend MD	D	30.1	F	71.9		A	8.4
				Weekend PM	D	31.3	F	72.2		A	8.3
26	Archibald Avenue and Riverside Drive	Signalized	Signalized	AM	E	71	F	85.9	Add SBR Add EBL (Dual EBL) Requires ROW or narrowing of lanes	E	61
				PM	E	61.9	F	89.3		E	62.1
				PM Stadium	-	-	F	89.8		E	62.1
				Weekend MD	D	48.4	F	86.2		D	51.8
				Weekend PM	D	41.2	E	72		D	44.3
27	Haven Avenue and Riverside Drive	Signalized	Signalized	AM	F	>120	F	>120	Add Overlap to SBR Add EBL (Dual EBL) Re-optimize signal timing	F	104.6
				PM	F	>120	F	>120		F	113.1
				PM Stadium	-	-	F	>120		F	113.1
				Weekend MD	F	101.3	F	114.7		F	94.4
				Weekend PM	E	68.6	E	79.6		E	74.2
28	Euclid Avenue and Chino Avenue	Signalized	Signalized	AM	D	43.8	D	48.1	Add WBL	D	35.5
				PM	E	78.7	F	81.1		E	80
				PM Stadium	-	-	F	81.1		E	79.9
				Weekend MD	C	21.6	C	29.8		C	26.9
				Weekend PM	C	20.3	C	27.2		C	25

Table 9: Opening Year (2026) Intersection Improvement Recommendations

Intersection Number	Intersection	OYNP Control	OYPP Control	Peak Hour	NP		PP (No Improvements)		Opening Year Improvements	PP (With Improvements)	
					LOS	Delay	LOS	Delay		LOS	Delay
36	Grove Avenue and Edison Avenue	Signalized	Signalized	AM	F	68	F	69.5	Install traffic signal Add EBL and WBL	B	14.4
				PM	F	>120	F	>120		C	22.6
				PM Stadium	-	-	F	>120		C	22.5
				Weekend MD	F	110.6	F	>120		B	19.7
				Weekend PM	E	40.6	E	49.1		B	15.8
40	Southbound I-15 On/Off Ramp and Cantu-Galleano Ranch Road	Signalized	Signalized	AM	D	38.2	D	43.5	Restripe to add third WB through lane Re-optimize signal timing	C	22
				PM	F	91.9	F	98.4		E	59.1
				PM Stadium	-	-	F	98.3		E	58.9
				Weekend MD	C	31.9	D	42		C	27.1
				Weekend PM	B	18.2	C	21.3		B	18.8

6.4.2 Cumulative Year (2050) Plus Project Intersection Improvements

As discussed earlier in Chapter 6, additional delay is added to seven intersections in the cumulative year, resulting in these intersections operating below adopted LOS standards. Improvements were identified that would result in acceptable operating conditions, recognizing some intersection improvements may be constrained due to right-of-way limitations. These improvements are in addition to the improvements assumed under No Project conditions as part of the buildout of the Ontario Ranch area and The Ontario Plan. The assumed baseline lane configurations are shown in Section 6.3 above.

The improvements and changes in LOS and delay are shown in **Table 10.** Recommended lane configurations are shown in **Figures 23 and 24.** LOS reports are provided in **Appendix F**.

Intersection 1: Grove Avenue and Mission Boulevard

- Constrained ROW Alternative
    - Remove eastbound/westbound left turn movements and replace with indirect left turn using downstream U-turn pockets (also known as a "Michigan left")
        - Single lane U-turn pocket for westbound left movement
        - Dual lane U-turn pocket for eastbound left movement
    - Add one westbound right-turn lane (two right-turn lanes in total)
    - Add one southbound left turn lane (two left-turn lanes in total)
    - Add overlap phase to westbound and eastbound right turn movements
    - Remove the southbound right turn lane to maintain three southbound through lanes by striping the southbound right turn lane as a southbound through-right turn lane
        - Will require removal of the existing southbound right-turn overlap phase
- Full Buildout, Unconstrained Alternative
    - Add two southbound left turn lanes (three left-turn lanes in total)
    - Add one westbound right turn lane (two right-turn lanes in total)
    - Add overlap phase to westbound right turn movement

Both above alternatives improve intersection operations; however, the intersection still fails to meet the threshold for acceptable conditions under the Cumulative Year No Project and Cumulative Year Plus Project conditions, unless the eastbound/westbound left-turn movements are replaced with indirect left turns.

Fehr & Peers recommends a further focused study on potential improvements for this intersection, evaluating alternatives that adequately serve traffic volumes within available right-of-way.

Intersection 4: Vineyard Avenue and Philadelphia Street

- Add dedicated eastbound right turn lane.

This improvement may require additional right-of-way and/or restriping of the existing roadway by narrowing lanes to 11 feet.

Intersection 12: Euclid Avenue and Riverside Drive

- Add one southbound through lane (four through lanes in total)
- Add one westbound through lane (three through lanes in total)
- Add one eastbound through lane (three through lanes in total)
- Add overlap phase to all right turns.

These improvements will require additional right-of-way and are within jurisdictional control of Caltrans. The City will be responsible for coordinating improvements with Caltrans.

Intersection 13: Campus Avenue and Riverside Drive

- Add dedicated southbound right turn lane
- Add one eastbound left turn lane (two left-turn lanes in total)
- Add one westbound left turn lane (two left-turn lanes in total)

These improvements may require additional right-of-way and/or restriping of the existing roadway by narrowing lanes to 11 feet.

Intersection 15: Grove Avenue and Riverside Drive

- Add one southbound left turn lane (two left-turn lanes in total)
- Add one eastbound left turn lane (two left-turn lanes in total)

These improvements may require additional right-of-way and/or restriping of the existing roadway by narrowing lanes to 11 feet.

Intersection 18: Vineyard Avenue and Riverside Drive

- Constrained ROW Alternative
    - Add one southbound left turn lane (two left-turn lanes in total)
    - Remove southbound shared through/left-turn lane
    - Add one eastbound through lane (three through lanes total)
    - Add one westbound through lane (three through lanes total)
- Full Buildout, Unconstrained Alternative
    - All of the above, plus
    - Add dedicated southbound right turn lane

The constrained ROW alternative assumes a maximum six lane cross section on the northern leg of the intersection (dual northbound through lanes, dual southbound left turn lanes, one southbound through

lane, and one southbound shared through/right-turn lane). The split signal phasing proposed for opening year would also be removed under this scenario. The intersection is still forecasted to operate at LOS F during the weekday PM peak hour. Installing a dedicated southbound right turn lane would require additional ROW but would improve operations to acceptable conditions.

ROW along Riverside Drive should be preserved during construction to allow for the widening of the eastbound and westbound intersection approaches to three through lanes in each direction as adjacent parcels develop.

Fehr & Peers recommends a further focused study on potential improvements for this intersection, evaluating alternatives that adequately serve traffic volumes within available right-of-way.

Intersection 26: Archibald Avenue and Riverside Drive

- Add dedicated westbound right turn lane
- Add dedicated eastbound right turn lane
- Add one northbound left turn lane (two left turn lanes in total)
- Add overlap phase to southbound and eastbound right turn movements

These improvements are in addition to the ones proposed for opening year. These improvements may require additional right-of-way and/or restriping of the existing roadway by narrowing lanes to 11 feet.

Fehr & Peers recommends a further focused study on potential improvements for this intersection, evaluating alternatives that adequately serve traffic volumes within available right-of-way.

Intersection 27: Haven Avenue and Riverside Drive

No additional improvements are recommended beyond those identified for Opening Year.

Intersection 28: Euclid Avenue and Chino Avenue

- Add one eastbound left turn lane (two left-turn lanes in total)
- Add one westbound left turn lane (two left-turn lanes in total)
- Add dedicated westbound right turn lane
- Add overlap phase to westbound and northbound right turn movements

These improvements will require additional right-of-way and are within jurisdictional control of Caltrans. The City will be responsible for coordinating improvements with Caltrans.

Intersection 32: Whispering Lakes Lane and Chino Avenue

- Install traffic signal

Intersection 34: Archibald Avenue and Chino Avenue

- Add one eastbound left turn lane (two left turn lanes in total)
- Add one northbound left turn lane (two left turn lanes in total)
- Add dedicated eastbound right turn lane

These improvements may require additional right-of-way and/or restriping of the existing roadway by narrowing lanes to 11 feet.

Intersection 35: Euclid Avenue and Riverside Drive

- Add one eastbound through lane (four through lanes in total)
- Add one westbound through lane (four through lanes in total)
- Add overlap phase to all right turn movements

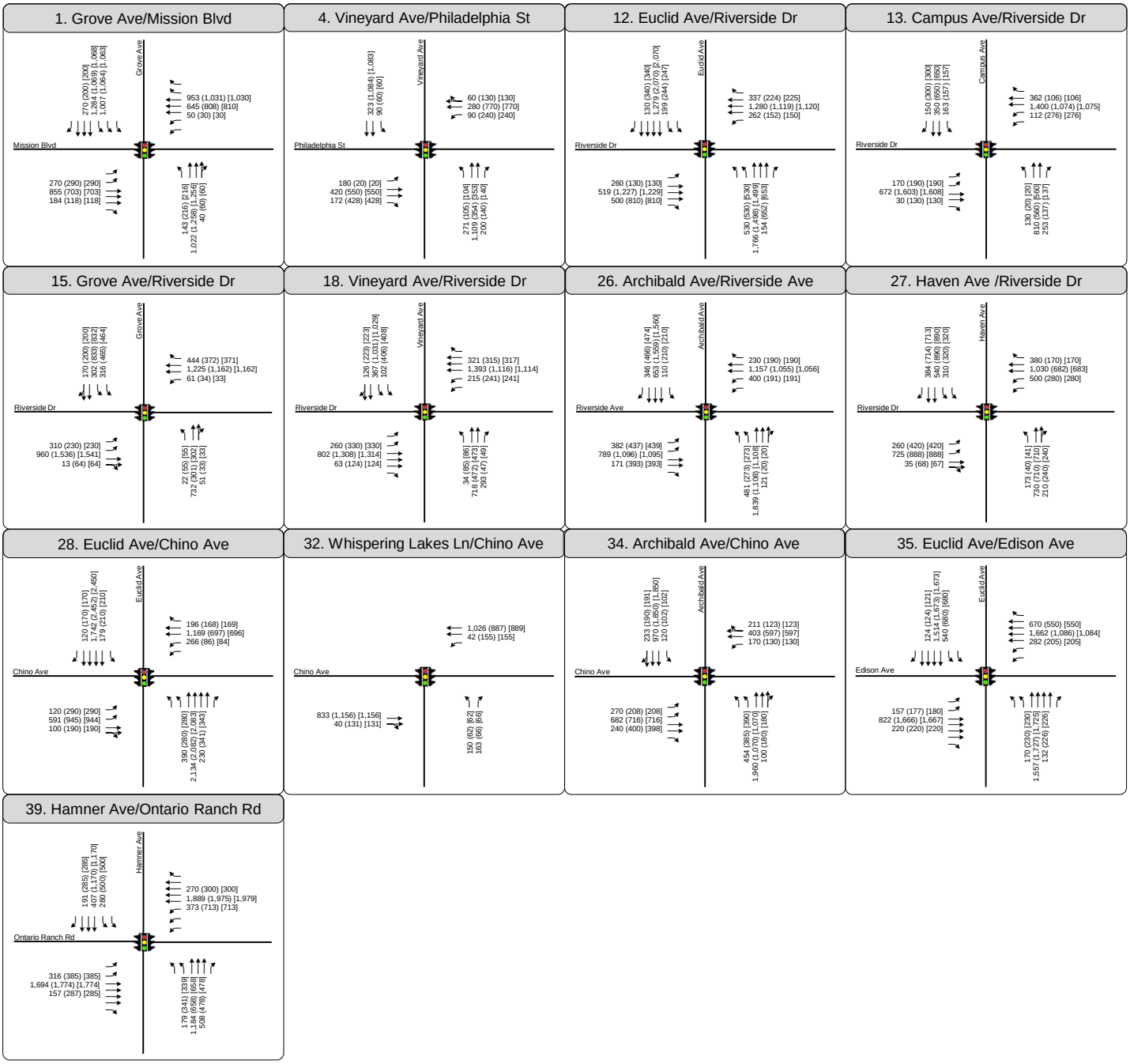
These improvements will require additional right-of-way and are within jurisdictional control of Caltrans. The City will be responsible for coordinating improvements with Caltrans.

Intersection 39: Hamner Avenue and Ontario Ranch Road

- Constrained ROW Alternative
    - Add one eastbound through lane (four through lanes in total)
    - Maintain dedicated eastbound right turn lane
    - Add overlap phase to all right turn movements
- Full Buildout, Unconstrained Alternative
    - Add one westbound left turn lane (three left-turn lanes in total)
    - Maintain dedicated eastbound right turn lane
    - Add one eastbound through lane (four through lanes in total)
    - Add one westbound through lane (four through lanes in total)
    - Add overlap phase to all right turn movements

The full buildout, unconstrained alternative would improve intersection operations to acceptable conditions; however, this alternative may not be feasible due to ROW constraints. The constrained ROW alternative would operate with LOS F conditions.

Fehr & Peers recommends a further focused study on potential improvements for this intersection, evaluating alternatives that adequately serve traffic volumes within available right-of-way.



LEGEND

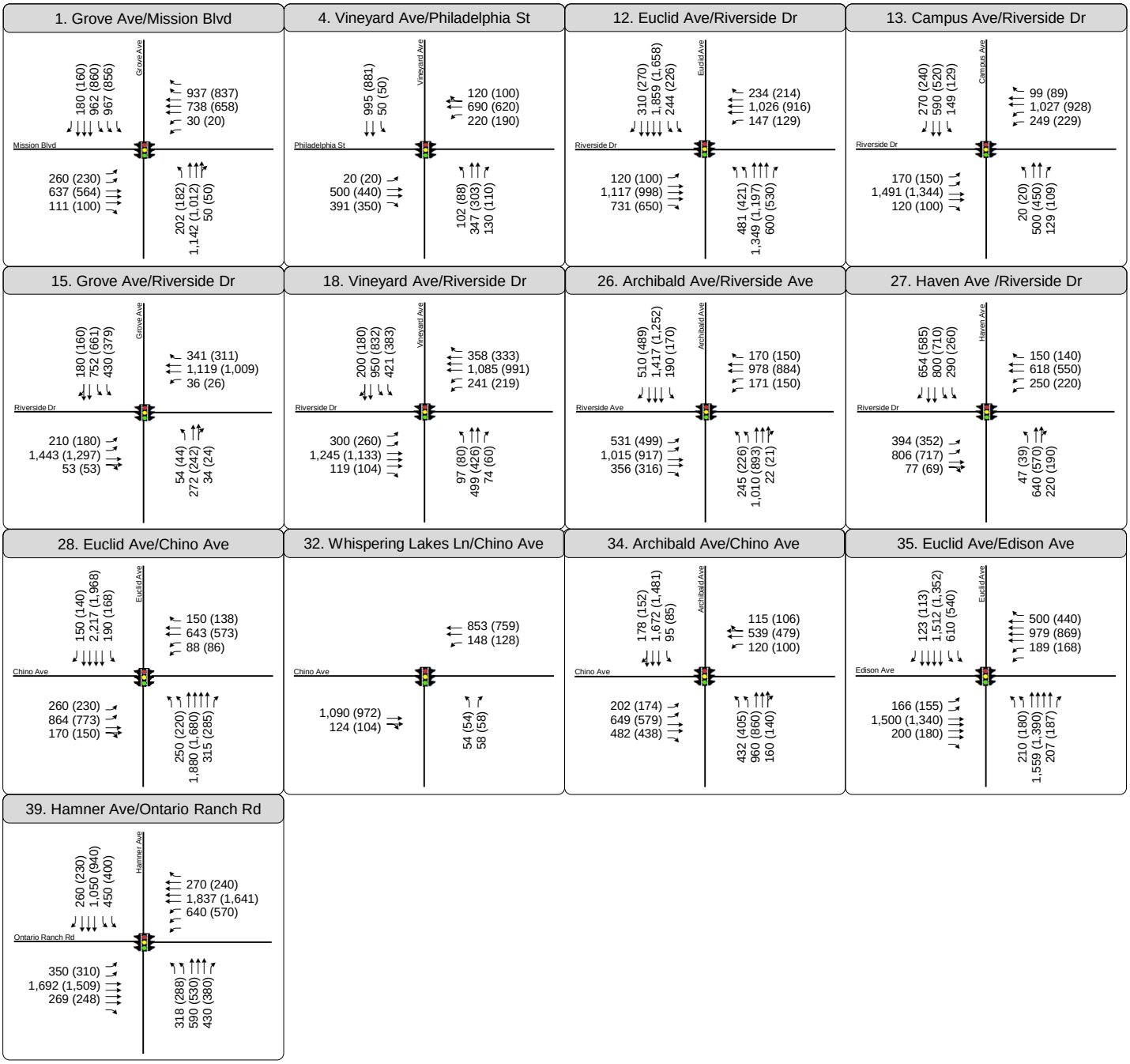
##	Weekday AM
(##)	Weekday PM
[##]	Weekday PM Stadium Event
	Movement
	Stop Sign
	Signalized

Figure 23

Traffic Volumes

Future Year Plus Improvements Weekday AM, PM, and PM with Stadium Event

Intersections 1, 4, 12, 13, 15, 18, 26, 27, 28, 32, 34, 35, and 39



LEGEND

MD (PM) Peak Hour Traffic Volume

Lane Configuration

Stop Sign

Signalized

Figure 24

Traffic Volumes

Future Year Plus Improvements Weekend MD and PM

Intersections 1, 4, 12, 13, 15, 18, 26, 27, 28, 32, 34, 35, and 39

Table 10: Cumulative Year (2050) Intersection Improvement Recommendations

Intersection Number	Intersection	CYNP Control	CYPP Control	Peak Hour	NP LOS	NP Delay	PP (No Improvements) LOS	PP (No Improvements) Delay	Cumulative Year Improvements	PP (With Improvements) LOS	PP (With Improvements) Delay
1	Grove Avenue and Mission Boulevard	Signalized	Signalized	AM	F	>120	F	>120	Triple SBL Dual WBR (with overlap)	**F**	**87.4**
				PM	F	>120	F	>120		**F**	**105.7**
				PM Stadium	-	-	F	>120		**F**	**105.5**
				Weekend MD	F	>120	F	>120	*Additional Study Recommended*	**F**	**88.2**
				Weekend PM	F	>120	F	>120		E	64.9
4	Vineyard Avenue and Philadelphia Street	Signalized	Signalized	AM	C	23.6	C	23.3	Add dedicated EB right turn lane	C	22.6
				PM	F	97.3	F	97.2		D	52.5
				PM Stadium	-	-	F	97.2		D	52.5
				Weekend MD	E	73	E	73.8		D	38.5
				Weekend PM	D	45.5	D	47		D	43.6
12	Euclid Avenue and Riverside Drive	Signalized	Signalized	AM	F	112.9	F	111.8	Add fourth SB through lane Add third EB/WB through lane Add overlap phase to all right turns	D	72.8
				PM	F	>120	F	>120		E	68.2
				PM Stadium	-	-	F	>120		E	67.4
				Weekend MD	F	89.3	F	95.7		D	53.6
				Weekend PM	E	63.1	E	67.6		D	47
13	Campus Avenue and Riverside Drive	Signalized	Signalized	AM	F	80.2	F	80.7	Add dedicated SB right turn lane Add second EB left turn lane Add second WB left turn lane	E	67.1
				PM	F	100.1	F	111.8		E	72.2
				PM Stadium	-	-	F	112.4		E	72.7
				Weekend MD	E	73.7	F	88.3		E	56.5
				Weekend PM	D	53.2	E	64.7		D	45.3
15	Grove Avenue and Riverside Drive	Signalized	Signalized	AM	F	91.7	F	91.3	Add second SB left turn lane Add second EB left turn lane	E	68.6
				PM	F	83.8	F	96.6		E	79.6
				PM Stadium	-	-	F	96.7		E	79.7
				Weekend MD	E	62.9	E	75.9		E	66.3
				Weekend PM	D	49.7	E	55.7		D	52.6
18	Vineyard Avenue and Riverside Drive	Signalized	Signalized	AM	F	111.4	F	>120	Add second dedicated SB left turn lane Remove SB shared through/left lane Add third EB/WB through lane Remove split phasing	D	41.3
				PM	F	>120	F	>120		**F**	**89.4**
				PM Stadium	-	-	F	>120		**F**	**89.6**
				Weekend MD	F	118.2	F	>120		E	75.8
				Weekend PM	E	70.9	F	101.6	*Additional Study Recommended*	D	54.8
26	Archibald Avenue and Riverside Drive	Signalized	Signalized	AM	F	>120	F	>120	Add dedicated EB right turn lane Add dedicated WB right turn lane Add second NB left turn lane Add second WB left turn lane Add overlap phase to SBR and EBR	E	73.3
				PM	F	105.5	F	>120		E	57.4
				PM Stadium	-	-	F	>120		E	57.5
				Weekend MD	E	79.4	F	>120		D	53.2
				Weekend PM	E	57.4	F	116.3	*Additional Study Recommended*	D	42.7
27	Haven Avenue and Riverside Drive	Signalized	Signalized	AM	F	92.6	E	78.5	*No additional improvements beyond those identified for Opening Year*	E	75.8
				PM	F	96.3	F	99.8		E	67.3
				PM Stadium	-	-	F	99.8		E	67.3
				Weekend MD	E	73.2	E	76.1		E	70.8
				Weekend PM	E	57.5	E	59.2		D	52.4

Table 10: Cumulative Year (2050) Intersection Improvement Recommendations

Intersection Number	Intersection	CYNP Control	CYPP Control	Peak Hour	NP LOS	NP Delay	PP (No Improvements) LOS	PP (No Improvements) Delay	Cumulative Year Improvements	PP (With Improvements) LOS	PP (With Improvements) Delay
28	Euclid Avenue and Chino Avenue	Signalized	Signalized	AM	F	>120	F	>120	Add second dedicated EB left turn lane Add second dedicated WB left turn lane Add dedicated WB right turn lane Add overlap phase to WBR and NBR	E	73.9
				PM	F	94.5	F	102		E	71.4
				PM Stadium	-	-	F	101.9		E	71.5
				Weekend MD	E	64.6	E	72.8		E	57.4
				Weekend PM	D	52.6	E	57.6		D	51.9
32	Whispering Lakes Lane and Chino Avenue	SSSC	SSSC	AM	F	>120	F	>120	Install traffic signal	A	9.1
				PM	F	117	F	>120		B	11.1
				PM Stadium	-	-	F	>120		B	11.1
				Weekend MD	F	64.4	F	>120		B	10
				Weekend PM	D	34.9	F	>120		A	9.2
34	Archibald Avenue and Chino Avenue	Signalized	Signalized	AM	F	94.6	F	117	Add second dedicated EB left turn lane Add second dedicated NB left turn lane Add dedicated EB right turn lane	E	73.3
				PM	F	96.8	F	>120		E	77.8
				PM Stadium	-	-	F	>120		E	78.3
				Weekend MD	E	70.5	F	>120		E	70.1
				Weekend PM	D	54	F	115.2		D	53
35	Euclid Avenue andEdison Avenue	Signalized	Signalized	AM	E	72	E	73.6	Add Fourth EB/WB Through Lane Add Overlap to EBR, NBR, and SBR	E	58.1
				PM	F	87.6	F	88.1		E	67
				PM Stadium	-	-	F	88.2		E	67
				Weekend MD	E	58.3	E	58.8		D	51.6
				Weekend PM	D	49.6	D	50.1		D	44.5
39	Hamner Avenue and Ontario Ranch Road	Signalized	Signalized	AM	E	75.1	E	77.5	Triple WBL Add EBR Four EB/WB Through Lanes Overlap on all right turns *Additional Study Recommended*	E	57.4
				PM	F	103.9	F	113.3		E	73.3
				PM Stadium	-	-	F	113.2		E	73.5
				Weekend MD	E	76.2	F	88		E	67
				Weekend PM	E	61.1	E	66.8		E	60

7. Freeway Off-Ramp Queueing Assessment

Storage capacities for all SR-60 and I-15 off ramps in the study area were evaluated using HCM 7th methodologies. Storage capacities for each turning movement were compared against 95th percentile queueing estimates using the Synchro 11 software. The results of the queuing analysis are summarized in **Table 11** and the queuing information can be found in the LOS worksheets include in **Appendix H.** Synchro 11 reports queue lengths by turning movement. Interchanges with multiple turning lanes or shared turning lanes provide additional capacity, which is accounted for in the available storage length shown in **Table 11**.

Interchange improvements are programmed in the 2020 SCAG RTP/SCS at the SR-60/Euclid Avenue and SR-60/Vineyard Avenue, which are anticipated to be complete by the cumulative year. Specific improvements have not yet been determined. Consistent with the intersection operations analysis in Section 6, the following improvements were assumed for analysis:

- SR-60/Euclid Avenue Interchange
    - Add one westbound left turn lane (two left turn lanes in total)
    - Convert existing westbound left turn lane into dedicated right turn lane
    - Widen undercrossing to three through lanes in each direction
    - Add one northbound left turn lane (two left turn lanes in total)
    - Add one southbound left turn lane (two left turn lanes in total)
- SR-60/Vineyard Avenue Interchange
    - Add one eastbound left turn lane (two left turn lanes in total)
    - Add one eastbound right turn lane (two right turn lanes in total)
    - Add one westbound left turn lane (two left turn lanes in total)
    - Add one westbound right turn lane (two right turn lanes in total)

As shown in **Table 11**, all off-ramp queues are forecast to be contained within the available storage capacity and are not anticipated to affect the freeway mainline.

Table 11: Freeway Off-Ramp 95th Percentile Queues

	Intersection	Control	Turning Movement	Storage Length (ft)	Peak Hour	95th Percentile Queues (ft)				
						Existing	2026 No Project	2026 Plus Project	2050 No Project	2050 Plus Project
5	SR-60 WB/Euclid Ave	Signalized	WBL	440	AM	250	300	300	225	225
					PM (Stadium)	250	275	275	425	425
					Wknd MD	225	325	325	350	350
					Wknd PM	175	275	275	300	300
			Shared WB	1,090	AM	150	275	275	250	250
					PM (Stadium)	225	250	250	425	425
					Wknd MD	150	225	225	350	350
					Wknd PM	125	175	175	250	275
			WBR	440	AM	75	100	100	150	150
					PM (Stadium)	150	200	200	300	300
					Wknd MD	75	150	150	250	250
					Wknd PM	75	75	100	175	175
6	SR-60 EB/Euclid Ave	Signalized	EBL	920	AM	275	275	275	200	200
					PM (Stadium)	225	225	225	125	125
					Wknd MD	350	200	200	75	75
					Wknd PM	275	200	200	75	75
			Shared EBT/EBR	920	AM	175	425	450	350	375
					PM (Stadium)	100	300	325	325	375
					Wknd MD	175	250	300	250	300
					Wknd PM	75	175	250	225	250
7	SR-60 WB/Vineyard Ave	Signalized	WBL	1,040	AM	125	175	175	100	100
					PM (Stadium)	175	200	225	300	325
					Wknd MD	200	175	200	250	300
					Wknd PM	175	200	225	225	250
			Shared WBL/WBT	1,040	AM	-	-	-	100	100
					PM (Stadium)	-	-	-	300	325
					Wknd MD	-	-	-	250	300
					Wknd PM	-	-	-	225	250
			WBR	460	AM	125	150	150	100	100
					PM (Stadium)	50	50	50	25	50
					Wknd MD	50	50	50	25	25
					Wknd PM	50	50	50	25	25
8	SR-60 EB/Vineyard Ave	Signalized	EBL	1,030	AM	425	450	450	250	250
					PM (Stadium)	125	125	125	75	75
					Wknd MD	150	100	100	75	75
					Wknd PM	75	125	125	50	50
			Shared EBT/EBR	1,030	AM	-	-	-	75	75
					PM (Stadium)	-	-	-	125	175
					Wknd MD	-	-	-	100	175
					Wknd PM	-	-	-	75	125
			EBR	460	AM	50	100	125	50	75
					PM (Stadium)	75	150	300	75	125
					Wknd MD	75	100	275	75	125
					Wknd PM	75	75	225	50	75
9	SR-60 WB/Archibald Ave	Signalized	WBL	450	AM	225	350	400	350	400
					PM (Stadium)	225	450	575	325	400
					Wknd MD	200	350	525	250	375
					Wknd PM	150	300	500	225	300
			Shared WB	990	AM	125	325	400	375	375
					PM (Stadium)	225	475	625	300	400
					Wknd MD	200	250	475	250	400
					Wknd PM	150	225	450	225	350
			WBR	450	AM	100	175	175	275	300
					PM (Stadium)	75	75	75	125	175
					Wknd MD	75	75	75	75	150
					Wknd PM	50	75	75	75	75

Table 11: Freeway Off-Ramp 95th Percentile Queues

	Intersection	Control	Turning Movement	Storage Length (ft)	Peak Hour	95th Percentile Queues (ft)				
						Existing	2026 No Project	2026 Plus Project	2050 No Project	2050 Plus Project
10	SR-60 EB/Archibald Ave	Signalized	EBL	390	AM	200	200	200	300	250
					PM (Stadium)	75	75	75	150	275
					Wknd MD	50	75	75	150	250
					Wknd PM	50	75	75	125	150
			Shared EB	1,060	AM	75	175	200	250	300
					PM (Stadium)	150	225	225	225	175
					Wknd MD	50	150	150	200	150
					Wknd PM	50	150	150	175	200
			EBR	390	AM	75	175	175	175	175
					PM (Stadium)	150	175	175	175	175
					Wknd MD	50	150	150	150	150
					Wknd PM	50	150	150	125	125
40	I-15 SB/Cantu-Galleano Ranch Rd	Signalized	SBL	630	AM	150	275	300	425	450
					PM (Stadium)	225	400	425	600	525
					Wknd MD	75	275	300	325	400
					Wknd PM	75	225	250	225	275
			SBR	1,770	AM	375	750	750	1,275	1,375
					PM (Stadium)	525	875	900	1,350	1,250
					Wknd MD	75	700	750	750	975
					Wknd PM	75	575	625	550	675
41	I-15 NB/Cantu-Galleano Ranch Rd	Signalized	NBL	1,920	AM	250	425	475	475	450
					PM (Stadium)	200	325	400	750	825
					Wknd MD	150	275	350	650	775
					Wknd PM	125	225	275	550	650
			NBR	520	AM	75	100	100	275	250
					PM (Stadium)	50	50	50	50	50
					Wknd MD	50	50	50	50	50
					Wknd PM	50	50	50	50	50

Notes

1. Queues are rounded up to the nearest 25-foot increment, assuming each vehcile takes up approximately 25 feet.
2. **Bold** indicates queue length is over available capacity. Queue may extend beyond turn pocket length but does not exceed ramp gore.
3. Signal timing was optimized at all intersection in 2050 scenarios. Peak hour factor was set to 0.95 in all 2050 scenarios.

Source: Fehr & Peers, 2024.

8. Active Transportation and Public Transportation Review

Potential impacts to public transit, pedestrian facilities and travel, and bicycle facilities and travel were evaluated to determine if the Project conflicts with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decreases the performance or safety of such facilities. Consistency with The Ontario Plan Policies is explained in **Table 12**.

The Project would construct paved separated sidewalks along with the City's proposed future bike facilities to increase connectivity and safety. Pedestrian circulation within the Project site will be facilitated with paved walkways and multiple neighborhood connections. These Project features closely align with The Ontario Plan's Mobility Elements policies LU-1.3, LU-1.4, PR-1.1, CE-1.12, M-1.4, M-2.1, M-2.2, M-2.3, M-2.4, and SR-1.4

The Project will continue to be served by Omnitrans Route 87 along Riverside Drive with enhanced bus stops at Whispering Lakes Lane/Riverside Drive and Ontario Avenue/Riverside Drive. The City will build on its working partnership with transit providers to increase transit service in the Ontario Ranch area and as part of the projects Transportation Demand Management measures. These satisfy the General Plan's Mobility Elements policies LU-1.4, PR-1.1, CE-1.12, M-1.2, M-1.6, and M-3.2.

Table 12: General Plan's Elements Consistency

Policy	Description	Consistency
M-1.1	Roadway Design and Maintenance	Roadways handle the capacity envisioned in the Ontario Master Plan of Streets and Highways. Roadways compliment project site and create efficient flow of traffic.
M-1.2	Mitigation Impacts	The Project proposes intersection improvements to mitigate traffic related impacts. Additional mitigation measures are detailed in the Project's VMT analysis and TDM plan.
M-1.4	Complete Streets	Proposed bike lanes by the City are within the vicinity of Proposed Project. The project would include pedestrian facilites, bike facilities, enhanced lighting, and safety.
M-1.5	Level of Service	A level of service analysis was conducted and indicated improvements are needed at several intersections to maintain acceptable conditions (LOS E or better).
M-1.6	Reduce Vehicle Miles traveled	A VMT analysis was conducted and mitigation efforts were proposed to the extent possible.
M-2.1	Active Transportation	The project is consistnet with the City's Active Transportatio Master Plan and includes adjacent pedestrian/bicycle infrastrcture improvements.
M-2.2	Bicycle System	The City's proposed bicycle infrastructure would increase interconnectivity to the project site.
M-2.3	Pedestrian Walkways	The project site would include a network of pedestrian facilities and construct adjacent new sidewalks.
M-2.4	Network Opportunities	Underutilized public and private spaces would be expanded to improve pedestrian and bicycle connectivity.
M-3.1	Transit Partners	The project proposes continued partnership between the City and Omnitrans to expand public transit service to the project site as the Ontario Ranch area develops
M-3.2	Alternative Transit Facilities at New Development	The proposed project includes enhanced bus stops along Riverside Drive.
M-3.11	Transit and Community Facilities	The proposed project is sited next to existing public transit routes and accomodates future transit service in the Ontario Ranch area.

Source:
The Ontario Plan Mobility Element, 2021

9. Construction Traffic

Fehr & Peers evaluated the potential effects of traffic that would be generated during construction of the Project. The operations, duration, and intensity of traffic related to construction is anticipated to be temporary and less than typical Project operating conditions, as explained below.

The project construction timeline is anticipated to take three years, as shown in the detailed construction schedule that summarizes each construction phase activity and associated worker, vendor and truck trips, provided in **Appendix I**. The maximum construction trip estimates for employees and trucks are summarized in **Table 13.** Construction activities have been staggered to minimize overlap as days with overlap result in the highest construction trips. Construction schedules provided by the City indicate shifts for contractors and vendors beginning at 7:00 AM and concluding between 4:00 PM and 6:00 PM. Hauling trips are expected to take place outside of AM and PM peak hours.

Generally, most days without overlap have minimal construction trips (typically less than 100 daily trips) while some of the heavier construction activities require more workers and/or truck trips to complete the larger tasks, sometimes resulting in over a thousand daily trips. On days with overlapping activities, there will be on average 625 daily passenger car equivalent (PCE) vehicle trips (trucks are larger than typical passenger cars and have been converted to PCE by assuming one truck is equivalent to three passenger cars for the discussion of roadway capacity). Hauling trips are expected to peak in October 2024, when worker and vendor trips are lowest. Vendor and worker trips peak in January 2025 and June 2025, respectively.

The highest daily total construction traffic is anticipated between May 31, 2025, and June 2, 2025. The 1,203 maximum daily construction trips, as converted to PCE, are approximately seven percent of typical weekday project daily trips (16,477 daily trips) and approximately six percent of tournament weekend project daily trips (21,286 daily trips). The maximum weekday PM peak hour construction trips are approximately 39 percent of the project weekday PM peak hour trips (1,546 PM peak hour trips).

It is anticipated that most workers and vendors will access the site from SR-60 from the Vineyard Avenue or Archibald Avenue Interchanges. Trucks are anticipated to primarily use the following three identified haul routes:

- Chino Avenue to Walker Avenue to Hellman Avenue
- Chino Avenue to Haven Avenue to Ontario Ranch Road
- Chino Avenue to Euclid Avenue

All signalized intersections along haul routes currently operate at LOS E or better during all peak hour scenarios except for the Northbound I-15 On/Off Ramp at Cantu-Galleano Ranch Road which currently operates at LOS F. Generally, haul traffic is not anticipated to deteriorate traffic operations significantly during most construction activity. However, during the heavier days of construction traffic, the Project's

construction management plan is designed to minimize construction traffic impacts on the existing roadway network by clearly identifying construction hours, truck routes, travel patterns for haul routes, staging and parking areas, staggered worker arrival and departure times, and safety procedures for pedestrians and cyclists. The use of heavy construction vehicles will be prohibited during peak hours and limited to existing truck routes. Temporary traffic control measures will be identified where necessary to manage worker and hauling trips.

Table 13: Summary of Project Construction Trip Generation

	Date(s)	Daily Passenger Vehicle Trips	Daily Truck Trips	Total Daily Trips (PCE)	PM Peak Hour (PCE)
Maximum Daily Hauling Trips	10/2/24 – 10/10/24	-	241	723	0
Maximum Daily Vendor Trips	1/31/25 – 2/1/25	251	-	251	126
Maximum Daily Worker Trips	5/31/25 – 6/2/25	1,046	-	1,046	523
Maximum Daily Total Trips	5/31/25 – 6/2/25	1,203	0	1,203	602

Notes:
1. PCE = Passenger Car Equivalent. Factor of 3.0 applied for hauling truck trips.
2. Maximum daily total trips does not equal the sum of maximum hauling trips, maximum vendor trips, and maximum worker trips as construction is phased. Hauling trips are expected to be highest at the beginning of the construction period, before most other construction activities begin.
Source: City of Ontario, 2024.

DRAFT

Ontario Regional Sports Complex (ORSC) Transportation Impact Study

Prepared for:

City of Ontario

March 2024

OC20-0741

FEHR PEERS

Appendix A
Ontario Regional Sports Complex
Traffic Study Scoping Assessment

FEHR PEERS

Memorandum

Date: November 27, 2023

To: Jay Bautista, P.E., City Traffic/Transportation Manager

From: Paul Herrmann, P.E.
Jason Pack, P.E.
Brian Wolfe

Subject: Draft Ontario Regional Sports Complex Transportation Study Scoping Assessment

OC20-0741

Fehr & Peers is conducting a Transportation Study in support of the Ontario Sports Park (Project) located in Ontario, California. This memorandum proposes the scoping information and parameters for the study. The remainder of this memorandum is divided into the following sections:

- Project Description
- Project Scenarios
- Trip Generation
- Trip Distribution
- Study Locations
- Data Collection
- Analysis Scenarios
- Next Steps

Project Description

The proposed Project is a 190-acre sports complex with an associated mixture of uses. The Project site is bounded by Riverside Drive to the north, Chino Avenue to the south, Cucamonga Creek Flood Control Channel to the east, and Vineyard Avenue to the west, as shown in **Figure 1**. There is an active dairy farm and nursery onsite while the fields on the western and southern portion of the site are fallow.

The Project will consist of the following land uses:

- Planning Area (PA) 1: Semi-professional Minor League Baseball Stadium (6,000-seat capacity)
- PA 2-4: Retail and Hospitality Areas
- PA 5: Baseball/Softball, Soccer, and Multi-use Fields
- PA 6-7: Recreation and Aquatics Centers

The Project will convert approximately 156 acres of Low Density Residential (LDR) and Medium Density Residential (MDR) zoning to Open Space-Parkland (OS-R) and approximately 34 acres of LDR zoning to Hospitality for a baseball stadium, ancillary/supportive retail, and lodging uses. The Project will comply with Senate Bill (SB) 330 and SB 166 by relocating the zoned units to the Vineyard Corridor within the City.

The Project proposes the following roadway and infrastructure improvements along Vineyard Avenue, Riverside Drive, and Chino Avenue:

- Riverside Avenue widening to ultimate Right-of-Way (ROW) width (104')
- Chino Avenue widening to full ROW (88') between Vineyard Avenue and the Cucamonga Channel
- Ontario Avenue widening to full ROW (88') pending discussion with Fehr & Peers
- Extension on Vineyard Avenue from Riverside Drive to Chino Avenue and widening to 148' ROW.
- Construction of internal streets:
    - Street A between Parking Structure A and Stadium (88' ROW)
    - Street B between Stadium and PA 4 (66' ROW)
- Intersection improvements
- Relocation/extension of existing utilities

The proposed construction timeline (as of November 2, 2023) is as follows:

- Phase 1A
    - Vineyard Avenue Extension – Complete by January 2026
    - Riverside Avenue Improvements – Complete by February 2025
    - Chino Avenue Improvements – Complete by October 2025
    - Internal Roadway Construction (Ontario Avenue, Street A, Street B) - Complete by May 2025
- Phase 1B
    - Baseball Stadium – Complete by December 2025
    - Parking Structure A – Complete by September 2025
    - PA 2 Retail Buildings – Complete by October 2025
    - PA 2 Surface Parking Lot – Complete by July 2025

  - PA 3 Retail Buildings – Complete by June 2025
  - PA 3 Hotel – Complete by September 2025
- Phase 2
  - PA 4 Retail Buildings – Complete by October 2025
  - PA 4 Surface Parking Lot – Complete by April 2025
  - PA 5 Parking Structure B – Complete by February 2026
  - PA 5 Multipurpose Fields – Complete by February 2026
  - PA 5 Surface Parking Lot – Complete by October 2025
- Phase 3
  - PA 6 Indoor Athletic Building and Parking Lot – Complete by November 2026
- Phase 4
  - PA 7 Community Center – Complete by September 2027

Project Scenarios

Fehr & Peers reviewed Southern California youth sports and Minor Leage Baseball team schedules to develop an understanding of how the Project land uses would operate throughout the year. The various youth sports have seasonal variability with how often and how many practices, games, and tournaments occur per day throughout the year. Through coordination with City staff, Fehr & Peers analyzed the proposed programming schedules for the Project land uses and determined the following four trip generation scenarios should be analyzed in this assessment:

- **Typical Weekday with No Stadium Event** (reflective of weekday AM and PM peak hours when baseball is not in season; includes general sports practice on fields)
- **Weekday with Stadium Event** (reflective of PM peak hours when baseball is in season; includes general sports practice on fields)
- **Weekend with Tournamnet, No Stadium Event** (weekend midday peak hour with one field tournament (baseball or soccer) occuring)
- **Weekend with Stadium Event, No Tournament** (reflective of evening peak hour during arrival time at stadium event with geenral sporting activity occuring during)

The intent of the transportation analysis is to evaluate typical daily traffic and commonly occuring events to appropriately size transportation infrastructure. It is expected that most weekends will host one regional tournament (from any one of the five sports) or stadium event; as such, a weekend scenario without a stadium event or tournament was not considered. Some worst-case events, such as multiple tournamnets during a stadium event may occur infrequently, but these events will require major traffic control plans to assist in managing traffic and should not influence the design of everyday infrastructure. For these reasons, we selected peak scneraios representative of "85th Percentile" on-site activity.

Trip Generation

Trip generation refers to the process of estimating the amount of vehicular traffic a project would add to the surrounding roadway system. Estimates for the Project scenarios were created for the daily condition and for the peak one-hour period when traffic volumes on the adjacent streets are typically the highest. On weekdays, the peak one-hour period occurs during the morning and evening commutes. On weekends, the peak one-hour period occurs around midday.

The number of weekday morning and evening and weekend midday peak hour trips were estimated for the Project scenarios by using one of three methods:

1. **ITE Trip Generation Manual** – rates published in *Trip Generation, 11th Edition (Institute of Transportation Engineers [ITE], 2021)* were used for typical land uses with robust data in the ITE manual.
2. **Custom Trip Generation Rates Derived from Traffic Counts** – rates for various sports activity and stadium events were developed from 24-hour traffic counts collected at comparable facilities in San Bernardino, Riverside, and Orange Counties. These rates more accurately reflect local travel patterns for events as compared to rates published by ITE, as described in more detail below. Traffic counts were also collected at the Chicken 'n Pickle facility in San Antonio, Texas to develop a specific trip generation rate for the proposed entertainment use.
3. **Custom Trip Generation Rates Derived from Streetlight Zone Activity Data** – Fehr & Peers utilized Streetlight data (anonymous cell phone and GPS data) to collect traffic counts at driveways of comparable facilities in San Bernardino, Riverside, and Orange Counties. This data was compared against actual traffic count data to validate the big data counts. Streetlight data allowed for the development of tournament and non-tournament trip generation rates from a wider sample size than one-day counts. Streetlight data was also used for land uses without ITE rates and for rates with outdated or limited data.

Fehr & Peers selected additional sites on Streetlight with exclusive parking lots to ensure trips for other land uses are not included; however, limited parking at some of these facilities may undercount overall demand.

Project land uses were grouped into the following four categories to estimate trip generations for the Project scenarios:

- Hospitality (Hotel and Shopping Plaza)
- Open Field/Recreation Uses
- Public Park Uses
- Minor League Baseball Stadium

Trip generation estimates for the four project scenarios are attached as **Tables 1-4**.

Hospitality (Hotel and Shopping Plaza)

The Project includes a hotel and commercial buildings adjacent to the stadium. While most of the retail use is unknown and assumed to be partially restaurant and partially commercial retail, the only known use is a proposed "Chicken 'n Pickle" restaurant and pickleball entertainment complex. This use is located in PA-4 and was grouped into the hospitality land uses. The following ITE trip generation rates were used to estimate trips for these land uses:

- ITE Code 310 – Hotel
- ITE Code 821 – Retail Plaza (40k-150k GSF, No Grocery Store)
- ITE Code 930 – Fast Casual Restaurant

Estimations for the "Chicken 'n Pickle" restaurant and entertainment complex were developed using driveway traffic count data at the current Chicken 'n Pickle in San Antonio, Texas. This facility most closely matches the proposed use case for the Project compared to traditional ITE trip generation rates for restaurants and tennis courts.

The remaining 80 KSF is assumed to be represented by 50 percent (40 KSF) fast casual (quick service) restaurant and 50 percent (40 KSF) retail plaza and will rely on traditional ITE rates for trip generation.

There is expected to be a high rate of internalization between the hotel and recreation fields as the primary purpose of the hotel is to serve visiting teams for sports tournaments. Fehr & Peers estimated a weekend internalization rate of 50 percent for the hotel, based on the assumption that half of all hotel trips will stay onsite within the Project (i.e., accessing adjacent sports fields, Minor League Baseball Stadium). This rate is similar to the rates used for comparable mixed-use entertainment and sports complexes throughout California. The weekday internalization rate is expected to be lower as there are typically no regional tournaments scheduled on weekdays. As such, Fehr & Peers assumed a weekday internalization rate of 20 percent (assuming one fifth of all hotel trips are to access other land uses such as the baseball stadium and retail uses).

Internalization was also applied to the retail uses on the Project Site, as the retail is intended to support the Minor League Baseball Complex and sports fields. Most customers will be visiting the retail plaza before or after baseball games and in between sports games during tournaments. Therefore, an internalization rate of 33 percent was applied to all retail trips during the weekend. Similar to the hotel, internalization is expected to be lower during the weekday, with a rate of ten percent applied. Internalization was not applied to the Chicken 'n Pickle use as this is expected to be a large entertainment complex that will draw visitors regionally.

Fehr & Peers did not apply a pass-by reduction for the retail plaza, as the retail uses are expected to be largely contained within the Sports Complex and include services that specifically cater to Sports Complex visitors. The anticipated congestion from sporting events will also deter pass-by trips from occurring.

Open Field/Recreation Uses

Trip generation rates for the various sporting uses will vary depending on programming (practices, games and tournaments). While the ITE Manual contains some trip generation information for sports fields/courts, it does not contain detailed daily, morning, midday, and evening rates for weekdays and weekends differentiated by practices, games and tournaments. It also does not have rates for most of the sports fields/courts proposed in this project. Therefore, Fehr & Peers developed custom trip generation rates for use in this study.

To account for the variation in activity, Fehr & Peers gathered data for each type of sporting event and type of field/court. Fehr & Peers collected peak hour driveway counts and field/court usage rates at the following facilities while practices, games, and tournaments were occurring:

- Soccer Fields: Silverlakes Sports Complex in Norco (September 2023)
- Baseball Fields: Big League Dreams Baseball Fields in Jurupa Valley (October 2023)
- Basketball Courts: Open Gym Premier in Ladera Ranch (October 2023)

This data was used to develop trip generation estimates for the following scenarios:

- Weekday with Practices
- Weekend with Typcial Games
- Weekend with a Tournament

These counts were also compared against zone activity at the same facilities from big data vendor Streetlight. Several tournament and non-tournament dates were chosen in 2022, focusing on the time period before and after scheduled programming. With the traffic counts received to date for the Silverlakes Sports Complex, data from Streetlight for a similar event in September 2022 shows nearly identical driveway volumes for both daily and midday peak hours. In cases where Streetlight data significantly over or underestimated volumes compared to live traffic counts, live traffic counts were used due to their increased precision.

Tournament rates were developed for all sport types and are included in **Appendix A**. These rates were scaled using Streetlight data to develop non-tournament rates for all sport types. Estimated trip generation for soccer tournaments is higher than estimated trip generation for baseball/softball tournaments; therefore, Fehr & Peers analyzed a weekend scenario with a soccer tournament. All weekend scenarios will include either a basketball or volleyball tournament as the City anticipates using the indoor athletic facility for a total of 37 weekends annually.

Public Park and Other Recreational Uses

The Public Park and Other Recreational Uses are assumed to follow more regular scheduling without the seasonal variability seen in the sports fields/courts. Fehr & Peers referenced both ITE trip generation rates and Streetlight Zone Activity data to develop trip generation estimates for the following land uses:

- Tennis/Pickleball Courts
- Swimming Pool
- Recreation Community Center
- Batting Cages
- Skate Park
- Tot Lot
- Picnic Area

The following ITE trip generation rates were used to estimate trips for the corresponding land uses documented above:

- ITE Code 495 – Recreational Community Center
- ITE Code 433 – Batting Cages

To better reflect the other public park uses, Fehr & Peers referenced Streetlight Zone Activity data for several tennis/pickleball court complexes and public swimming pools throughout San Bernardino, Riverside, and Orange Counties. The intent of this data collection was to develop more current and locally specific trip generation rates compared to the ITE Trip Generation Manual. Trip generation rates for tennis/pickleball court facilities were found to be slightly higher than the rates reported by ITE Code 490 (Tennis Courts). No directly comparable ITE rate is available for swimming pools. As such, Fehr & Peers used these trip generation rates as they more accurately reflect the characteristics of the proposed project.

Fehr & Peers also used the Trip Generation Rate for a public park developed by the San Diego County Association of Governments (SANDAG) to calculate trips for the general park amenities as the ITE Code 411 for a public park is unreliable and study areas do not match the density of amenities found in the project area. These general park amenities (skate park, tot lot, and picnic area) total 11.21 acres, which would only generate nine daily trips if the ITE rate was used (one in the PM peak hour), far lower than anticipated. Therefore, we utilized the "City Developed Park" rate from SANDAG that estimates the proposed park will generate 561 daily trips commensurate with the park's densely planned amenities.

Minor League Baseball Stadium

Rather than relying on ITE Code 462 (Professional Baseball Stadium), Fehr & Peers developed custom trip generation rates for the minor league baseball stadium, as the ITE rate is based on two major league baseball events during spring training.

Driveway counts were collected at an Inland Empire 66ers home baseball game on a Saturday in September 2023. These counts were then converted into a per stadium seat trip generation rate, for daily and peak hour of arrival (5:00pm – 6:00pm) and peak hour of departure (9:00pm – 10:00pm). Fehr & Peers compared these custom trip generation rates to rates derived from Streetlight Zone Activity Data for the Rancho Cucamonga Quakes and Inland Empire 66ers during Spring 2022 home games (mid-April to mid-June). The per seat rates were found to be almost identical between the two methods. Since the Streetlight data references two stadiums over a longer observation period, Fehr & Peers used the rates developed from Streetlight data.

The stadium will also employ 43 full-time office workers. While the gameday trip generation estimates described above account for these workers, it is assumed that the stadium will function most like a typical 43-employee office building on non-game days. Non-gameday trip generation considerations were included for weekday AM and PM peak hours.

Trip Distribution

Project trip distribution refers to the directions of approach and departure that vehicles would use to travel to and from the Project site. Local knowledge of the study area, travel pattern data and statistics, the City's general plan travel demand model (SBTAM), and professional judgment were used to develop a Project trip distribution for the respective trip generators. Trip distribution was estimated for both opening year (2026) and cumulative year (2050) scenarios. The cumulative year trip distribution is expected to have a higher rate of trips originating and terminating in the area immediately surrounding the project site, reflecting the additional residential development zoned for the area. Currently, the adjacent land is largely agricultural and is not expected to generate many Project trips in the opening year.

Trips were grouped into four types for trip distribution purposes since each will have different capture audiences: stadium trips, retail, sports field trips, and hotel trips. The detailed trip distribution assumptions for each of the land use types are provided in **Figure 2** and are described below.

1. The stadium is anticipated to have a regional draw and trips are largely expected to utilize from the SR-60 corridor. Trip distribution origin-destination patterns for the existing Rancho Cucamonga Quakes stadium in Rancho Cucamonga was referenced from Streetlight and from ticket purchase data to prepare the distribution assumptions.

2. The Retail trip distribution is anticipated to be more localized (for trips not already attending the events at the stadium or sports fields). A select zone model run was prepared using SBTAM to assist in determining the retail trip distribution and is provided as **Appendix B**.
3. The Sports Fields are anticipated to serve both the local Ontario community as well as the regional community throughout the Inland Empire, Orange County and broader SCAG region on a weekly basis. It is also anticipated that many tournaments on site will draw competitors from around the country.
4. The Hotel is anticipated to serve regional, longer-distance trips that are assumed to travel mostly by freeway to and from Ontario Airport.

Study Locations

The proposed Project trip generation and trip distribution were used to identify study locations. Consistent with City requirements, intersections classified as collectors or higher that the Project is anticipated to add 50 or more peak hour trips to were chosen as study intersections.

Figure 3 shows the Project study area and proposed study intersections. The proposed study locations for this Project are:

1. Grove Avenue and Mission Boulevard
2. Vineyard Avenue and Mission Boulevard
3. Vineyard Avenue and Francis Street
4. Vineyard Avenue and Philadelphia Street
5. Euclid Avenue and Westbound SR-60 On/Off Ramps
6. Euclid Avenue and Eastbound SR-60 On/Off Ramps
7. Vineyard Avenue and Westbound SR-60 On/Off Ramps
8. Vineyard Avenue and Eastbound SR-60 On/Off Ramps
9. Archibald Avenue and Westbound SR-60 On/Off Ramps
10. Archibald Avenue and Eastbound SR-60 On/Off Ramps
11. Archibald Avenue and Walnut Avenue
12. Euclid Avenue and Riverside Drive
13. Campus Avenue and Riverside Drive
14. Bon View Avenue and Riverside Drive
15. Grove Avenue and Riverside Drive
16. Walker Avenue and Riverside Drive
17. Baker Avenue and Riverside Drive
18. Vineyard Avenue and Riverside Drive
19. 2943 S Vineyard Avenue Driveway and Riverside Drive
20. 2929 S Vineyard Avenue Driveway and Riverside Drive
21. 1945 E Riverside Drive #20 Driveway and Riverside Drive
22. Whispering Lakes Lane and Riverside Drive
23. Whispering Lakes Golf Course Driveway and Riverside Drive
24. Ontario Avenue and Riverside Drive

25. Colonial Avenue and Riverside Drive
26. Archibald Avenue and Riverside Drive
27. Haven Avenue and Riverside Drive
28. Euclid Avenue and Chino Avenue
29. Grove Avenue and Chino Avenue
30. Walker Avenue and Chino Avenue
31. Vineyard Avenue and Chino Avenue
32. Whispering Lakes Lane and Chino Avenue
33. Ontario Avenue and Chino Avenue
34. Archibald Avenue and Chino Avenue
35. Euclid Avenue and Chino Avenue
36. Grove Avenue and Edison Avenue
37. Archibald Avenue and Ontario Ranch Road
38. Haven Avenue and Ontario Ranch Road
39. Hamner Avenue and Ontario Ranch Road
40. Southbound I-15 Off Ramp and Cantu-Galleano Ranch Road
41. Northbound I-15 Off Ramp and Cantu-Galleano Ranch Road

Data Collection

Fehr & Peers collected intersection turning movement counts in Fall 2023 at the 41 study intersections during fair weather, while school was in session, and during a typical (non-holiday) Tuesday (when the flea market was in operation) during the AM and PM peak periods (7:00-9:00 AM and 4:00-6:00 PM, respectively) and Saturday mid-day (11:00 AM-1:00 PM) and evening (4:00-7:00PM) peak periods.

24-hour roadway volume classification counts were also collected along 12 roadway segments adjacent to the Project site to estimate heavy vehicle percentage and support the Noise assessment.

Fehr & Peers collected the following information in a field visit to the study area:

- Lane configurations
- Signal phasing
- Land uses in the study area
- Existing pedestrian and bicycle facilities
- On-street parking conditions
- Transit service

Fehr & Peers has requested the following from the City of Ontario for use in the study:

- Traffic signal timing information at all signalized intersections
- Pending and approved development projects Citywide

Analysis Scenarios

Fehr & Peers will study the intersection Level of Service (LOS) at the study intersections noted above for the following scenarios:

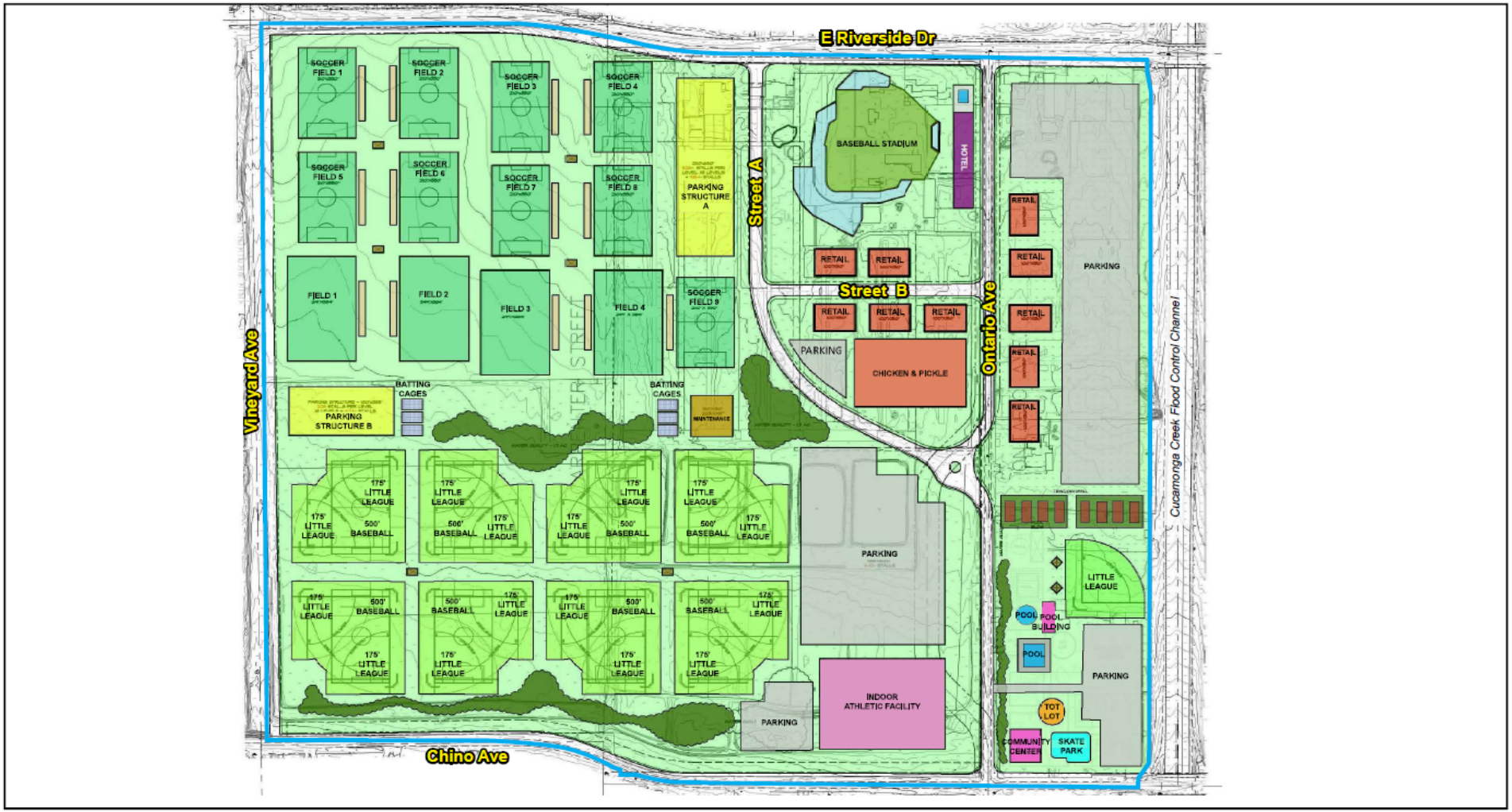
- **Existing (2023) Conditions** – Based on traffic counts collected in Fall of 2023.
- **Project Opening Year (2026) Without Project Conditions** – Ambient growth plus trips from pending and approved Projects in the study area at Project Opening Year will be added to Existing (2023) conditions.
- **Project Opening Year (2026) Plus Project Conditions** – Project traffic will be added to the No Project condition.
- **Cumulative Year (2050) No Project Conditions** – Estimated using the TOP Model and the adopted general plan land use assumptions.
- **Cumulative Year (2050) Plus Project Conditions** – Project traffic will be added to the No Project condition, and proposed housing units onsite will be relocated.

Next Steps

Once the proposed trip generation estimates and study intersections are approved by the City, Fehr & Peers will begin the traffic operations analysis for this Project.

Attachments

- Figure 1 – Project Site Location
- Figure 2-A – Project Trip Distribution, Opening Year (2026)
- Figure 2-B – Project Trip Distribution, Cumulative Year (2050)
- Figure 3-A – Project Study Locations
- Figure 3-B – Project Study Locations
- Table 1 – Weekday, No Event Trip Generation
- Table 2 – Weekday, Stadium Event Trip Generation
- Table 3 – Weekend with Tournament, No Stadium Event Trip Generation
- Table 4 – Weekend with Stadium Event, No Tournament Trip Generation
- Appendix A – Tournament Scenario Trip Generation, All Sports
- Appendix B – SBTAM Select Zone Model Bandwidth Plots



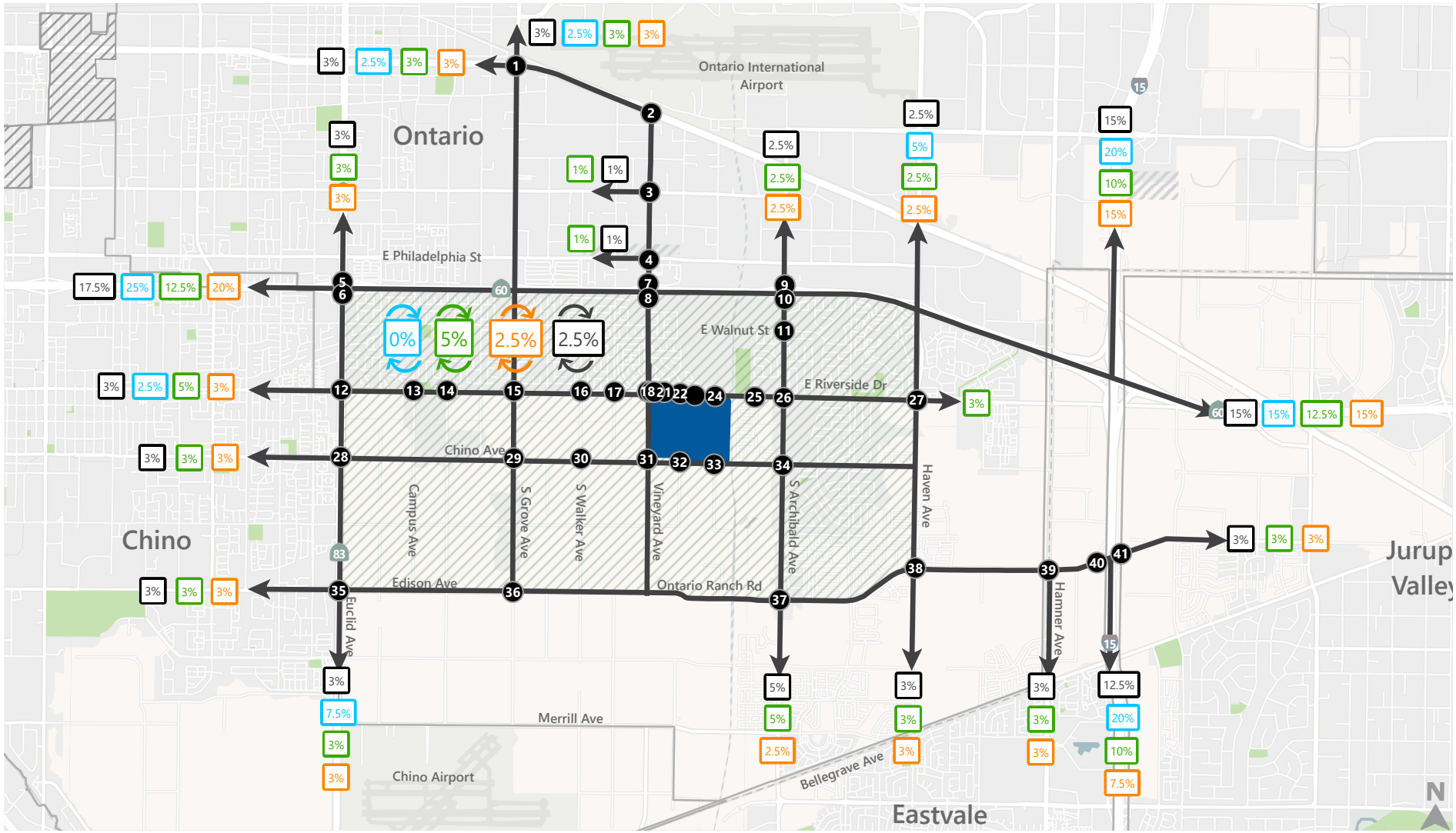
Project Boundary

0 500
Scale (Feet)

Source: RUM Design Group 2023; Ontario 2023.

Figure 1

Proposed Site Plan



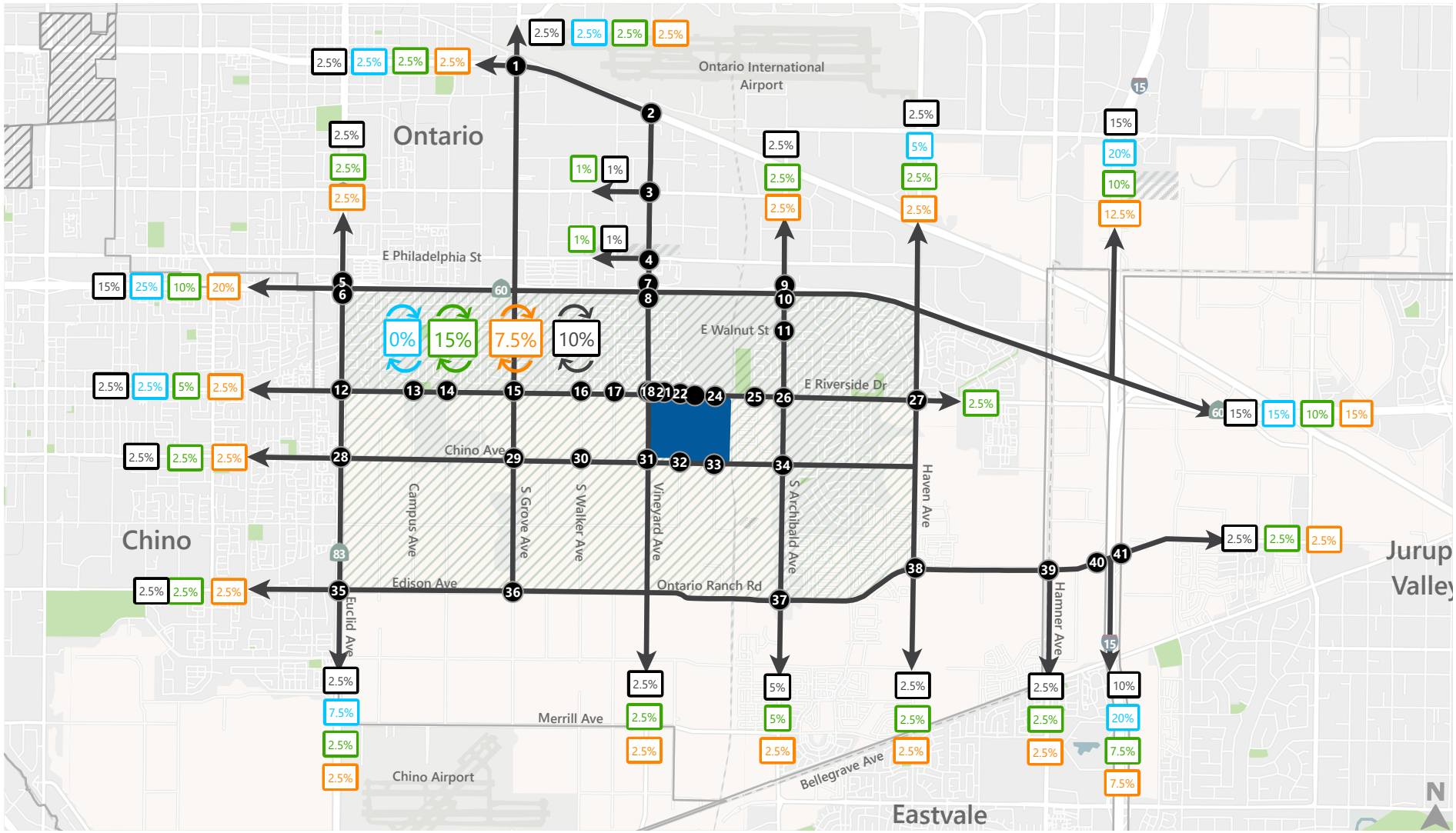
Project Site
City Boundaries
Study Intersections
Unincorporated San Bernardino County

x% Stadium Trips
x% Hotel Trips
x% Retail Trips
x% Recreation/Sports Field Trips

Surrounding Project Area
Travel Routes
Trips Beginning/Ending within Surrounding Project Area

Figure 2a

Ontario Sports Park Trip Distribution (Opening Year, 2026)



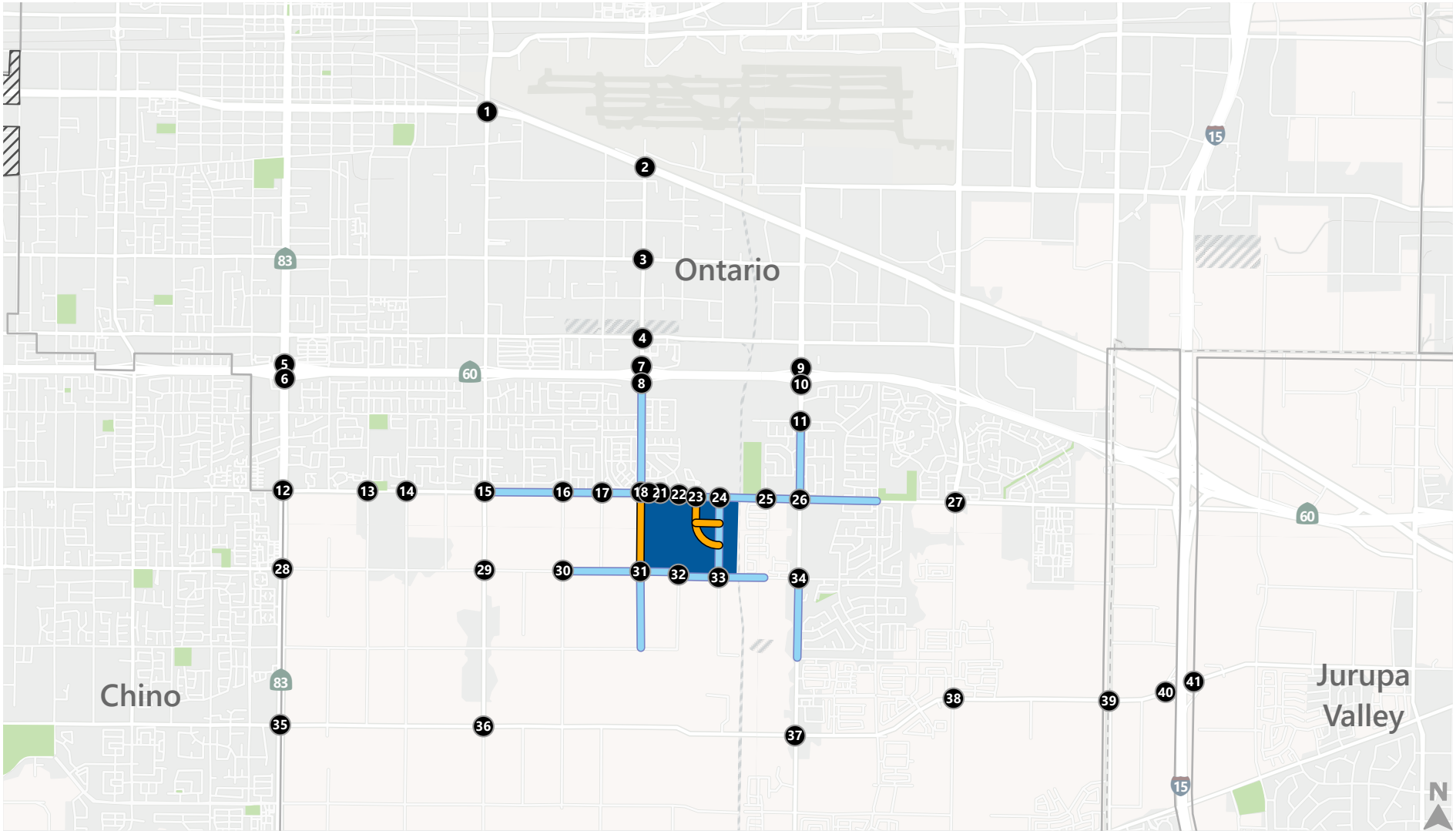
Project Site
City Boundaries
Study Intersections
Unincorporated San Bernardino County

x% Stadium Trips
x% Hotel Trips
x% Retail Trips
x% Recreation/Sports Field Trips

Surrounding Project Area
Travel Routes
Trips Beginning/Ending within Surrounding Project Area

Figure 2-B

Ontario Sports Park Trip Distribution (Cumulative Year, 2050)



Study Intersections

ADT Count Locations

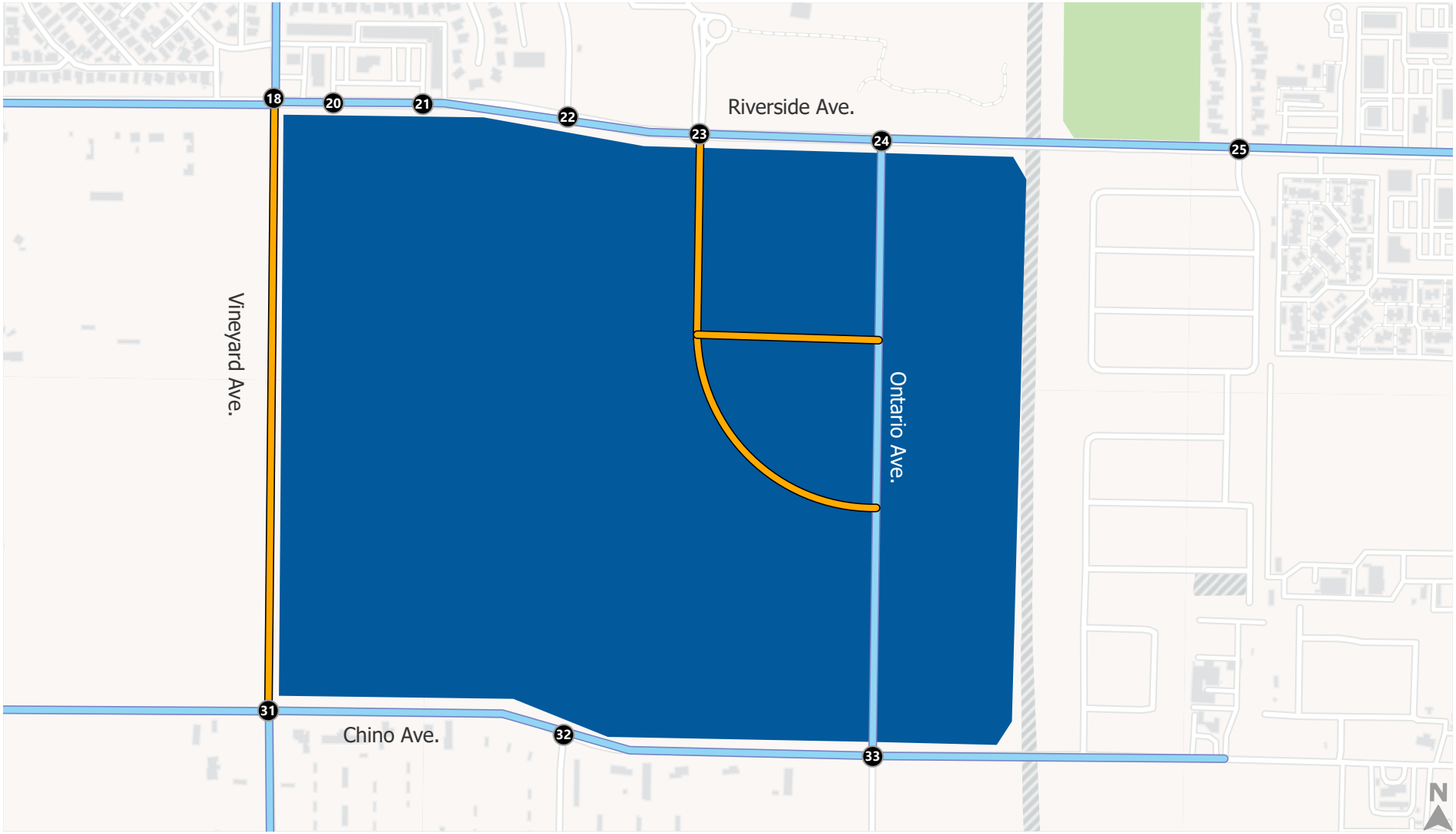
Proposed Roadways

Project Site

City Boundaries

Figure 3-A

Ontario Sports Park Study Locations



Study Intersections
ADT Count Locations
Proposed Roadways
Project Site
City Boundaries

Figure 3-B

Ontario Sports Park Study Locations

Table 1: Typical Weekday with No Stadium Event

Land Use	Data Source	Notes	Quantity	Unit	Trip Generation Rates							Estimated Trip Generation						
					Daily Rate	AM Peak			PM Peak			Daily Trips	AM Peak			PM Peak		
						Rate	% In	% Out	Rate	% In	% Out		In	Out	Total	In	Out	Total
Hotel	ITE Code 310 - Hotel	-	100.00	Keys	7.99	0.46	56%	44%	0.59	51%	49%	799	26	20	46	30	29	59
Shopping Plaza (PA 2, PA 3, PA 4)	ITE Code 821 - Shopping Plaza (40k-150 KSF, No Grocery)	45 KSF from PA 2, 21 KSF from PA 3, and remaining 14 KSF from PA 4; 50% operating as retail	40.00	KSF	67.52	1.73	62%	38%	5.19	49%	51%	2,701	43	26	69	102	106	208
Restaurants (PA 2, PA 3, PA 4)	ITE Code 930 - Fast Casual Restaurant	45 KSF from PA 2, 21 KSF from PA 3, and remaining 14 KSF from PA 4; 50% operating as quick service restaurant.	40.00	KSF	97.14	1.43	50%	50%	12.55	55%	45%	3,886	29	28	57	276	226	502
Chicken 'n Pickle Restaurant	Chicken 'n Pickle San Antonio Data Collection	100 KSF of retail from PA 4 operating as Chicken 'n Pickle Restaurant/Entertainment Complex. 12 total courts (4 indoor, 8 outdoor)	12.00	Courts	124.4	4.6	93%	7%	11.7	68%	32%	1,493	51	4	55	95	45	140
												Lodging and Retail	*8,879*	*149*	*78*	*227*	*503*	*406*	*909*
												Hotel Internalization Reduction (20% of Hotel Trips)	*-160*	*-5*	*-4*	*-9*	*-6*	*-6*	*-12*
												Retail Internalization Reduction (10% of Retail Trips)	*-659*	*-7*	*-5*	*-13*	*-38*	*-33*	*-71*
												Lodging and Retail Subtotal	**8,061**	**137**	**69**	**205**	**459**	**367**	**826**
Soccer Fields (Soccer Complex)	Silverlakes Data Collection	Observation of field usage from a Tuesday evening in September 2023. Assumes all fields in use w/ 4 teams/field/day)	13.00	Fields	153.33	4.88	31%	69%	17.04	74%	26%	1,993	20	43	63	165	57	222
Baseball Fields	Big League Dreams Sports Park Data Collection and Streetlight Data	Count data collected October 2023 during weekend local games scenario. Streetlight data pulled Tuesdays from 01/10/22-03/31/22 representing Tuesday Adult Softball/Little League Practice (~33% of weekend trip generation rate). No AM rate available; used same rate as Silverlakes Data Collection (assume very low trips in AM period). Total number of fields includes little league field on east side of project area	9.00	Fields	112.01	4.88	31%	69%	5.75	78%	22%	1,008	14	30	44	41	11	52
Batting Cages	-	Assume 100% internalization from baseball fields. Batting cages are not avaiilable for commercial use and are intended for practice/team warm ups.	12.00	Cages	0.00	0.00	0%	0%	0.00	0%	0%	0	0	0	0	0	0	0
Basketball Courts	Open Gym Premier Ladera Ranch Data Collection and Streetlight Data from Three Indoor Gymnasium Facilities in Organge County (MAP Sports, Garden Grove; Open Gym Premerier, Ladera Ranch; Momentous Sports Center, Irvine)	Count data collected October 2023 during local tournamnet scenario. Streetlight data pulled for the monthof April 2022 and used to scale rate to weekday open gym scenario (~55% of weekend trip rate). No AM data available but considered to be minimal	8.00	Courts	76.45	0	0%	0%	3.03	55%	45%	612	0	0	0	13	11	24
Volleyball Courts	Streetlight Data from Momentous Sports Center, Ivine	Data pulled for the month of April 2022. Period isolated to focus on volleyball only events. Volleyball per court trips = ~60% of basketball per court trips. No AM rate available (assume very low trips in AM period)	16.00	Courts	45.87	0	0%	0%	1.818	55%	45%	734	0	0	0	16	13	29
		Total Indoor Gymnasium Facility (assume higher of basketball or volleyball):										734	0	0	0	16	13	29
Tennis/Pickleball Courts	Streetlight Data from Three Tennis/Pickleball Facilities in Riverside and Orange Counties (Andulka Park, Anaheim Tennis Center, Tustin Hills Raquet Club)	Streetlight data compared against ITE Code 490 - Tennis Courts and was found to be slightly higher. Higher rate reflects pickleball courts more accurately.	8.00	Courts	36.25	1.95	93%	7%	4.27	55%	45%	290	15	1	16	19	15	34
Swimming Pool	Streetlight Data from Two Public Pools in San Bernardino and Riverside Counties (Fontana Heritage Pool, Palm Desert Aquatic Center)	Data pulled for the months of April 2022 (Fontana pools) and Jan-March 2022 (Palm Desert).	8.00	Pool Lanes	36.17	3.93	51%	49%	4.54	60%	40%	289	16	15	31	22	14	36
Recreational Community Center	ITE Code 495 - Recreational Community Center	Community Recreation Center includes 70,000 sq ft. community center and 25,000 sq ft. maintenance yard. Excludes 13,000 sq. ft. aquatics building (see Swimming Pool)	95.00	KSF	28.82	1.91	66%	34%	2.50	47%	53%	2,738	119	62	181	112	126	238
Public Park	SANDAG Vehicle Traffic Generation Rates for San Diego Region	Assumes general park amenities (i.e. skate park, tot lot, general open space, picnic areas) total 11.21 acres and act as a "City Developed Park." ITE Code for Public Park not used due to low reliability and extremely low rate that does not reflect uses found in this park.	11.21	Acres	50	6.5	50%	50%	4.5	50%	50%	561	37	36	73	25	25	50
												Recreational Subtotal	***7,613***	***221***	***187***	***408***	***400***	***261***	***661***
Minor League Baseball Stadium	-	Not in Use in this Scenario	1388	Avg Weekday Attendance	0	0	0%	0%	0	0%	0%	0	0	0	0	0	0	0
Minor League Baseball Stadium Office	ITE Code 710 - General Office Building	43 FTE employees working on-site for Quakes Team. Assumed to work in office on weekdays without games. Fitted curve used.	43	Employees	Ln(T)=0.76* Ln(X)+2.74	0.49	88%	12%	Ln(T)=0.74* Ln(X)+0.89	17%	83%	270	18	3	21	7	33	39
												Weekday no Event Total Trips	**15,944**	**376**	**259**	**634**	**866**	**661**	**1,527**

Notes:

1.KSF = 1,000 square feet

2. Sources: Trip Generation Manual 11th Edition (Institute of Transportation Engineers, 2021, Norco Silver Lakes Data Collection (Fehr & Peers 2023), Streetlight Data, 2022-2023, Big Leage Dreams Jurupa Valley Data Collection (Fehr & Peers, 2023), Chicken 'n Pickle San Antonio Data Collection (Fehr & Peers, 2023).

3. Internalization rate derived from similar mixed use sports entertainment projects in California and best practices from Fehr & Peers internal research.

Table 2: Typical Weekday with Stadium Event

Land Use	Data Source	Notes	Quantity	Unit	Trip Generation Rates							Estimated Trip Generation						
					Daily Rate	AM Peak			PM Peak			Daily Trips	AM Peak			PM Peak		
						Rate	% In	% Out	Rate	% In	% Out		In	Out	Total	In	Out	Total
Hotel	ITE Code 310 - Hotel	-	100.00	Keys	7.99	0.46	56%	44%	0.59	51%	49%	799	26	20	46	30	29	59
Shopping Plaza (PA 2, PA 3, PA 4)	ITE Code 821 - Shopping Plaza (40k-150 KSF, No Grocery)	45 KSF from PA 2, 21 KSF from PA 3, and remaining 14 KSF from PA 4; 50% operating as retail	40.00	KSF	67.52	1.73	62%	38%	5.19	49%	51%	2,701	43	26	69	102	106	208
Restaurants (PA 2, PA 3, PA 4)	ITE Code 930 - Fast Casual Restaurant	45 KSF from PA 2, 21 KSF from PA 3, and remaining 14 KSF from PA 4; 50% operating as quick service restaurant.	40.00	KSF	97.14	1.43	50%	50%	12.55	55%	45%	3,886	29	28	57	276	226	502
Chicken 'n Pickle Restaurant	Chicken 'n Pickle San Antonio Data Collection	100 KSF of retail from PA 4 operating as Chicken 'n Pickle Restaurant/Entertainment Complex. 12 total courts (4 indoor, 8 outdoor)	12.00	Courts	124.4	4.6	93%	7%	11.7	68%	32%	1,493	51	4	55	95	45	140
											Lodging and Retail	*8,879*	*149*	*78*	*227*	*503*	*406*	*909*
											Hotel Internalization Reduction (20% of Hotel Trips)	*-160*	*-5*	*-4*	*-9*	*-6*	*-6*	*-12*
											Retail Internalization Reduction (10% of Retail Trips)	*-659*	*-7*	*-5*	*-13*	*-38*	*-33*	*-71*
											Lodging and Retail Subtotal	**8,061**	**137**	**69**	**205**	**459**	**367**	**826**
Soccer Fields (Soccer Complex)	Silverlakes Data Collection	Observation of field usage from a Tuesday evening in September 2023. Assumes all fields in use w/ 4 teams/field/day)	13.00	Fields	153.33	4.88	31%	69%	17.04	74%	26%	1,993	20	43	63	165	57	222
Baseball Fields	Big League Dreams Sports Park Data Collection and Streetlight Data	Count data collected October 2023 during weekend local games scenario. Streetlight data pulled Tuesdays from 01/10/22-03/31/22 representing Tuesday Adult Softball/Little League Practice (~33% of weekend trip generation rate). No AM rate available; used same rate as Silverlakes Data Collection (assume very low trips in AM period). Total number of fields includes little league field on east side of project area	9.00	Fields	112.01	4.88	31%	69%	5.75	78%	22%	1,008	14	30	44	41	11	52
Batting Cages	-	Assume 100% internalization from baseball fields. Batting cages are not avaiilable for commercial use and are intended for practice/team warm ups.	12.00	Cages	0.00	0.00	0%	0%	0.00	0%	0%	0	0	0	0	0	0	0
Basketball Courts	Open Gym Premier Ladera Ranch Data Collection and Streetlight Data from Three Indoor Gymnasium Facilities in Organge County (MAP Sports, Garden Grove; Open Gym Premerier, Ladera Ranch; Momentous Sports Center, Irvine)	Count data collected October 2023 during local tournamnet scenario. Streetlight data pulled for the monthof April 2022 and used to scale rate to weekday open gym scenario (~55% of weekend trip rate). No AM data available but considered to be minimal	8.00	Courts	76.45	0	0%	0%	3.03	55%	45%	612	0	0	0	13	11	24
Volleyball Courts	Streetlight Data from Momentous Sports Center, Irvine	Data pulled for the month of April 2022. Period isolated to focus on volleyball only events. Volleyball per court trips = ~60% of basketball per court trips. No AM rate available (assume very low trips in AM period)	16.00	Courts	45.87	0	0%	0%	1.818	55%	45%	734	0	0	0	16	13	29
		Total Indoor Gymnasium Facility (assume higher of basketball or volleyball):										734	0	0	0	16	13	29
Tennis/Pickleball Courts	Streetlight Data from Three Tennis/Pickleball Facilities in Riverside and Orange Counties (Andulka Park, Anaheim Tennis Center, Tustin Hills Raquet Club)	Streetlight data compared against ITE Code 490 - Tennis Courts and was found to be slightly higher. Higher rate reflects pickleball courts more accurately.	8.00	Courts	36.25	1.95	93%	7%	4.27	55%	45%	290	15	1	16	19	15	34
Swimming Pool	Streetlight Data from Two Public Pools in San Bernardino and Riverside Counties (Fontana Heritage Pool, Palm Desert Aquatic Center)	Data pulled for the months of April 2022 (Fontana pools) and Jan-March 2022 (Palm Desert).	8.00	Pool Lanes	36.17	3.93	51%	49%	4.54	60%	40%	289	16	15	31	22	14	36
Recreational Community Center	ITE Code 495 - Recreational Community Center	Community Recreation Center includes 70,000 sq ft. community center and 25,000 sq ft. maintenance yard. Excludes 13,000 sq. ft. aquatics building (see Swimming Pool)	95.00	KSF	28.82	1.91	66%	34%	2.50	47%	53%	2,738	119	62	181	112	126	238
Public Park	SANDAG Vehicle Traffic Generation Rates for San Diego Region	Assumes general park amenities (i.e. skate park, tot lot, general open space, picnic areas) total 11.21 acres and act as a "City Developed Park." ITE Code for Public Park not used due to low reliability and extremely low rate that does not reflect uses found in this park.	11.21	Acres	50	6.5	50%	50%	4.5	50%	50%	561	37	36	73	25	25	50
											Recreational Subtotal	***7,613***	***221***	***187***	***408***	***400***	***261***	***661***
Minor League Baseball Stadium	Streetlight Data from Two MiLB Stadiums (Rancho Cucamonga Quakes, Inland Empire 66ers)	Data pulled during first half of 2022 Season (mid April - mid June) counting all home games. Assumes all games in evening (no AM peak). Average attendance data from 2023 Quakes season (excluding holidays).	1388	Avg Weekday Attendance	0.5784	0	0%	0%	0.043	48%	52%	803	0	0	0	28	31	59
Minor League Baseball Stadium Office	ITE Code 710 - General Office Building	43 FTE employees working on-site for Quakes Team. On weekdays with games, trips are accounted for in rate for stadium.	43	Employees	-	0.49	88%	12%	-	-	-	-	18	3	21	0	0	0
											Weekday w Event Total Trips	**16,477**	**358**	**256**	**613**	**887**	**659**	**1,546**

Notes:

1.KSF = 1,000 square feet

2. Sources: Trip Generation Manual 11th Edition (Institute of Transportation Engineers, 2021, Norco Silver Lakes Data Collection (Fehr & Peers 2023), Streetlight Data, 2022-2023, Big Leage Dreams Jurupa Valley Data Collection (Fehr & Peers, 2023), Chicken 'n Pickle San Antonio Data Collection (Fehr & Peers, 2023).

3. Internalization rate derived from similar mixed use sports entertainment projects in California and best practices from Fehr & Peers internal research.

Table 3: Weekend (Saturday) with One Tournament (No Baseball Stadium Use)

Land Use	Data Source	Notes	Quantity	Unit	Trip Generation Rates				Estimated Trip Generation			
					Daily Rate	Midday Peak Hour			Daily Trips	Midday Peak Hour		
						Rate	% In	% Out		In	Out	Total
Hotel	ITE Code 310 - Hotel	-	100.00	Keys	8.07	0.72	56%	44%	807	40	32	72
Shopping Plaza (PA 2, PA 3, PA 4)	ITE Code 821 - Shopping Plaza (40k-150 KSF, No Grocery)	45 KSF from PA 2, 21 KSF from PA 3, and remaining 14 KSF from PA 4; 50% operating as retail	40.00	KSF	81.07	6.22	52%	48%	3,243	129	120	249
Restaurants (PA 2, PA 3, PA 4)	ITE Code 930 - Fast Casual Restaurant	45 KSF from PA 2, 21 KSF from PA 3, and remaining 14 KSF from PA 4; 50% operating as quick service restaurant. No weekend daily rate available; weekday used.	40.00	KSF	97.14	32.64	55%	45%	3,886	718	588	1306
Chicken 'n Pickle Restaurant	Chicken 'n Pickle San Antonio Data Collection	100 KSF of retail from PA 4 operating as Chicken 'n Pickle Restaurant/Entertainment Complex. 12 total courts (4 indoor, 8 outdoor)	12.00	Courts	238.00	11.2	59%	41%	2,856	79	55	134
								Lodging and Retail Subtotal	*10,792*	*966*	*795*	*1,761*
								Hotel Internalization Reduction (50% of Hotel Trips)	*-404*	*-20*	*-16*	*-36*
								Retail/Entertainment Internalization Reduction (33% of Hotel Trips)	*-2,353*	*-280*	*-234*	*-513*
								Lodging and Retail Subtotal	**8,036**	**666**	**545**	**1,212**
Soccer Fields (Soccer Complex)	Silverlakes Data Collection	Data collected from September 2023 observation. Assumes all 13 full time soccer fields are in use for soccer tournament. 7 games/field/day.	13.00	Fields	519.58	50.96	38%	62%	6,755	252	410	662
Baseball Fields	Big League Dreams Data Collection	Data collected October 21, 2023 during a typical local weekend game series scenario with all fields in use. 5 games/field/day.	9.00	Fields	339.43	21.29	53%	47%	3,055	102	90	192
Batting Cages	-	Not in Use in this Scenario (no baseball occuring)	12.00	Cages	0.00	0.00	0%	0%	0	0	0	0
Basketball Courts	-	Not in Use in this Scenario (all courts in use for volleyball)	0.00	Courts					0	0	0	0
Volleyball Courts (Tournament)	Streetlight Data from Momentous Sports Center, Irvine	Streetlight Data collected during a volleyball tournament on Jan 7th, 2023 used to scale data collected from Open Gym Premier counts. Assume all 16 volleyball courts are in use (no basketball).	16.00	Courts	83.4	8.55	48%	52%	1,334	66	71	137
				Total Indoor Gymnasium Facility:					1,334	66	71	137
Tennis/Pickleball Courts	Streetlight Data from Three Tennis/Pickleball Facilities in Riverside and Orange Counties (Andulka Park, Anaheim Tennis Center, Tustin Hills Raquet Club)	Streetlight data compared against weekday data for ITE Code 490 - Tennis Courts and was found to be slightly higher. Higher rate reflects pickleball courts more accurately.	8.00	Courts	36.48	2.35	51%	49%	292	10	9	19
Swimming Pool	Streetlight Data from Two Public Pools in San Bernardino and Riverside Counties (Fontana Heritage Pool, Palm Desert Aquatic Center)	Data pulled for the months of April 2022 (Fontana pools) and Jan-March 2022 (Palm Desert).	8.00	Pool Lanes	46.2	4.99	24%	76%	370	10	30	40
Recreational Community Center	ITE Code 495 - Recreational Community Center	Community Recreation Center includes 70,000 sq ft. community center and 25,000 sq ft. maintenance yard. Excludes 13,000 sq. ft. aquatics building (see Swimming Pool)	95.00	KSF	9.1	1.07	54%	46%	865	55	47	102
Public Park	SANDAG Vehicle Traffic Generation Rates for San Diego Region	Assumes general park amenities (i.e. skate park, tot lot, general open space, picnic areas) total 11.21 acres and act as a "City Developed Park." ITE Code for Public Park not used due to low reliability and extremely low rate that does not reflect uses found in this park.	11.21	Acres	50	6.5	50%	50%	561	37	36	73
								Recreational Subtotal	***13,232***	***532***	***693***	***1,225***
Minor League Baseball Stadium	-	Not in Use in this Scenario	3659	Avg Sat Attendance	0	0	0%	0%	0	0	0	0
Minor League Baseball Stadium Office	ITE Code 710 - General Office Building	43 FTE employees working on-site for Quakes Team. On weekends without games, minimal trip activity is expected	43	Employees	0.43	0.09	54%	46%	18	2	2	4
								Weekday Tournamnet + No Stadium Total Trips	**21,286**	**1,200**	**1,240**	**2,441**

Notes:

1.KSF = 1,000 square feet

2. Sources: Trip Generation Manual 11th Edition (Institute of Transportation Engineers, 2021, Norco Silver Lakes Data Collection (Fehr & Peers 2023), Streetlight Data, 2022-2023, Big Leage Dreams Jurupa Valley Data Collection (Fehr & Peers, 2023), Chicken 'n Pickle San Antonio Data Collection (Fehr & Peers, 2023).

3. Internalization rate derived from similar mixed use sports entertainment projects in California and best practices from Fehr & Peers internal research.

Table 4: Weekend (Saturday) with Stadium Event (No Field Tournaments)

Land Use	Data Source	Notes	Quantity	Unit	Trip Generation Rates				Estimated Trip Generation			
					Daily Rate	Peak Hour of Arrival (5pm - 6pm)			Daily Trips	Peak Hour of Arrival (5pm - 6pm)		
						Rate	% In	% Out		In	Out	Total
Hotel	ITE Code 310 - Hotel	-	100.00	Keys	8.07	0.72	56%	44%	807	40	32	72
Shopping Plaza (PA 2, PA 3, PA 4)	ITE Code 821 - Shopping Plaza (40k-150 KSF, No Grocery)	45 KSF from PA 2, 21 KSF from PA 3, and remaining 14 KSF from PA 4; 50% operating as retail	40.00	KSF	81.07	6.22	52%	48%	3,243	129	120	249
Restaurants (PA 2, PA 3, PA 4)	ITE Code 930 - Fast Casual Restaurant	45 KSF from PA 2, 21 KSF from PA 3, and remaining 14 KSF from PA 4; 50% operating as quick service restaurant. No weekend daily rate available; weekday used.	40.00	KSF	97.14	32.64	55%	45%	3,886	718	588	1306
Chicken 'n Pickle Restaurant	Chicken 'n Pickle San Antonio Data Collection	100 KSF of retail from PA 4 operating as Chicken 'n Pickle Restaurant/Entertainment Complex. 12 total courts (4 indoor, 8 outdoor)	12.00	Courts	238.00	17.8	58%	42%	2,856	124	90	214
								Lodging and Retail Subtotal	*10,792*	*1,011*	*830*	*1,841*
								Hotel Internalization Reduction (50% of Hotel Trips)	*-404*	*-20*	*-16*	*-36*
								Retail/Entertainment Internalization Reduction (33% of Hotel Trips)	*-2,353*	*-280*	*-234*	*-513*
								Lodging and Retail Subtotal	**8,036**	**711**	**580**	**1,292**
Soccer Fields (Soccer Complex)	Silverlakes Data Collection	Observation of field usage from Saturday in September 2023. Assumes standard weekend of games (no Tournament with regional draw). 5 games/field/day.	13.00	Fields	349.92	37.00	35%	65%	4,549	168	313	481
Baseball Fields	Big League Dreams Sports Park Data Collection	Data collected October 21, 2023 during a typical local weekend game series scenario with all fields in use. 5 games/field/day.	9.00	Fields	339.43	17.43	59%	41%	3,055	93	64	157
Batting Cages	-	Assume 100% internalization from baseball fields. Batting cages are not avaiilable for commercial use and are intended for practice/team warm ups.	12.00	Cages	0.00	0.00	0%	0%	0	0	0	0
Basketball Courts (Tournament)	Open Gym Premier Ladera Ranch Data Collection	Data collected October 21, 2023 during a typical local youth weekend basketball tournament at Open Gym Premier in Ladera Ranch. Assume that all 8 basketball courts are in use (no volleyball).	8.00	Courts	139.00	5.5	25%	75%	1,112	11	33	44
Volleyball Courts	-	Not In Use In This Scenario (all courts in use for basketball)	0.00	Courts					0	0	0	0
				Total Indoor Gymnasium Facility:					1,112	11	33	44
Tennis/Pickleball Courts	Streetlight Data from Three Tennis/Pickleball Facilities in Riverside and Orange Counties (Andulka Park, Anaheim Tennis Center, Tustin Hills Raquet Club)	Streetlight data compared against weekday data for ITE Code 490 - Tennis Courts and was found to be slightly higher. Higher rate reflects pickleball courts more accurately.	8.00	Courts	36.48	2.35	51%	49%	292	10	9	19
Swimming Pool	Streetlight Data from Two Public Pools in San Bernardino and Riverside Counties (Fontana Heritage Pool, Palm Desert Aquatic Center)	Data pulled for the months of April 2022 (Fontana pools) and Jan-March 2022 (Palm Desert).	8.00	Pool Lanes	46.2	4.99	24%	76%	370	10	30	40
Recreational Community Center	ITE Code 495 - Recreational Community Center	Community Recreation Center includes 70,000 sq ft. community center and 25,000 sq ft. maintenance yard. Excludes 13,000 sq. ft. aquatics building (see Swimming Pool)	95.00	KSF	9.1	1.07	54%	46%	865	55	47	102
Public Park	SANDAG Vehicle Traffic Generation Rates for San Diego Region	Assumes general park amenities (i.e. skate park, tot lot, general open space, picnic areas) total 11.21 acres and act as a "City Developed Park." ITE Code for Public Park not used due to low reliability and extremely low rate that does not reflect uses found in this park.	11.21	Acres	50	6.5	50%	50%	561	37	36	73
								Recreational Subtotal	***10,804***	***384***	***532***	***916***
Minor League Baseball Stadium	Streetlight Data from Two MiLB Stadiums (Rancho Cucamonga Quakes, Inland Empire 66ers).	Data pulled during first half of 2022 Season (mid April - mid June) counting all home games. Similar rates as those derived from September 2023 traffic counts. Average attendance from 2023 Quakes season	3659	Avg Sat Attendance	0.5784	0.0425	48%	52%	2,116	75	81	156
Minor League Baseball Stadium Office	ITE Code 710 - General Office Building	43 FTE employees working on-site for Quakes Team. On weekdays with games, trips are accounted for in rate for stadium.	43	Employees	-	-	-	-	0	0	0	0
								Weekday Stadium + No Tournament Total Trips	**20,956**	**1,170**	**1,193**	**2,364**

Notes:

1.KSF = 1,000 square feet

2. Sources: Trip Generation Manual 11th Edition (Institute of Transportation Engineers, 2021, Norco Silver Lakes Data Collection (Fehr & Peers 2023), Streetlight Data, 2022-2023, Big Leage Dreams Jurupa Valley Data Collection (Fehr & Peers, 2023), Chicken 'n Pickle San Antonio Data Collection (Fehr & Peers, 2023).

3. Internalization rate derived from similar mixed use sports entertainment projects in California and best practices from Fehr & Peers internal research.

Tuesday, August 29, 2023 | CITY: SilverLakes | PROJECT: SC4176

ADT ALL Dwys | **Prepared by AimTD LLC tel. 714 253 7888**

AM Period	IN		OUT		Hourly Count In	Out	Total		PM Period	IN		OUT		In	Out	Total	
0:00	1		0						12:00	10		9		39	37	76	
0:15	5		0						12:15	7		10		34	37	71	
0:30	1		1						12:30	5		8		31	34	65	
0:45	1	8	0	1	8	1	9	9	12:45	11	33	13	40	33	40	73	73
1:00	1		1		8	2	10		13:00	11		12		34	43	77	
1:15	0		1		3	3	6		13:15	8		5		35	38	73	
1:30	0		0		2	2	4		13:30	12		14		42	44	86	
1:45	2	3	0	2	3	2	5	5	13:45	11	42	24	55	42	55	97	97
2:00	0		0		2	1	3		14:00	9		15		40	58	98	
2:15	0		1		2	1	3		14:15	11		10		43	63	106	
2:30	1		0		3	1	4		14:30	11		22		42	71	113	
2:45	0	1	1	2	1	2	3	3	14:45	11	42	9	56	42	56	98	98
3:00	0		1		1	3	4		15:00	7		4		40	45	85	
3:15	0		1		1	3	4		15:15	11		12		40	47	87	
3:30	1		1		1	4	5		15:30	18		12		47	37	84	
3:45	1	2	1	4	2	4	6	6	15:45	15	51	28	56	51	56	107	107
4:00	0		1		2	4	6		16:00	13		8		57	60	117	
4:15	1		2		3	5	8		16:15	13		8		59	56	115	
4:30	0		3		2	7	9		16:30	25		8		66	52	118	
4:45	4	5	2	8	5	8	13	13	16:45	56	107	21	45	107	45	152	152
5:00	0		9		5	16	21		17:00	52		24		146	61	207	
5:15	4		3		8	17	25		17:15	53		20		186	73	259	
5:30	5		2		13	16	29		17:30	77		15		238	80	318	
5:45	5	14	11	25	14	25	39	39	17:45	122	304	46	105	304	105	409	409
6:00	4		6		18	22	40		18:00	100		56		352	137	489	
6:15	5		8		19	27	46		18:15	119		58		418	175	593	
6:30	6		5		20	30	50		18:30	69		62		410	222	632	
6:45	8	23	1	20	23	20	43	43	18:45	98	386	63	239	386	239	625	625
7:00	9		18		28	32	60		19:00	87		70		373	253	626	
7:15	10		15		33	39	72		19:15	84		102		338	297	635	
7:30	16		7		43	41	84		19:30	61		92		330	327	657	
7:45	13	48	13	53	48	53	101	101	19:45	103	335	106	370	335	370	705	705
8:00	8		20		47	55	102		20:00	55		145		303	445	748	
8:15	10		29		47	69	116		20:15	40		105		259	448	707	
8:30	11		15		42	77	119		20:30	21		101		219	457	676	
8:45	7	36	17	81	36	81	117	117	20:45	19	135	22	373	135	373	508	508
9:00	9		13		37	74	111		21:00	16		88		96	316	412	
9:15	11		10		38	55	93		21:15	11		20		67	231	298	
9:30	5		9		32	49	81		21:30	18		23		64	153	217	
9:45	4	29	21	53	29	53	82	82	21:45	5	50	83	214	50	214	264	264
10:00	7		12		27	52	79		22:00	3		43		37	169	206	
10:15	8		14		24	56	80		22:15	1		6		27	155	182	
10:30	7		10		26	57	83		22:30	3		1		12	133	145	
10:45	6	28	6	42	28	42	70	70	22:45	2	9	0	50	9	50	59	59
11:00	8		9		29	39	68		23:00	3		5		9	12	21	
11:15	12		10		33	35	68		23:15	1		3		9	9	18	
11:30	8		11		34	36	70		23:30	3		0		9	8	17	
11:45	9	37	7	37	37	37	74	74	23:45	4	11	2	10	11	10	21	21
Total Vol.		234		328				**562**			1505		1613				**3118**

Daily Totals

IN	OUT	Combined
1739	1941	**3680**

	AM			PM		
Split %	41.6%	58.4%	**15.3%**	48.3%	51.7%	**84.7%**
Peak Hour		8:00			19:15	
Volume	36	81	**117**	303	445	**748**
Peak %	0.31	0.69		0.41	0.59	

Saturday, September 02, 2023 | CITY: SilverLakes | PROJECT: SC4176

ADT ALL Dwys | **Prepared by AimTD LLC tel. 714 253 7888**

AM Period	IN		OUT		Hourly Count In	Hourly Count Out	Hourly Count Total		PM Period	IN		OUT		In	Out	Total	
0:00	1		1						12:00	174		70		477	712	1189	
0:15	1		0						12:15	158		45		553	537	1090	
0:30	0		0						12:30	121		68		569	318	887	
0:45	1	3	0	1	3	1	4	4	12:45	114	567	70	253	567	253	820	820
1:00	0		1		2	1	3		13:00	109		182		502	365	867	
1:15	2		0		3	1	4		13:15	78		286		422	606	1028	
1:30	1		0		4	1	5		13:30	111		200		412	738	1150	
1:45	1	4	1	2	4	2	6	6	13:45	169	467	88	756	467	756	1223	1223
2:00	1		4		5	5	10		14:00	104		48		462	622	1084	
2:15	4		0		7	5	12		14:15	99		26		483	362	845	
2:30	1		0		7	5	12		14:30	73		37		445	199	644	
2:45	0	6	1	5	6	5	11	11	14:45	74	350	220	331	350	331	681	681
3:00	0		0		5	1	6		15:00	80		297		326	580	906	
3:15	1		1		2	2	4		15:15	96		323		323	877	1200	
3:30	3		0		4	2	6		15:30	134		63		384	903	1287	
3:45	1	5	1	2	5	2	7	7	15:45	148	458	42	725	458	725	1183	1183
4:00	1		0		6	2	8		16:00	86		35		464	463	927	
4:15	0		3		5	4	9		16:15	75		70		443	210	653	
4:30	5		1		7	5	12		16:30	74		207		383	354	737	
4:45	2	8	3	7	8	7	15	15	16:45	49	284	298	610	284	610	894	894
5:00	1		1		8	8	16		17:00	52		220		250	795	1045	
5:15	4		2		12	7	19		17:15	51		81		226	806	1032	
5:30	10		2		17	8	25		17:30	53		44		205	643	848	
5:45	9	24	1	6	24	6	30	30	17:45	41	197	26	371	197	371	568	568
6:00	21		4		44	9	53		18:00	15		61		160	212	372	
6:15	60		5		100	12	112		18:15	35		232		144	363	507	
6:30	156		7		246	17	263		18:30	24		303		115	622	737	
6:45	243	480	8	24	480	24	504	504	18:45	16	90	148	744	90	744	834	834
7:00	237		27		696	47	743		19:00	14		27		89	710	799	
7:15	260		27		896	69	965		19:15	12		25		66	503	569	
7:30	172		12		912	74	986		19:30	7		18		49	218	267	
7:45	133	802	14	80	802	80	882	882	19:45	12	45	29	99	45	99	144	144
8:00	140		21		705	74	779		20:00	9		94		40	166	206	
8:15	177		18		622	65	687		20:15	16		125		44	266	310	
8:30	226		64		676	117	793		20:30	7		29		44	277	321	
8:45	219	762	113	216	762	216	978	978	20:45	9	41	19	267	41	267	308	308
9:00	198		52		820	247	1067		21:00	6		22		38	195	233	
9:15	107		55		750	284	1034		21:15	3		19		25	89	114	
9:30	107		201		631	421	1052		21:30	6		24		24	84	108	
9:45	95	507	240	548	507	548	1055	1055	21:45	7	22	19	84	22	84	106	106
10:00	164		96		473	592	1065		22:00	8		19		24	81	105	
10:15	176		77		542	614	1156		22:15	5		8		26	70	96	
10:30	208		83		643	496	1139		22:30	5		5		25	51	76	
10:45	146	694	43	299	694	299	993	993	22:45	4	22	7	39	22	39	61	61
11:00	100		57		630	260	890		23:00	2		14		16	34	50	
11:15	82		220		536	403	939		23:15	2		16		13	42	55	
11:30	105		287		433	607	1040		23:30	3		11		11	48	59	
11:45	116	403	135	699	403	699	1102	1102	23:45	5	12	8	49	12	49	61	61
Total Vol.		3698		1889				**5587**			2555		4328				**6883**

Daily Totals

IN	OUT	Combined
6253	6217	**12470**

	AM			PM/MIDDAY		
Split %	66.2%	33.8%	**44.8%**	37.1%	62.9%	**55.2%**
Peak Hour		9:30			13:00	
Volume	542	614	**1156**	467	756	**1223**
Peak %	0.47	0.53		0.38	0.62	

Saturday, September 09, 2023 | CITY: SilverLakes | PROJECT: SC4176

ADT ALL Dwys | **Prepared by AimTD LLC tel. 714 253 7888**

AM Period	IN		OUT		Hourly Count In	Out	Total		PM Period	IN		OUT		In	Out	Total	
0:00	1		0						12:00	99		173		532	655	1187	
0:15	3		2						12:15	139		101		526	637	1163	
0:30	2		0						12:30	143		101		513	557	1070	
0:45	3	9	0	2	9	2	11	11	12:45	153	534	189	564	534	564	1098	1098
1:00	2		0		10	2	12		13:00	119		243		554	634	1188	
1:15	0		0		7	0	7		13:15	97		259		512	792	1304	
1:30	1		2		6	2	8		13:30	124		222		493	913	1406	
1:45	1	4	0	2	4	2	6	6	13:45	127	467	139	863	467	863	1330	1330
2:00	0		0		2	2	4		14:00	136		156		484	776	1260	
2:15	0		0		2	2	4		14:15	138		160		525	677	1202	
2:30	4		0		5	0	5		14:30	116		137		517	592	1109	
2:45	0	4	1	1	4	1	5	5	14:45	96	486	159	612	486	612	1098	1098
3:00	1		0		5	1	6		15:00	102		202		452	658	1110	
3:15	0		1		5	2	7		15:15	86		148		400	646	1046	
3:30	1		0		2	2	4		15:30	76		102		360	611	971	
3:45	0	2	1	2	2	2	4	4	15:45	74	338	220	672	338	672	1010	1010
4:00	0		1		1	3	4		16:00	72		163		308	633	941	
4:15	4		4		5	6	11		16:15	68		156		290	641	931	
4:30	2		3		6	9	15		16:30	62		141		276	680	956	
4:45	3	9	2	10	9	10	19	19	16:45	34	236	113	573	236	573	809	809
5:00	9		1		18	10	28		17:00	33		171		197	581	778	
5:15	40		0		54	6	60		17:15	36		140		165	565	730	
5:30	20		5		72	8	80		17:30	33		85		136	509	645	
5:45	34	103	2	8	103	8	111	111	17:45	14	116	142	538	116	538	654	654
6:00	36		3		130	10	140		18:00	19		87		102	454	556	
6:15	42		5		132	15	147		18:15	22		40		88	354	442	
6:30	117		9		229	19	248		18:30	22		26		77	295	372	
6:45	250	445	15	32	445	32	477	477	18:45	11	74	33	186	74	186	260	260
7:00	213		60		622	89	711		19:00	15		43		70	142	212	
7:15	205		38		785	122	907		19:15	8		52		56	154	210	
7:30	226		29		894	142	1036		19:30	5		23		39	151	190	
7:45	193	837	44	171	837	171	1008	1008	19:45	12	40	10	128	40	128	168	168
8:00	197		37		821	148	969		20:00	10		6		35	91	126	
8:15	208		40		824	150	974		20:15	7		8		34	47	81	
8:30	189		85		787	206	993		20:30	4		7		33	31	64	
8:45	150	744	187	349	744	349	1093	1093	20:45	9	30	4	25	30	25	55	55
9:00	131		243		678	555	1233		21:00	4		11		24	30	54	
9:15	162		216		632	731	1363		21:15	4		17		21	39	60	
9:30	163		162		606	808	1414		21:30	6		6		23	38	61	
9:45	178	634	123	744	634	744	1378	1378	21:45	7	21	9	43	21	43	64	64
10:00	182		130		685	631	1316		22:00	3		6		20	38	58	
10:15	171		153		694	568	1262		22:15	8		10		24	31	55	
10:30	152		230		683	636	1319		22:30	7		10		25	35	60	
10:45	174	679	164	677	679	677	1356	1356	22:45	4	22	8	34	22	34	56	56
11:00	142		148		639	695	1334		23:00	6		2		25	30	55	
11:15	145		119		613	661	1274		23:15	1		2		18	22	40	
11:30	156		181		617	612	1229		23:30	3		2		14	14	28	
11:45	132	575	182	630	575	630	1205	1205	23:45	4	14	2	8	14	8	22	22
Total Vol.		4045		2628				**6673**			2378		4246				**6624**

Daily Totals

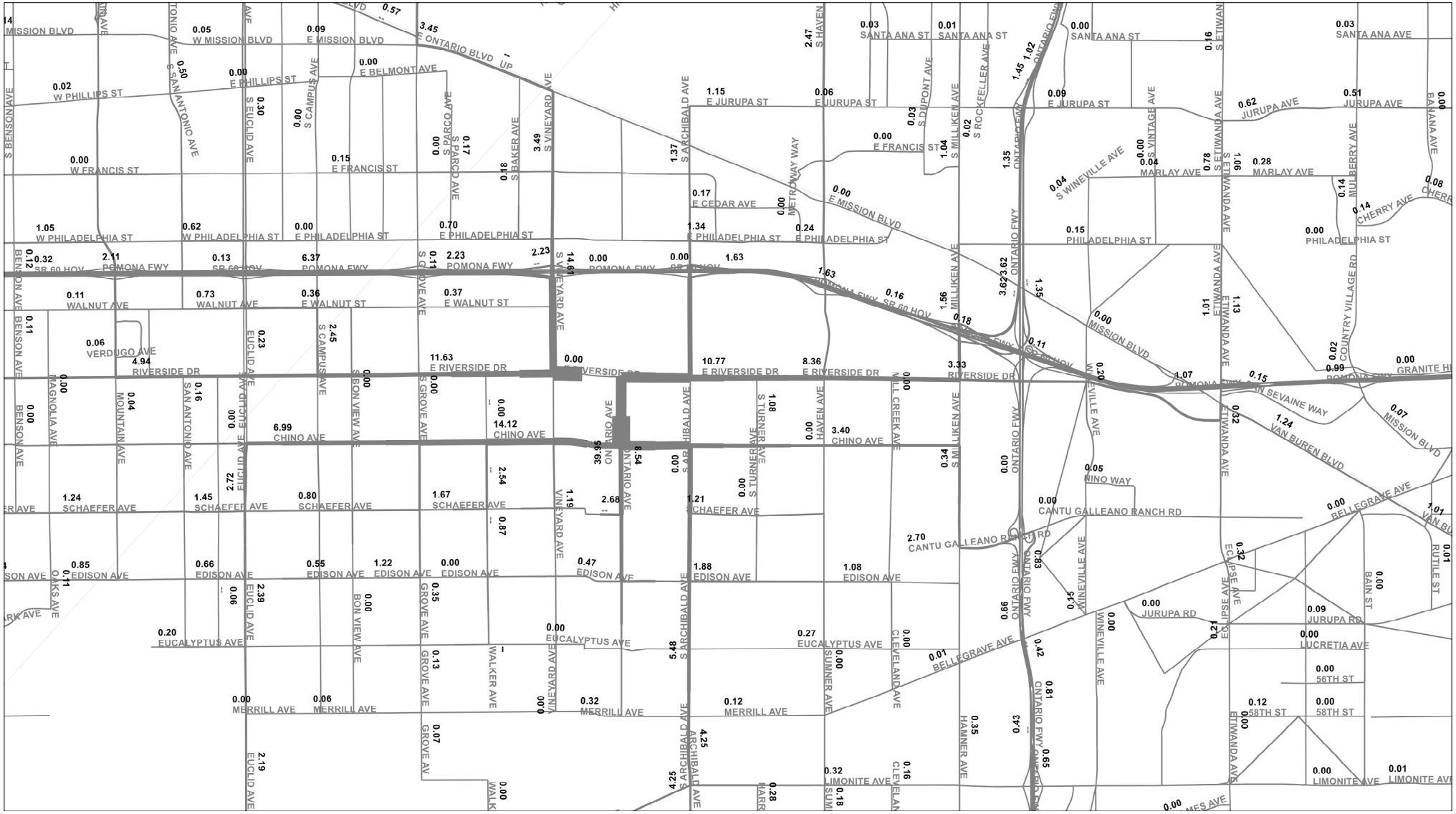
IN	OUT	Combined
6423	6874	**13297**

	AM			PM		
Split %	60.6%	39.4%	**50.2%**	35.9%	64.1%	**49.8%**
Peak Hour		8:45			12:45	
Volume	606	808	**1414**	493	913	**1406**
Peak %	0.43	0.57		0.35	0.65	

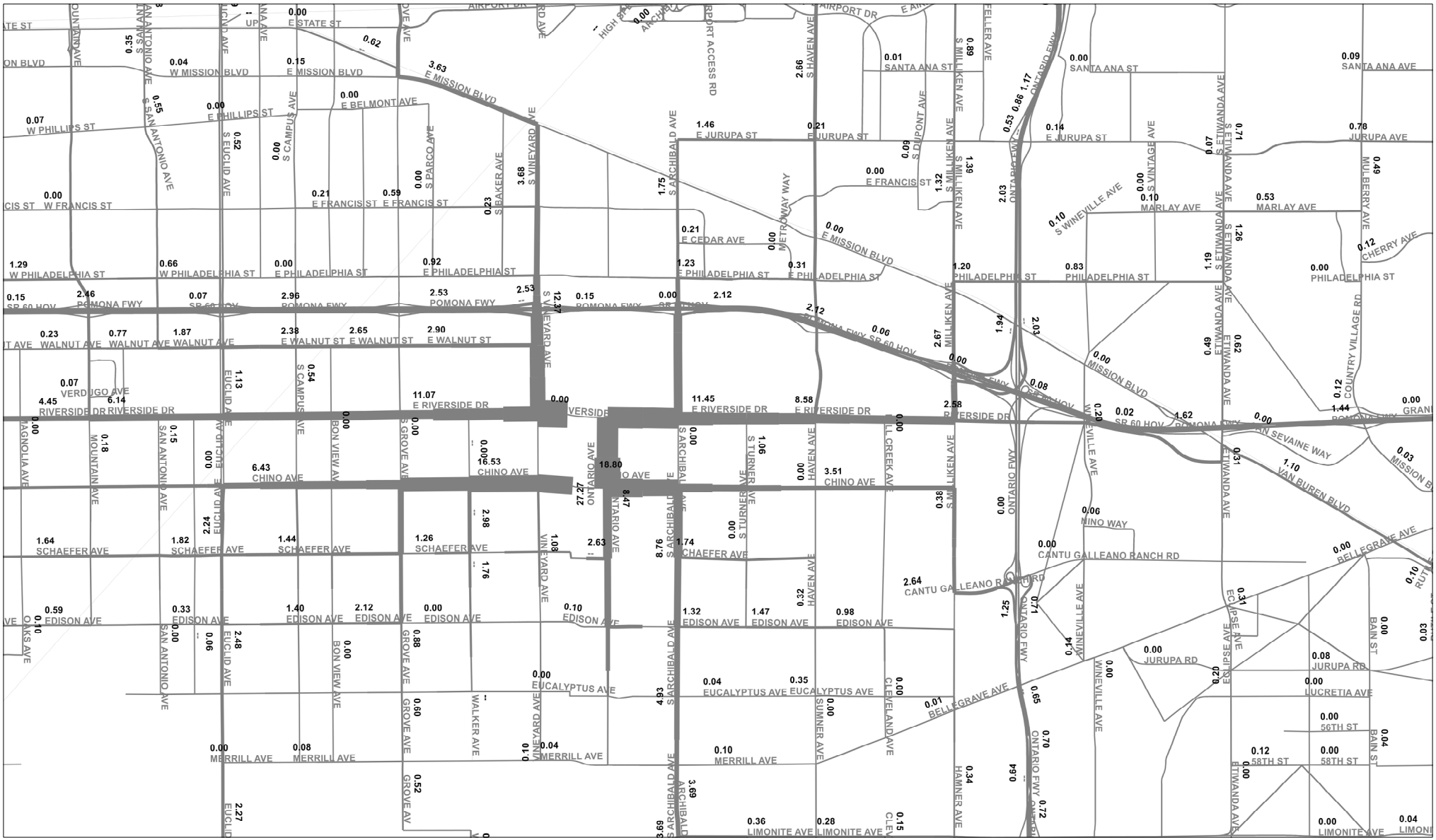
Midday

Hour		13:00	
Volume	467	863	**1330**
Peak %	0.35	0.65	

Appendix B - SBTAM AM Peak Period Retail Select Zone Bandwidth Plot



Appendix B - SBTAM PM Peak Period Retail Select Zone Bandwidth Plot



Appendix B
Turning Movement Counts

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Wed, Oct 27, 21

LOCATION: Ontario
NORTH & SOUTH: Grove
EAST & WEST: Mission

PROJECT #: SC3147
LOCATION #: 5
CONTROL: SIGNAL

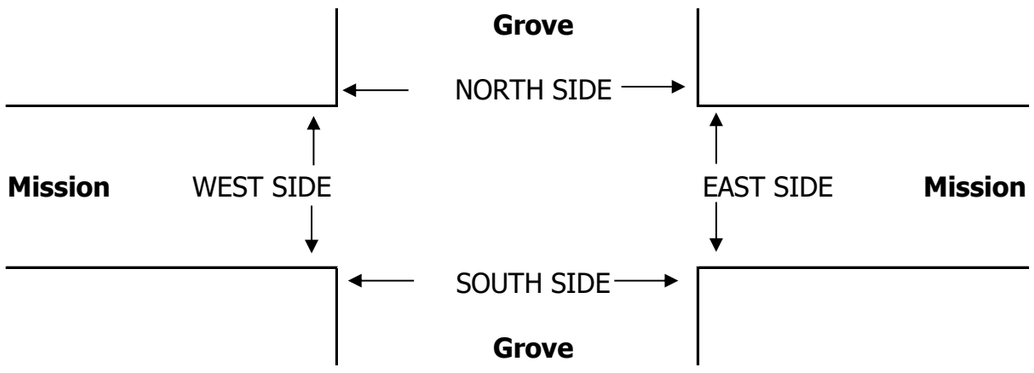
NOTES:

AM
PM
MD
OTHER
OTHER

▲ N
◄ W
E ►
S ▼

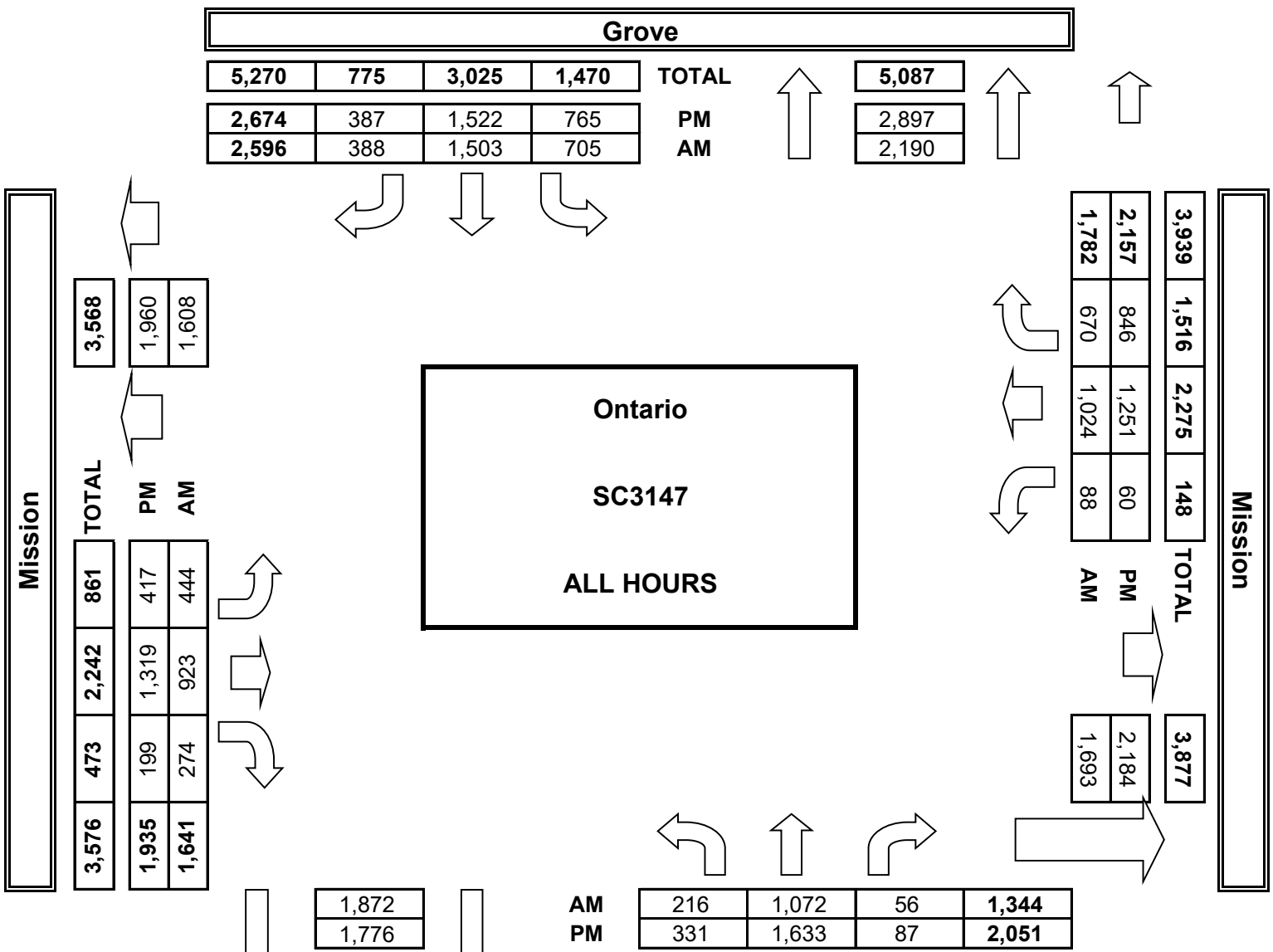
☑ Add U-Turns to Left Turns

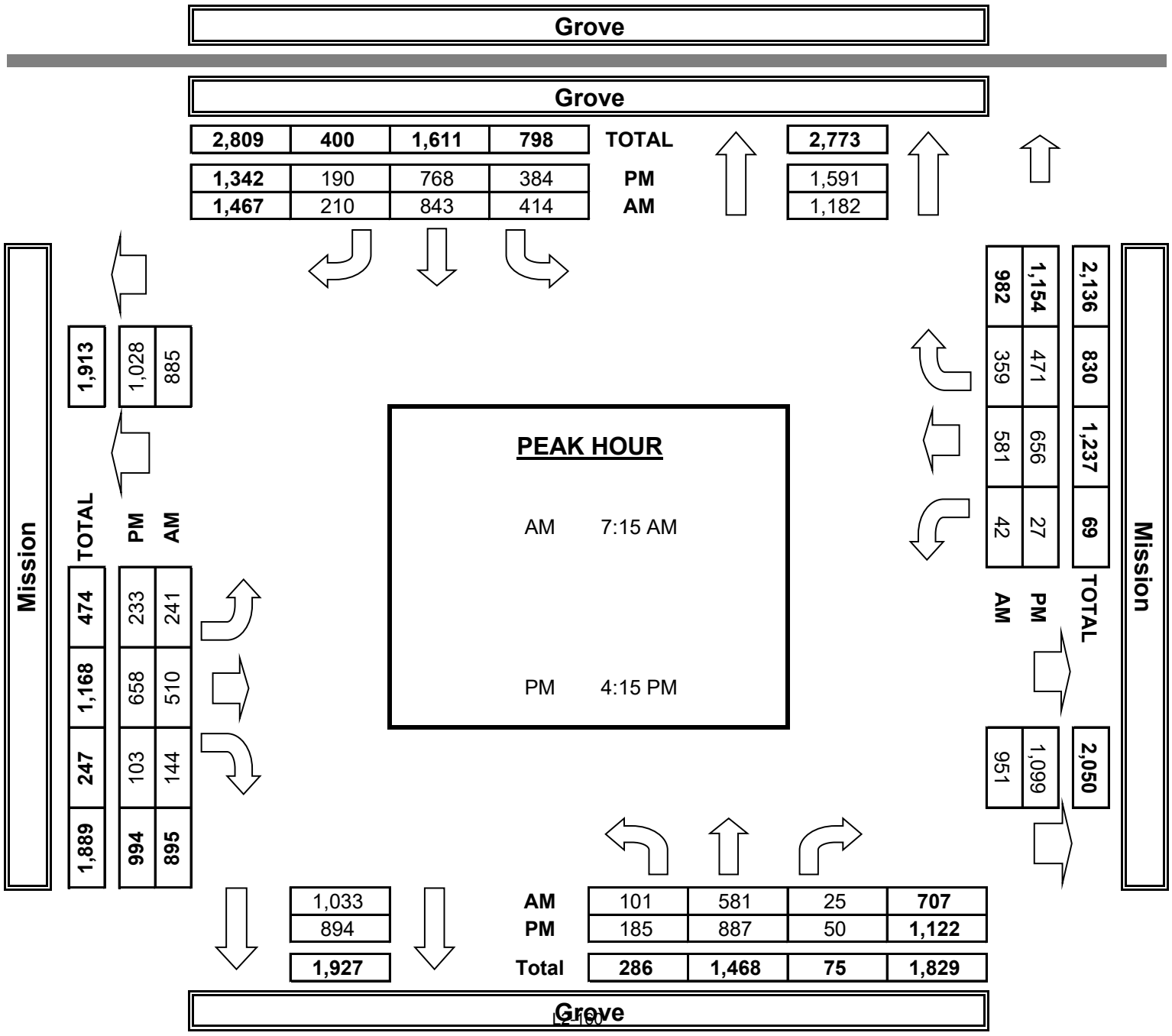
	NORTHBOUND Grove			SOUTHBOUND Grove			EASTBOUND Mission			WESTBOUND Mission				U-TURNS				
LANES:	NL 1	NT 3	NR 0	SL 1	ST 3	SR 1	EL 2	ET 2	ER 1	WL 2	WT 2	WR 1	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
AM 7:00 AM	28	99	9	61	167	62	51	102	25	7	150	82	843	4	1	0	4	9
7:15 AM	16	131	6	89	177	55	50	109	33	10	165	84	925	2	0	0	2	4
7:30 AM	24	157	5	85	244	64	57	109	30	11	171	100	1,057	2	0	0	1	3
7:45 AM	31	150	5	123	225	47	85	176	45	12	134	75	1,108	0	0	0	0	0
8:00 AM	30	143	9	117	197	44	49	116	36	9	111	100	961	3	1	0	0	4
8:15 AM	31	139	6	87	183	51	35	124	42	18	100	71	887	3	0	0	1	4
8:30 AM	24	133	8	69	174	37	64	115	38	9	101	93	865	3	1	0	3	7
8:45 AM	32	120	8	74	136	28	53	72	25	12	92	65	717	3	1	0	2	6
VOLUMES	216	1,072	56	705	1,503	388	444	923	274	88	1,024	670	7,363	20	4	0	13	37
APPROACH %	16%	80%	4%	27%	58%	15%	27%	56%	17%	5%	57%	38%						
APP/DEPART	1,344	/	2,190	2,596	/	1,872	1,641	/	1,693	1,782	/	1,608	0					
BEGIN PEAK HR		7:15 AM																
VOLUMES	101	581	25	414	843	210	241	510	144	42	581	359	4,051					
APPROACH %	14%	82%	4%	28%	57%	14%	27%	57%	16%	4%	59%	37%						
PEAK HR FACTOR		0.950			0.928			0.731			0.871		0.914					
APP/DEPART	707	/	1,182	1,467	/	1,033	895	/	951	982	/	885	0					
PM 4:00 PM	53	189	7	113	182	67	45	141	28	6	127	95	1,053	2	0	0	3	5
4:15 PM	24	218	7	83	204	47	58	159	29	8	182	135	1,154	1	0	0	4	5
4:30 PM	52	256	17	101	182	41	60	157	36	7	147	97	1,153	0	0	0	1	1
4:45 PM	43	207	17	103	197	64	55	171	19	5	156	124	1,161	3	1	1	1	6
5:00 PM	66	206	9	97	185	38	60	171	19	7	171	115	1,144	0	0	0	2	2
5:15 PM	37	195	13	90	195	34	41	182	26	8	162	86	1,069	0	0	0	1	1
5:30 PM	33	179	10	97	185	49	49	163	18	11	156	94	1,044	2	1	0	1	4
5:45 PM	23	183	7	81	192	47	49	175	24	8	150	100	1,039	2	0	0	2	4
VOLUMES	331	1,633	87	765	1,522	387	417	1,319	199	60	1,251	846	8,817	10	2	1	15	28
APPROACH %	16%	80%	4%	29%	57%	14%	22%	68%	10%	3%	58%	39%						
APP/DEPART	2,051	/	2,897	2,674	/	1,776	1,935	/	2,184	2,157	/	1,960	0					
BEGIN PEAK HR		4:15 PM																
VOLUMES	185	887	50	384	768	190	233	658	103	27	656	471	4,612					
APPROACH %	16%	79%	4%	29%	57%	14%	23%	66%	10%	2%	57%	41%						
PEAK HR FACTOR		0.863			0.922			0.982			0.888		0.993					
APP/DEPART	1,122	/	1,591	1,342	/	894	994	/	1,099	1,154	/	1,028	0					



AimTD LLC

TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Wed, Oct 27, 21

LOCATION: Ontario
NORTH & SOUTH: Vineyard
EAST & WEST: Mission

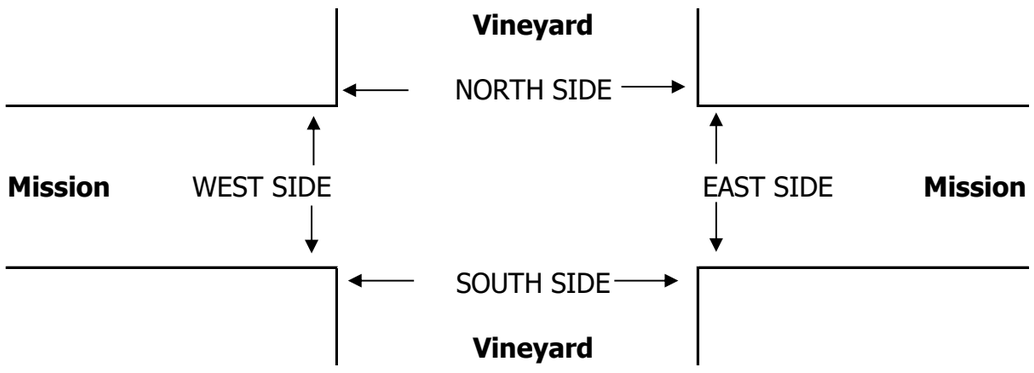
PROJECT #: SC3147
LOCATION #: 9
CONTROL: SIGNAL

NOTES:

AM PM MD OTHER OTHER — ▲ N ◄ W E ► S ▼

☑ Add U-Turns to Left Turns

		NORTHBOUND Vineyard			SOUTHBOUND Vineyard			EASTBOUND Mission			WESTBOUND Mission				U-TURNS				
	LANES:	NL 1	NT 2	NR 0	SL 1	ST 2	SR 1	EL 1	ET 2	ER 1	WL 1	WT 2	WR 0	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
AM	7:00 AM	27	9	10	1	9	2	10	119	24	15	208	1	435	0	0	0	3	3
	7:15 AM	29	6	7	1	1	14	3	128	26	15	244	1	475	0	0	0	1	1
	7:30 AM	32	2	6	2	9	10	4	146	28	16	217	0	472	0	0	0	2	2
	7:45 AM	22	2	4	0	6	10	4	230	39	10	231	2	560	0	0	0	1	1
	8:00 AM	34	10	3	3	11	7	6	145	51	15	197	3	485	0	0	0	1	1
	8:15 AM	22	8	8	1	6	9	3	141	44	13	164	2	421	0	0	0	0	0
	8:30 AM	29	5	10	0	4	5	3	107	34	8	159	4	368	0	0	1	0	1
	8:45 AM	33	11	6	0	4	5	6	107	38	14	126	1	351	0	0	0	3	3
	VOLUMES	228	53	54	8	50	62	39	1,123	284	106	1,546	14	3,567	0	0	1	11	12
	APPROACH %	68%	16%	16%	7%	42%	52%	3%	78%	20%	6%	93%	1%						
	APP/DEPART	335	/	105	120	/	429	1,446	/	1,196	1,666	/	1,837	0					
	BEGIN PEAK HR		7:15 AM																
	VOLUMES	117	20	20	6	27	41	17	649	144	56	889	6	1,992					
	APPROACH %	75%	13%	13%	8%	36%	55%	2%	80%	18%	6%	93%	1%						
	PEAK HR FACTOR		0.835			0.881			0.742			0.914		0.889					
	APP/DEPART	157	/	43	74	/	222	810	/	680	951	/	1,047	0					
PM	4:00 PM	79	13	18	2	10	12	17	209	34	9	137	1	541	0	0	0	0	0
	4:15 PM	43	7	21	0	4	6	6	211	50	16	216	1	581	0	0	0	1	1
	4:30 PM	61	11	26	1	6	5	16	251	38	7	193	3	618	0	0	1	0	1
	4:45 PM	37	9	16	0	5	14	9	272	27	14	186	0	589	0	0	0	0	0
	5:00 PM	73	11	16	3	13	14	13	249	32	8	156	0	588	0	0	0	1	1
	5:15 PM	35	7	9	0	4	10	7	232	35	9	202	0	550	0	0	0	0	0
	5:30 PM	37	5	10	0	9	6	9	260	22	15	194	0	567	0	0	0	0	0
	5:45 PM	35	10	13	1	6	5	13	247	23	7	199	0	559	0	0	1	0	1
	VOLUMES	400	73	129	7	57	72	90	1,931	261	85	1,483	5	4,593	0	0	2	2	4
	APPROACH %	66%	12%	21%	5%	42%	53%	4%	85%	11%	5%	94%	0%						
	APP/DEPART	602	/	166	136	/	401	2,282	/	2,069	1,573	/	1,957	0					
	BEGIN PEAK HR		4:15 PM																
	VOLUMES	214	38	79	4	28	39	44	983	147	45	751	4	2,376					
	APPROACH %	65%	11%	24%	6%	39%	55%	4%	84%	13%	6%	94%	1%						
	PEAK HR FACTOR		0.828			0.592			0.953			0.858		0.961					
	APP/DEPART	331	/	85	71	/	218	1,174	/	1,068	800	/	1,005	0					



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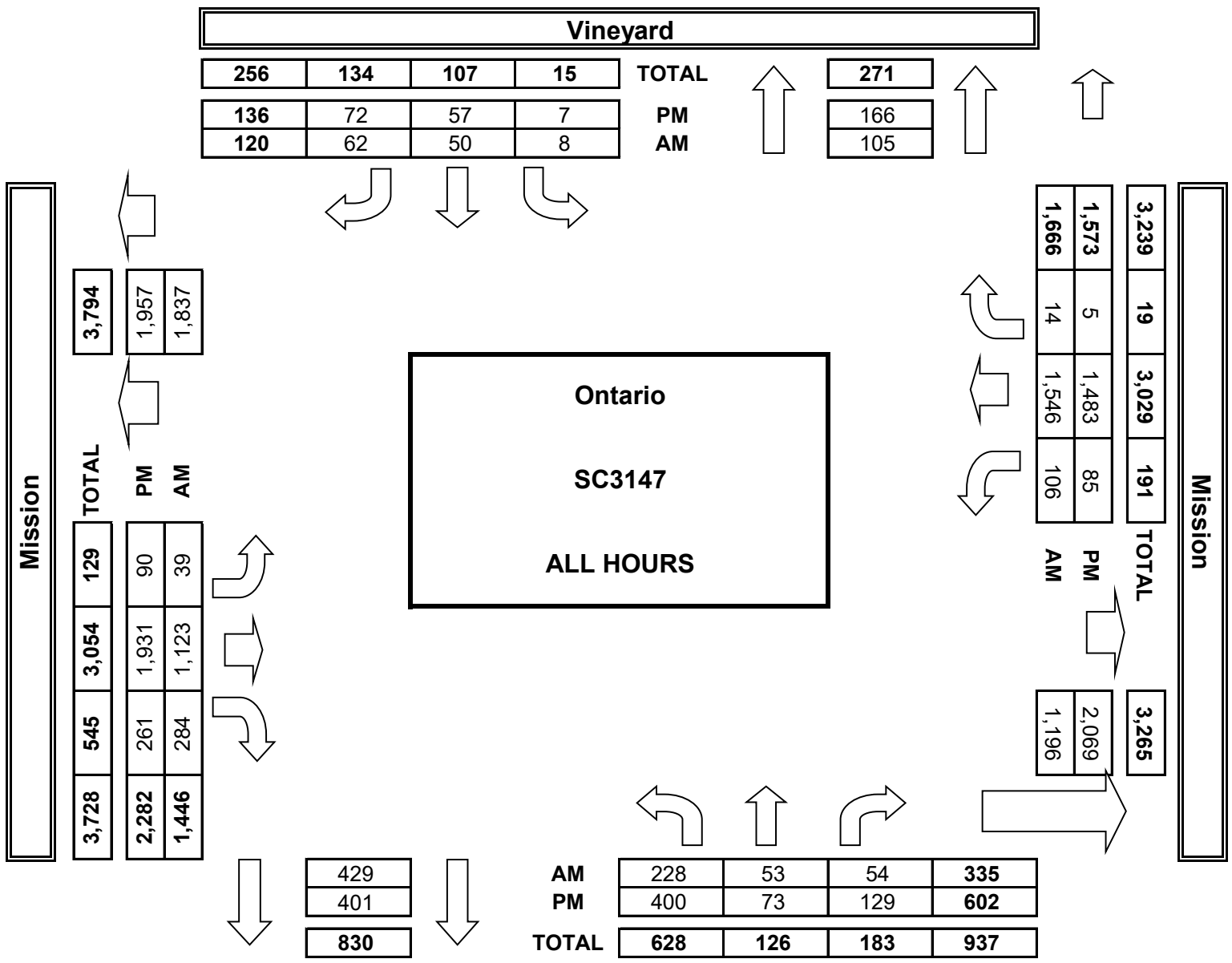
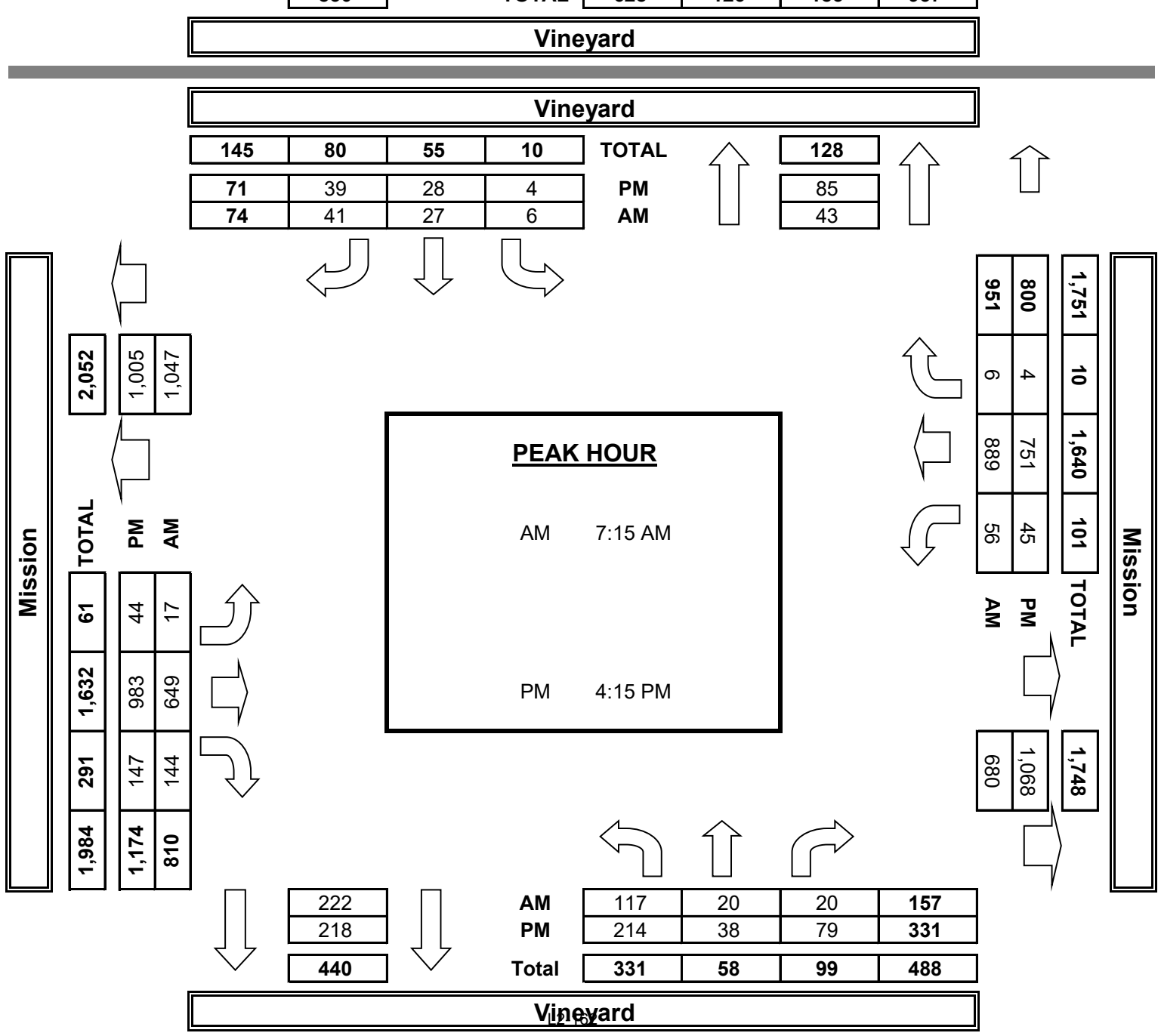
TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Wed, Oct 27, 21

LOCATION: Ontario
NORTH & SOUTH: Vineyard
EAST & WEST: Francis

PROJECT #: SC3147
LOCATION #: 10
CONTROL: SIGNAL

NOTES:

AM
PM
MD
OTHER
OTHER

▲ N
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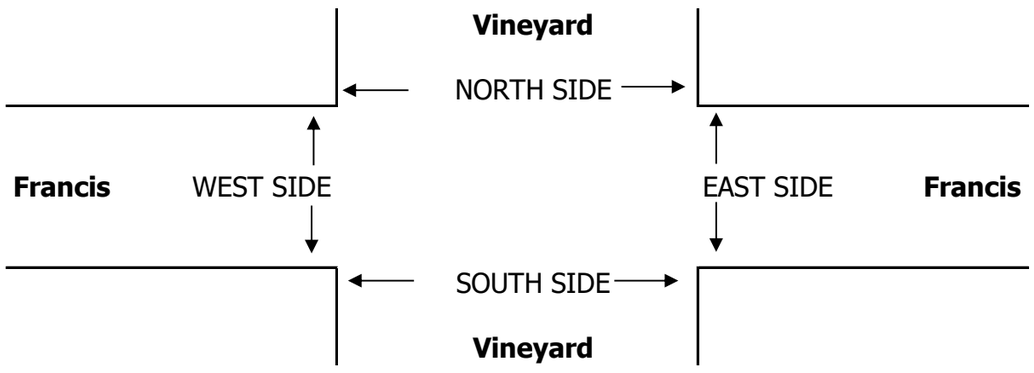
E ►
S ▼

☑ Add U-Turns to Left Turns

	NORTHBOUND Vineyard			SOUTHBOUND Vineyard			EASTBOUND Francis			WESTBOUND Francis			
LANES:	NL 1	NT 2	NR 0	SL 1	ST 2	SR 0	EL 1	ET 2	ER 0	WL 1	WT 2	WR 0	TOTAL
7:00 AM	18	57	15	6	36	2	2	7	4	7	18	2	174
7:15 AM	14	44	16	4	36	3	4	15	5	5	26	3	175
7:30 AM	12	50	23	3	39	0	1	21	5	4	15	3	176
7:45 AM	25	49	24	3	52	3	3	33	13	4	34	5	248
8:00 AM	32	58	21	3	62	2	3	26	10	10	30	3	260
8:15 AM	18	57	26	4	57	2	2	23	18	5	22	2	236
8:30 AM	19	57	21	4	38	4	4	11	11	2	28	0	199
8:45 AM	21	59	13	0	44	6	4	19	18	6	13	1	204
AM VOLUMES	159	431	159	27	364	22	23	155	84	43	186	19	1,672
AM APPROACH %	21%	58%	21%	7%	88%	5%	9%	59%	32%	17%	75%	8%	
AM APP/DEPART	749	/	473	413	/	491	262	/	341	248	/	367	0
AM BEGIN PEAK HR		7:45 AM											
AM VOLUMES	94	221	92	14	209	11	12	93	52	21	114	10	943
AM APPROACH %	23%	54%	23%	6%	89%	5%	8%	59%	33%	14%	79%	7%	
AM PEAK HR FACTOR		0.917			0.873			0.801			0.843		0.907
AM APP/DEPART	407	/	243	234	/	282	157	/	199	145	/	219	0
4:00 PM	13	77	7	4	69	3	5	61	14	24	54	16	347
4:15 PM	9	48	8	7	82	0	6	53	20	16	41	10	300
4:30 PM	7	53	7	5	68	5	5	81	26	31	54	17	359
4:45 PM	6	43	7	3	60	2	4	40	13	20	30	2	230
5:00 PM	8	75	13	2	66	2	5	63	20	40	46	8	348
5:15 PM	8	48	14	7	59	5	6	49	12	16	18	2	244
5:30 PM	6	43	5	4	52	4	4	32	16	22	31	5	224
5:45 PM	5	41	4	4	40	1	4	28	8	9	27	2	173
PM VOLUMES	62	428	65	36	496	22	39	407	129	178	301	62	2,225
PM APPROACH %	11%	77%	12%	6%	90%	4%	7%	71%	22%	33%	56%	11%	
PM APP/DEPART	555	/	529	554	/	803	575	/	508	541	/	385	0
PM BEGIN PEAK HR		4:15 PM											
PM VOLUMES	30	219	35	17	276	9	20	237	79	107	171	37	1,237
PM APPROACH %	11%	77%	12%	6%	91%	3%	6%	71%	24%	34%	54%	12%	
PM PEAK HR FACTOR		0.740			0.848			0.750			0.772		0.861
PM APP/DEPART	284	/	276	302	/	462	336	/	289	315	/	210	0

U-TURNS

NB	SB	EB	WB	TTL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0



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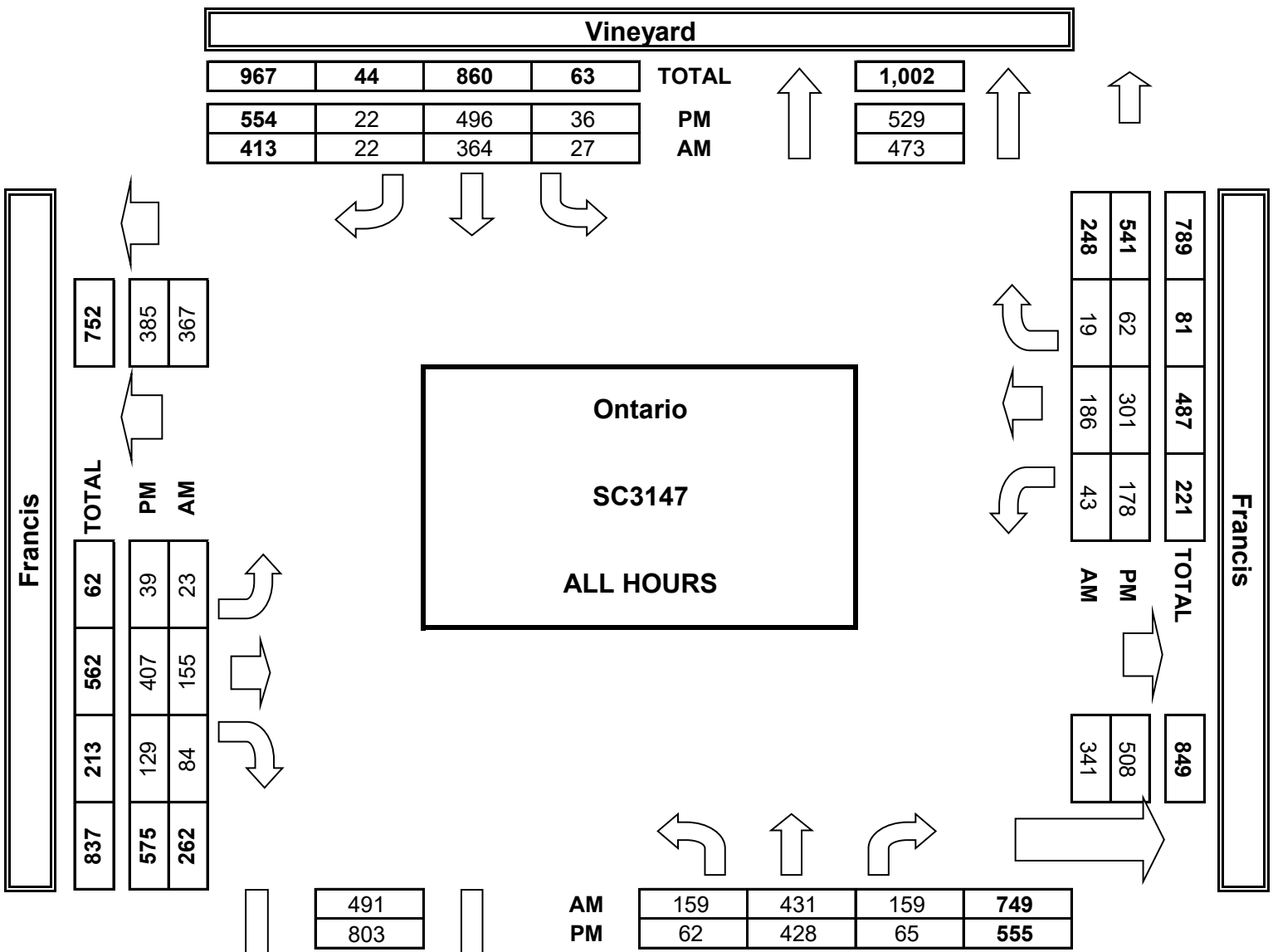
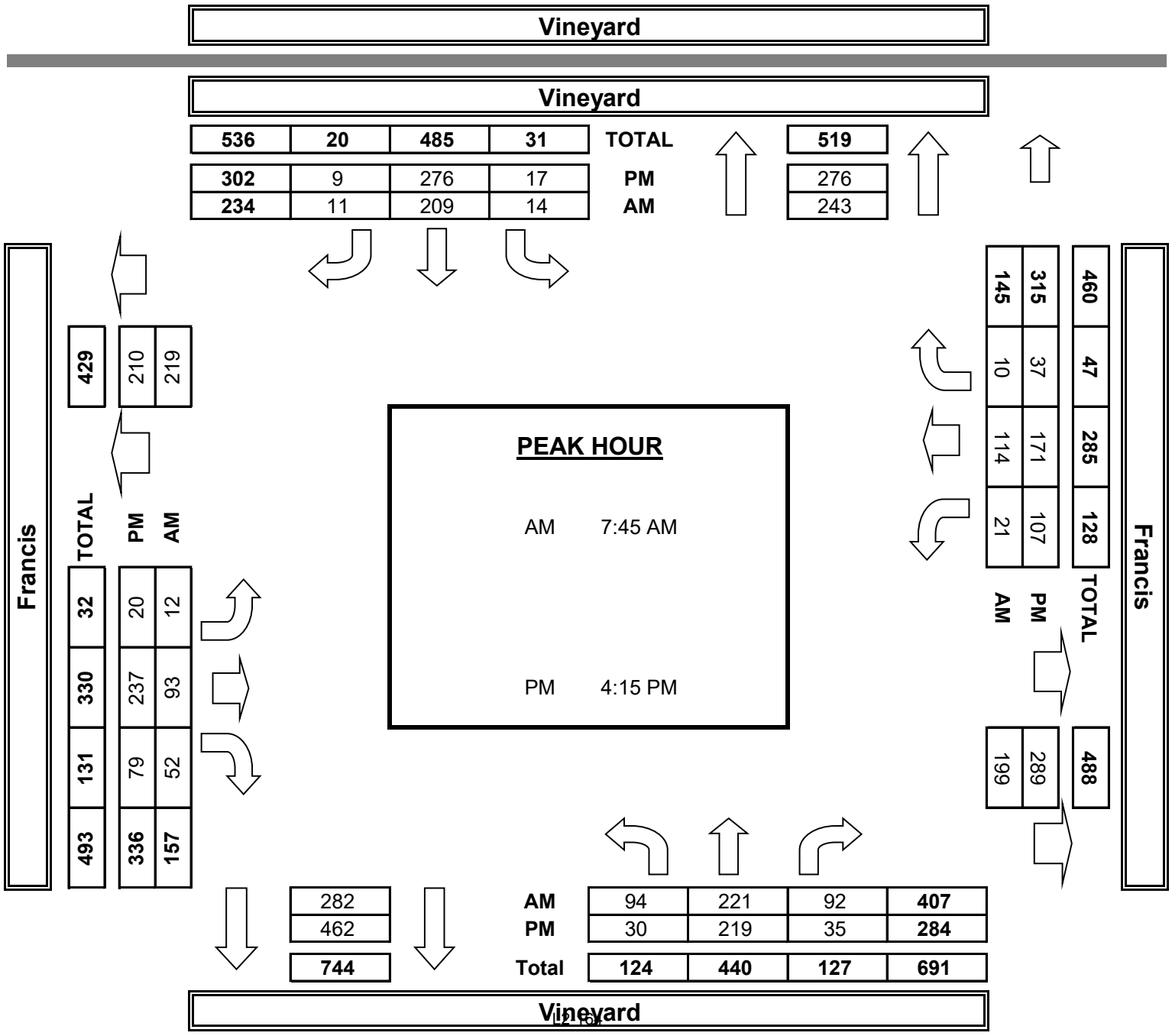
TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Wed, Oct 27, 21

LOCATION: Ontario
NORTH & SOUTH: Vineyard
EAST & WEST: Philadelphia

PROJECT #: SC3147
LOCATION #: 11
CONTROL: SIGNAL

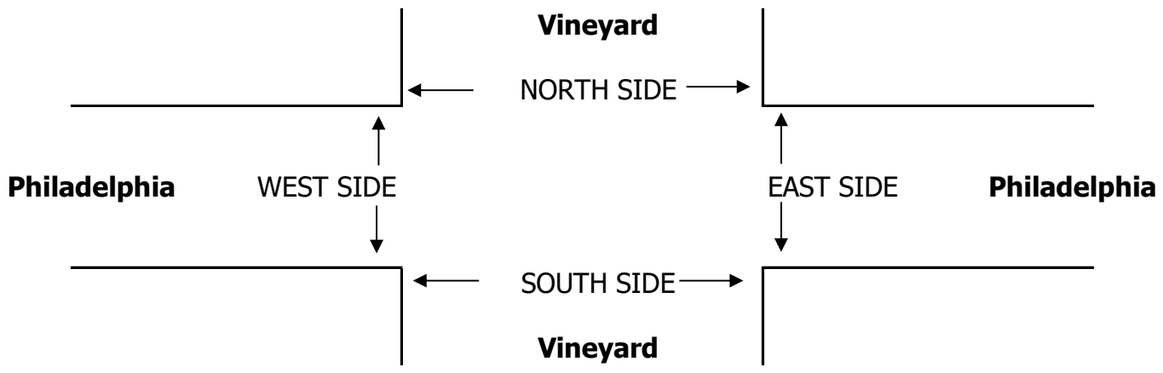
NOTES: Queue SB PM

AM / PM / MD / OTHER / OTHER

▲ N ◄ W E ► S ▼

☑ Add U-Turns to Left Turns

		NORTHBOUND Vineyard			SOUTHBOUND Vineyard			EASTBOUND Philadelphia			WESTBOUND Philadelphia				U-TURNS				
	LANES:	NL 1	NT 2	NR 1	SL 1	ST 2	SR 0	EL 1	ET 2	ER 0	WL 1	WT 2	WR 0	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
AM	7:00 AM	23	95	18	6	43	1	1	29	17	15	50	11	309	0	0	0	0	0
	7:15 AM	21	92	24	7	43	2	4	30	16	16	60	12	327	0	0	0	0	0
	7:30 AM	31	109	17	9	37	3	2	41	31	17	69	11	377	0	0	0	0	0
	7:45 AM	37	126	29	10	56	1	5	41	24	15	63	9	416	0	0	0	0	0
	8:00 AM	26	125	27	21	58	4	4	48	29	16	55	17	430	0	0	0	0	0
	8:15 AM	20	125	23	14	57	7	10	43	36	11	56	11	413	0	0	0	0	0
	8:30 AM	27	127	28	9	49	1	4	29	41	14	48	16	393	0	0	0	0	0
	8:45 AM	29	102	35	7	53	1	4	27	37	15	28	9	347	0	0	0	0	0
	VOLUMES	214	901	201	83	396	20	34	288	231	119	429	96	3,012	0	0	0	0	0
	APPROACH %	16%	68%	15%	17%	79%	4%	6%	52%	42%	18%	67%	15%						
	APP/DEPART	1,316	/	1,031	499	/	746	553	/	572	644	/	663	0					
	BEGIN PEAK HR		7:45 AM																
	VOLUMES	110	503	107	54	220	13	23	161	130	56	222	53	1,652					
	APPROACH %	15%	70%	15%	19%	77%	5%	7%	51%	41%	17%	67%	16%						
	PEAK HR FACTOR		0.938			0.864			0.882			0.940		0.960					
	APP/DEPART	720	/	579	287	/	406	314	/	322	331	/	345	0					
PM	4:00 PM	32	78	15	4	109	6	4	75	64	36	92	14	529	3	0	0	0	3
	4:15 PM	24	50	26	8	109	4	2	80	49	37	82	8	479	1	0	0	0	1
	4:30 PM	25	48	19	16	142	4	4	101	74	46	87	8	574	0	0	0	0	0
	4:45 PM	25	45	10	13	107	7	4	83	46	37	62	5	444	0	0	0	0	0
	5:00 PM	21	51	17	16	148	4	5	89	51	37	107	23	569	0	0	0	0	0
	5:15 PM	26	60	24	11	123	6	3	78	33	32	63	13	472	1	0	0	0	1
	5:30 PM	17	40	21	4	92	6	2	90	51	60	69	11	463	1	0	0	0	1
	5:45 PM	22	51	30	10	65	1	1	58	40	33	79	4	394	0	0	0	1	1
	VOLUMES	192	423	162	82	895	38	25	654	408	318	641	86	3,924	6	0	0	1	7
	APPROACH %	25%	54%	21%	8%	88%	4%	2%	60%	38%	30%	61%	8%						
	APP/DEPART	777	/	534	1,015	/	1,626	1,087	/	899	1,045	/	865	0					
	BEGIN PEAK HR		4:15 PM																
	VOLUMES	95	194	72	53	506	19	15	353	220	157	338	44	2,066					
	APPROACH %	26%	54%	20%	9%	88%	3%	3%	60%	37%	29%	63%	8%						
	PEAK HR FACTOR		0.903			0.860			0.821			0.807		0.900					
	APP/DEPART	361	/	253	578	/	884	588	/	478	539	/	451	0					



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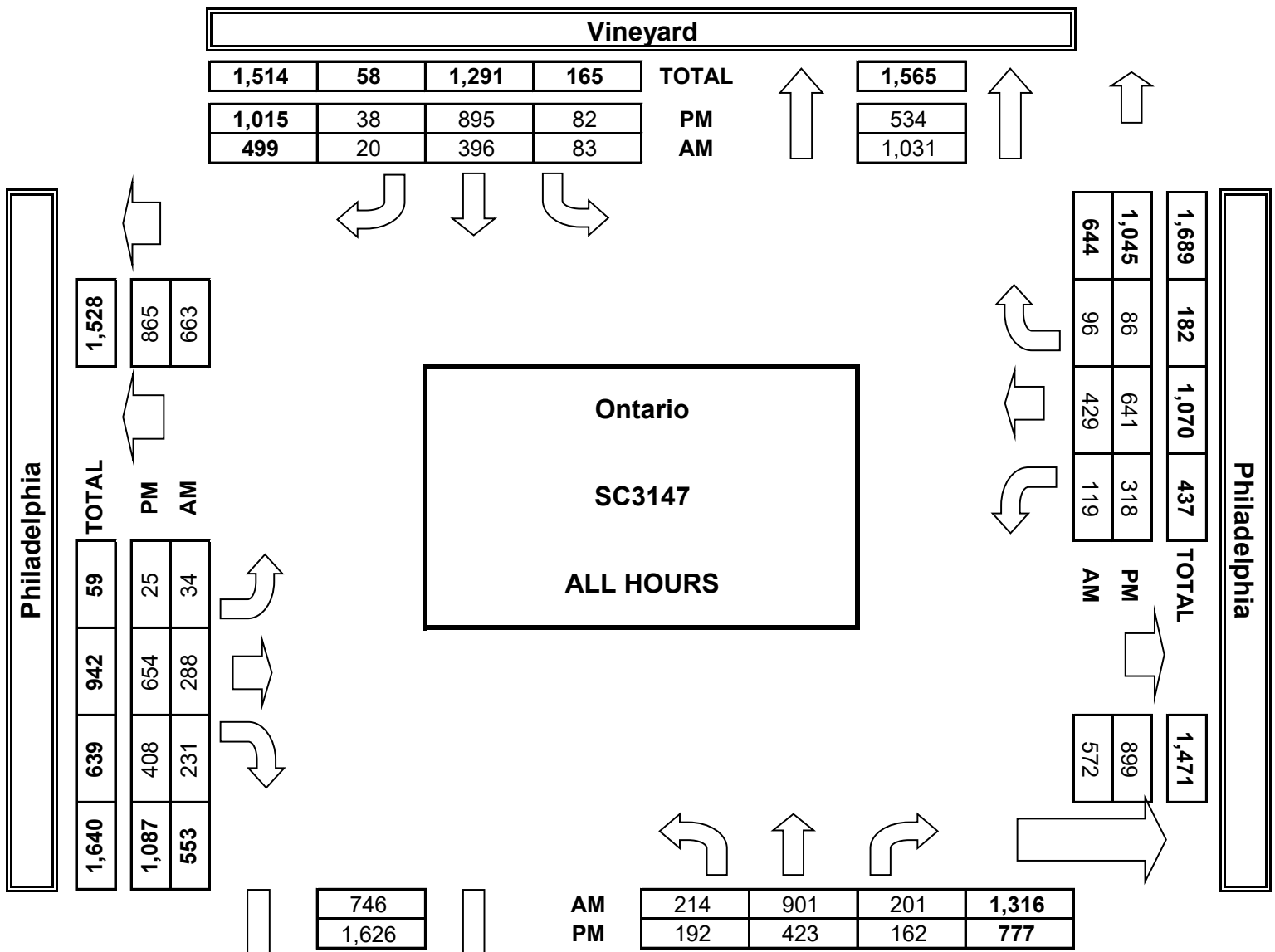
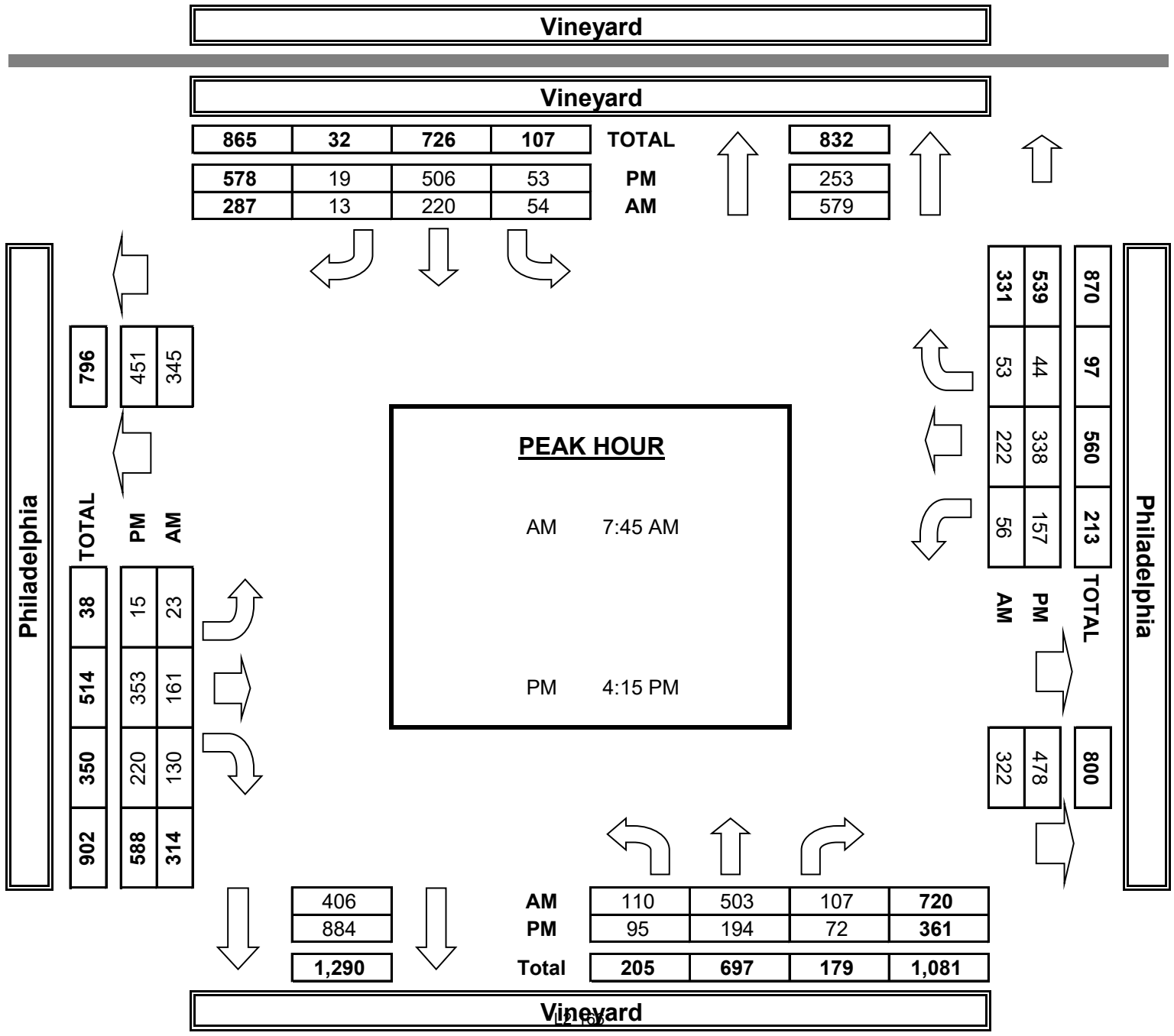
TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

T101823

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

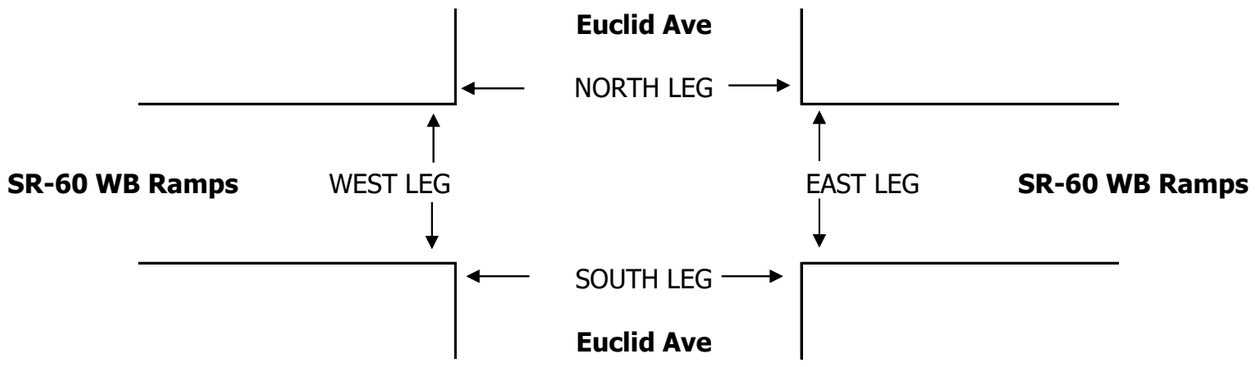
DATE:				
Tue, Oct 10, 23	LOCATION:	Ontario	PROJECT #:	SC4225
	NORTH & SOUTH:	Euclid Ave	LOCATION #:	1
	EAST & WEST:	SR-60 WB Ramps	CONTROL:	SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER

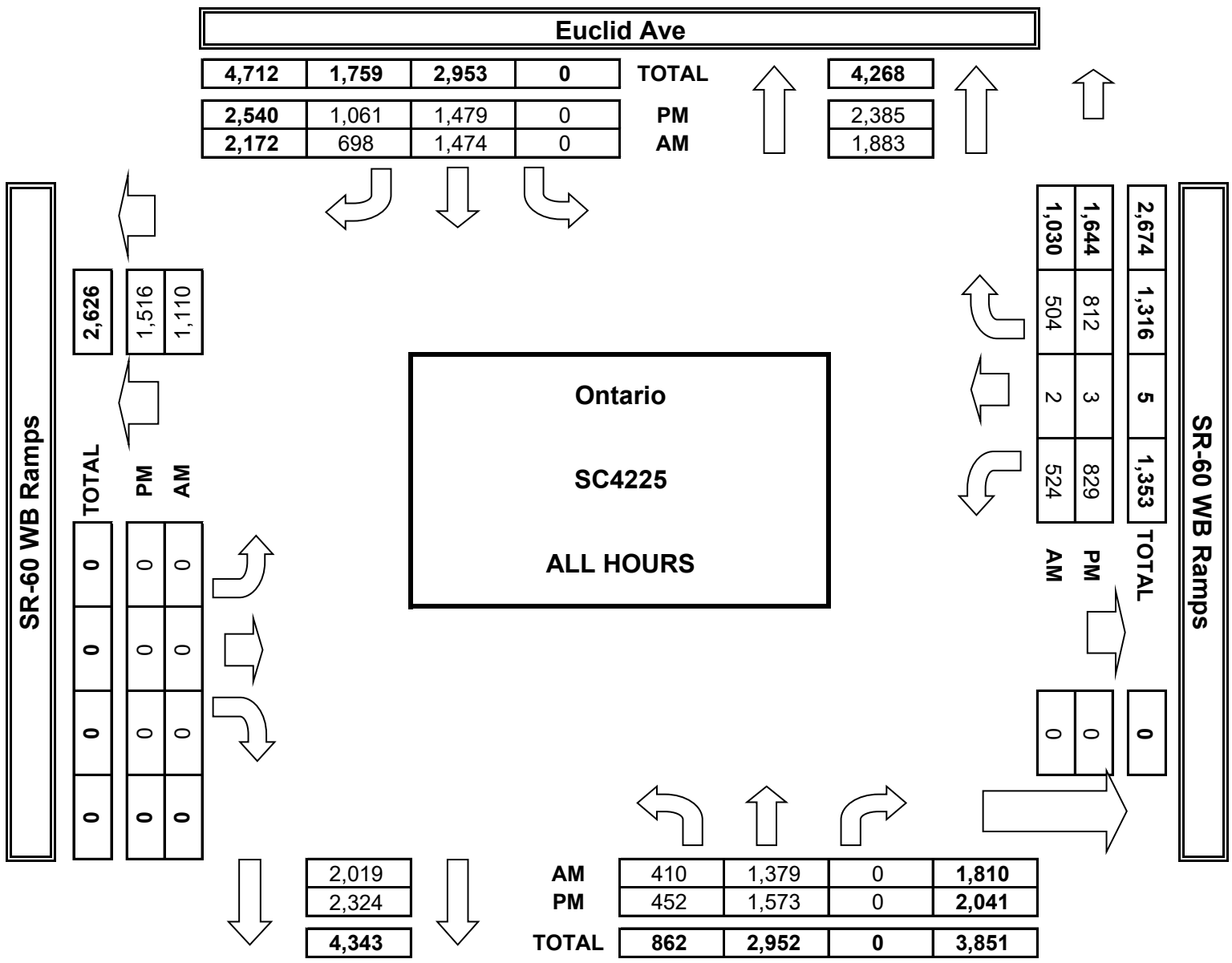
▲ N ◄ W E ► S ▼

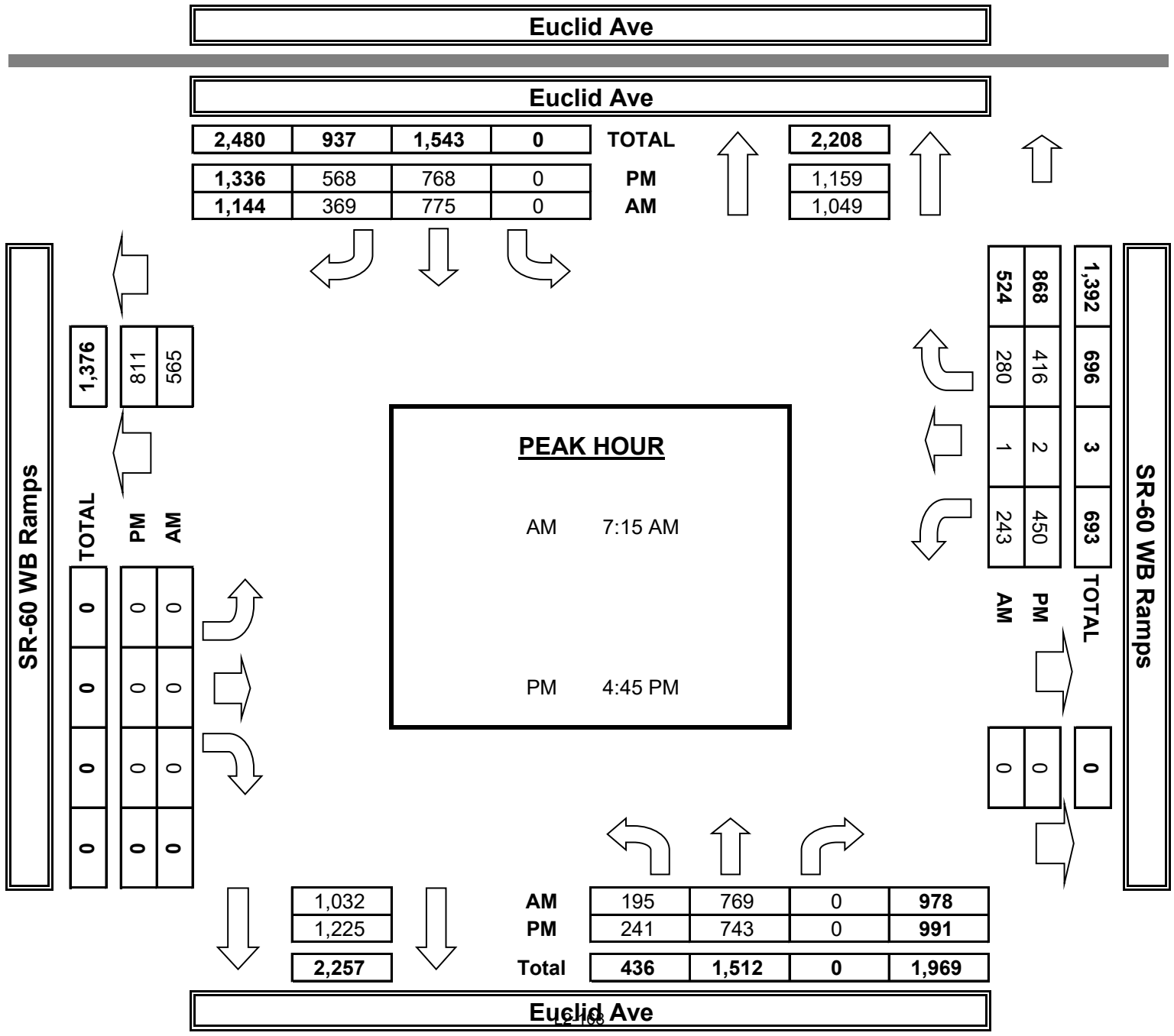
	NORTHBOUND Euclid Ave			SOUTHBOUND Euclid Ave			EASTBOUND SR-60 WB Ramps			WESTBOUND SR-60 WB Ramps				U-TURNS				
LANES:	NL 1	NT 2	NR X	SL X	ST 2	SR 1	EL X	ET X	ER X	WL 1.3	WT 0.3	WR 1.3	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
AM 7:00 AM	49	141	0	0	150	104	0	0	0	52	0	54	550	1	0	0	0	1
7:15 AM	63	180	0	0	172	106	0	0	0	67	0	64	652	3	0	0	0	3
7:30 AM	45	181	0	0	179	82	0	0	0	65	0	57	609	4	0	0	0	4
7:45 AM	40	216	0	0	203	85	0	0	0	64	1	93	702	4	0	0	0	4
8:00 AM	47	192	0	0	221	96	0	0	0	47	0	66	669	3	0	0	0	3
8:15 AM	41	157	0	0	211	84	0	0	0	77	0	62	632	2	0	0	0	2
8:30 AM	62	152	0	0	167	63	0	0	0	84	0	63	591	3	0	0	0	3
8:45 AM	63	160	0	0	171	78	0	0	0	68	1	45	586	1	0	0	0	1
VOLUMES	410	1,379	0	0	1,474	698	0	0	0	524	2	504	5,012	21	0	0	0	21
APPROACH %	23%	76%	0%	0%	68%	32%	0%	0%	0%	51%	0%	49%						
APP/DEPART	1,810	/	1,883	2,172	/	2,019	0	/	0	1,030	/	1,110	0					
BEGIN PEAK HR		7:15 AM																
VOLUMES	195	769	0	0	775	369	0	0	0	243	1	280	2,646					
APPROACH %	20%	79%	0%	0%	68%	32%	0%	0%	0%	46%	0%	53%						
PEAK HR FACTOR		0.940			0.902			0.000			0.829		0.937					
APP/DEPART	978	/	1,049	1,144	/	1,032	0	/	0	524	/	565	0					
PM 4:00 PM	62	188	0	0	187	114	0	0	0	95	1	103	750	1	0	0	0	1
4:15 PM	46	215	0	0	170	119	0	0	0	89	0	105	744	1	0	0	0	1
4:30 PM	56	199	0	0	170	143	0	0	0	109	0	106	783	6	0	0	0	6
4:45 PM	66	176	0	0	192	154	0	0	0	111	0	114	813	2	0	0	0	2
5:00 PM	65	191	0	0	206	149	0	0	0	112	1	102	826	5	0	0	0	5
5:15 PM	52	201	0	0	169	133	0	0	0	110	1	92	758	0	0	0	0	0
5:30 PM	58	175	0	0	201	132	0	0	0	117	0	108	791	0	0	0	0	0
5:45 PM	47	228	0	0	184	117	0	0	0	86	0	82	744	1	0	0	0	1
VOLUMES	452	1,573	0	0	1,479	1,061	0	0	0	829	3	812	6,225	16	0	0	0	16
APPROACH %	22%	77%	0%	0%	58%	42%	0%	0%	0%	50%	0%	49%						
APP/DEPART	2,041	/	2,385	2,540	/	2,324	0	/	0	1,644	/	1,516	0					
BEGIN PEAK HR		4:45 PM																
VOLUMES	241	743	0	0	768	568	0	0	0	450	2	416	3,195					
APPROACH %	24%	75%	0%	0%	57%	43%	0%	0%	0%	52%	0%	48%						
PEAK HR FACTOR		0.949			0.941			0.000			0.964		0.961					
APP/DEPART	991	/	1,159	1,336	/	1,225	0	/	0	868	/	811	0					



AimTD LLC

TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

T101823

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

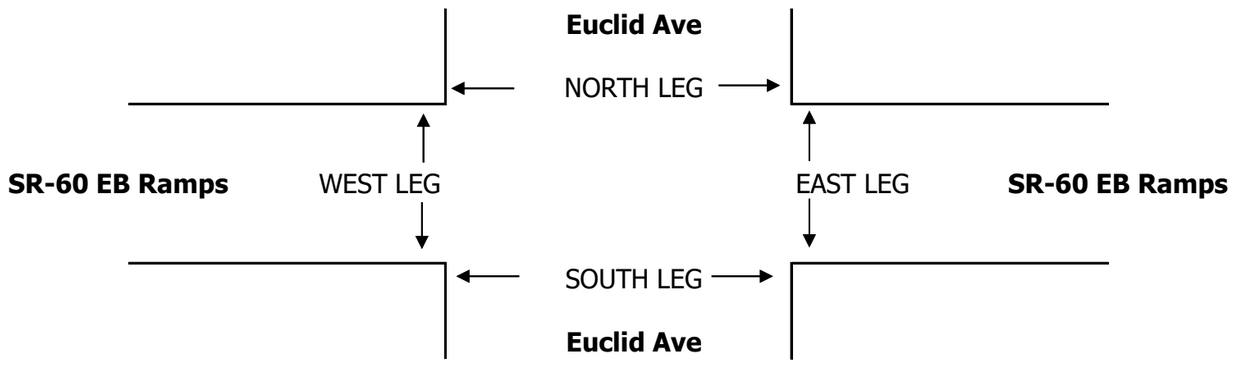
DATE:				
Tue, Oct 10, 23	LOCATION:	Ontario	PROJECT #:	SC4225
	NORTH & SOUTH:	Euclid Ave	LOCATION #:	2
	EAST & WEST:	SR-60 EB Ramps	CONTROL:	SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER

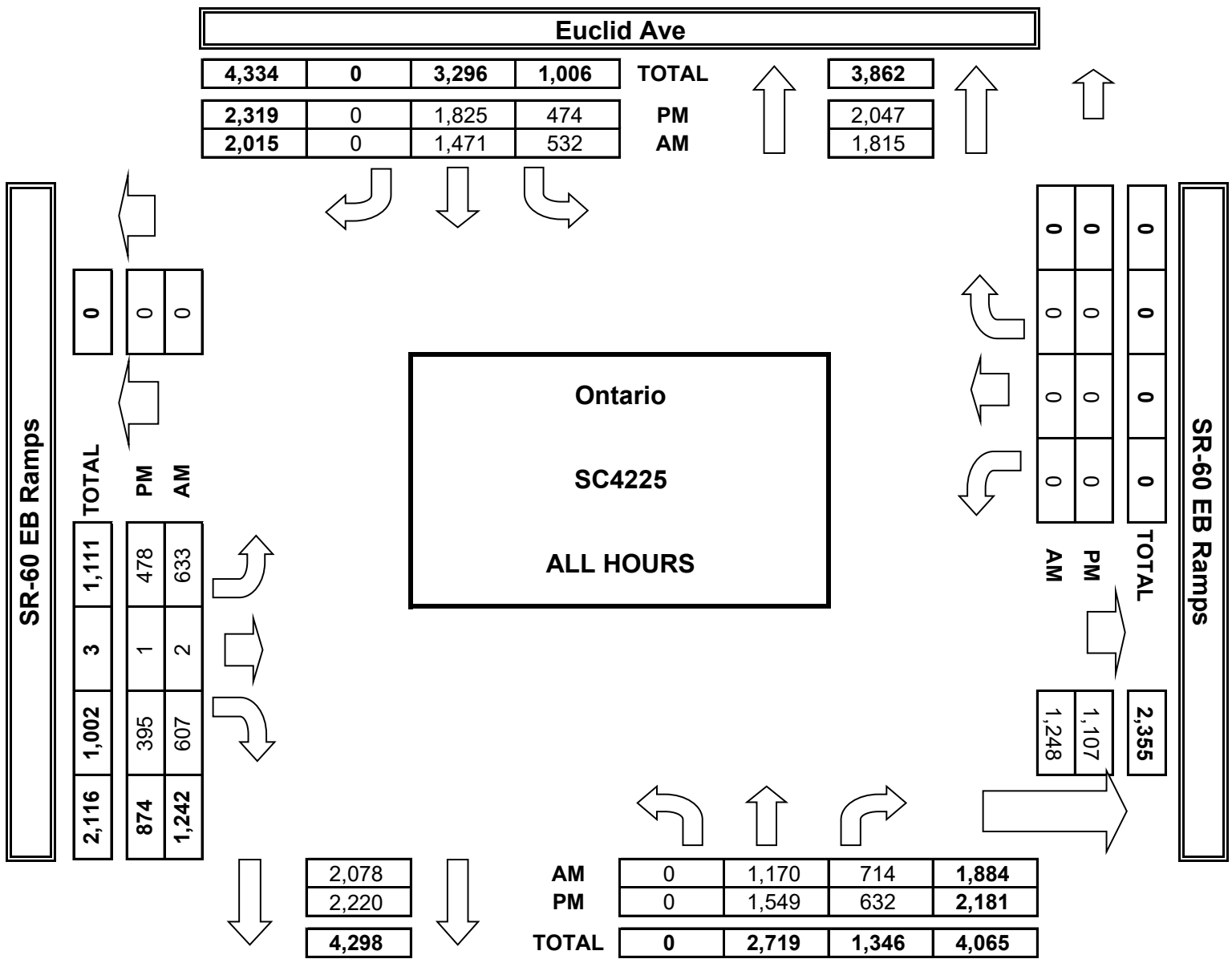
▲ N ▼ S ◄ W E ►

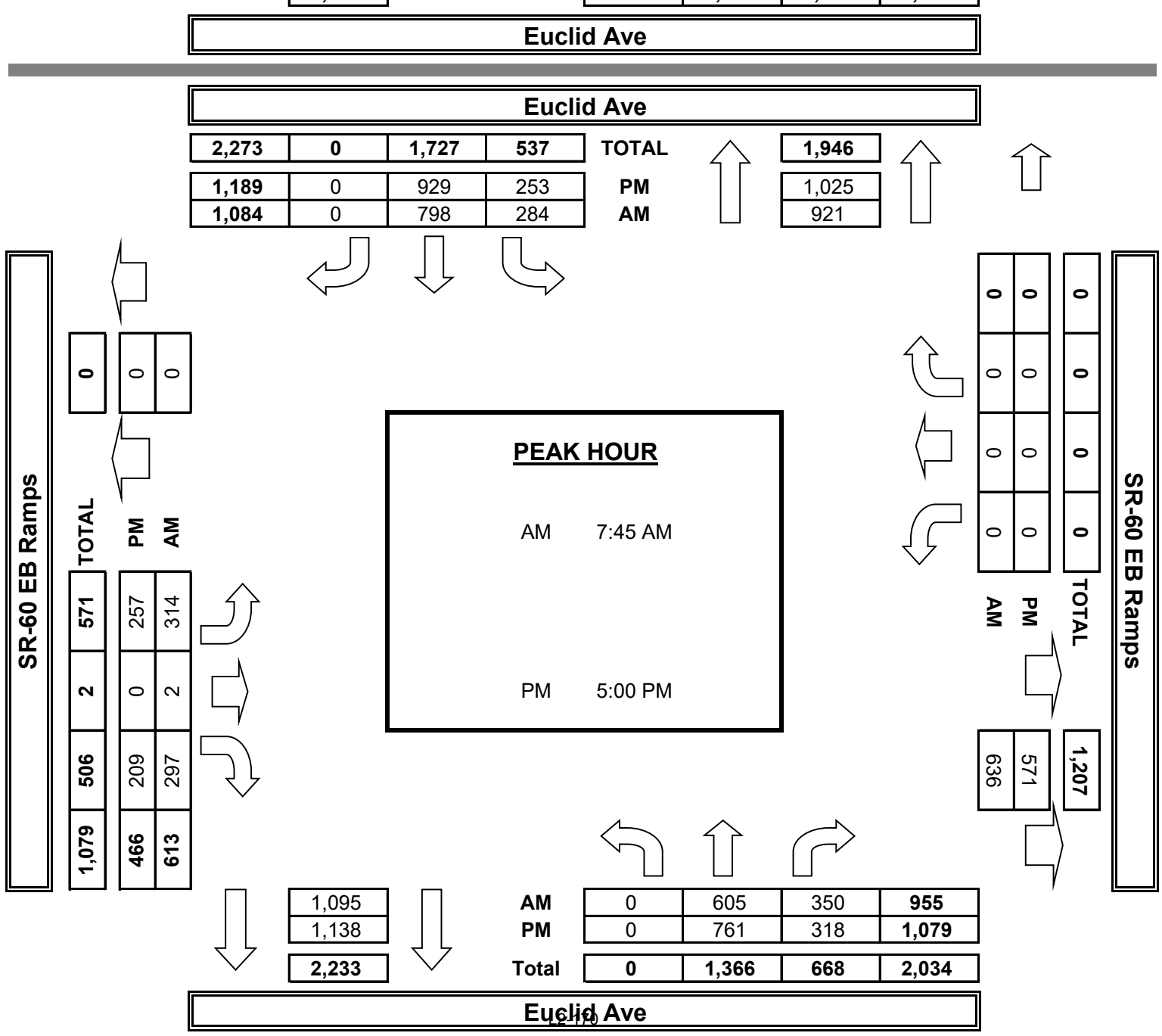
	NORTHBOUND Euclid Ave			SOUTHBOUND Euclid Ave			EASTBOUND SR-60 EB Ramps			WESTBOUND SR-60 EB Ramps				U-TURNS				
LANES:	NL X	NT 2	NR 1	SL 1	ST 2	SR X	EL 1.5	ET 0	ER 0.5	WL X	WT X	WR X	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
AM 7:00 AM	0	122	103	61	140	0	67	0	71	0	0	0	564	0	2	0	0	2
7:15 AM	0	151	84	63	171	0	89	0	73	0	0	0	631	0	6	0	0	6
7:30 AM	0	144	78	63	183	0	86	0	61	0	0	0	615	0	2	0	0	2
7:45 AM	0	159	105	79	191	0	100	1	62	0	0	0	697	0	1	0	0	1
8:00 AM	0	162	95	74	197	0	80	0	63	0	0	0	671	0	0	0	0	0
8:15 AM	0	135	75	67	220	0	66	0	81	0	0	0	644	0	1	0	0	1
8:30 AM	0	149	75	64	190	0	68	1	91	0	0	0	638	0	0	0	0	0
8:45 AM	0	148	99	61	179	0	77	0	105	0	0	0	669	0	0	0	0	0
VOLUMES	0	1,170	714	532	1,471	0	633	2	607	0	0	0	5,141	0	12	0	0	12
APPROACH %	0%	62%	38%	26%	73%	0%	51%	0%	49%	0%	0%	0%						
APP/DEPART	1,884	/	1,815	2,015	/	2,078	1,242	/	1,248	0	/	0	0					
BEGIN PEAK HR		7:45 AM																
VOLUMES	0	605	350	284	798	0	314	2	297	0	0	0	2,652					
APPROACH %	0%	63%	37%	26%	74%	0%	51%	0%	48%	0%	0%	0%						
PEAK HR FACTOR		0.904			0.941			0.940			0.000		0.950					
APP/DEPART	955	/	921	1,084	/	1,095	613	/	636	0	/	0	0					
PM 4:00 PM	0	198	80	52	227	0	52	1	48	0	0	0	658	0	1	0	0	1
4:15 PM	0	193	81	54	199	0	64	0	43	0	0	0	634	0	7	0	0	7
4:30 PM	0	198	81	52	229	0	59	0	52	0	0	0	671	0	4	0	0	4
4:45 PM	0	199	72	63	241	0	46	0	43	0	0	0	664	0	1	0	0	1
5:00 PM	0	204	75	64	255	0	55	0	43	0	0	0	696	0	2	0	0	2
5:15 PM	0	189	74	70	209	0	64	0	46	0	0	0	652	0	0	0	0	0
5:30 PM	0	166	79	57	258	0	66	0	61	0	0	0	687	0	3	0	0	3
5:45 PM	0	202	90	62	207	0	72	0	59	0	0	0	692	0	2	0	0	2
VOLUMES	0	1,549	632	474	1,825	0	478	1	395	0	0	0	5,374	0	20	0	0	20
APPROACH %	0%	71%	29%	20%	79%	0%	55%	0%	45%	0%	0%	0%						
APP/DEPART	2,181	/	2,047	2,319	/	2,220	874	/	1,107	0	/	0	0					
BEGIN PEAK HR		5:00 PM																
VOLUMES	0	761	318	253	929	0	257	0	209	0	0	0	2,734					
APPROACH %	0%	71%	29%	21%	78%	0%	55%	0%	45%	0%	0%	0%						
PEAK HR FACTOR		0.924			0.926			0.889			0.000		0.979					
APP/DEPART	1,079	/	1,025	1,189	/	1,138	466	/	571	0	/	0	0					



AimTD LLC

TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

T101823

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Tue, Oct 10, 23

LOCATION: Ontario
NORTH & SOUTH: S Vineyard Ave
EAST & WEST: SR-60 WB Ramps

PROJECT #: SC4225
LOCATION #: 3
CONTROL: SIGNAL

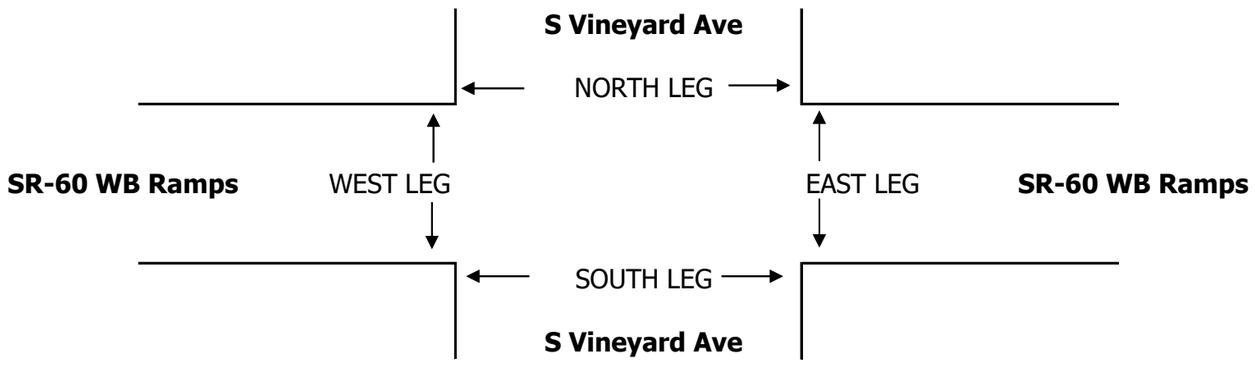
NOTES:

AM
PM
MD
OTHER
OTHER

▲ N
◄ W
E ►
S ▼

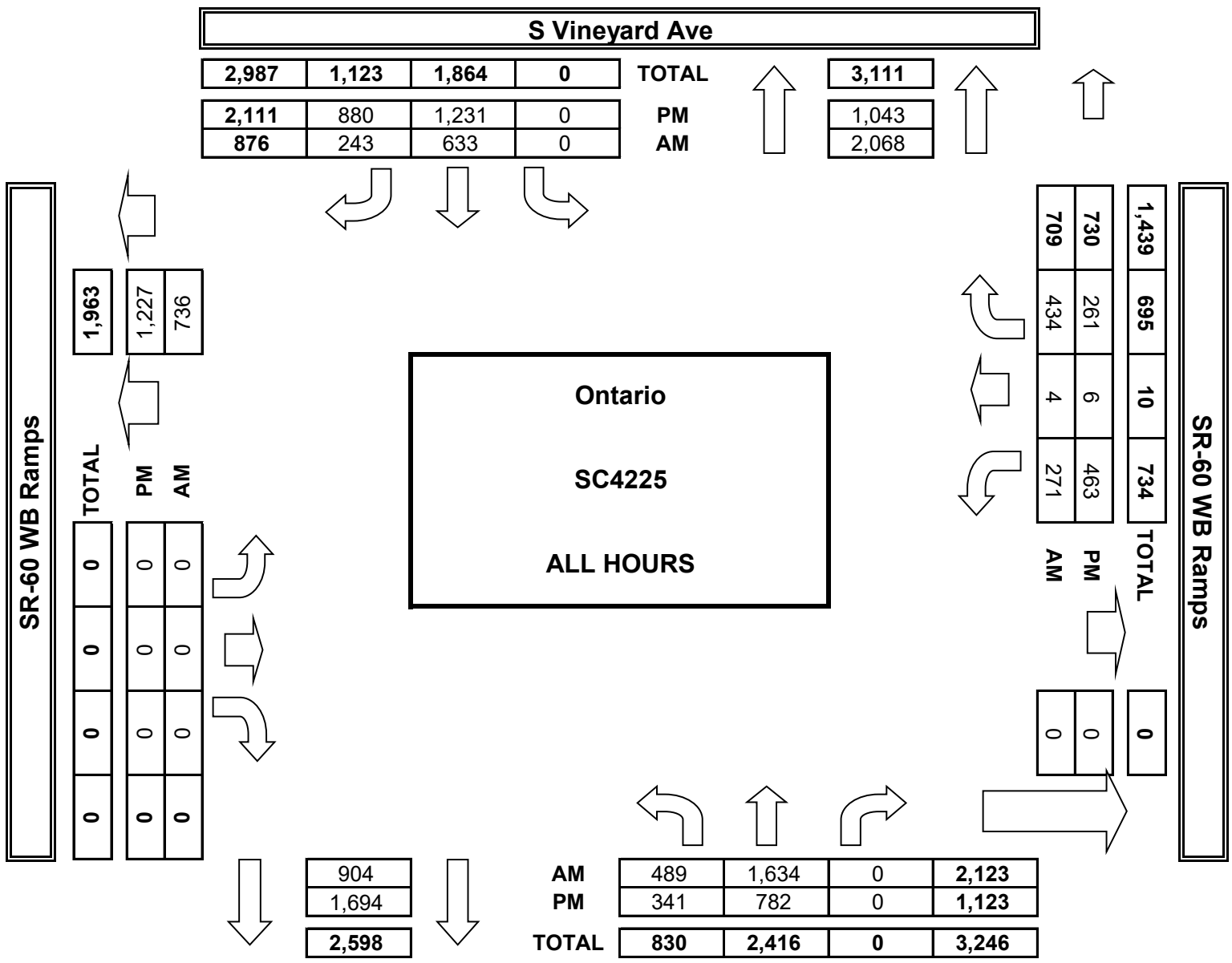
		NORTHBOUND S Vineyard Ave			SOUTHBOUND S Vineyard Ave			EASTBOUND SR-60 WB Ramps			WESTBOUND SR-60 WB Ramps			
	LANES:	NL 1	NT 2	NR X	SL X	ST 2	SR 0	EL X	ET X	ER X	WL 0.5	WT 0.5	WR 1	TOTAL
AM	7:00 AM	62	191	0	0	57	30	0	0	0	19	1	47	407
	7:15 AM	74	133	0	0	74	27	0	0	0	28	0	37	373
	7:30 AM	68	181	0	0	78	25	0	0	0	35	1	51	439
	7:45 AM	60	220	0	0	96	24	0	0	0	38	0	53	491
	8:00 AM	51	237	0	0	93	25	0	0	0	37	1	63	507
	8:15 AM	66	222	0	0	88	29	0	0	0	37	0	65	507
	8:30 AM	53	230	0	0	70	38	0	0	0	37	1	64	493
	8:45 AM	55	220	0	0	77	45	0	0	0	40	0	54	491
	VOLUMES	489	1,634	0	0	633	243	0	0	0	271	4	434	3,708
	APPROACH %	23%	77%	0%	0%	72%	28%	0%	0%	0%	38%	1%	61%	
	APP/DEPART	2,123	/	2,068	876	/	904	0	/	0	709	/	736	0
	BEGIN PEAK HR		8:00 AM											
	VOLUMES	225	909	0	0	328	137	0	0	0	151	2	246	1,998
	APPROACH %	20%	80%	0%	0%	71%	29%	0%	0%	0%	38%	1%	62%	
	PEAK HR FACTOR		0.984			0.953			0.000			0.978		0.985
	APP/DEPART	1,134	/	1,155	465	/	479	0	/	0	399	/	364	0
PM	4:00 PM	33	77	0	0	135	135	0	0	0	67	0	47	494
	4:15 PM	49	107	0	0	166	103	0	0	0	62	1	35	523
	4:30 PM	40	114	0	0	183	138	0	0	0	46	2	33	556
	4:45 PM	50	104	0	0	148	94	0	0	0	39	0	36	471
	5:00 PM	44	92	0	0	167	169	0	0	0	59	1	32	564
	5:15 PM	35	114	0	0	178	82	0	0	0	59	1	30	499
	5:30 PM	50	84	0	0	111	77	0	0	0	65	1	19	407
	5:45 PM	40	90	0	0	143	82	0	0	0	66	0	29	450
	VOLUMES	341	782	0	0	1,231	880	0	0	0	463	6	261	3,964
	APPROACH %	30%	70%	0%	0%	58%	42%	0%	0%	0%	63%	1%	36%	
	APP/DEPART	1,123	/	1,043	2,111	/	1,694	0	/	0	730	/	1,227	0
	BEGIN PEAK HR		4:15 PM											
	VOLUMES	183	417	0	0	664	504	0	0	0	206	4	136	2,114
	APPROACH %	31%	70%	0%	0%	57%	43%	0%	0%	0%	60%	1%	39%	
	PEAK HR FACTOR		0.962			0.869			0.000			0.883		0.937
	APP/DEPART	600	/	553	1,168	/	870	0	/	0	346	/	691	0

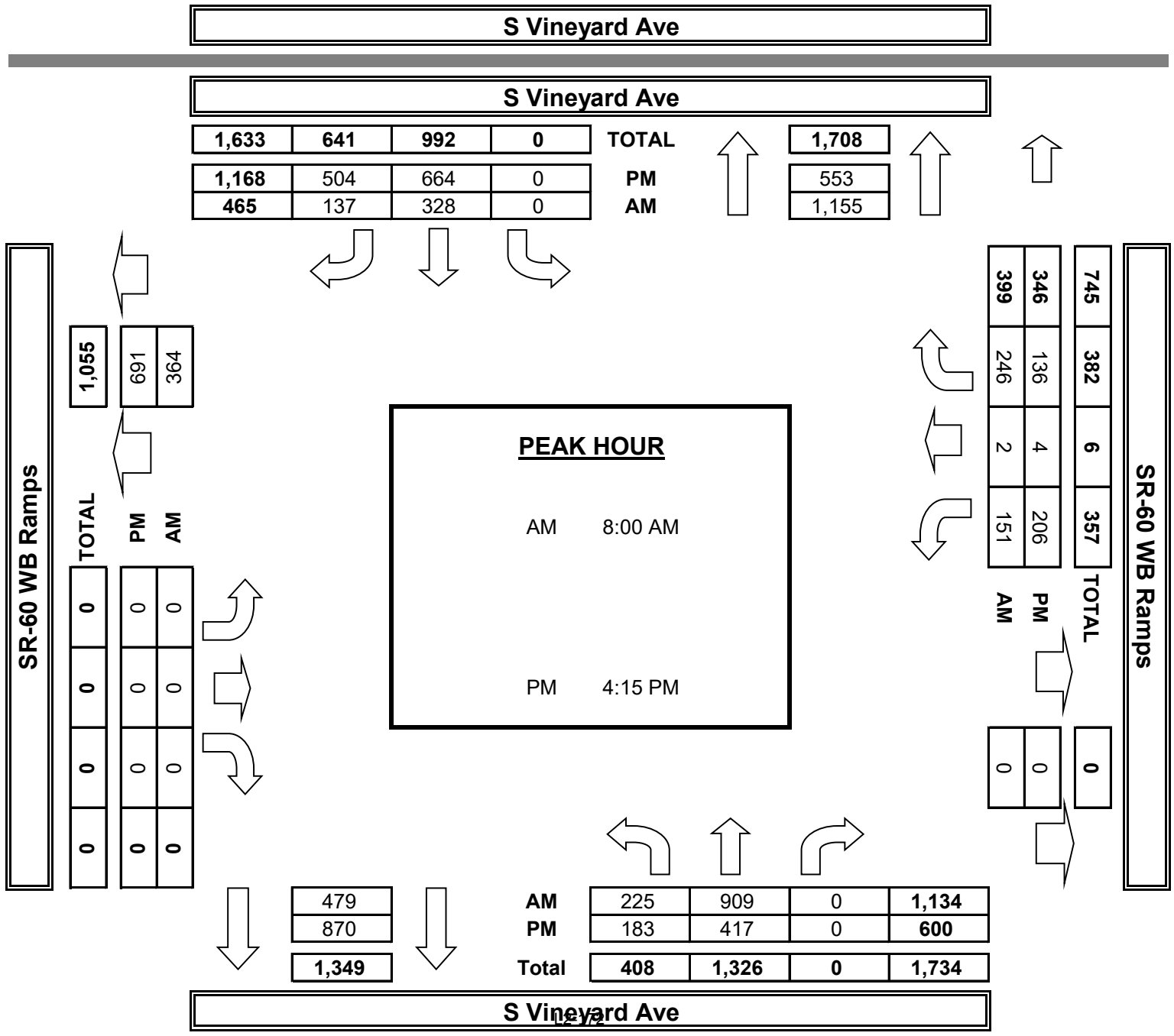
U-TURNS				
NB	SB	EB	WB	TTL
0	0	0	0	
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0



AimTD LLC

TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

T101823

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:				
Tue, Oct 10, 23	LOCATION:	Ontario	PROJECT #:	SC4225
	NORTH & SOUTH:	S Vineyard Ave	LOCATION #:	4
	EAST & WEST:	SR-60 EB Ramps	CONTROL:	SIGNAL

NOTES:

AM
PM
MD
OTHER
OTHER

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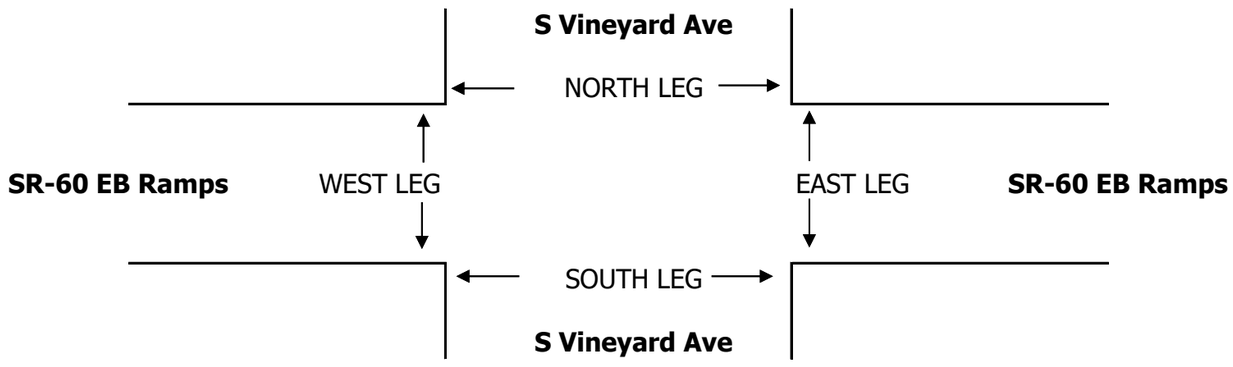
E ►
S ▼

		NORTHBOUND S Vineyard Ave			SOUTHBOUND S Vineyard Ave			EASTBOUND SR-60 EB Ramps			WESTBOUND SR-60 EB Ramps			
	LANES:	NL X	NT 2	NR 0	SL 1	ST 2	SR X	EL 0.5	ET 0.5	ER 1	WL X	WT X	WR X	TOTAL
AM	7:00 AM	0	138	74	19	57	0	117	2	56	0	0	0	463
	7:15 AM	0	146	86	31	70	0	61	5	23	0	0	0	422
	7:30 AM	0	148	112	35	78	0	101	0	33	0	0	0	507
	7:45 AM	0	164	72	39	95	0	116	0	51	0	0	0	537
	8:00 AM	0	166	67	30	100	0	124	0	64	0	0	0	551
	8:15 AM	0	169	59	36	89	0	119	0	63	0	0	0	535
	8:30 AM	0	156	52	28	76	0	127	1	68	0	0	0	508
	8:45 AM	0	151	51	39	78	0	124	0	76	0	0	0	519
	VOLUMES	0	1,238	573	257	643	0	889	8	434	0	0	0	4,042
	APPROACH %	0%	68%	32%	29%	71%	0%	67%	1%	33%	0%	0%	0%	
	APP/DEPART	1,811	/	2,127	900	/	1,077	1,331	/	838	0	/	0	0
	BEGIN PEAK HR		7:45 AM											
	VOLUMES	0	655	250	133	360	0	486	1	246	0	0	0	2,131
	APPROACH %	0%	72%	28%	27%	73%	0%	66%	0%	34%	0%	0%	0%	
	PEAK HR FACTOR		0.959			0.920			0.935			0.000		0.967
	APP/DEPART	905	/	1,141	493	/	606	733	/	384	0	/	0	0
PM	4:00 PM	0	84	63	61	141	0	26	1	47	0	0	0	423
	4:15 PM	0	119	73	57	169	0	37	0	51	0	0	0	506
	4:30 PM	0	116	69	72	157	0	40	0	58	0	0	0	512
	4:45 PM	0	114	80	48	139	0	40	0	57	0	0	0	478
	5:00 PM	0	114	69	72	151	0	22	0	68	0	0	0	496
	5:15 PM	0	118	67	62	175	0	32	1	58	0	0	0	513
	5:30 PM	0	103	57	29	147	0	31	0	47	0	0	0	414
	5:45 PM	0	97	75	58	151	0	33	0	55	0	0	0	469
	VOLUMES	0	865	553	459	1,230	0	261	2	441	0	0	0	3,811
	APPROACH %	0%	61%	39%	27%	73%	0%	37%	0%	63%	0%	0%	0%	
	APP/DEPART	1,418	/	1,126	1,689	/	1,671	704	/	1,014	0	/	0	0
	BEGIN PEAK HR		4:30 PM											
	VOLUMES	0	462	285	254	622	0	134	1	241	0	0	0	1,999
	APPROACH %	0%	62%	38%	29%	71%	0%	36%	0%	64%	0%	0%	0%	
	PEAK HR FACTOR		0.963			0.924			0.959			0.000		0.974
	APP/DEPART	747	/	596	876	/	863	376	/	540	0	/	0	0

U-TURNS

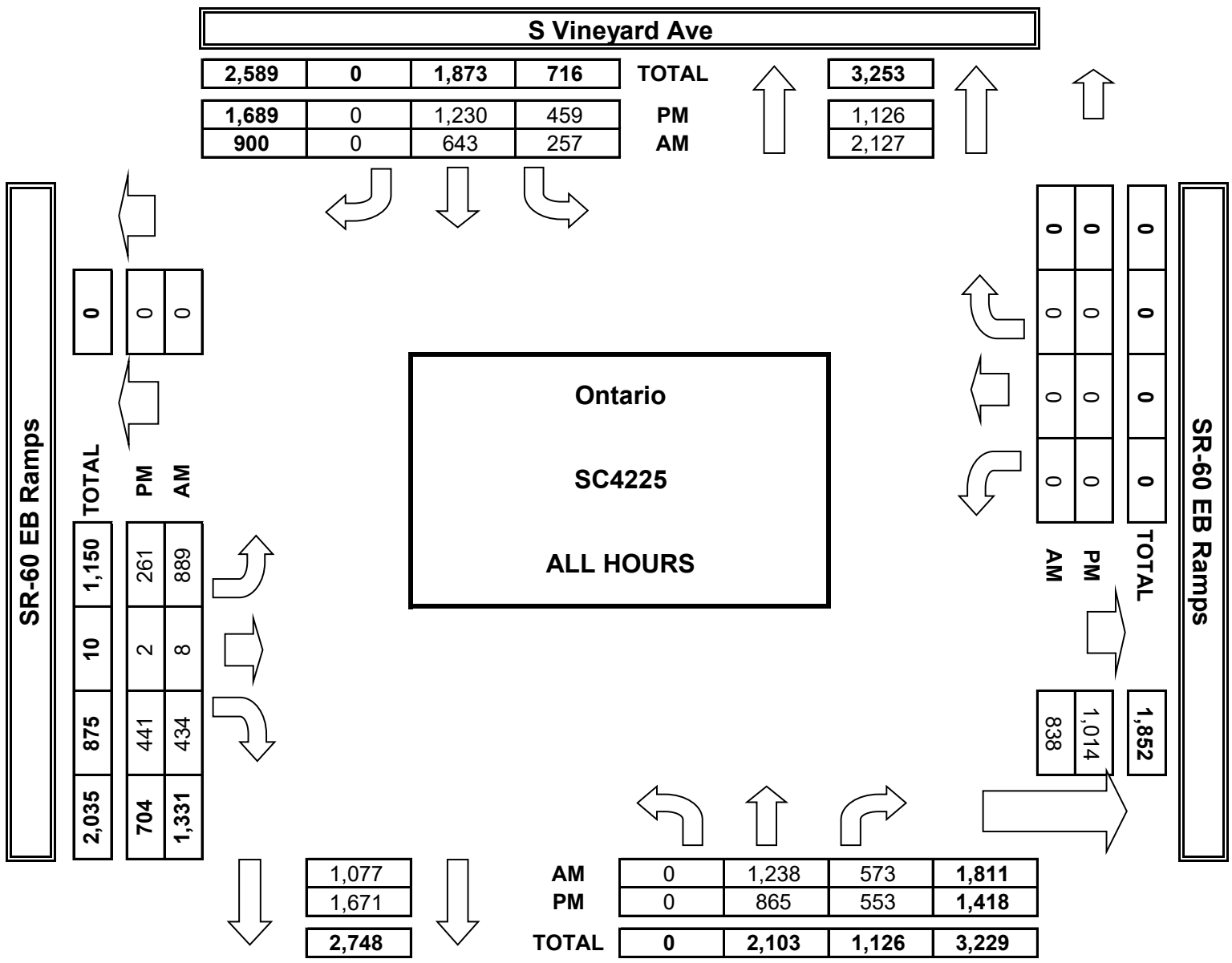
AM NB	AM SB	AM EB	AM WB	AM TTL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

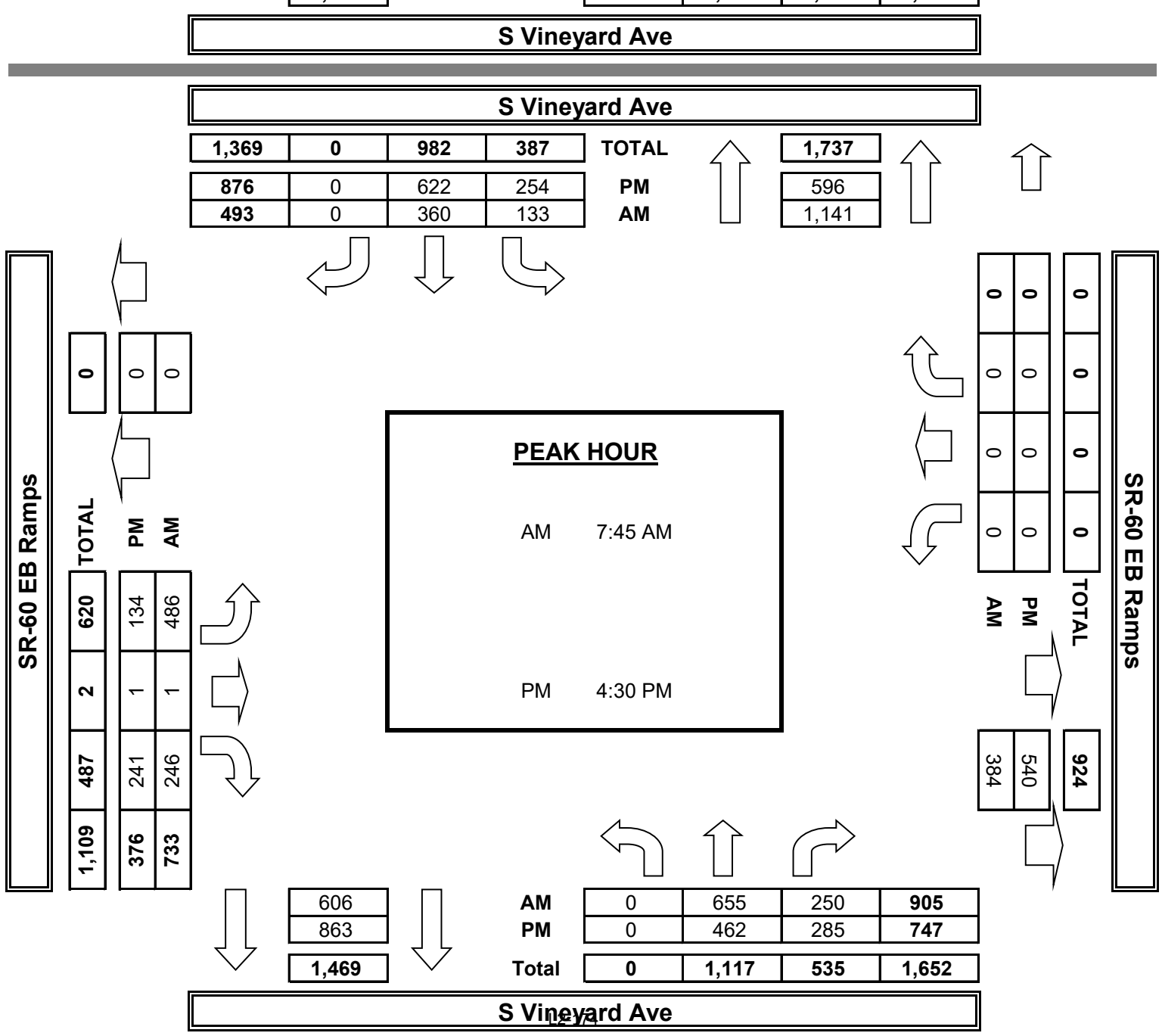
PM NB	PM SB	PM EB	PM WB	PM TTL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0



AimTD LLC

TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

T101823

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:				
Tue, Oct 10, 23	LOCATION:	Ontario	PROJECT #:	SC4225
	NORTH & SOUTH:	S Archibald Ave	LOCATION #:	5
	EAST & WEST:	SR-60 WB Ramps	CONTROL:	SIGNAL

NOTES:

AM
PM
MD
OTHER
OTHER

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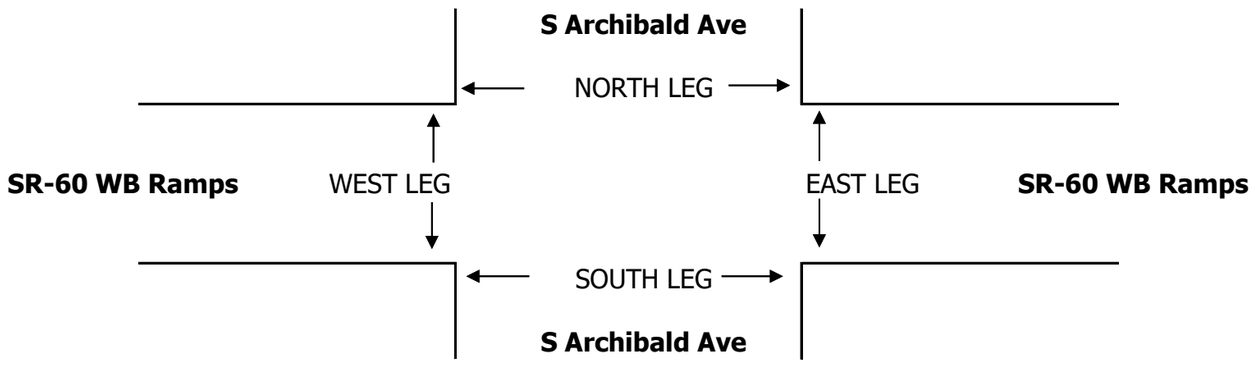
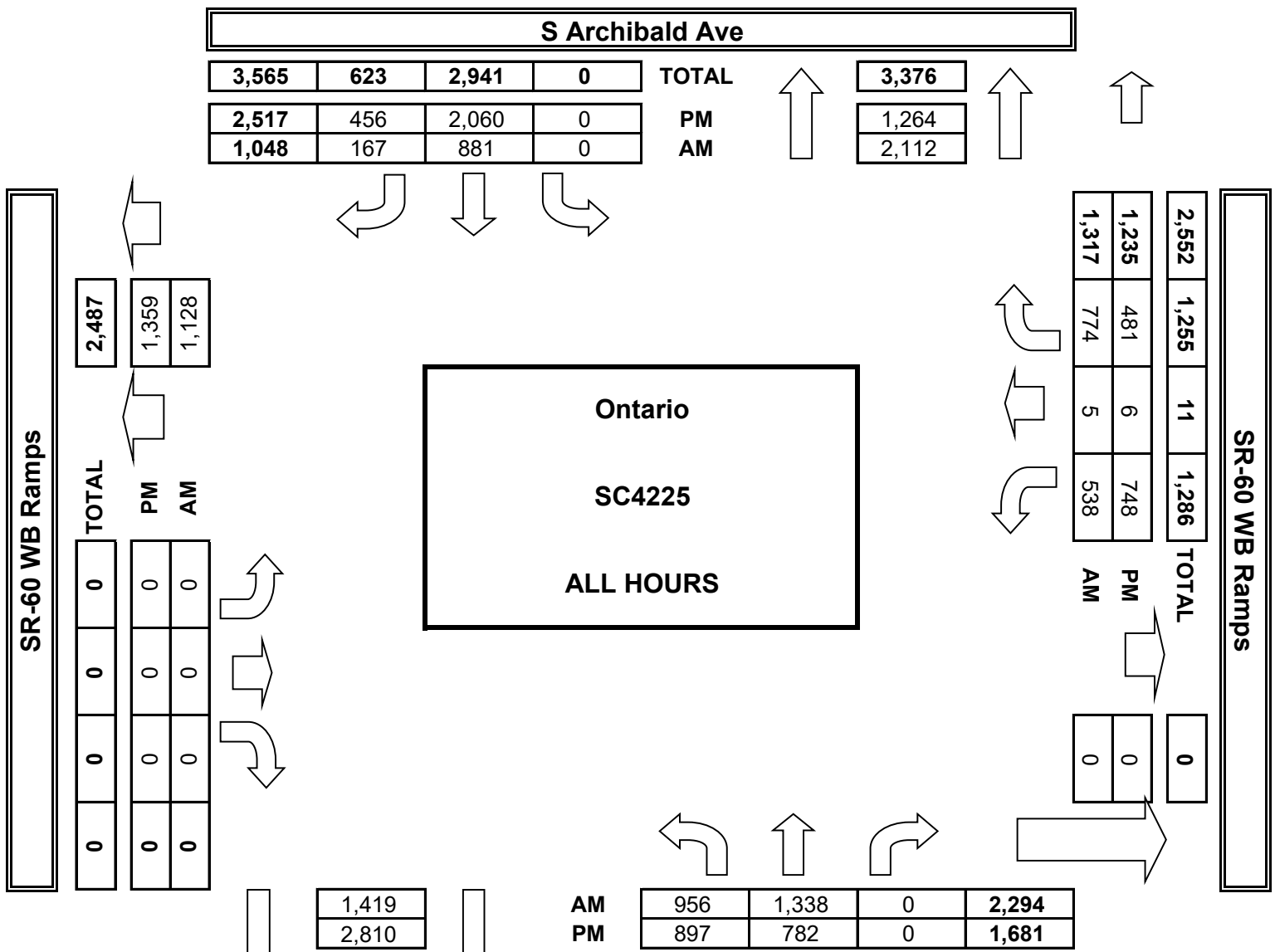
		NORTHBOUND S Archibald Ave			SOUTHBOUND S Archibald Ave			EASTBOUND SR-60 WB Ramps			WESTBOUND SR-60 WB Ramps			
	LANES:	NL 2	NT 3	NR X	SL X	ST 4	SR 1	EL X	ET X	ER X	WL 1.3	WT 0.3	WR 1.3	TOTAL
AM	7:00 AM	131	125	0	0	105	35	0	0	0	46	1	101	544
	7:15 AM	119	178	0	0	93	22	0	0	0	54	1	78	545
	7:30 AM	127	159	0	0	147	19	0	0	0	68	0	71	591
	7:45 AM	123	214	0	0	104	22	0	0	0	74	0	121	658
	8:00 AM	120	186	0	0	117	21	0	0	0	89	2	121	656
	8:15 AM	118	178	0	0	113	19	0	0	0	68	0	91	587
	8:30 AM	114	157	0	0	94	14	0	0	0	62	1	115	557
	8:45 AM	104	141	0	0	108	15	0	0	0	77	0	76	521
	VOLUMES	956	1,338	0	0	881	167	0	0	0	538	5	774	4,659
	APPROACH %	42%	58%	0%	0%	84%	16%	0%	0%	0%	41%	0%	59%	
	APP/DEPART	2,294	/	2,112	1,048	/	1,419	0	/	0	1,317	/	1,128	0
	BEGIN PEAK HR		7:30 AM											
	VOLUMES	488	737	0	0	481	81	0	0	0	299	2	404	2,492
	APPROACH %	40%	60%	0%	0%	86%	14%	0%	0%	0%	42%	0%	57%	
	PEAK HR FACTOR		0.909			0.846			0.000			0.831		0.947
	APP/DEPART	1,225	/	1,141	562	/	780	0	/	0	705	/	571	0
PM	4:00 PM	94	96	0	0	247	46	0	0	0	113	0	72	668
	4:15 PM	128	100	0	0	265	52	0	0	0	96	1	60	702
	4:30 PM	120	89	0	0	260	69	0	0	0	73	0	53	664
	4:45 PM	88	111	0	0	263	44	0	0	0	76	0	53	635
	5:00 PM	112	85	0	0	295	79	0	0	0	85	1	52	709
	5:15 PM	130	85	0	0	296	64	0	0	0	104	1	54	734
	5:30 PM	110	101	0	0	220	50	0	0	0	105	1	69	656
	5:45 PM	115	115	0	0	214	52	0	0	0	96	2	68	662
	VOLUMES	897	782	0	0	2,060	456	0	0	0	748	6	481	5,433
	APPROACH %	53%	47%	0%	0%	82%	18%	0%	0%	0%	61%	0%	39%	
	APP/DEPART	1,681	/	1,264	2,517	/	2,810	0	/	0	1,235	/	1,359	0
	BEGIN PEAK HR		5:00 PM											
	VOLUMES	467	386	0	0	1,025	245	0	0	0	390	5	243	2,762
	APPROACH %	55%	45%	0%	0%	81%	19%	0%	0%	0%	61%	1%	38%	
	PEAK HR FACTOR		0.924			0.849			0.000			0.911		0.941
	APP/DEPART	854	/	629	1,270	/	1,416	0	/	0	638	/	717	0

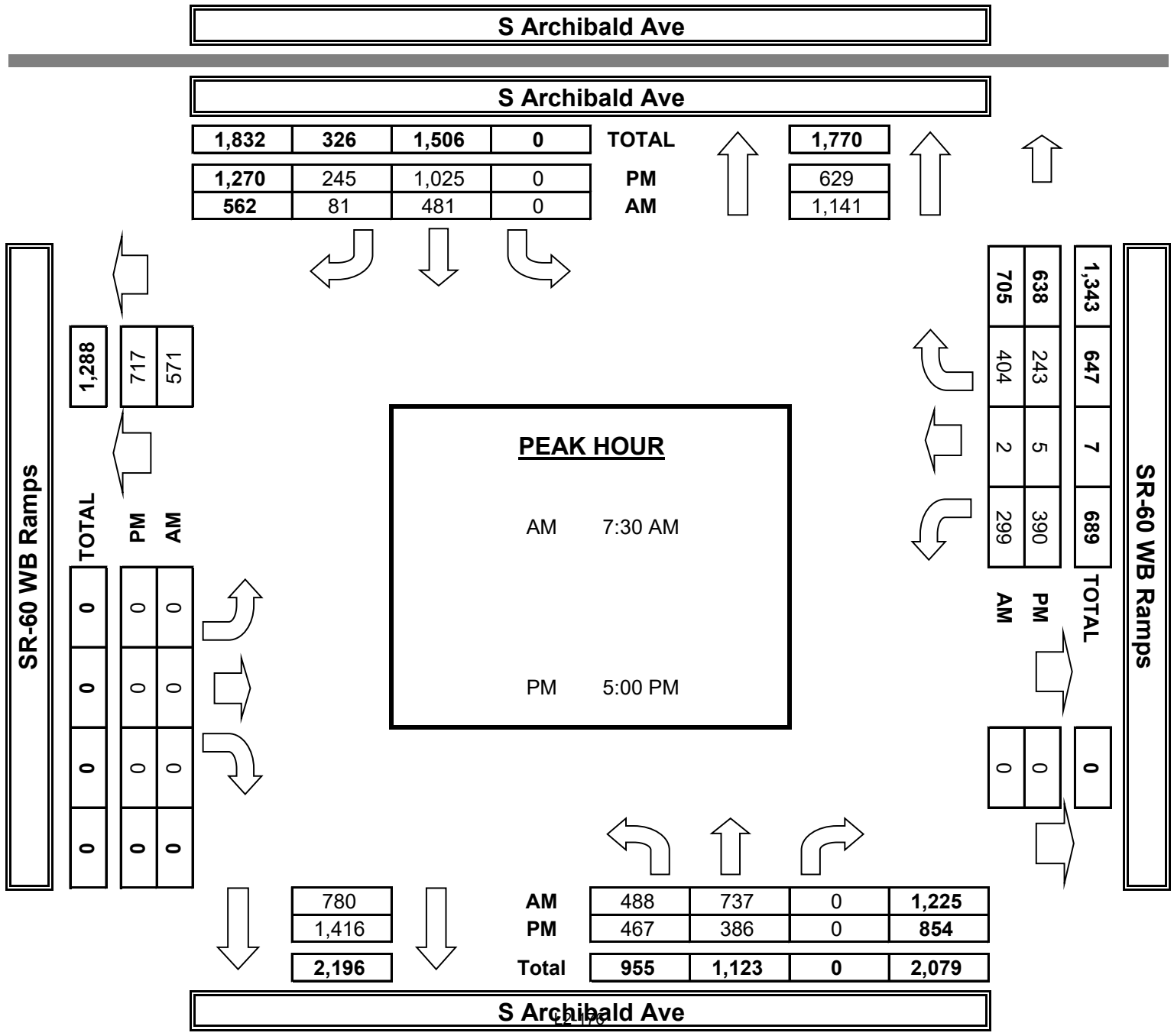
U-TURNS				
NB	SB	EB	WB	TTL
0	0	0	0	
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	1	0	0	1
0	0	0	0	0
1	0	0	0	1
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
1	0	0	0	1
2	1	0	0	3



AimTD LLC

TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

T101823

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Tue, Oct 10, 23

LOCATION: Ontario
NORTH & SOUTH: S Archibald Ave
EAST & WEST: SR-60 EB Ramps

PROJECT #: SC4225
LOCATION #: 6
CONTROL: SIGNAL

NOTES:

AM PM MD OTHER OTHER

N ▲ ◄ W E ► S ▼

		NORTHBOUND S Archibald Ave			SOUTHBOUND S Archibald Ave			EASTBOUND SR-60 EB Ramps			WESTBOUND SR-60 EB Ramps			
	LANES:	NL X	NT 4	NR 1	SL 2	ST 3	SR 0	EL 1.3	ET 0.3	ER 1.3	WL X	WT X	WR X	TOTAL
AM	7:00 AM	0	256	90	28	120	3	0	0	1	0	0	0	498
	7:15 AM	0	297	120	30	111	6	0	3	1	0	0	0	568
	7:30 AM	0	286	107	33	169	4	0	3	0	0	0	0	602
	7:45 AM	0	337	129	40	137	3	0	3	0	0	0	0	649
	8:00 AM	0	315	93	35	167	4	0	5	0	0	0	0	619
	8:15 AM	0	294	92	30	148	3	2	4	0	0	0	0	573
	8:30 AM	0	270	74	30	121	4	0	7	1	0	0	0	507
	8:45 AM	0	244	68	26	156	3	1	0	0	0	0	0	498
	VOLUMES	0	2,299	773	252	1,129	30	3	25	3	0	0	0	4,515
	APPROACH %	0%	75%	25%	18%	80%	2%	10%	81%	10%	0%	0%	0%	
	APP/DEPART	3,072	/	2,303	1,412	/	1,132	31	/	1,050	0	/	30	0
	BEGIN PEAK HR		7:30 AM											
	VOLUMES	0	1,232	421	138	621	14	2	15	0	0	0	0	2,443
	APPROACH %	0%	75%	25%	18%	80%	2%	12%	88%	0%	0%	0%	0%	
	PEAK HR FACTOR		0.887			0.938			0.708			0.000		0.941
	APP/DEPART	1,653	/	1,234	773	/	621	17	/	574	0	/	14	0
PM	4:00 PM	0	190	115	110	245	1	0	2	0	0	0	0	663
	4:15 PM	0	228	125	110	251	0	0	0	1	0	0	0	715
	4:30 PM	0	208	130	102	229	1	0	0	0	0	0	0	670
	4:45 PM	0	200	112	106	233	1	0	2	0	0	0	0	654
	5:00 PM	0	201	117	117	263	0	1	2	2	0	0	0	703
	5:15 PM	0	215	98	116	283	1	0	1	0	0	0	0	714
	5:30 PM	0	211	100	74	251	0	0	1	0	0	0	0	637
	5:45 PM	0	231	100	84	226	1	0	0	0	0	0	0	642
	VOLUMES	0	1,684	897	819	1,981	5	1	8	3	0	0	0	5,399
	APPROACH %	0%	65%	35%	29%	71%	0%	8%	67%	25%	0%	0%	0%	
	APP/DEPART	2,581	/	1,686	2,806	/	1,984	12	/	1,724	0	/	5	0
	BEGIN PEAK HR		4:15 PM											
	VOLUMES	0	837	484	435	976	2	1	4	3	0	0	0	2,743
	APPROACH %	0%	63%	37%	31%	69%	0%	13%	50%	38%	0%	0%	0%	
	PEAK HR FACTOR		0.936			0.930			0.400			0.000		0.959
	APP/DEPART	1,321	/	839	1,414	/	979	8	/	923	0	/	2	0

U-TURNS				
NB	SB	EB	WB	TTL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	1	0	0	1
0	0	0	0	0
0	1	0	0	1
0	0	0	0	0
0	0	0	0	0
0	1	0	0	1
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
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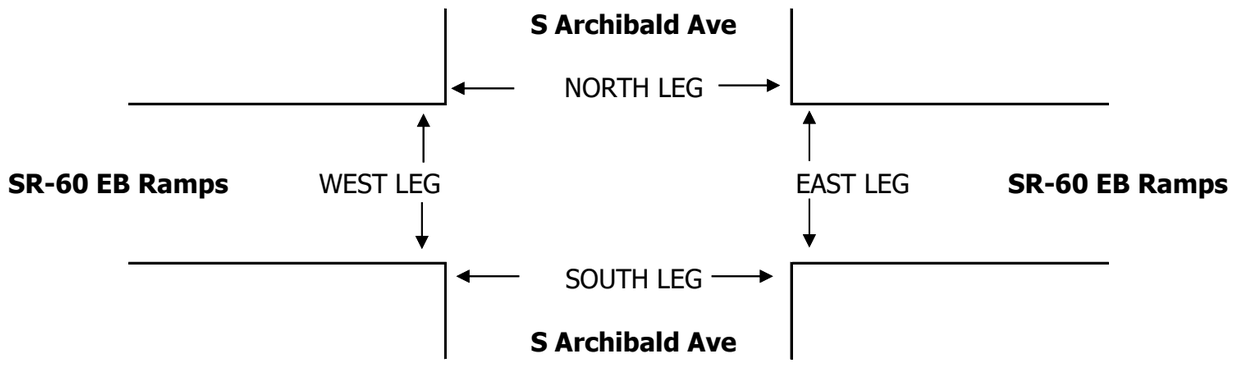
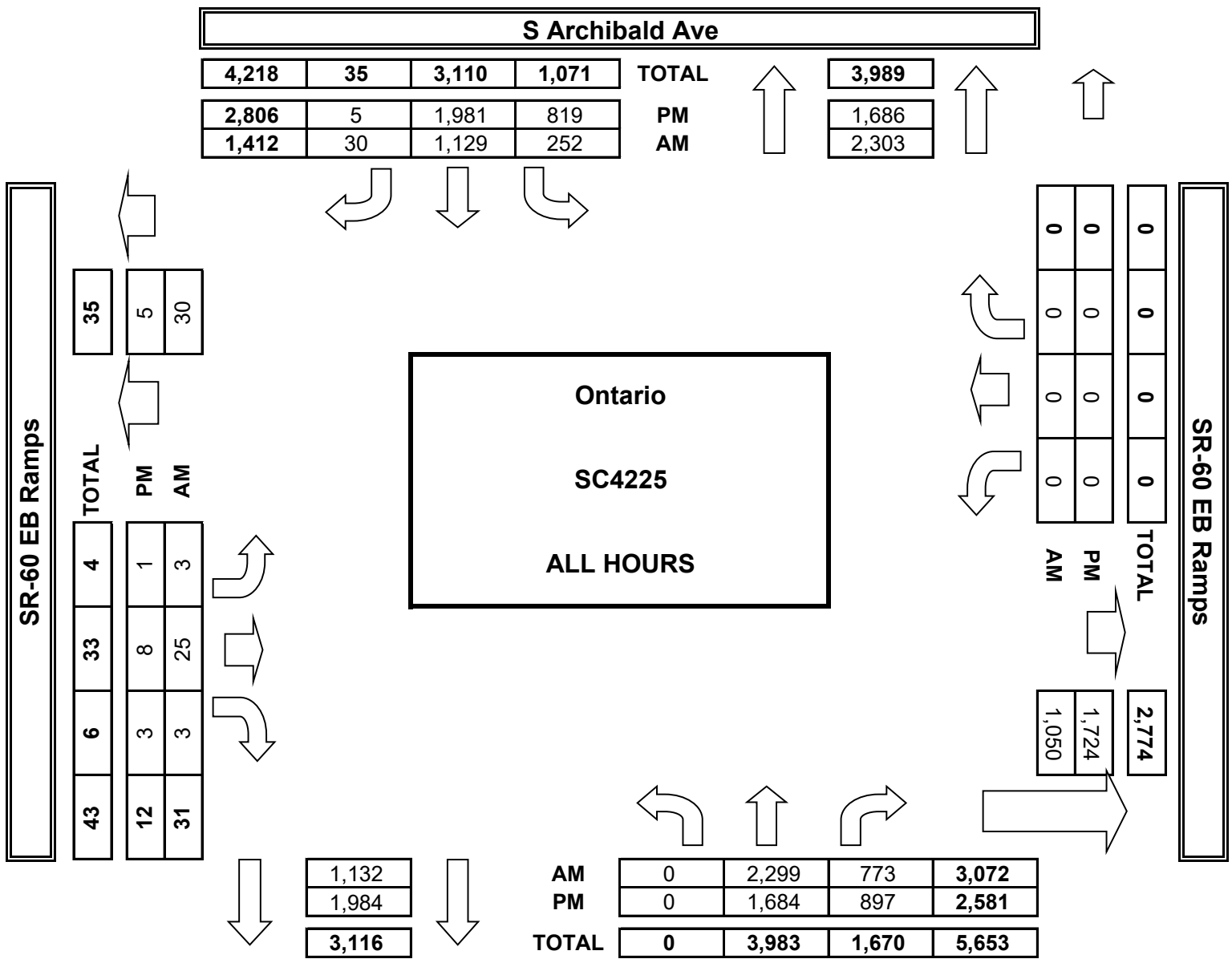
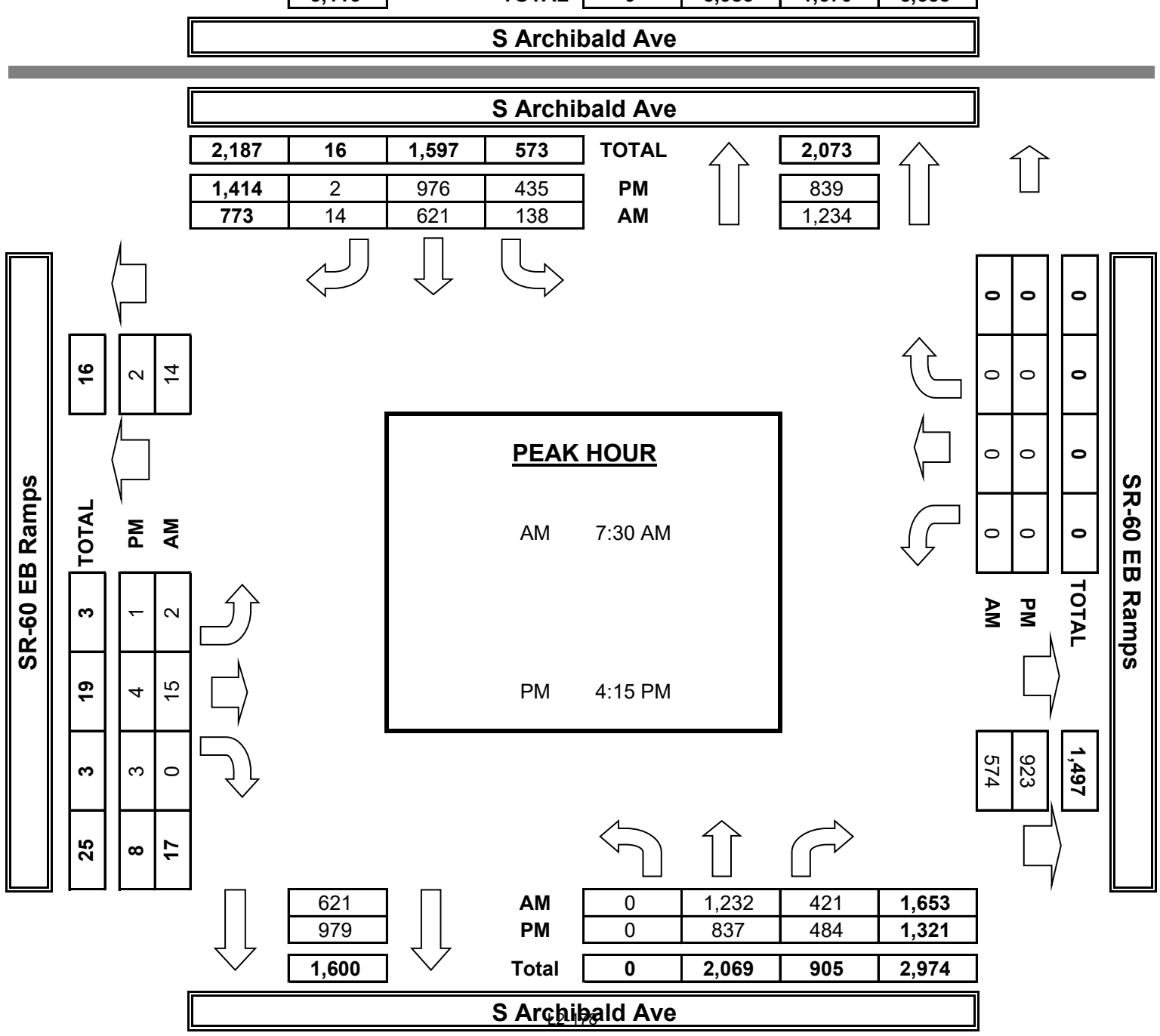
0	0	0	0	0
0	0	0	0	0
0	1	0	0	1



AimTD LLC

TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

T101823

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Tue, Oct 10, 23

LOCATION: Ontario
NORTH & SOUTH: S Archibald Ave
EAST & WEST: E Walnut St

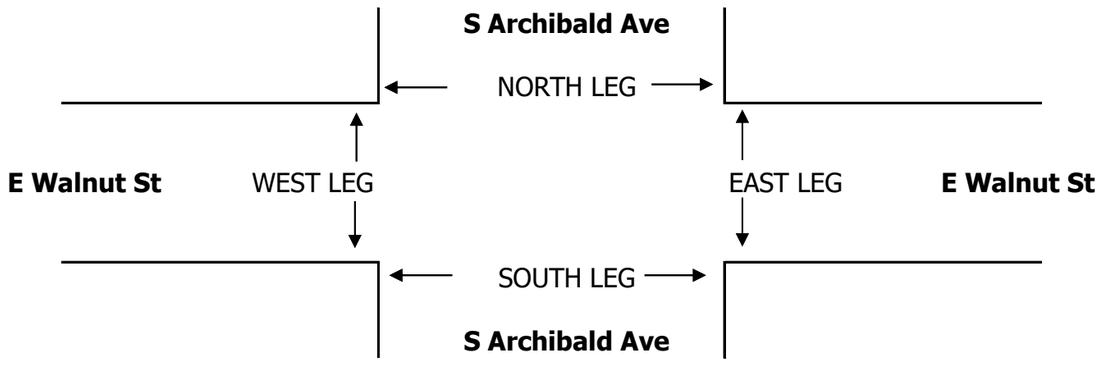
PROJECT #: SC4225
LOCATION #: 7
CONTROL: SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER

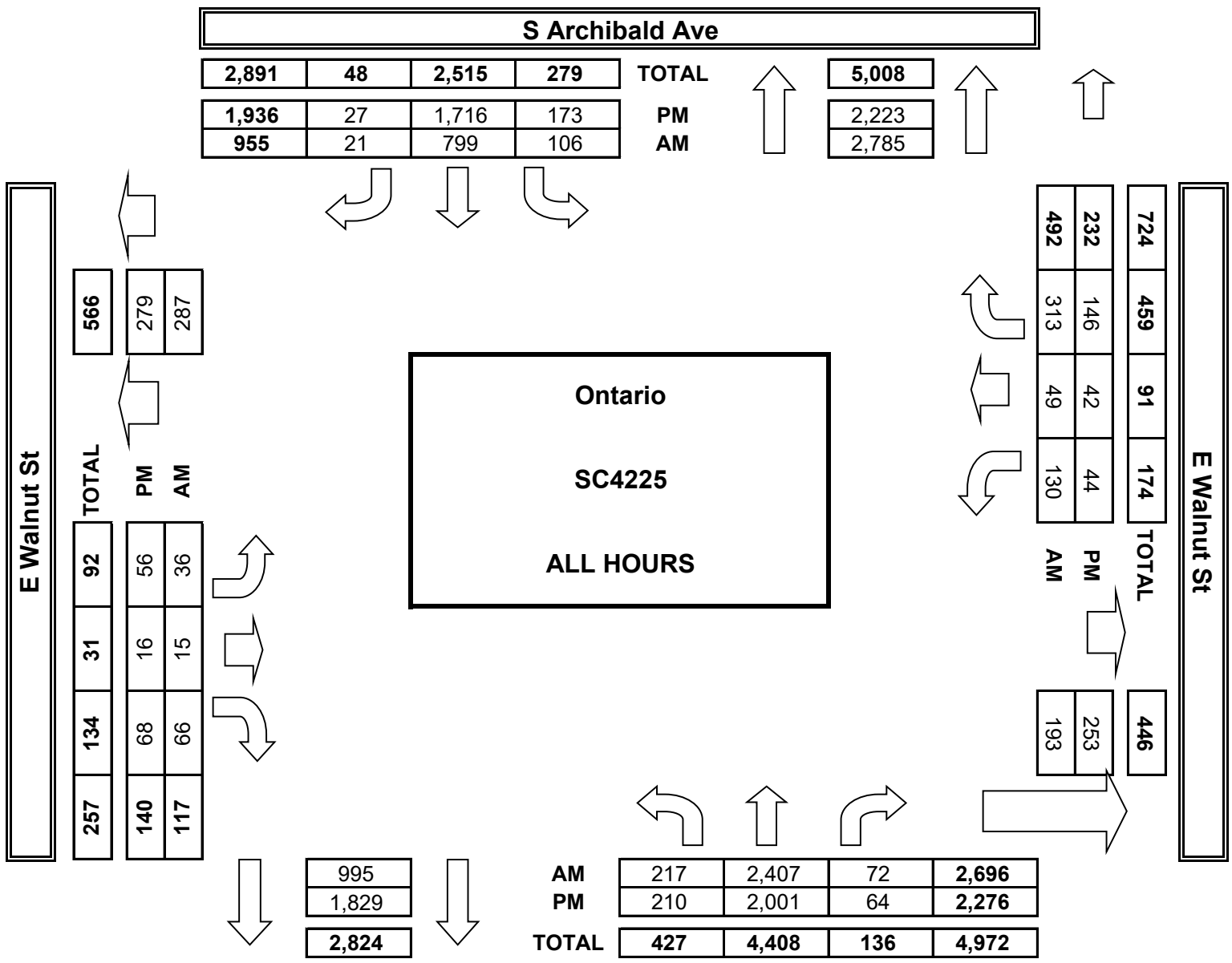
▲ N
◄ W
E ►
S ▼

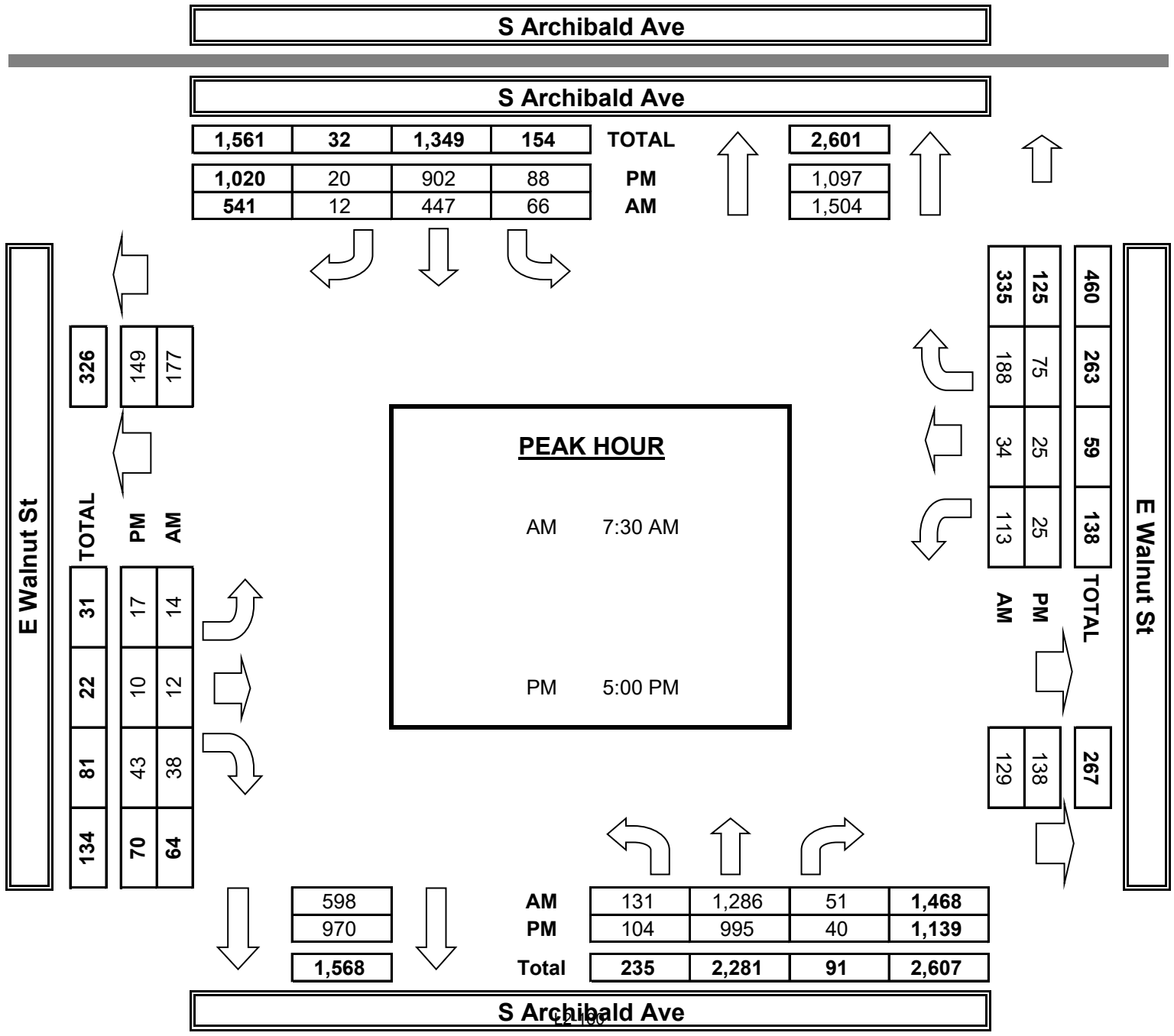
	NORTHBOUND S Archibald Ave			SOUTHBOUND S Archibald Ave			EASTBOUND E Walnut St			WESTBOUND E Walnut St				U-TURNS				
LANES:	NL 1	NT 3	NR 0	SL 1	ST 3	SR 0	EL 1	ET 1	ER 0	WL 1	WT 1	WR 0	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
AM 7:00 AM	14	251	6	13	76	1	4	0	2	3	4	45	419	0	1	0	0	1
7:15 AM	18	313	6	11	78	1	10	0	10	4	4	35	490	0	4	0	0	4
7:30 AM	24	316	12	25	116	0	1	2	1	18	4	48	567	0	3	0	0	3
7:45 AM	29	314	25	20	103	4	6	6	12	49	17	65	650	0	7	0	0	7
8:00 AM	40	339	9	11	122	5	2	2	20	40	8	43	641	0	2	0	0	2
8:15 AM	38	317	5	10	106	3	5	2	5	6	5	32	534	0	4	0	0	4
8:30 AM	31	291	5	8	91	5	4	1	10	6	2	26	480	0	5	0	0	5
8:45 AM	23	266	4	8	107	2	4	2	6	4	5	19	450	0	3	0	0	3
VOLUMES	217	2,407	72	106	799	21	36	15	66	130	49	313	4,260	0	29	0	0	29
APPROACH %	8%	89%	3%	11%	84%	2%	31%	13%	56%	26%	10%	64%						
APP/DEPART	2,696	/	2,785	955	/	995	117	/	193	492	/	287	0					
BEGIN PEAK HR		7:30 AM																
VOLUMES	131	1,286	51	66	447	12	14	12	38	113	34	188	2,408					
APPROACH %	9%	88%	3%	12%	83%	2%	22%	19%	59%	34%	10%	56%						
PEAK HR FACTOR		0.946			0.939			0.667			0.639		0.916					
APP/DEPART	1,468	/	1,504	541	/	598	64	/	129	335	/	177	0					
PM 4:00 PM	34	254	8	21	217	1	12	2	6	4	2	14	575	0	2	0	0	2
4:15 PM	24	277	4	25	188	3	7	2	4	4	6	22	566	0	1	0	0	1
4:30 PM	21	225	5	20	203	1	13	2	6	5	4	21	526	1	2	0	0	3
4:45 PM	27	250	7	19	206	2	7	0	9	6	5	14	552	0	5	0	0	5
5:00 PM	23	246	7	24	231	6	5	5	13	4	5	13	582	0	1	0	0	1
5:15 PM	24	273	8	17	249	6	1	0	9	7	7	17	618	0	5	0	0	5
5:30 PM	23	234	12	28	227	3	4	2	10	5	5	21	574	0	1	0	0	1
5:45 PM	34	242	13	19	195	5	7	3	11	9	8	24	570	0	3	0	0	3
VOLUMES	210	2,001	64	173	1,716	27	56	16	68	44	42	146	4,584	1	20	0	0	21
APPROACH %	9%	88%	3%	9%	89%	1%	40%	11%	49%	19%	18%	63%						
APP/DEPART	2,276	/	2,223	1,936	/	1,829	140	/	253	232	/	279	0					
BEGIN PEAK HR		5:00 PM																
VOLUMES	104	995	40	88	902	20	17	10	43	25	25	75	2,354					
APPROACH %	9%	87%	4%	9%	88%	2%	24%	14%	61%	20%	20%	60%						
PEAK HR FACTOR		0.934			0.921			0.761			0.762		0.945					
APP/DEPART	1,139	/	1,097	1,020	/	970	70	/	138	125	/	149	0					



AimTD LLC

TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

T101823

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

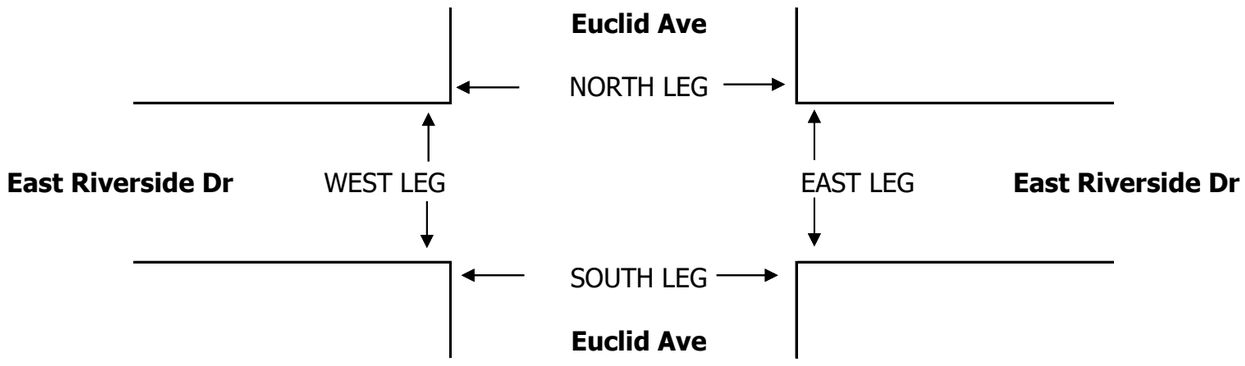
DATE:				
Tue, Oct 10, 23	LOCATION:	Ontario	PROJECT #:	SC4225
	NORTH & SOUTH:	Euclid Ave	LOCATION #:	8
	EAST & WEST:	East Riverside Dr	CONTROL:	SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER

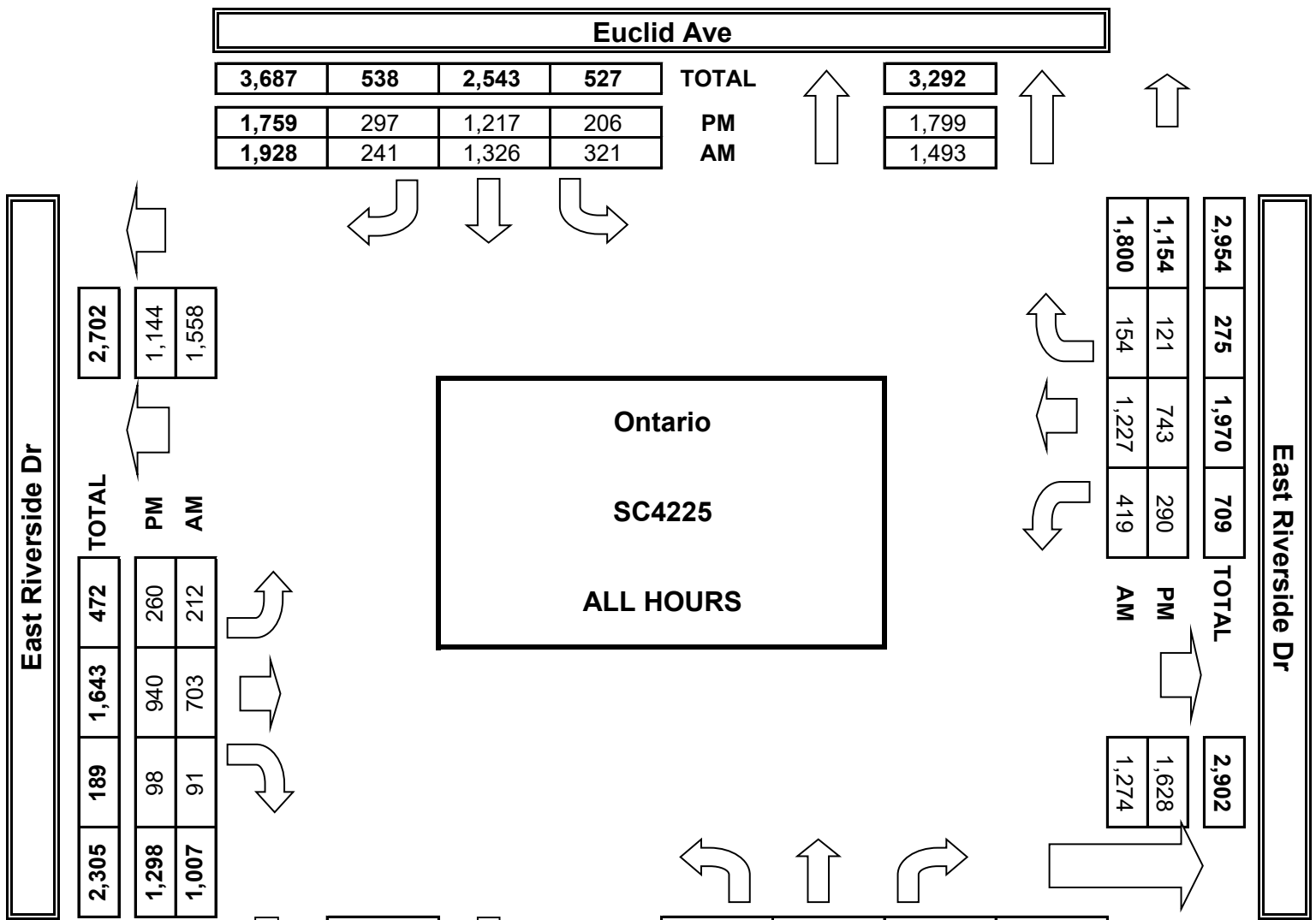
▲ N ◄ W E ► S ▼

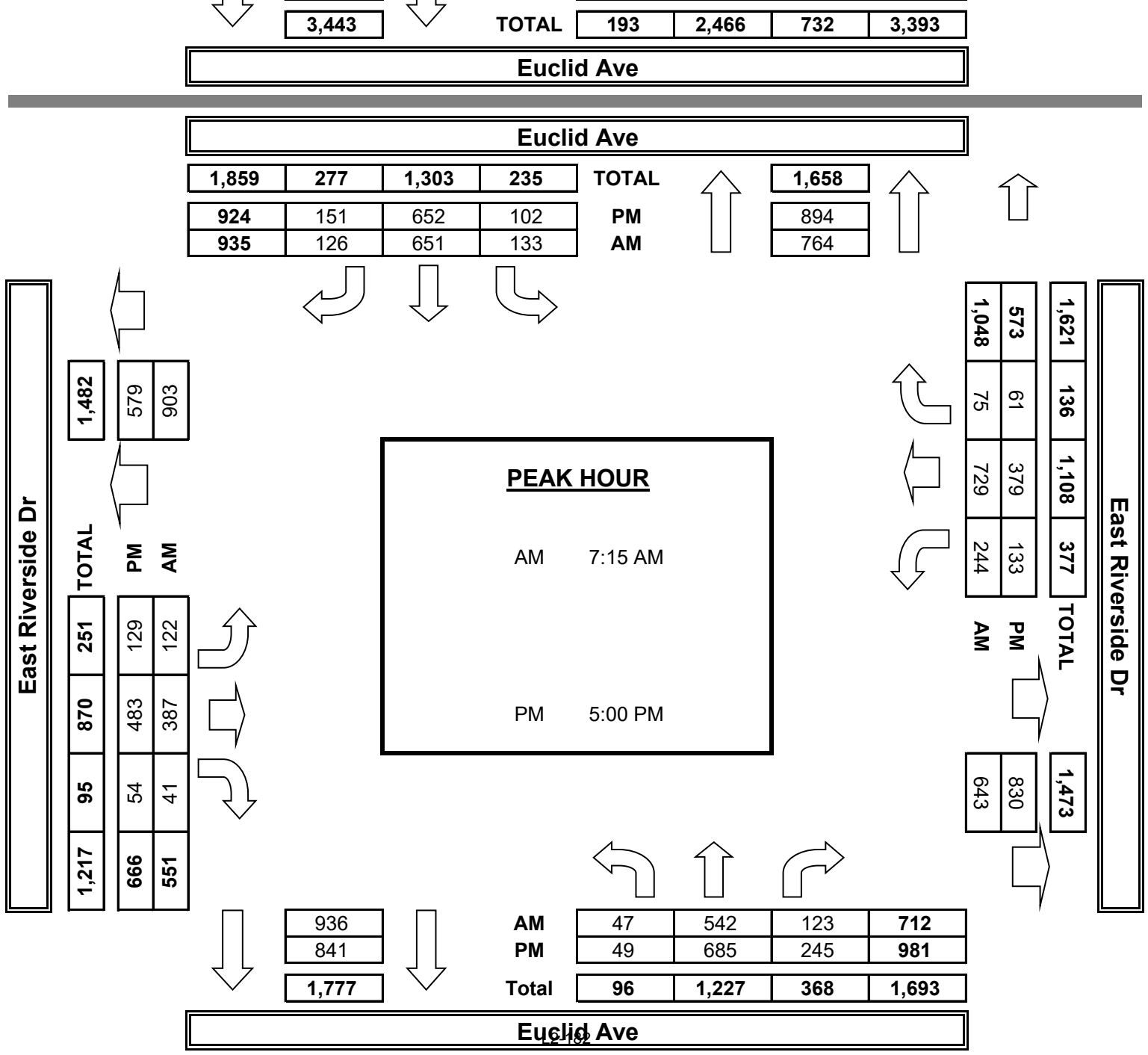
	NORTHBOUND Euclid Ave			SOUTHBOUND Euclid Ave			EASTBOUND East Riverside Dr			WESTBOUND East Riverside Dr				U-TURNS				
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB	TTL
LANES:	1	2	1	1	2	1	1	1	0	1	2	0		0	0	0	0	
AM 7:00 AM	3	180	24	21	183	21	24	65	15	60	138	15	749	0	3	0	0	3
7:15 AM	7	143	26	29	174	27	30	69	8	60	140	11	724	0	8	0	0	8
7:30 AM	11	129	28	37	137	31	27	115	16	66	212	16	825	0	7	0	0	7
7:45 AM	15	156	39	37	191	30	31	98	9	56	188	26	876	0	8	0	0	8
8:00 AM	14	114	30	30	149	38	34	105	8	62	189	22	795	0	2	1	0	3
8:15 AM	11	122	33	48	184	41	18	82	13	39	112	14	717	0	6	0	0	6
8:30 AM	12	106	35	53	162	24	25	94	16	42	127	26	722	0	3	0	0	3
8:45 AM	16	137	35	66	146	29	23	75	6	34	121	24	712	0	3	0	0	3
VOLUMES	89	1,087	250	321	1,326	241	212	703	91	419	1,227	154	6,161	0	40	1	0	41
APPROACH %	6%	76%	18%	17%	69%	13%	21%	70%	9%	23%	68%	9%						
APP/DEPART	1,426	/	1,493	1,928	/	1,836	1,007	/	1,274	1,800	/	1,558	0					
BEGIN PEAK HR		7:15 AM																
VOLUMES	47	542	123	133	651	126	122	387	41	244	729	75	3,246					
APPROACH %	7%	76%	17%	14%	70%	13%	22%	70%	7%	23%	70%	7%						
PEAK HR FACTOR		0.848			0.879			0.872			0.891		0.918					
APP/DEPART	712	/	764	935	/	936	551	/	643	1,048	/	903	0					
PM 4:00 PM	15	178	73	30	145	26	30	112	10	37	98	19	773	0	6	0	0	6
4:15 PM	9	180	60	12	108	42	48	126	12	51	93	12	753	0	0	0	0	0
4:30 PM	17	170	45	32	164	38	24	106	12	33	99	20	760	0	6	0	0	6
4:45 PM	14	166	59	30	148	40	29	113	10	36	74	9	728	0	8	0	0	8
5:00 PM	13	155	61	33	164	33	21	120	7	38	95	20	760	2	4	0	0	6
5:15 PM	14	157	64	22	175	36	40	124	19	41	103	18	813	0	5	0	0	5
5:30 PM	9	187	60	24	157	46	35	120	14	29	101	15	797	0	5	0	0	5
5:45 PM	13	186	60	23	156	36	33	119	14	25	80	8	753	0	5	0	0	5
VOLUMES	104	1,379	482	206	1,217	297	260	940	98	290	743	121	6,178	2	39	0	0	41
APPROACH %	5%	70%	25%	12%	69%	17%	20%	72%	8%	25%	64%	10%						
APP/DEPART	1,967	/	1,799	1,759	/	1,607	1,298	/	1,628	1,154	/	1,144	0					
BEGIN PEAK HR		5:00 PM																
VOLUMES	49	685	245	102	652	151	129	483	54	133	379	61	3,144					
APPROACH %	5%	70%	25%	11%	71%	16%	19%	73%	8%	23%	66%	11%						
PEAK HR FACTOR		0.947			0.971			0.910			0.884		0.961					
APP/DEPART	981	/	894	924	/	841	666	/	830	573	/	579	0					



AimTD LLC

TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

T101823

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Tue, Oct 10, 23

LOCATION: Ontario
NORTH & SOUTH: S Capmus Ave
EAST & WEST: East Riverside Dr

PROJECT #: SC4225
LOCATION #: 9
CONTROL: SIGNAL

NOTES:

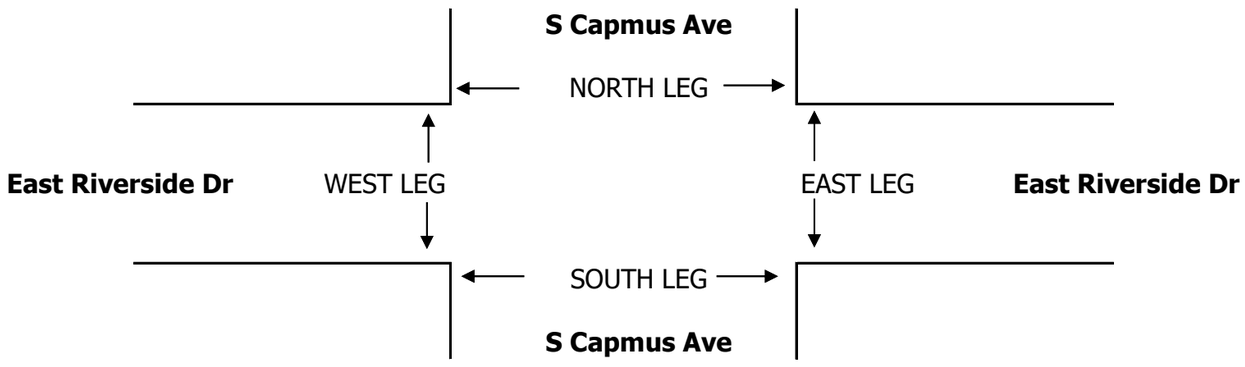
AM
PM
MD
OTHER
OTHER

▲ N
◄ W
E ►
S ▼

		NORTHBOUND S Capmus Ave			SOUTHBOUND S Capmus Ave			EASTBOUND East Riverside Dr			WESTBOUND East Riverside Dr			
	LANES:	NL 1	NT 1	NR 0	SL 1	ST 1	SR 1	EL 1	ET 1	ER 1	WL 1	WT 2	WR 0	TOTAL
AM	7:00 AM	2	38	9	18	49	32	13	69	8	17	153	37	445
	7:15 AM	6	63	10	26	66	46	15	118	5	14	199	43	611
	7:30 AM	4	75	21	23	66	39	19	146	11	18	226	53	701
	7:45 AM	7	81	31	23	56	39	30	138	5	24	231	67	732
	8:00 AM	6	59	20	26	59	45	17	129	11	23	203	50	648
	8:15 AM	6	51	13	25	62	31	18	107	15	38	145	38	549
	8:30 AM	6	52	15	29	73	35	33	103	13	65	145	35	604
	8:45 AM	5	49	18	23	60	32	25	92	13	38	167	45	567
	VOLUMES	42	468	137	193	491	299	170	902	81	237	1,469	368	4,858
	APPROACH %	6%	72%	21%	20%	50%	30%	15%	78%	7%	11%	71%	18%	
	APP/DEPART	647	/	1,006	983	/	809	1,154	/	1,232	2,074	/	1,811	0
	BEGIN PEAK HR		7:15 AM											
	VOLUMES	23	278	82	98	247	169	81	531	32	79	859	213	2,692
	APPROACH %	6%	73%	21%	19%	48%	33%	13%	82%	5%	7%	75%	19%	
	PEAK HR FACTOR		0.805			0.931			0.915			0.894		0.919
	APP/DEPART	383	/	572	514	/	358	644	/	711	1,151	/	1,051	0
PM	4:00 PM	3	86	27	27	36	23	43	175	12	13	128	26	599
	4:15 PM	4	99	14	27	32	20	35	190	12	4	112	19	568
	4:30 PM	7	106	21	19	35	35	24	170	6	7	110	22	562
	4:45 PM	5	94	17	20	30	31	22	165	7	7	113	20	531
	5:00 PM	2	81	12	26	32	37	28	183	6	4	130	22	563
	5:15 PM	2	89	24	28	36	29	20	167	5	10	120	26	556
	5:30 PM	0	83	19	24	33	31	39	177	14	8	110	28	566
	5:45 PM	2	51	11	27	33	24	28	159	6	8	90	21	460
	VOLUMES	25	689	145	198	267	230	239	1,386	68	61	913	184	4,408
	APPROACH %	3%	80%	17%	28%	38%	33%	14%	82%	4%	5%	79%	16%	
	APP/DEPART	859	/	1,112	695	/	396	1,696	/	1,729	1,158	/	1,171	0
	BEGIN PEAK HR		4:00 PM											
	VOLUMES	19	385	79	93	133	109	124	700	37	31	463	87	2,262
	APPROACH %	4%	80%	16%	28%	40%	33%	14%	81%	4%	5%	80%	15%	
	PEAK HR FACTOR		0.901			0.941			0.903			0.870		0.944
	APP/DEPART	483	/	596	335	/	201	863	/	872	581	/	593	0

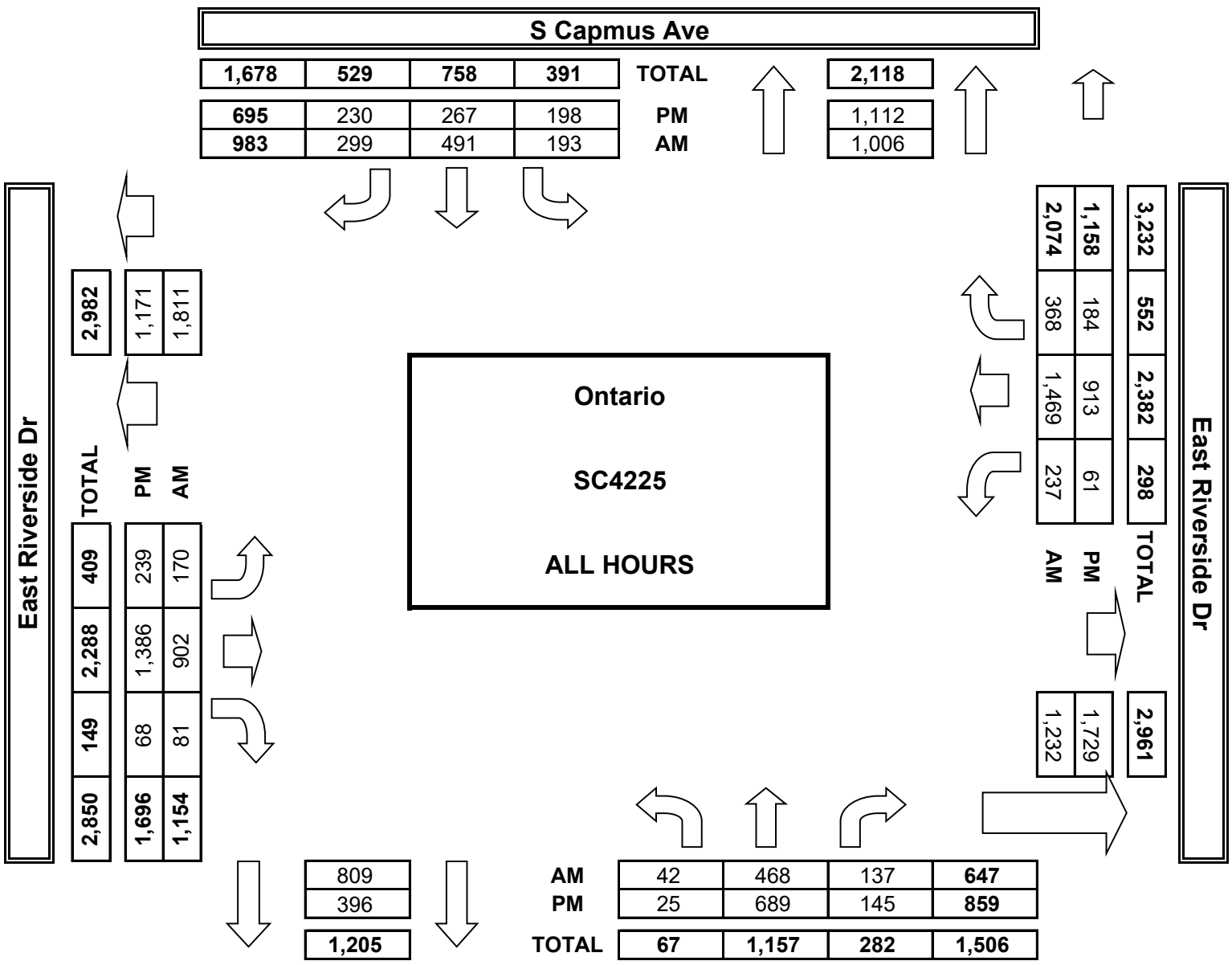
U-TURNS

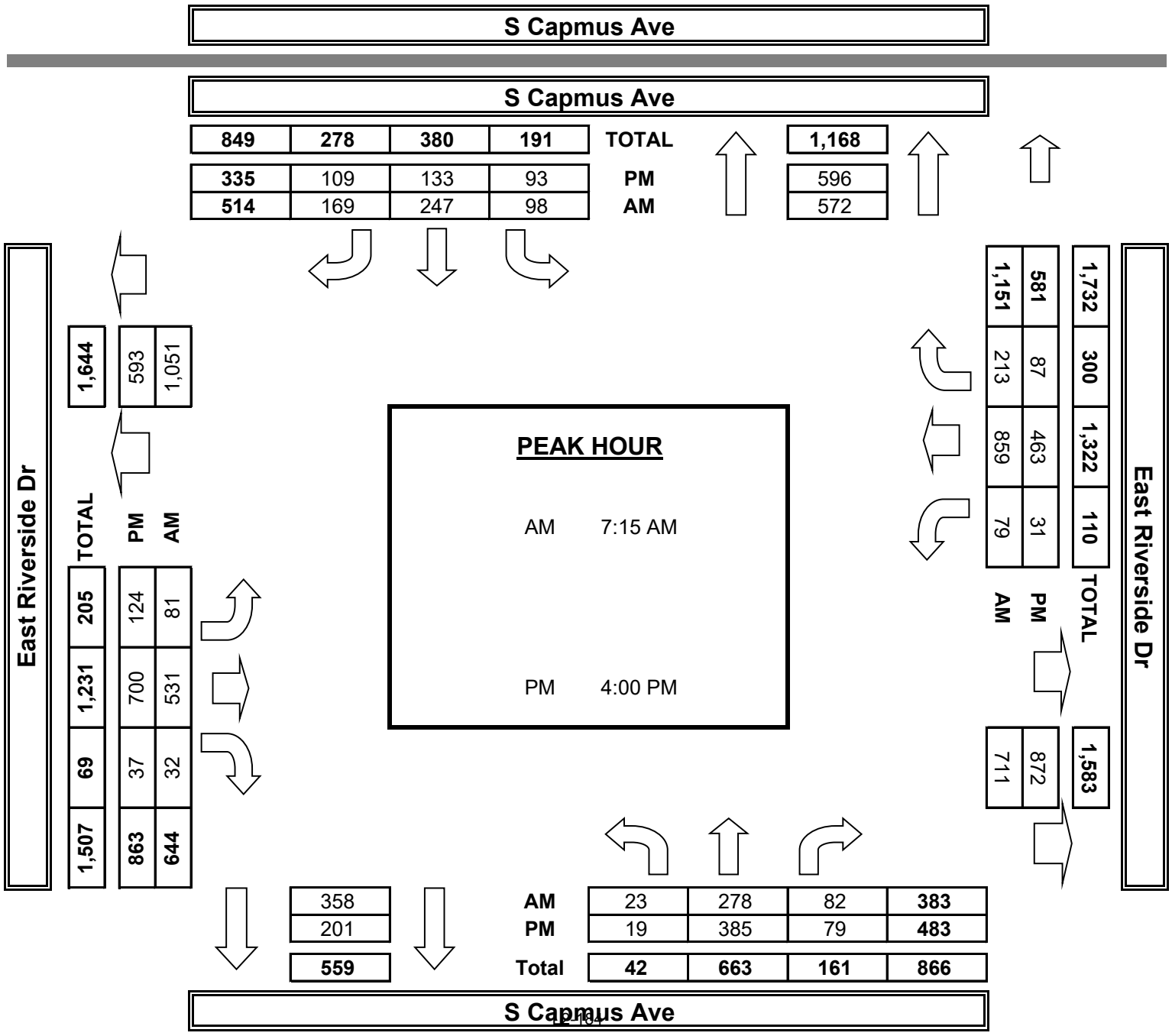
	NB	SB	EB	WB	TTL
	0	0	0	0	
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	0	1	0	1
	0	0	1	0	1
4:00 PM	0	0	0	0	0
4:15 PM	0	0	2	0	2
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	1	0	1
	0	0	3	0	3



AimTD LLC

TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

T101823

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Tue, Oct 10, 23

LOCATION: Ontario
NORTH & SOUTH: S Bon View Ave
EAST & WEST: East Riverside Dr

PROJECT #: SC4225
LOCATION #: 10
CONTROL: STOP N/S

NOTES:

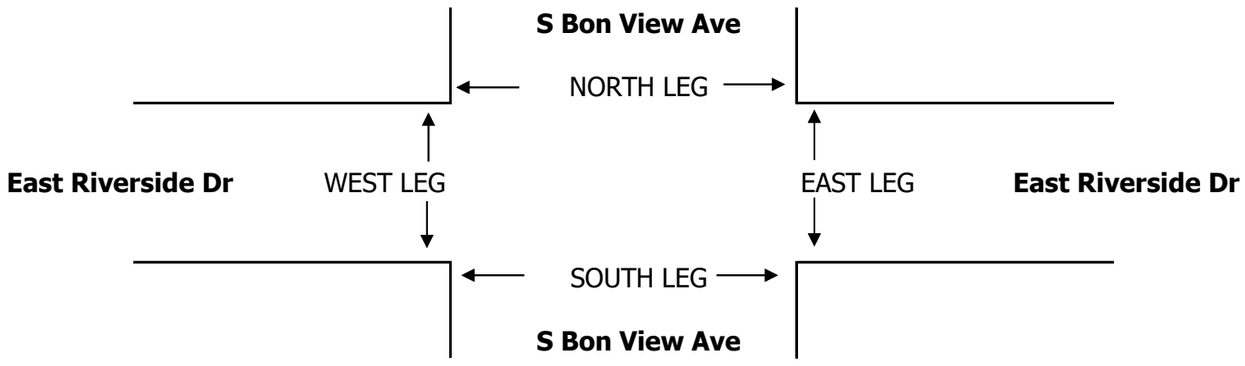
AM / PM / MD / OTHER / OTHER

N ▲ / ◄ W / E ► / S ▼

		NORTHBOUND S Bon View Ave			SOUTHBOUND S Bon View Ave			EASTBOUND East Riverside Dr			WESTBOUND East Riverside Dr			
	LANES:	NL 0	NT 1	NR 0	SL 0	ST 1	SR 0	EL 1	ET 1	ER 0	WL 1	WT 2	WR 0	TOTAL
AM	7:00 AM	5	5	25	1	3	4	6	79	6	32	207	3	376
	7:15 AM	1	2	29	3	6	14	18	130	7	40	237	12	499
	7:30 AM	2	9	38	2	6	27	29	145	9	45	267	18	597
	7:45 AM	5	6	37	2	5	29	28	167	5	55	295	14	648
	8:00 AM	5	4	38	3	4	18	6	163	3	42	247	3	536
	8:15 AM	4	5	33	1	0	8	9	123	13	31	202	13	442
	8:30 AM	6	0	29	2	3	8	7	139	6	33	235	12	480
	8:45 AM	5	4	35	4	4	1	10	112	5	17	237	19	453
	VOLUMES	33	35	264	18	31	109	113	1,058	54	295	1,927	94	4,032
	APPROACH %	10%	11%	80%	11%	20%	69%	9%	86%	4%	13%	83%	4%	
	APP/DEPART	332	/	242	158	/	380	1,226	/	1,340	2,316	/	2,070	0
	BEGIN PEAK HR		7:15 AM											
	VOLUMES	13	21	142	10	21	88	81	605	24	182	1,046	47	2,280
	APPROACH %	7%	12%	81%	8%	18%	74%	11%	85%	3%	14%	82%	4%	
	PEAK HR FACTOR		0.898			0.826			0.888			0.876		0.880
	APP/DEPART	176	/	149	119	/	227	710	/	757	1,275	/	1,147	0
PM	4:00 PM	2	6	56	1	2	8	9	212	4	20	165	3	488
	4:15 PM	2	7	37	1	3	6	8	215	9	21	126	5	440
	4:30 PM	6	8	62	0	4	10	8	196	9	24	109	5	441
	4:45 PM	7	5	52	1	4	8	12	186	10	23	124	5	437
	5:00 PM	3	5	59	0	2	10	6	196	6	27	146	4	464
	5:15 PM	6	5	50	2	5	8	8	221	5	23	142	3	478
	5:30 PM	7	5	40	0	2	4	12	202	9	21	139	1	442
	5:45 PM	2	5	50	2	3	0	10	177	5	16	117	4	391
	VOLUMES	35	46	406	7	25	54	73	1,605	57	175	1,068	30	3,581
	APPROACH %	7%	9%	83%	8%	29%	63%	4%	93%	3%	14%	84%	2%	
	APP/DEPART	487	/	149	86	/	257	1,735	/	2,018	1,273	/	1,157	0
	BEGIN PEAK HR		4:45 PM											
	VOLUMES	23	20	201	3	13	30	38	805	30	94	551	13	1,821
	APPROACH %	9%	8%	82%	7%	28%	65%	4%	92%	3%	14%	84%	2%	
	PEAK HR FACTOR		0.910			0.767			0.933			0.929		0.952
	APP/DEPART	244	/	71	46	/	137	873	/	1,009	658	/	604	0

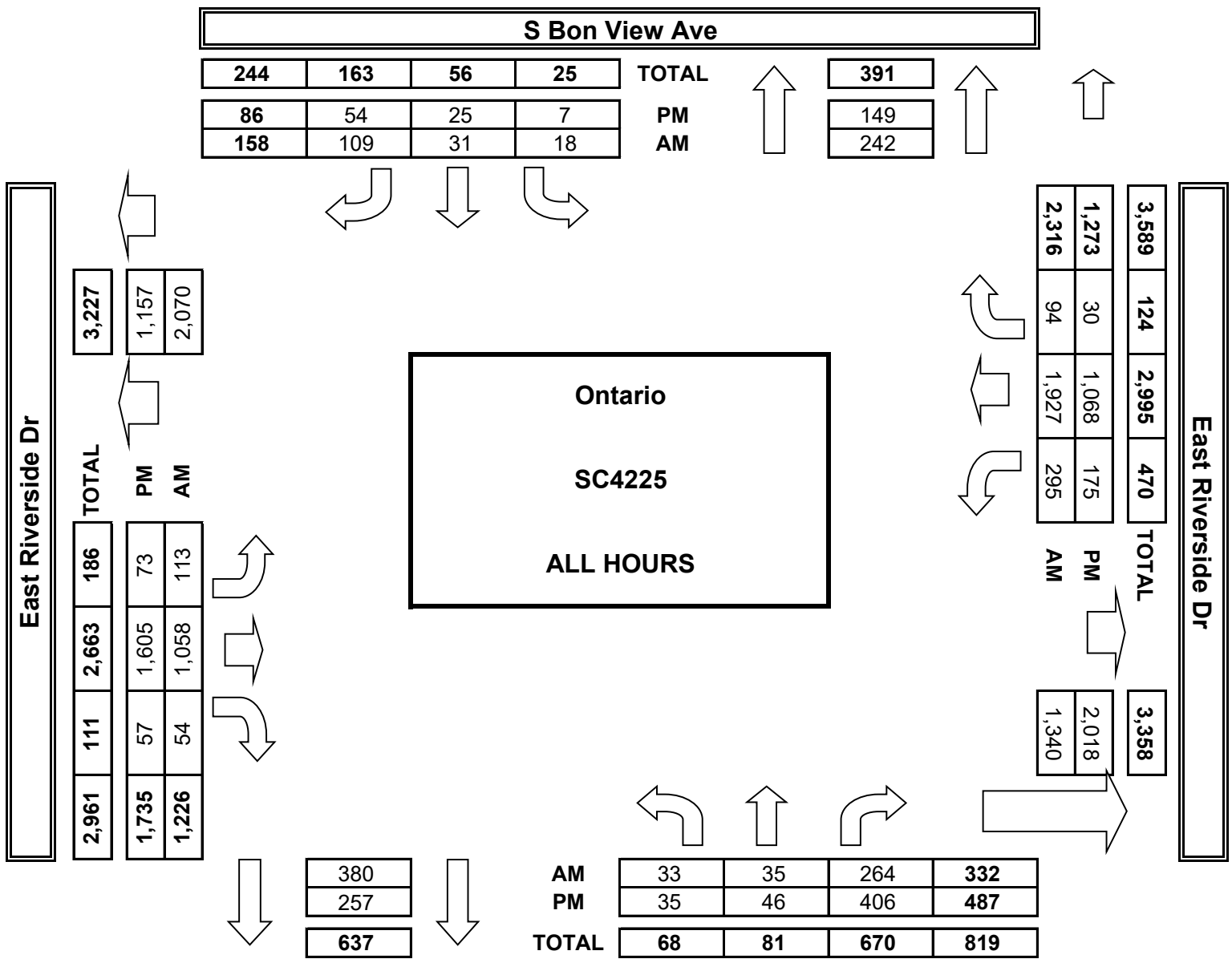
U-TURNS

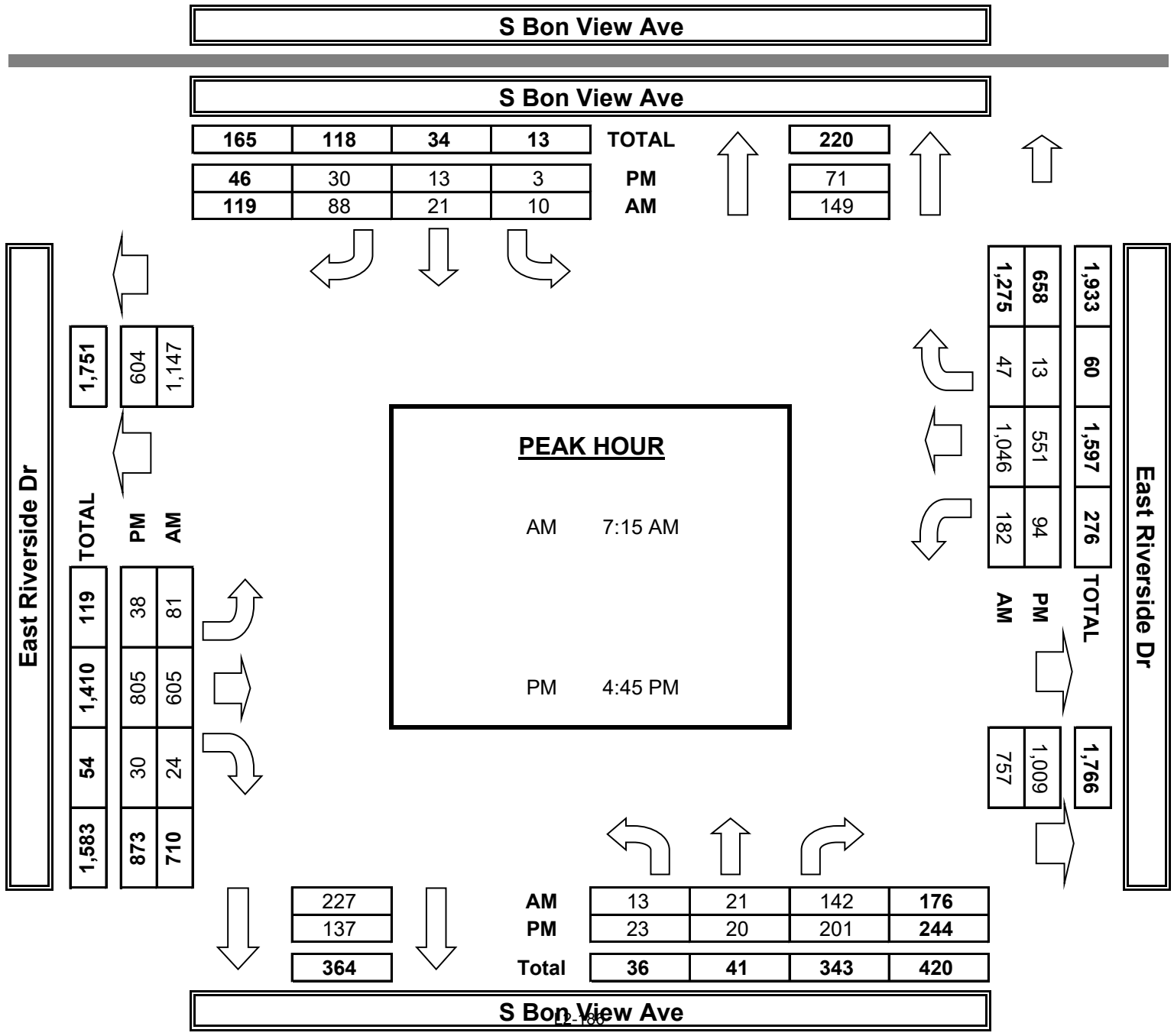
AM NB	AM SB	AM EB	AM WB	AM TTL	PM NB	PM SB	PM EB	PM WB	PM TTL
0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0
0	0	1	0	1	0	0	0	0	0
0	0	1	0	1	0	0	0	0	0



AimTD LLC

TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

T101823

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

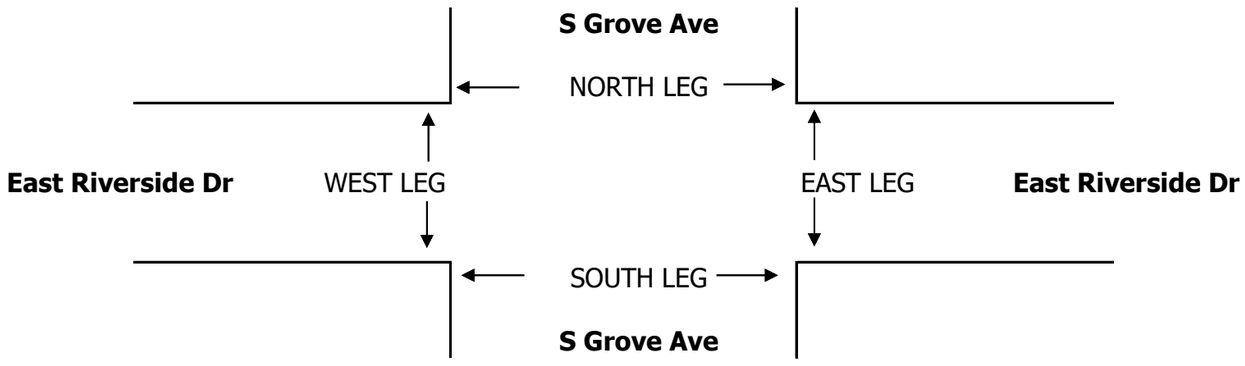
DATE:				
Tue, Oct 10, 23	LOCATION:	Ontario	PROJECT #:	SC4225
	NORTH & SOUTH:	S Grove Ave	LOCATION #:	11
	EAST & WEST:	East Riverside Dr	CONTROL:	SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER

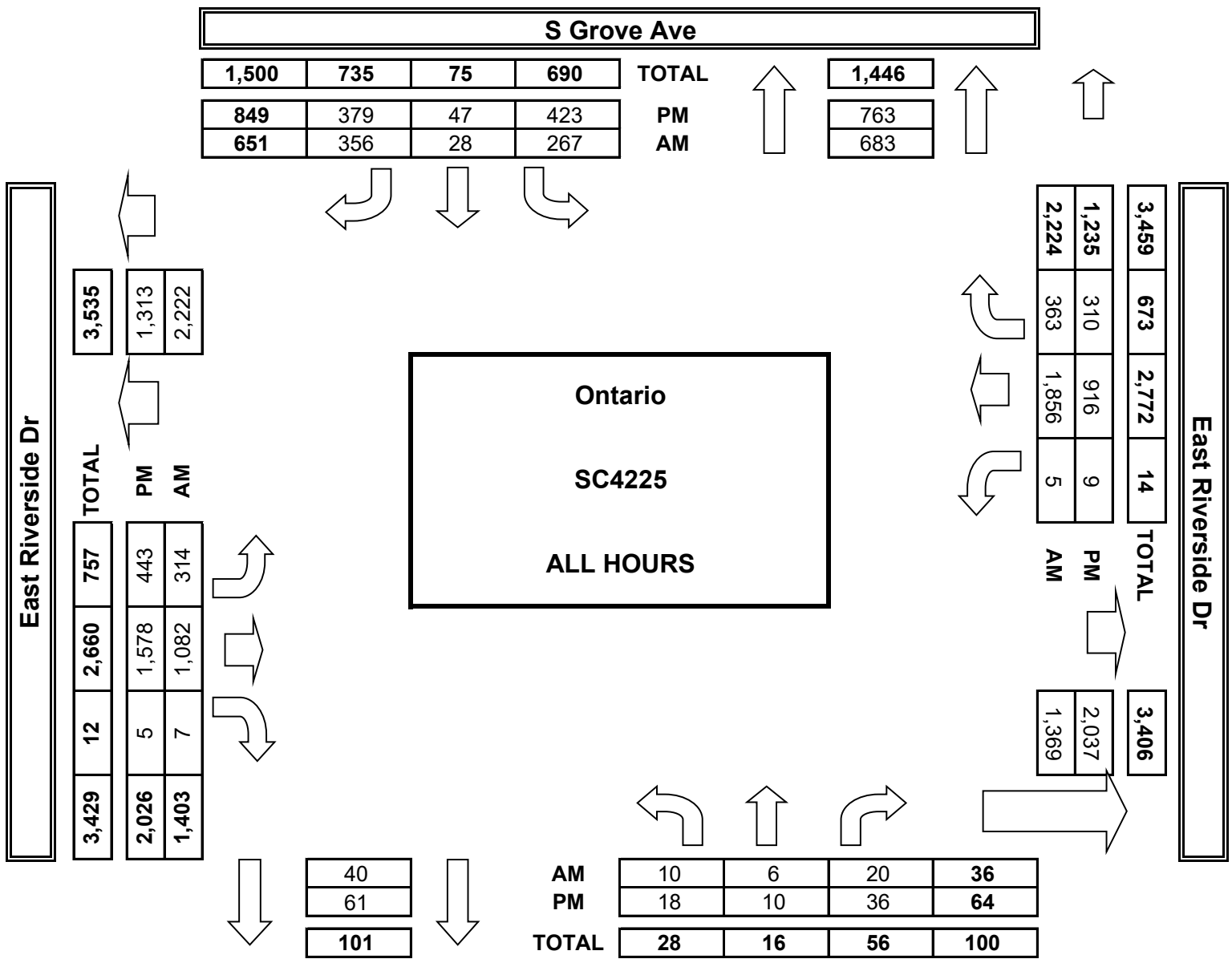
▲ N ◄ W E ► S ▼

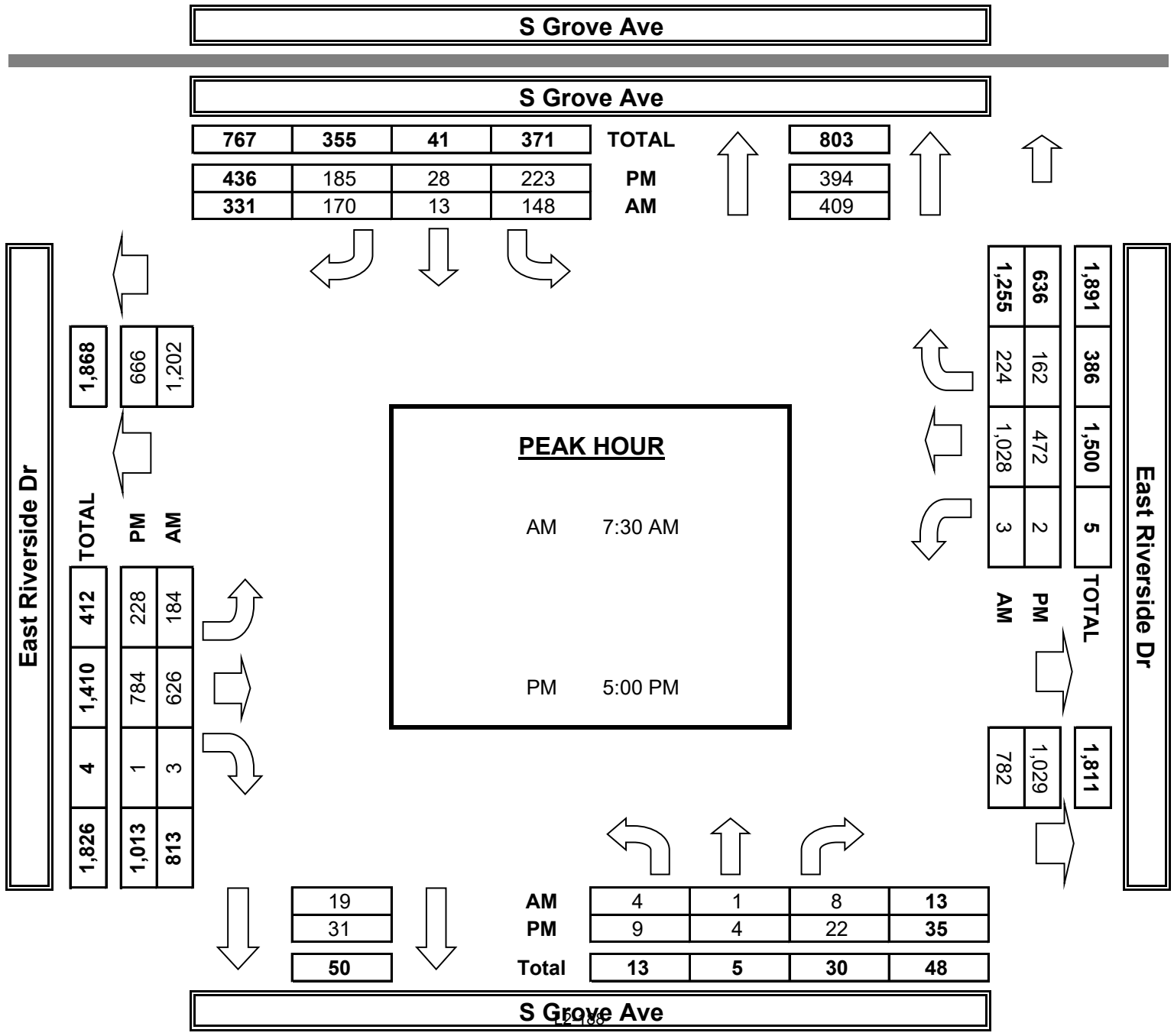
		NORTHBOUND S Grove Ave			SOUTHBOUND S Grove Ave			EASTBOUND East Riverside Dr			WESTBOUND East Riverside Dr				U-TURNS				
	LANES:	NL 1	NT 1	NR 0	SL 1	ST 1	SR 1	EL 1	ET 1	ER 0	WL 1	WT 2	WR 0	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
AM	7:00 AM	1	1	0	27	0	31	23	64	1	0	187	29	364	0	0	0	0	0
	7:15 AM	2	1	1	36	3	42	35	98	0	2	227	41	488	0	0	0	0	0
	7:30 AM	1	0	1	43	1	29	28	147	1	0	304	52	607	0	0	0	0	0
	7:45 AM	0	0	2	41	2	50	48	169	1	1	290	64	668	0	0	0	0	0
	8:00 AM	1	1	4	30	7	45	65	167	1	1	246	49	617	0	0	0	0	0
	8:15 AM	2	0	1	34	3	46	43	143	0	1	188	59	520	0	0	0	0	0
	8:30 AM	2	2	4	27	9	53	34	141	2	0	209	33	516	0	0	0	0	0
	8:45 AM	1	1	7	29	3	60	38	153	1	0	205	36	534	0	0	0	0	0
	VOLUMES	10	6	20	267	28	356	314	1,082	7	5	1,856	363	4,314	0	0	0	0	0
	APPROACH %	28%	17%	56%	41%	4%	55%	22%	77%	0%	0%	83%	16%						
	APP/DEPART	36	/	683	651	/	40	1,403	/	1,369	2,224	/	2,222	0					
	BEGIN PEAK HR		7:30 AM																
	VOLUMES	4	1	8	148	13	170	184	626	3	3	1,028	224	2,412					
	APPROACH %	31%	8%	62%	45%	4%	51%	23%	77%	0%	0%	82%	18%						
	PEAK HR FACTOR		0.542			0.890			0.872			0.881		0.903					
	APP/DEPART	13	/	409	331	/	19	813	/	782	1,255	/	1,202	0					
PM	4:00 PM	4	2	2	35	4	49	62	198	1	2	120	37	516	0	0	0	0	0
	4:15 PM	2	0	3	57	4	47	51	192	2	4	115	28	505	0	0	0	0	0
	4:30 PM	0	3	6	56	4	54	51	204	1	1	103	44	527	0	0	0	0	0
	4:45 PM	3	1	3	52	7	44	51	200	0	0	106	39	506	0	0	0	0	0
	5:00 PM	5	1	10	48	13	55	52	186	0	1	122	32	525	0	0	0	0	0
	5:15 PM	2	0	3	53	2	46	64	217	0	0	117	42	546	0	0	0	0	0
	5:30 PM	0	1	4	73	5	40	50	188	1	1	112	48	523	0	0	0	0	0
	5:45 PM	2	2	5	49	8	44	62	193	0	0	121	40	526	0	0	0	0	0
	VOLUMES	18	10	36	423	47	379	443	1,578	5	9	916	310	4,174	0	0	0	0	0
	APPROACH %	28%	16%	56%	50%	6%	45%	22%	78%	0%	1%	74%	25%						
	APP/DEPART	64	/	763	849	/	61	2,026	/	2,037	1,235	/	1,313	0					
	BEGIN PEAK HR		5:00 PM																
	VOLUMES	9	4	22	223	28	185	228	784	1	2	472	162	2,120					
	APPROACH %	26%	11%	63%	51%	6%	42%	23%	77%	0%	0%	74%	25%						
	PEAK HR FACTOR		0.547			0.924			0.901			0.988		0.971					
	APP/DEPART	35	/	394	436	/	31	1,013	/	1,029	636	/	666	0					



AimTD LLC

TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

T101823

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

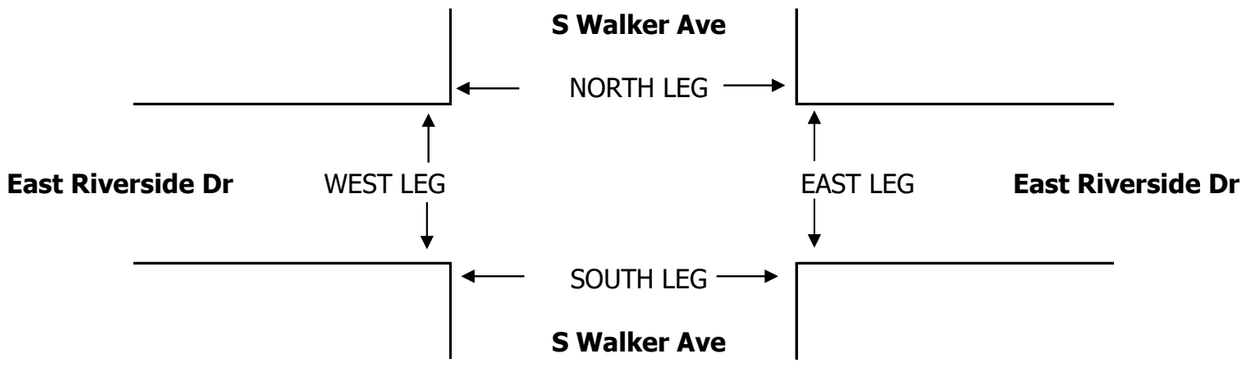
DATE:			PROJECT #:	
Tue, Oct 10, 23	LOCATION:	Ontario	PROJECT #:	SC4225
	NORTH & SOUTH:	S Walker Ave	LOCATION #:	12
	EAST & WEST:	East Riverside Dr	CONTROL:	STOP N/S

NOTES:

AM / PM / MD / OTHER / OTHER

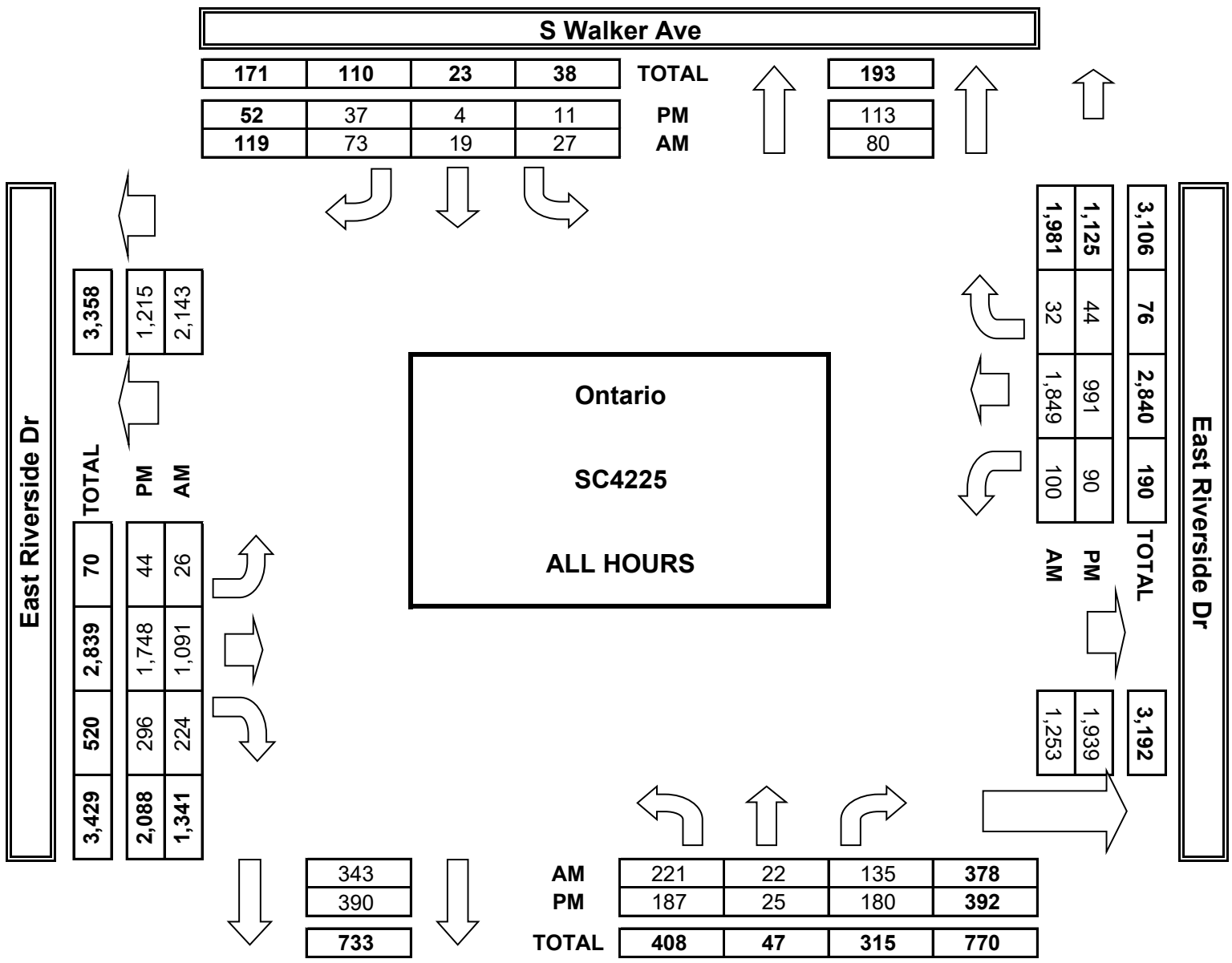
		NORTHBOUND S Walker Ave			SOUTHBOUND S Walker Ave			EASTBOUND East Riverside Dr			WESTBOUND East Riverside Dr			
	LANES:	NL 0	NT 1	NR 0	SL 0	ST 1	SR 0	EL 1	ET 1	ER 0	WL 1	WT 2	WR 0	TOTAL
AM	7:00 AM	34	2	16	2	7	10	2	81	21	12	191	1	379
	7:15 AM	31	3	19	5	4	10	0	133	37	14	240	3	499
	7:30 AM	17	2	25	4	2	14	2	161	29	14	302	6	578
	7:45 AM	28	2	17	8	4	11	5	181	29	14	290	4	593
	8:00 AM	26	5	21	3	0	7	3	163	23	14	237	4	506
	8:15 AM	28	6	13	1	0	5	2	134	22	8	197	5	421
	8:30 AM	22	2	16	3	1	8	4	122	27	11	208	4	428
	8:45 AM	35	0	8	1	1	8	8	116	36	13	184	5	415
	VOLUMES	221	22	135	27	19	73	26	1,091	224	100	1,849	32	3,819
	APPROACH %	58%	6%	36%	23%	16%	61%	2%	81%	17%	5%	93%	2%	
	APP/DEPART	378	/	80	119	/	343	1,341	/	1,253	1,981	/	2,143	0
	BEGIN PEAK HR		7:15 AM											
	VOLUMES	102	12	82	20	10	42	10	638	118	56	1,069	17	2,176
	APPROACH %	52%	6%	42%	28%	14%	58%	1%	83%	15%	5%	94%	1%	
	PEAK HR FACTOR		0.925			0.783			0.891			0.887		0.917
	APP/DEPART	196	/	39	72	/	184	766	/	740	1,142	/	1,213	0
PM	4:00 PM	26	1	23	1	1	4	4	234	28	12	125	8	467
	4:15 PM	22	2	26	1	1	7	6	211	55	9	125	7	472
	4:30 PM	25	4	30	0	0	2	7	225	28	12	102	6	441
	4:45 PM	25	3	19	0	0	2	5	221	30	10	117	3	435
	5:00 PM	26	6	18	0	2	5	7	201	36	11	134	8	454
	5:15 PM	19	3	23	2	0	3	7	239	27	17	126	4	470
	5:30 PM	20	2	17	2	0	9	5	202	53	12	127	3	452
	5:45 PM	24	4	24	5	0	5	3	215	39	7	135	5	466
	VOLUMES	187	25	180	11	4	37	44	1,748	296	90	991	44	3,657
	APPROACH %	48%	6%	46%	21%	8%	71%	2%	84%	14%	8%	88%	4%	
	APP/DEPART	392	/	113	52	/	390	2,088	/	1,939	1,125	/	1,215	0
	BEGIN PEAK HR		5:00 PM											
	VOLUMES	89	15	82	9	2	22	22	857	155	47	522	20	1,842
	APPROACH %	48%	8%	44%	27%	6%	67%	2%	83%	15%	8%	89%	3%	
	PEAK HR FACTOR		0.894			0.750			0.947			0.962		0.980
	APP/DEPART	186	/	57	33	/	204	1,034	/	948	589	/	633	0

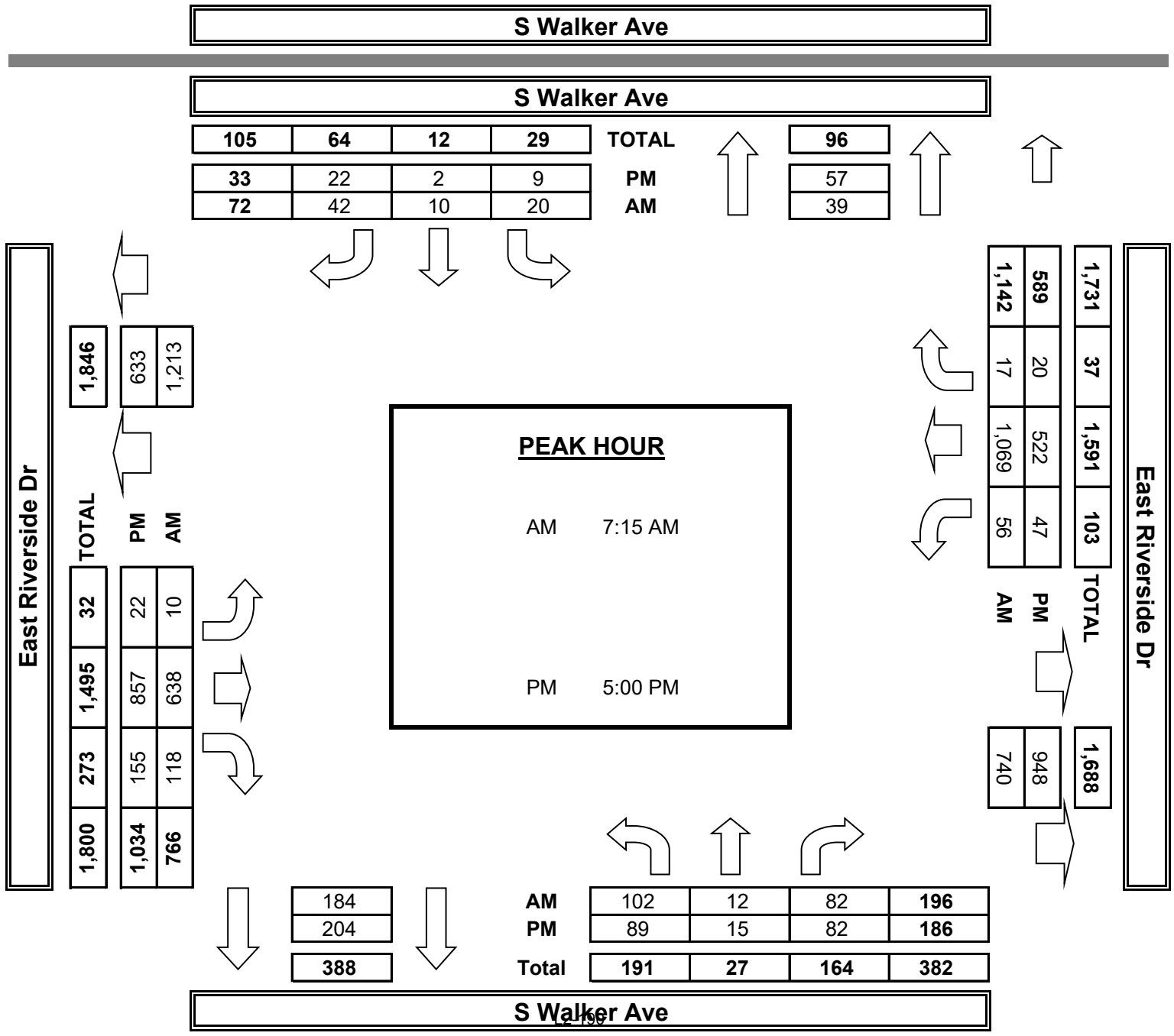
U-TURNS				
NB	SB	EB	WB	TTL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0



AimTD LLC

TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

T101823

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:			PROJECT #:	
Tue, Oct 10, 23	LOCATION:	Ontario	PROJECT #:	SC4225
	NORTH & SOUTH:	S Baker Ave	LOCATION #:	13
	EAST & WEST:	East Riverside Dr	CONTROL:	STOP N/S

NOTES:

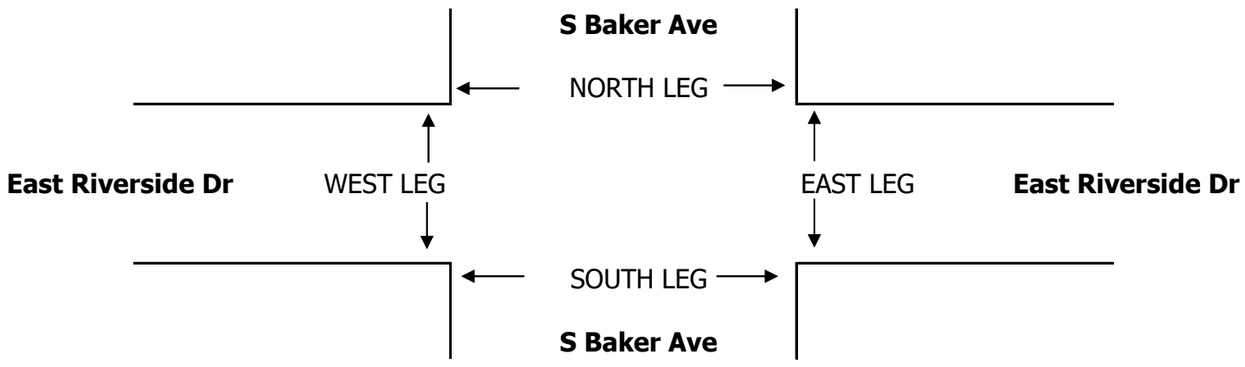
AM / PM / MD / OTHER / OTHER

▲ N ◄ W E ► S ▼

	NORTHBOUND S Baker Ave			SOUTHBOUND S Baker Ave			EASTBOUND East Riverside Dr			WESTBOUND East Riverside Dr			
LANES:	NL 0	NT 1	NR 0	SL 0	ST 1	SR 0	EL 1	ET 1	ER 0	WL 1	WT 2	WR 0	TOTAL
7:00 AM	3	0	2	2	0	4	3	97	1	5	193	1	311
7:15 AM	5	2	7	5	1	7	3	152	3	3	248	3	439
7:30 AM	20	1	3	3	0	15	7	171	3	0	311	2	536
7:45 AM	18	0	9	2	1	8	11	195	4	1	260	3	512
8:00 AM	12	1	1	3	1	10	6	176	5	2	226	3	446
8:15 AM	5	0	5	2	0	4	2	144	0	1	200	7	370
8:30 AM	3	0	0	4	0	7	1	137	1	1	224	2	380
8:45 AM	3	0	1	0	0	4	3	123	0	1	191	4	330
AM VOLUMES	69	4	28	21	3	59	36	1,195	17	14	1,853	25	3,326
AM APPROACH %	68%	4%	28%	25%	4%	71%	3%	96%	1%	1%	98%	1%	
AM APP/DEPART	101	/	65	83	/	34	1,250	/	1,244	1,892	/	1,983	0
AM BEGIN PEAK HR		7:15 AM											
AM VOLUMES	55	4	20	13	3	40	27	694	15	6	1,045	11	1,935
AM APPROACH %	70%	5%	25%	23%	5%	71%	4%	94%	2%	1%	98%	1%	
AM PEAK HR FACTOR		0.731			0.778			0.879			0.848		0.901
AM APP/DEPART	79	/	42	56	/	24	738	/	727	1,062	/	1,142	0
4:00 PM	4	3	10	5	1	5	5	241	5	4	143	2	428
4:15 PM	1	2	9	1	1	5	8	240	4	2	123	7	403
4:30 PM	1	1	8	0	2	6	10	242	5	1	122	4	402
4:45 PM	1	1	1	2	0	2	5	230	1	2	123	1	369
5:00 PM	4	2	8	2	1	2	4	210	3	4	147	7	394
5:15 PM	1	0	3	3	1	6	5	260	5	3	146	7	440
5:30 PM	5	0	2	3	1	3	3	214	5	5	128	13	382
5:45 PM	4	1	8	0	0	6	5	230	2	2	139	9	406
PM VOLUMES	21	10	49	16	7	35	45	1,867	30	23	1,071	50	3,226
PM APPROACH %	26%	13%	61%	27%	12%	59%	2%	96%	2%	2%	94%	4%	
PM APP/DEPART	80	/	106	59	/	60	1,943	/	1,932	1,144	/	1,128	0
PM BEGIN PEAK HR		5:00 PM											
PM VOLUMES	14	3	21	8	3	17	17	914	15	14	560	36	1,623
PM APPROACH %	37%	8%	55%	29%	11%	61%	2%	97%	2%	2%	92%	6%	
PM PEAK HR FACTOR		0.679			0.700			0.877			0.965		0.922
PM APP/DEPART	38	/	56	28	/	32	947	/	943	610	/	592	0

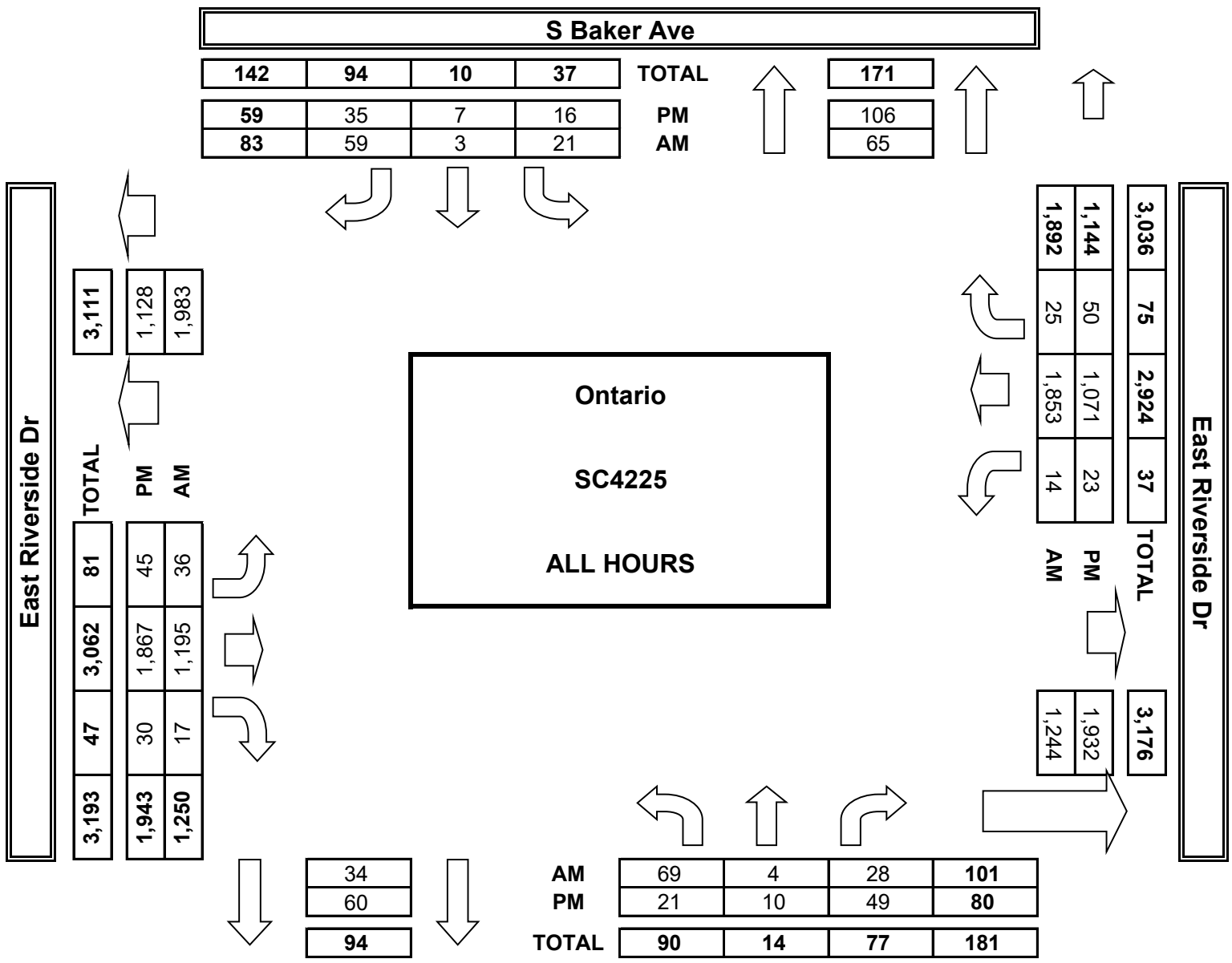
U-TURNS

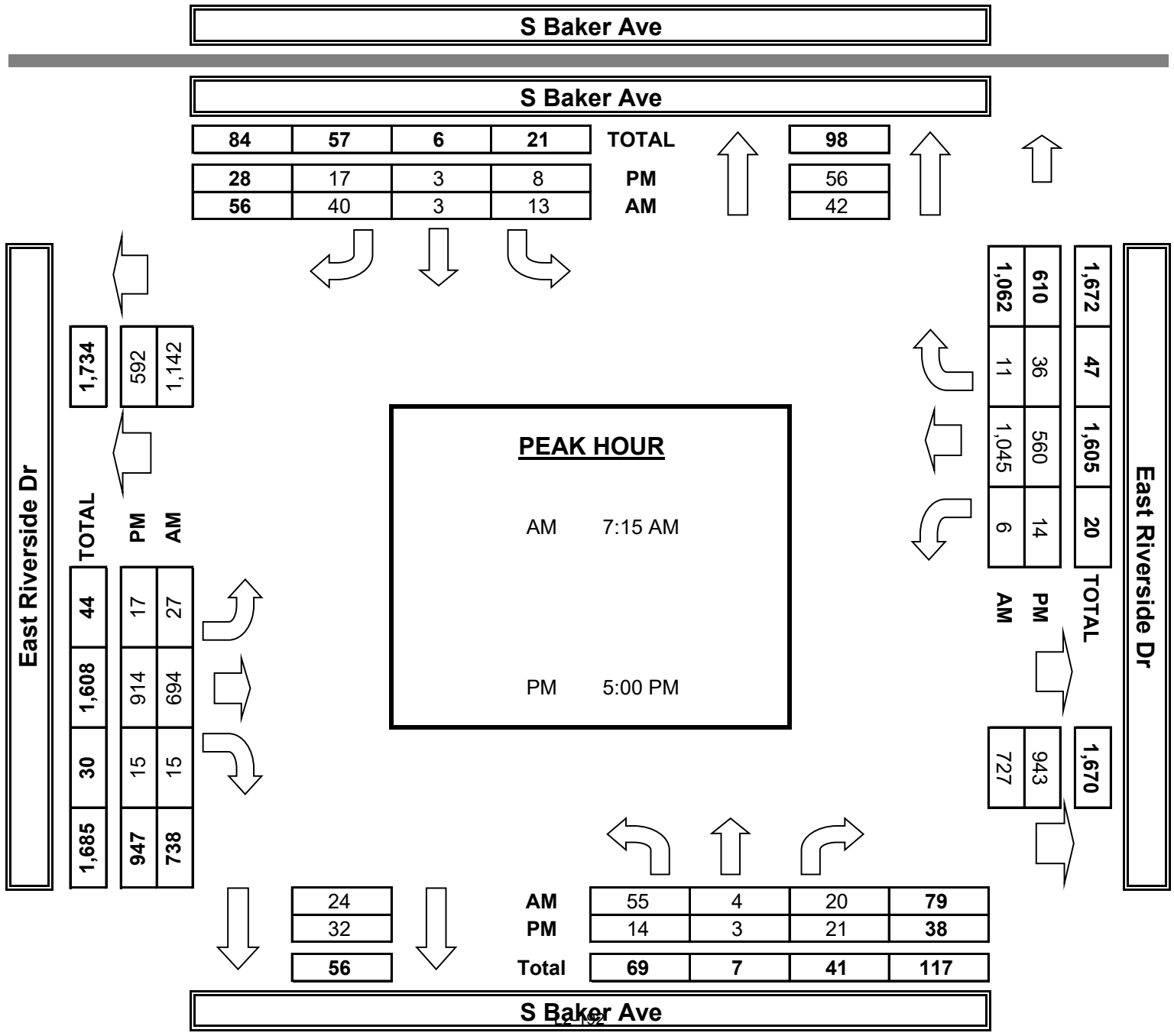
	NB	SB	EB	WB	TTL
AM	0	0	0	0	0
	0	0	0	0	1
	0	0	1	0	1
	0	0	0	0	0
	0	0	0	0	0
	0	0	0	0	0
	0	0	0	0	0
	0	0	0	0	0
	0	0	2	0	2
PM	0	0	0	0	0
	0	1	0	0	1
	0	0	0	0	0
	0	0	0	0	0
	0	0	0	0	0
	0	0	0	0	0
	0	0	0	0	0
	0	0	1	0	1
	0	1	1	0	2



AimTD LLC

TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

T101823

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

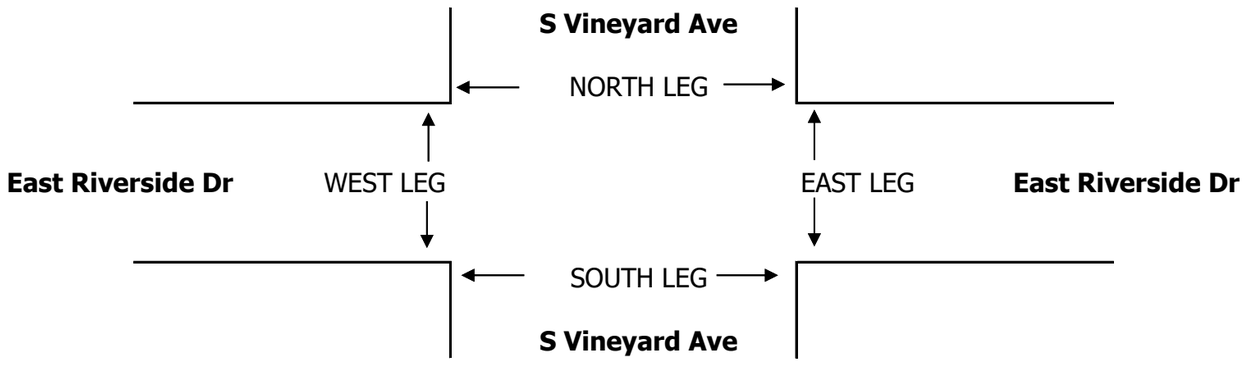
DATE:				
Tue, Oct 10, 23	LOCATION:	Ontario	PROJECT #:	SC4225
	NORTH & SOUTH:	S Vineyard Ave	LOCATION #:	14
	EAST & WEST:	East Riverside Dr	CONTROL:	SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER

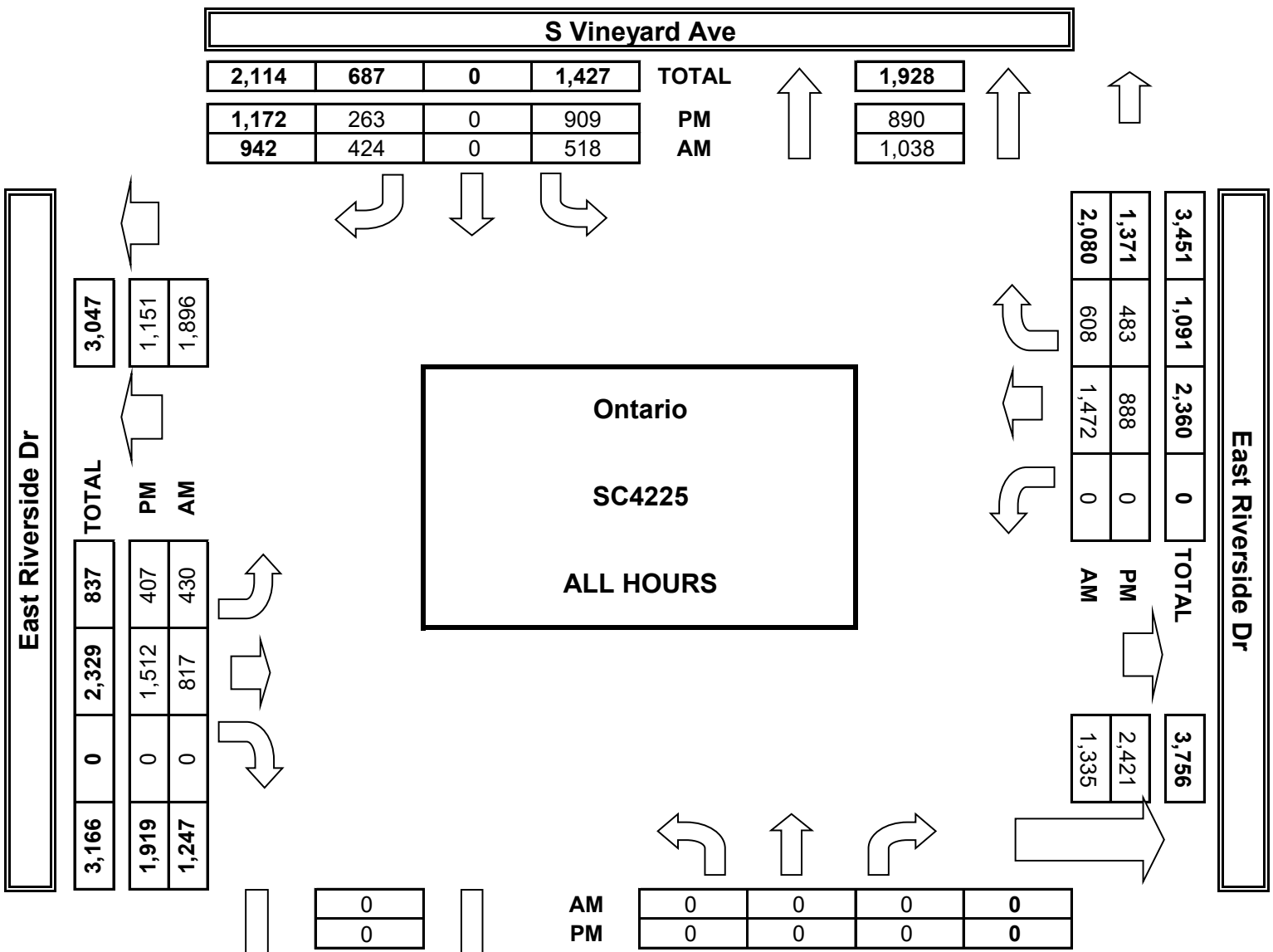
▲ N ◄ W E ► S ▼

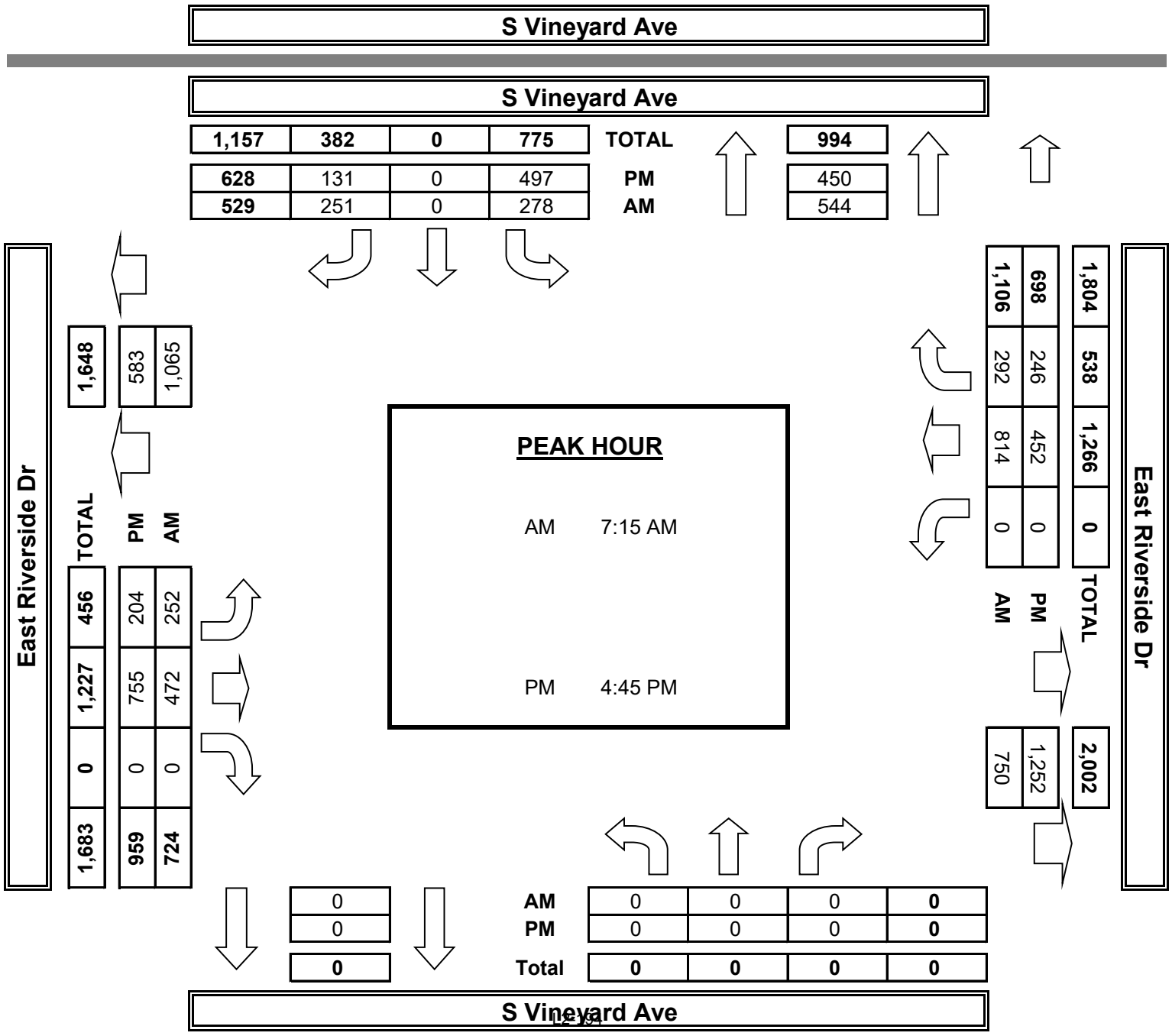
	NORTHBOUND S Vineyard Ave			SOUTHBOUND S Vineyard Ave			EASTBOUND East Riverside Dr			WESTBOUND East Riverside Dr				U-TURNS				
LANES:	NL X	NT X	NR X	SL 1	ST X	SR 1	EL 1	ET 1	ER X	WL X	WT 2	WR 0	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
AM 7:00 AM	0	0	0	55	0	36	38	62	0	0	158	55	404	0	0	0	0	0
7:15 AM	0	0	0	50	0	57	63	96	0	0	196	71	533	0	0	0	0	0
7:30 AM	0	0	0	54	0	76	64	116	0	0	236	55	601	0	0	0	0	0
7:45 AM	0	0	0	84	0	69	76	135	0	0	196	65	625	0	0	0	0	0
8:00 AM	0	0	0	90	0	49	49	125	0	0	186	101	600	0	0	0	0	0
8:15 AM	0	0	0	66	0	45	52	95	0	0	163	81	502	0	0	0	0	0
8:30 AM	0	0	0	40	0	45	44	108	0	0	184	93	514	0	0	0	0	0
8:45 AM	0	0	0	79	0	47	44	80	0	0	153	87	490	0	0	0	0	0
VOLUMES	0	0	0	518	0	424	430	817	0	0	1,472	608	4,269	0	0	0	0	0
APPROACH %	0%	0%	0%	55%	0%	45%	34%	66%	0%	0%	71%	29%						
APP/DEPART	0	/	1,038	942	/	0	1,247	/	1,335	2,080	/	1,896	0					
BEGIN PEAK HR		7:15 AM																
VOLUMES	0	0	0	278	0	251	252	472	0	0	814	292	2,359					
APPROACH %	0%	0%	0%	53%	0%	47%	35%	65%	0%	0%	74%	26%						
PEAK HR FACTOR		0.000			0.864			0.858			0.950		0.944					
APP/DEPART	0	/	544	529	/	0	724	/	750	1,106	/	1,065	0					
PM 4:00 PM	0	0	0	117	0	32	51	198	0	0	130	49	577	0	0	0	0	0
4:15 PM	0	0	0	99	0	32	57	188	0	0	96	76	548	0	0	0	0	0
4:30 PM	0	0	0	93	0	26	47	183	0	0	101	52	502	0	0	0	0	0
4:45 PM	0	0	0	122	0	28	57	191	0	0	99	60	557	0	0	0	0	0
5:00 PM	0	0	0	123	0	33	45	188	0	0	128	75	592	0	0	0	0	0
5:15 PM	0	0	0	130	0	38	49	191	0	0	118	50	576	0	0	0	0	0
5:30 PM	0	0	0	122	0	32	53	185	0	0	107	61	560	0	0	0	0	0
5:45 PM	0	0	0	103	0	42	48	188	0	0	109	60	550	0	0	0	0	0
VOLUMES	0	0	0	909	0	263	407	1,512	0	0	888	483	4,462	0	0	0	0	0
APPROACH %	0%	0%	0%	78%	0%	22%	21%	79%	0%	0%	65%	35%						
APP/DEPART	0	/	890	1,172	/	0	1,919	/	2,421	1,371	/	1,151	0					
BEGIN PEAK HR		4:45 PM																
VOLUMES	0	0	0	497	0	131	204	755	0	0	452	246	2,285					
APPROACH %	0%	0%	0%	79%	0%	21%	21%	79%	0%	0%	65%	35%						
PEAK HR FACTOR		0.000			0.935			0.967			0.860		0.965					
APP/DEPART	0	/	450	628	/	0	959	/	1,252	698	/	583	0					



AimTD LLC

TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

T101823

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

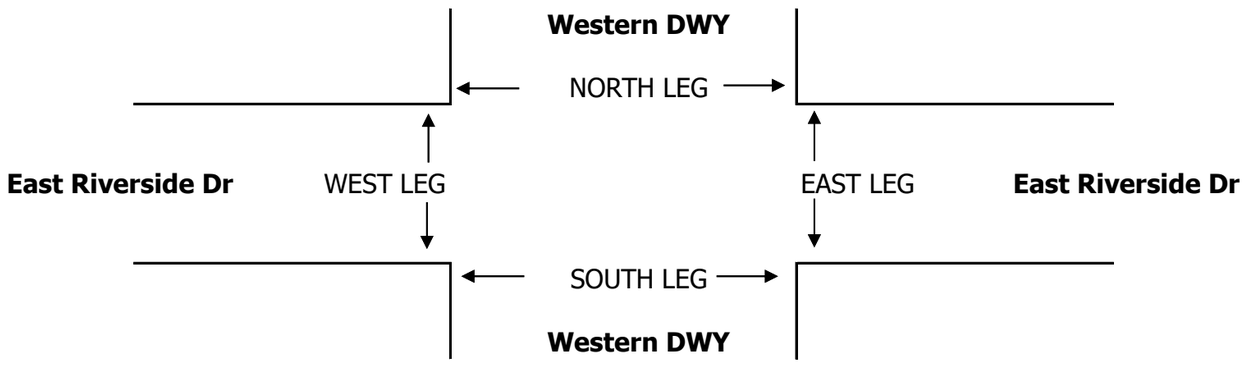
DATE:				
Tue, Oct 10, 23	LOCATION:	Ontario	PROJECT #:	SC4225
	NORTH & SOUTH:	Western DWY	LOCATION #:	15
	EAST & WEST:	East Riverside Dr	CONTROL:	NO CONTROL

NOTES:

AM / PM / MD / OTHER / OTHER

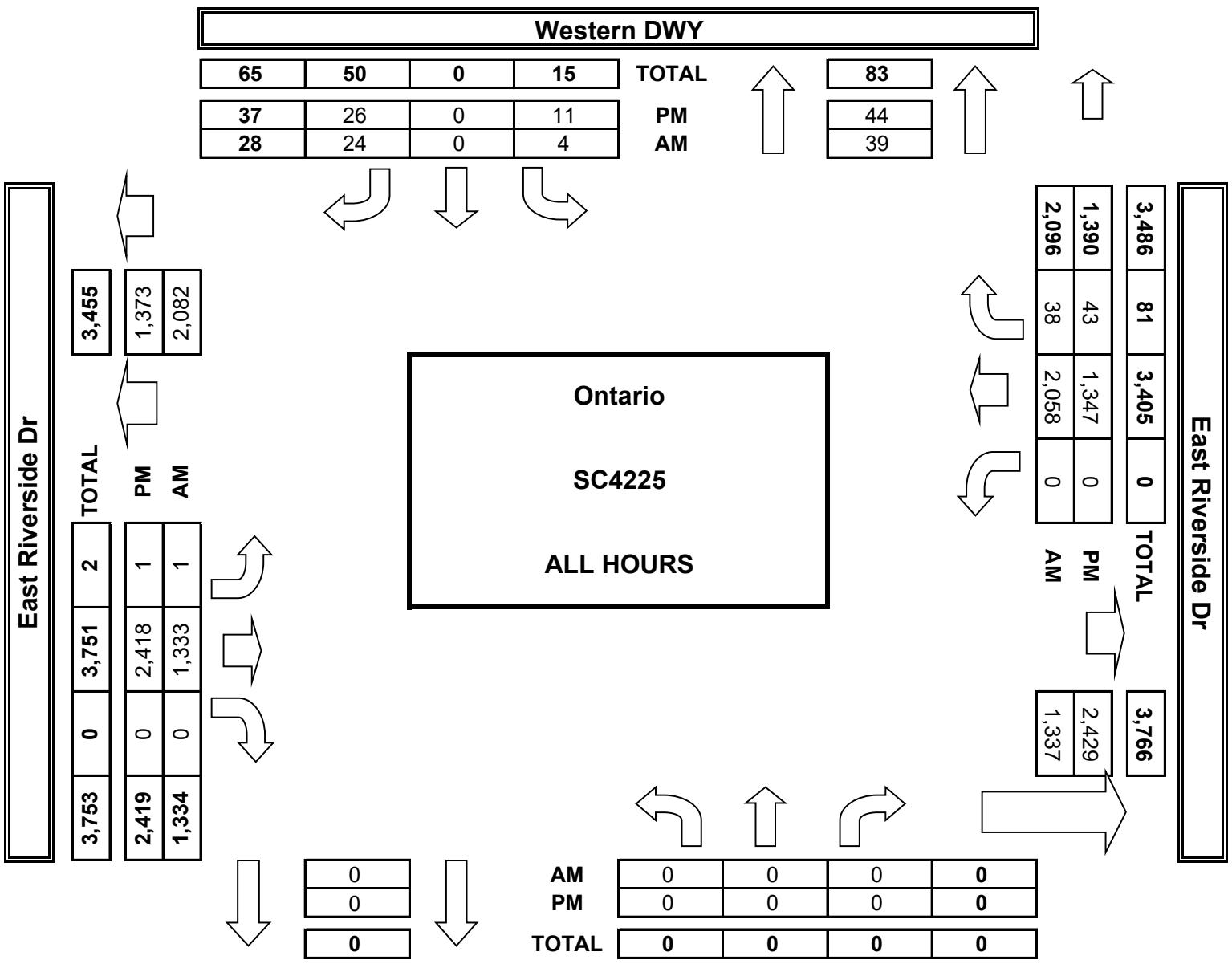
▲ N
◄ W E ►
S ▼

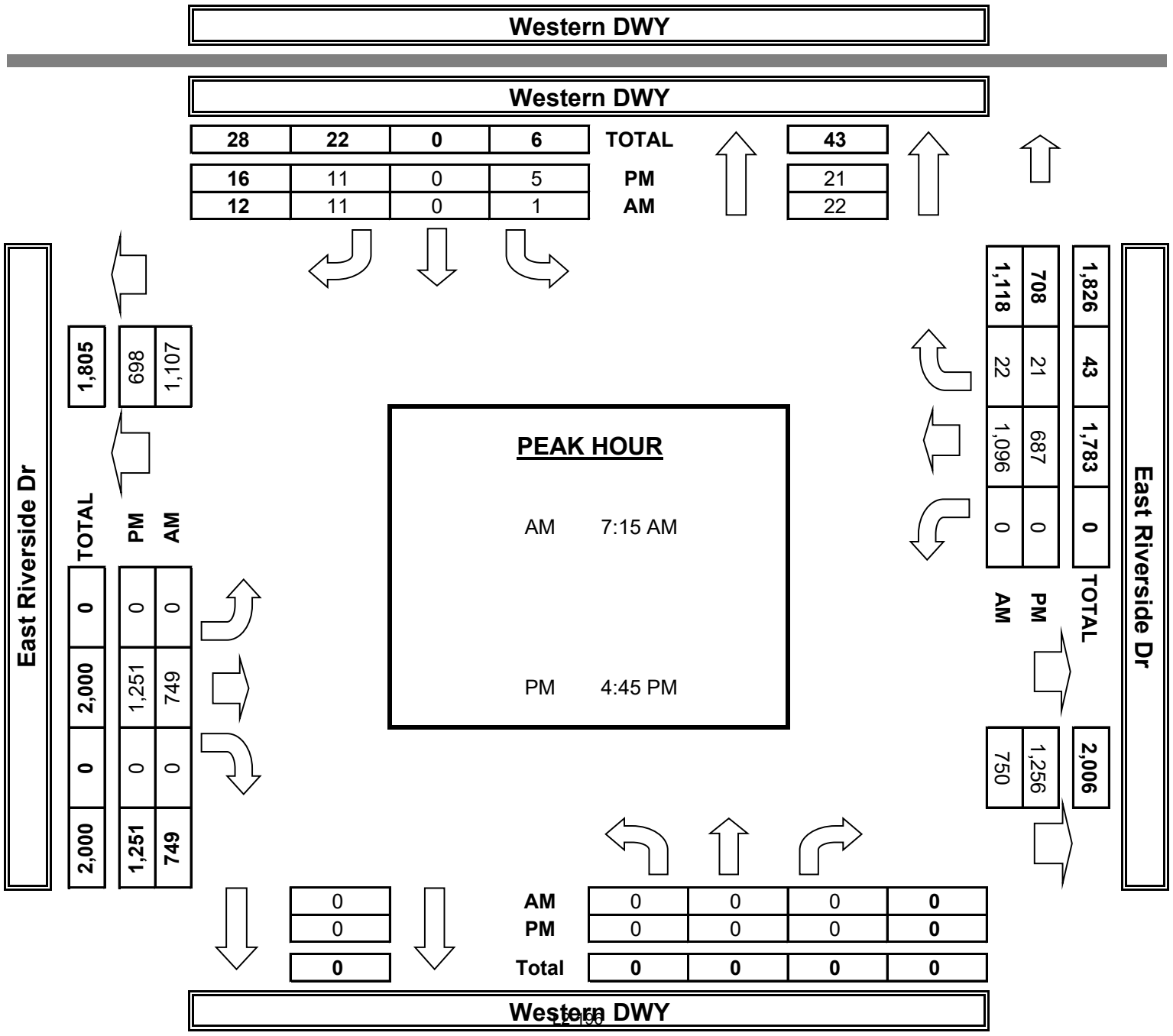
	NORTHBOUND Western DWY			SOUTHBOUND Western DWY			EASTBOUND East Riverside Dr			WESTBOUND East Riverside Dr				U-TURNS				
LANES:	NL X	NT X	NR X	SL 0	ST X	SR 0	EL 0	ET 1	ER X	WL X	WT 2	WR 0	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
AM 7:00 AM	0	0	0	1	0	4	1	116	0	0	209	2	333	0	0	0	0	0
7:15 AM	0	0	0	1	0	2	0	146	0	0	266	3	418	0	0	0	0	0
7:30 AM	0	0	0	0	0	2	0	170	0	0	289	7	468	0	0	0	0	0
7:45 AM	0	0	0	0	0	6	0	218	0	0	255	5	484	0	0	0	0	0
8:00 AM	0	0	0	0	0	1	0	215	0	0	286	7	509	0	0	0	0	0
8:15 AM	0	0	0	0	0	3	0	161	0	0	242	5	411	0	0	0	0	0
8:30 AM	0	0	0	2	0	2	0	148	0	0	275	4	431	0	0	0	0	0
8:45 AM	0	0	0	0	0	4	0	159	0	0	236	5	404	0	0	0	0	0
VOLUMES	0	0	0	4	0	24	1	1,333	0	0	2,058	38	3,458	0	0	0	0	0
APPROACH %	0%	0%	0%	14%	0%	86%	0%	100%	0%	0%	98%	2%						
APP/DEPART	0	/	39	28	/	0	1,334	/	1,337	2,096	/	2,082	0					
BEGIN PEAK HR		7:15 AM																
VOLUMES	0	0	0	1	0	11	0	749	0	0	1,096	22	1,879					
APPROACH %	0%	0%	0%	8%	0%	92%	0%	100%	0%	0%	98%	2%						
PEAK HR FACTOR		0.000			0.500			0.859			0.944		0.923					
APP/DEPART	0	/	22	12	/	0	749	/	750	1,118	/	1,107	0					
PM 4:00 PM	0	0	0	1	0	5	0	315	0	0	174	9	504	0	0	0	0	0
4:15 PM	0	0	0	1	0	3	0	287	0	0	170	7	468	0	0	0	0	0
4:30 PM	0	0	0	3	0	3	1	275	0	0	151	3	436	0	0	0	0	0
4:45 PM	0	0	0	2	0	3	0	312	0	0	156	6	479	0	0	0	0	0
5:00 PM	0	0	0	3	0	4	0	311	0	0	199	3	520	0	0	0	0	0
5:15 PM	0	0	0	0	0	4	0	321	0	0	164	9	498	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	307	0	0	168	3	478	0	0	0	0	0
5:45 PM	0	0	0	1	0	4	0	290	0	0	165	3	463	0	0	0	0	0
VOLUMES	0	0	0	11	0	26	1	2,418	0	0	1,347	43	3,846	0	0	0	0	0
APPROACH %	0%	0%	0%	30%	0%	70%	0%	100%	0%	0%	97%	3%						
APP/DEPART	0	/	44	37	/	0	2,419	/	2,429	1,390	/	1,373	0					
BEGIN PEAK HR		4:45 PM																
VOLUMES	0	0	0	5	0	11	0	1,251	0	0	687	21	1,975					
APPROACH %	0%	0%	0%	31%	0%	69%	0%	100%	0%	0%	97%	3%						
PEAK HR FACTOR		0.000			0.571			0.974			0.876		0.950					
APP/DEPART	0	/	21	16	/	0	1,251	/	1,256	708	/	698	0					



AimTD LLC

TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

T101823

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

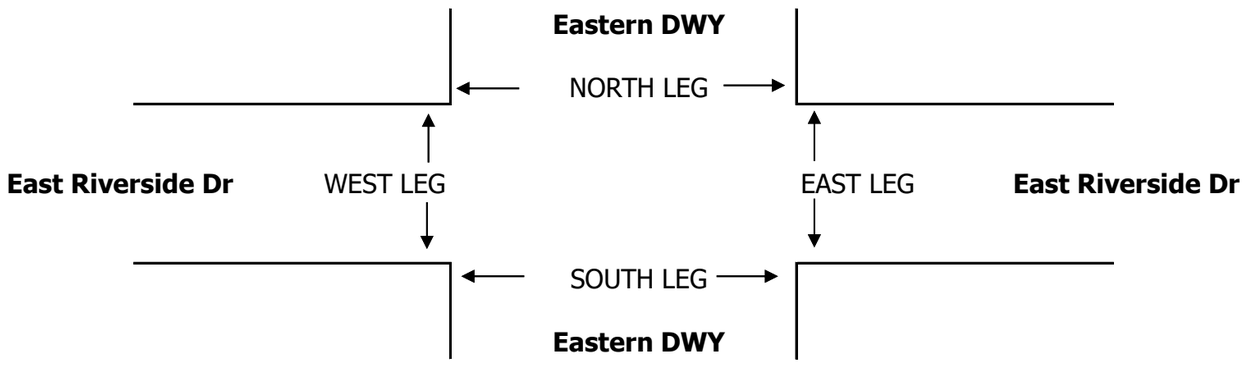
DATE:				
Tue, Oct 10, 23	LOCATION:	Ontario	PROJECT #:	SC4225
	NORTH & SOUTH:	Eastern DWY	LOCATION #:	16
	EAST & WEST:	East Riverside Dr	CONTROL:	NO CONTROL

NOTES:

AM
PM
MD
OTHER
OTHER

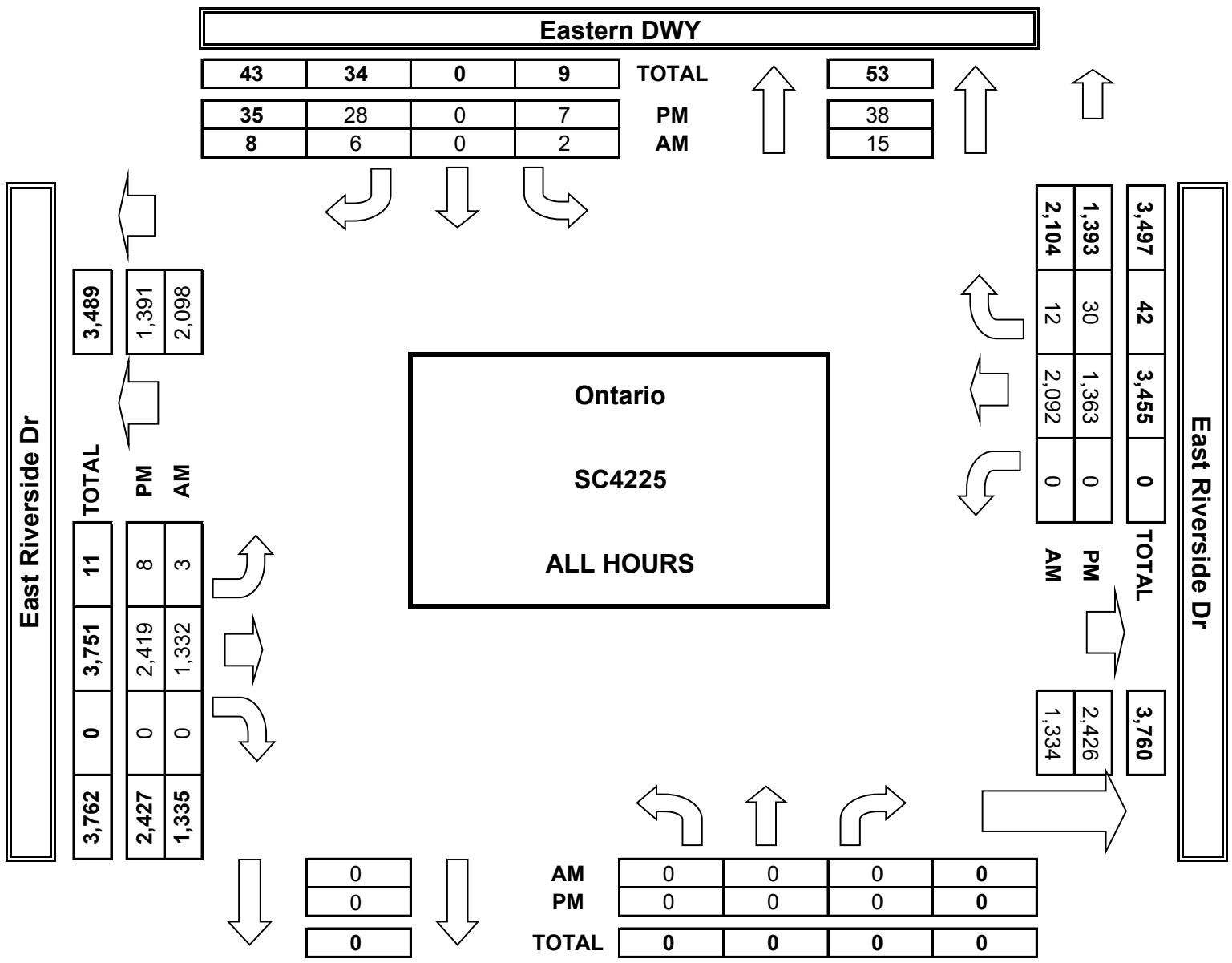
▲ N
◄ W E ►
S ▼

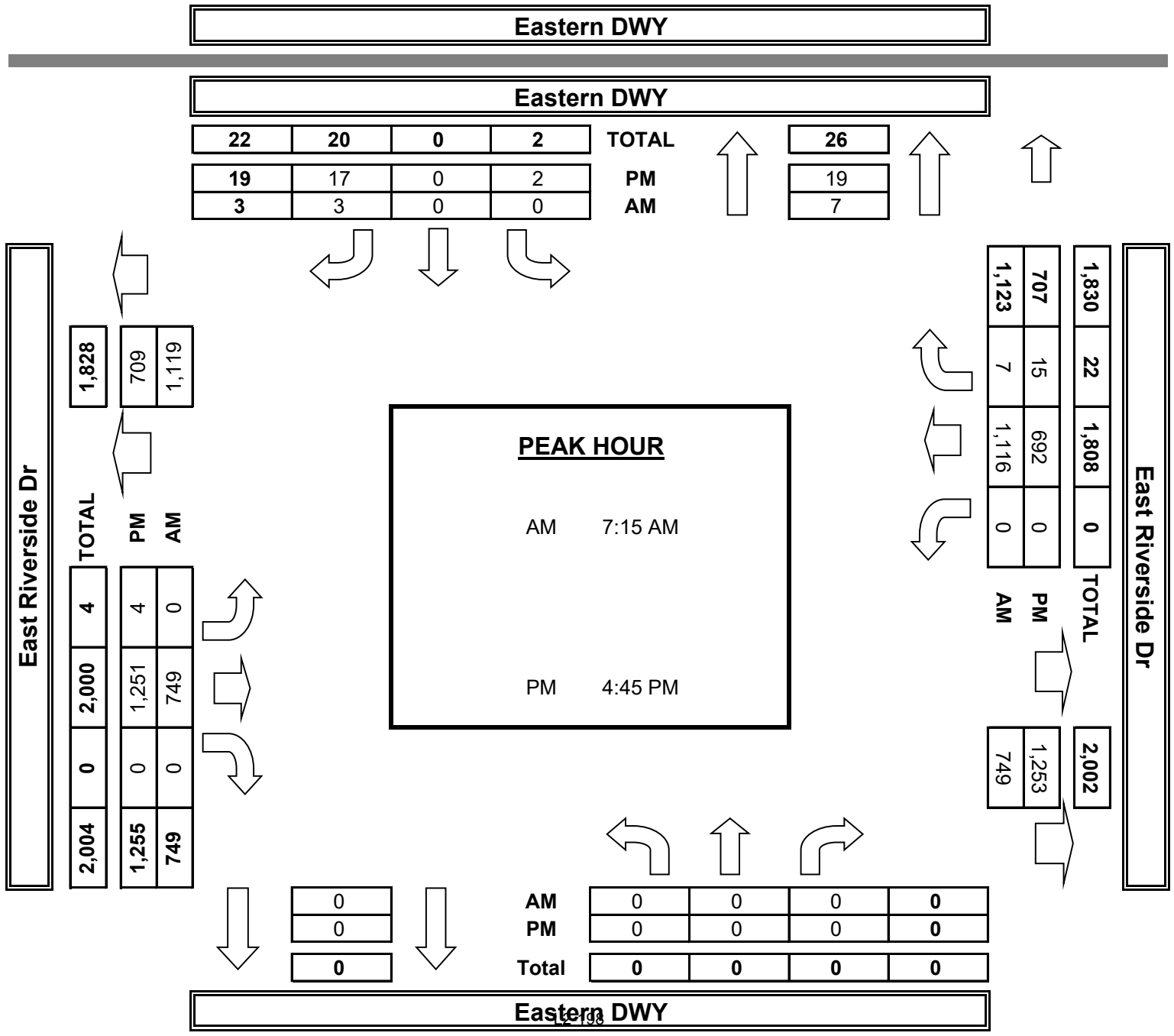
		NORTHBOUND Eastern DWY			SOUTHBOUND Eastern DWY			EASTBOUND East Riverside Dr			WESTBOUND East Riverside Dr				U-TURNS				
	LANES:	NL X	NT X	NR X	SL 0	ST X	SR 0	EL 0	ET 1	ER X	WL X	WT 2	WR 0	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
AM	7:00 AM	0	0	0	0	0	1	0	117	0	0	210	1	329	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	147	0	0	269	1	417	0	0	0	0	0
	7:30 AM	0	0	0	0	0	1	0	170	0	0	295	1	467	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	217	0	0	261	3	481	0	0	0	0	0
	8:00 AM	0	0	0	0	0	2	0	215	0	0	291	2	510	0	0	0	0	0
	8:15 AM	0	0	0	1	0	0	0	161	0	0	247	0	409	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	150	0	0	279	0	429	0	0	0	0	0
	8:45 AM	0	0	0	1	0	2	3	155	0	0	240	4	405	0	0	0	0	0
	VOLUMES	0	0	0	2	0	6	3	1,332	0	0	2,092	12	3,447	0	0	0	0	0
	APPROACH %	0%	0%	0%	25%	0%	75%	0%	100%	0%	0%	99%	1%						
	APP/DEPART	0	/	15	8	/	0	1,335	/	1,334	2,104	/	2,098	0					
	BEGIN PEAK HR		7:15 AM																
	VOLUMES	0	0	0	0	0	3	0	749	0	0	1,116	7	1,875					
	APPROACH %	0%	0%	0%	0%	0%	100%	0%	100%	0%	0%	99%	1%						
	PEAK HR FACTOR		0.000			0.375			0.863			0.948		0.919					
	APP/DEPART	0	/	7	3	/	0	749	/	749	1,123	/	1,119	0					
PM	4:00 PM	0	0	0	1	0	4	2	314	0	0	179	6	506	0	0	0	0	0
	4:15 PM	0	0	0	1	0	3	1	287	0	0	174	2	468	0	0	0	0	0
	4:30 PM	0	0	0	2	0	4	1	277	0	0	150	2	436	0	0	0	0	0
	4:45 PM	0	0	0	0	0	2	1	312	0	0	161	4	480	0	0	0	0	0
	5:00 PM	0	0	0	0	0	8	3	311	0	0	194	5	521	0	0	0	0	0
	5:15 PM	0	0	0	0	0	4	0	321	0	0	169	4	498	0	0	0	0	0
	5:30 PM	0	0	0	2	0	3	0	307	0	0	168	2	482	0	0	0	0	0
	5:45 PM	0	0	0	1	0	0	0	290	0	0	168	5	464	0	0	0	0	0
	VOLUMES	0	0	0	7	0	28	8	2,419	0	0	1,363	30	3,855	0	0	0	0	0
	APPROACH %	0%	0%	0%	20%	0%	80%	0%	100%	0%	0%	98%	2%						
	APP/DEPART	0	/	38	35	/	0	2,427	/	2,426	1,393	/	1,391	0					
	BEGIN PEAK HR		4:45 PM																
	VOLUMES	0	0	0	2	0	17	4	1,251	0	0	692	15	1,981					
	APPROACH %	0%	0%	0%	11%	0%	89%	0%	100%	0%	0%	98%	2%						
	PEAK HR FACTOR		0.000			0.594			0.977			0.888		0.951					
	APP/DEPART	0	/	19	19	/	0	1,255	/	1,253	707	/	709	0					



AimTD LLC

TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

T101823

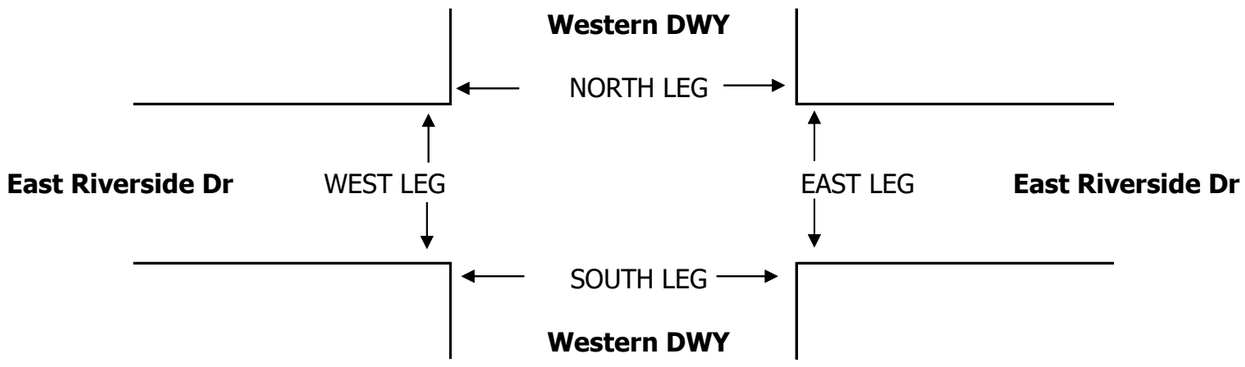
PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:				
Tue, Oct 10, 23	LOCATION:	Ontario	PROJECT #:	SC4225
	NORTH & SOUTH:	Western DWY	LOCATION #:	17
	EAST & WEST:	East Riverside Dr	CONTROL:	NO CONTROL

NOTES:

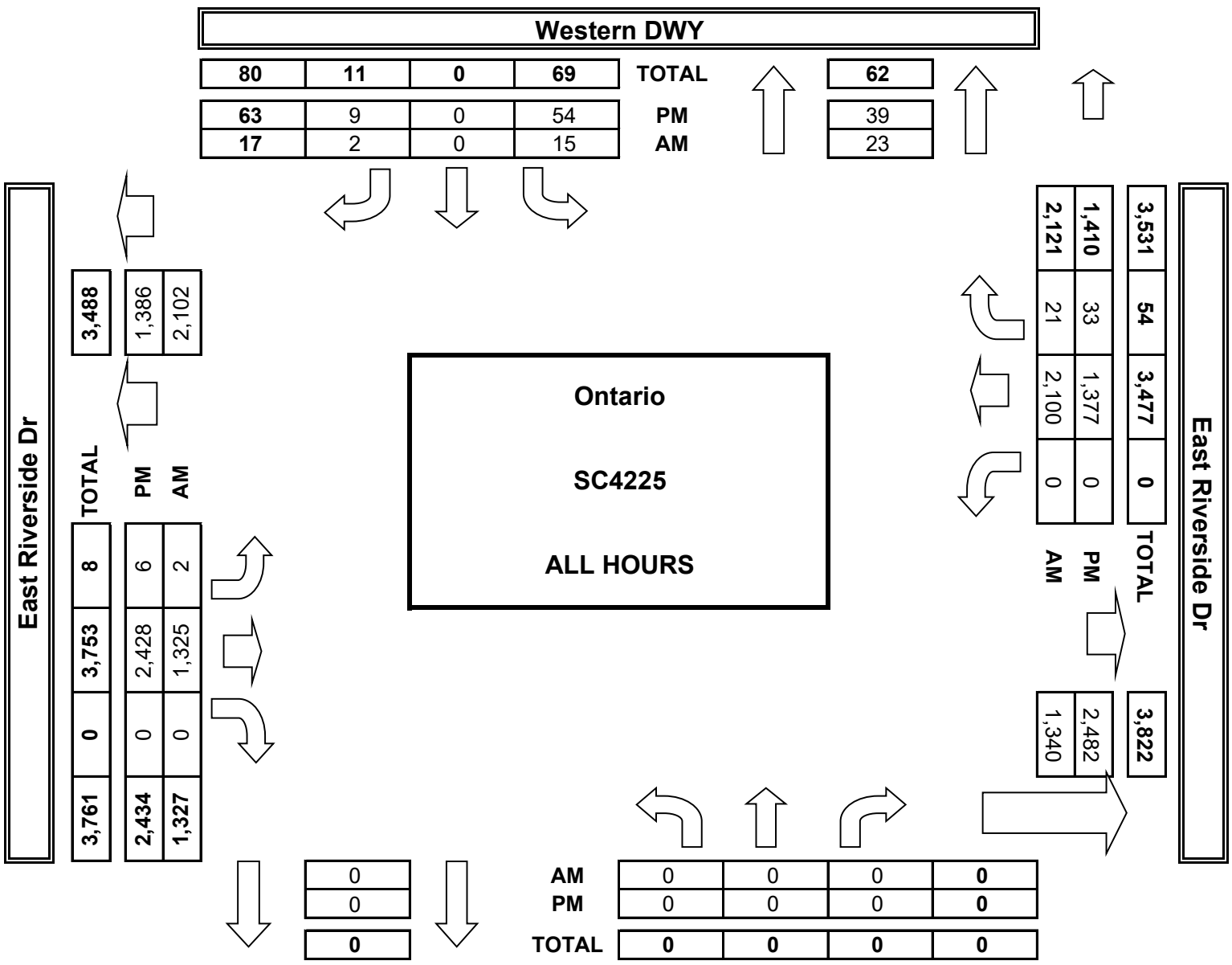
AM		▲ N	
PM			
MD	◄ W		E ►
OTHER		S	
OTHER		▼	

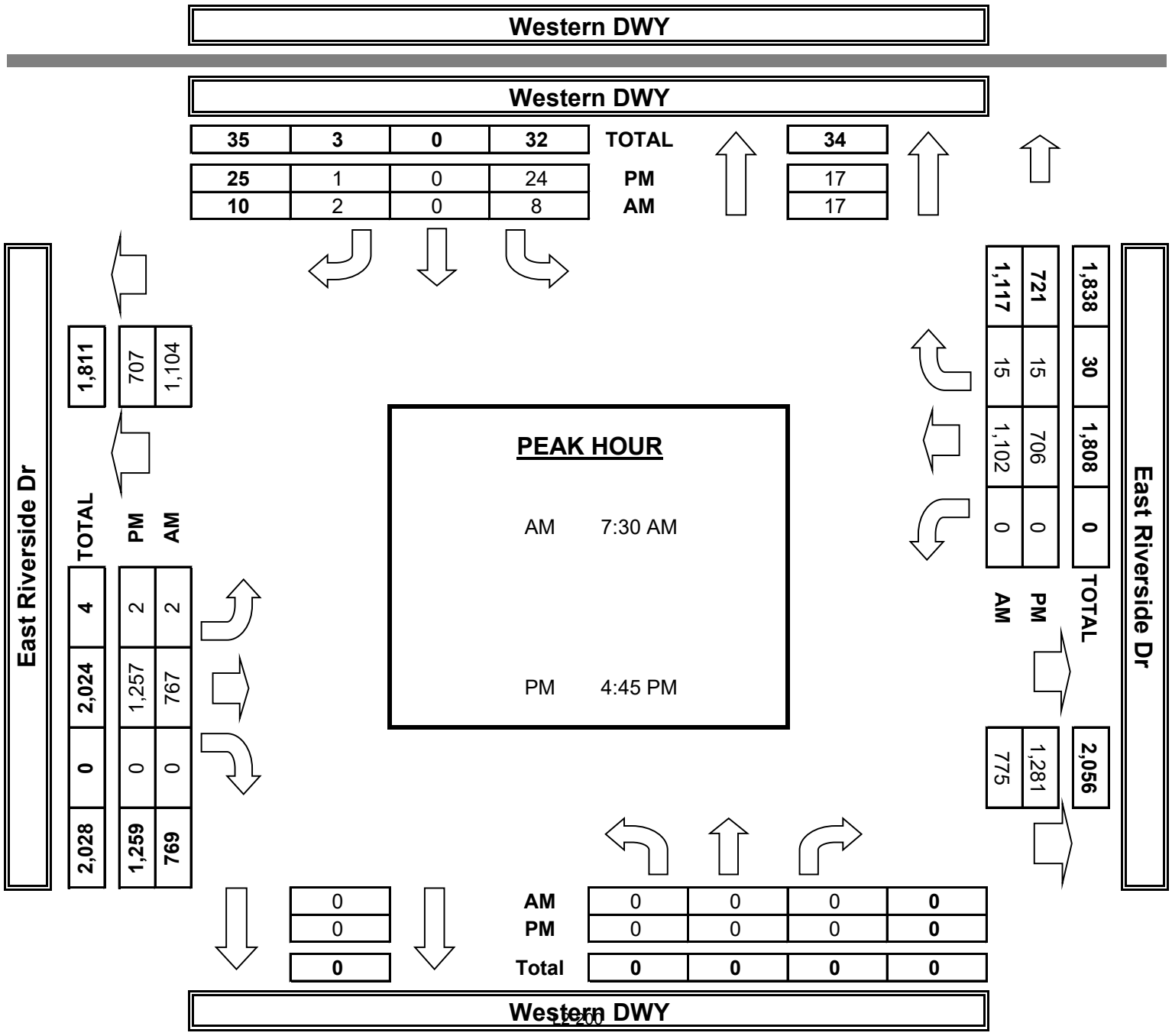
		NORTHBOUND Western DWY			SOUTHBOUND Western DWY			EASTBOUND East Riverside Dr			WESTBOUND East Riverside Dr				U-TURNS				
	LANES:	NL X	NT X	NR X	SL 0	ST X	SR 0	EL 0	ET 1	ER X	WL X	WT 2	WR 0	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
AM	7:00 AM	0	0	0	0	0	0	0	110	0	0	215	0	325	0	0	0	0	0
	7:15 AM	0	0	0	3	0	0	0	142	0	0	265	1	411	0	0	0	0	0
	7:30 AM	0	0	0	2	0	1	0	173	0	0	306	8	490	0	0	0	0	0
	7:45 AM	0	0	0	1	0	0	0	203	0	0	255	5	464	0	0	0	0	0
	8:00 AM	0	0	0	3	0	0	0	211	0	0	299	2	515	0	0	0	0	0
	8:15 AM	0	0	0	2	0	1	2	180	0	0	242	0	427	0	0	0	0	0
	8:30 AM	0	0	0	3	0	0	0	145	0	0	269	3	420	0	0	0	0	0
	8:45 AM	0	0	0	1	0	0	0	161	0	0	249	2	413	0	0	0	0	0
	VOLUMES	0	0	0	15	0	2	2	1,325	0	0	2,100	21	3,465	0	0	0	0	0
	APPROACH %	0%	0%	0%	88%	0%	12%	0%	100%	0%	0%	99%	1%						
	APP/DEPART	0	/	23	17	/	0	1,327	/	1,340	2,121	/	2,102	0					
	BEGIN PEAK HR		7:30 AM																
	VOLUMES	0	0	0	8	0	2	2	767	0	0	1,102	15	1,896					
	APPROACH %	0%	0%	0%	80%	0%	20%	0%	100%	0%	0%	99%	1%						
	PEAK HR FACTOR		0.000			0.833			0.911			0.889		0.920					
	APP/DEPART	0	/	17	10	/	0	769	/	775	1,117	/	1,104	0					
PM	4:00 PM	0	0	0	5	0	5	2	303	0	0	171	3	489	0	0	0	0	0
	4:15 PM	0	0	0	9	0	1	1	312	0	0	184	7	514	0	0	0	0	0
	4:30 PM	0	0	0	8	0	1	0	267	0	0	151	4	431	0	0	0	0	0
	4:45 PM	0	0	0	6	0	0	0	317	0	0	167	3	493	0	0	0	0	0
	5:00 PM	0	0	0	7	0	0	0	320	0	0	187	5	519	0	0	0	0	0
	5:15 PM	0	0	0	5	0	1	2	311	0	0	173	4	496	0	0	0	0	0
	5:30 PM	0	0	0	6	0	0	0	309	0	0	179	3	497	0	0	0	0	0
	5:45 PM	0	0	0	8	0	1	1	289	0	0	165	4	468	0	0	0	0	0
	VOLUMES	0	0	0	54	0	9	6	2,428	0	0	1,377	33	3,907	0	0	0	0	0
	APPROACH %	0%	0%	0%	86%	0%	14%	0%	100%	0%	0%	98%	2%						
	APP/DEPART	0	/	39	63	/	0	2,434	/	2,482	1,410	/	1,386	0					
	BEGIN PEAK HR		4:45 PM																
	VOLUMES	0	0	0	24	0	1	2	1,257	0	0	706	15	2,005					
	APPROACH %	0%	0%	0%	96%	0%	4%	0%	100%	0%	0%	98%	2%						
	PEAK HR FACTOR		0.000			0.893			0.984			0.939		0.966					
	APP/DEPART	0	/	17	25	/	0	1,259	/	1,281	721	/	707	0					



AimTD LLC

TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

T101823

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:			PROJECT #:	
Tue, Oct 10, 23	LOCATION:	Ontario	PROJECT #:	SC4225
	NORTH & SOUTH:	S Whispering Lakes Ln	LOCATION #:	18
	EAST & WEST:	East Riverside Dr	CONTROL:	STOP S

NOTES:

AM / PM / MD / OTHER / OTHER

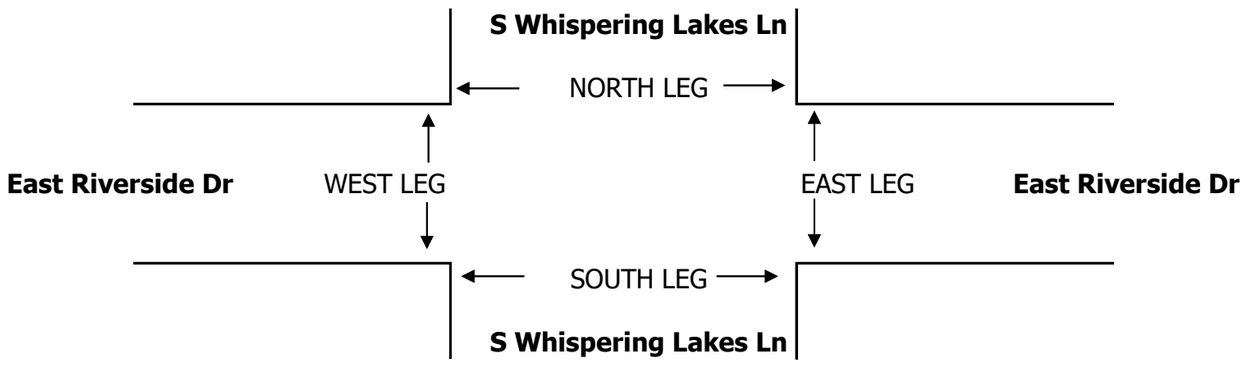
▲ N
◄ W E ►
S ▼

	NORTHBOUND S Whispering Lakes Ln			SOUTHBOUND S Whispering Lakes Ln			EASTBOUND East Riverside Dr			WESTBOUND East Riverside Dr			
LANES:	NL X	NT X	NR X	SL 0	ST X	SR 0	EL 0	ET 1	ER X	WL X	WT 2	WR 0	TOTAL
7:00 AM	0	0	0	5	0	0	3	107	0	0	215	6	336
7:15 AM	0	0	0	5	0	4	1	144	0	0	262	3	419
7:30 AM	0	0	0	3	0	6	2	173	0	0	312	2	498
7:45 AM	0	0	0	3	0	1	4	200	0	0	259	4	471
8:00 AM	0	0	0	7	0	8	5	209	0	0	293	8	530
8:15 AM	0	0	0	3	0	2	2	180	0	0	240	3	430
8:30 AM	0	0	0	1	0	4	0	144	0	0	268	1	418
8:45 AM	0	0	0	2	0	7	4	158	0	0	244	1	416
AM VOLUMES	0	0	0	29	0	32	21	1,315	0	0	2,093	28	3,518
AM APPROACH %	0%	0%	0%	48%	0%	52%	2%	98%	0%	0%	99%	1%	
AM APP/DEPART	0	/	49	61	/	0	1,336	/	1,344	2,121	/	2,125	0
AM BEGIN PEAK HR		7:30 AM											
AM VOLUMES	0	0	0	16	0	17	13	762	0	0	1,104	17	1,929
AM APPROACH %	0%	0%	0%	48%	0%	52%	2%	98%	0%	0%	98%	2%	
AM PEAK HR FACTOR		0.000			0.550			0.905			0.893		0.910
AM APP/DEPART	0	/	30	33	/	0	775	/	778	1,121	/	1,121	0
4:00 PM	0	0	0	2	0	3	2	314	0	0	176	2	499
4:15 PM	0	0	0	3	0	2	1	315	0	0	189	0	510
4:30 PM	0	0	0	4	0	0	3	272	0	0	149	5	433
4:45 PM	0	0	0	8	0	2	1	311	0	0	168	6	496
5:00 PM	0	0	0	12	0	0	3	316	0	0	203	3	537
5:15 PM	0	0	0	7	0	4	4	322	0	0	162	9	508
5:30 PM	0	0	0	3	0	4	5	321	0	0	178	8	519
5:45 PM	0	0	0	11	0	3	4	293	0	0	166	5	482
PM VOLUMES	0	0	0	50	0	18	23	2,464	0	0	1,391	38	3,984
PM APPROACH %	0%	0%	0%	74%	0%	26%	1%	99%	0%	0%	97%	3%	
PM APP/DEPART	0	/	61	68	/	0	2,487	/	2,514	1,429	/	1,409	0
PM BEGIN PEAK HR		4:45 PM											
PM VOLUMES	0	0	0	30	0	10	13	1,270	0	0	711	26	2,060
PM APPROACH %	0%	0%	0%	75%	0%	25%	1%	99%	0%	0%	96%	4%	
PM PEAK HR FACTOR		0.000			0.833			0.984			0.894		0.959
PM APP/DEPART	0	/	39	40	/	0	1,283	/	1,300	737	/	721	0

U-TURNS

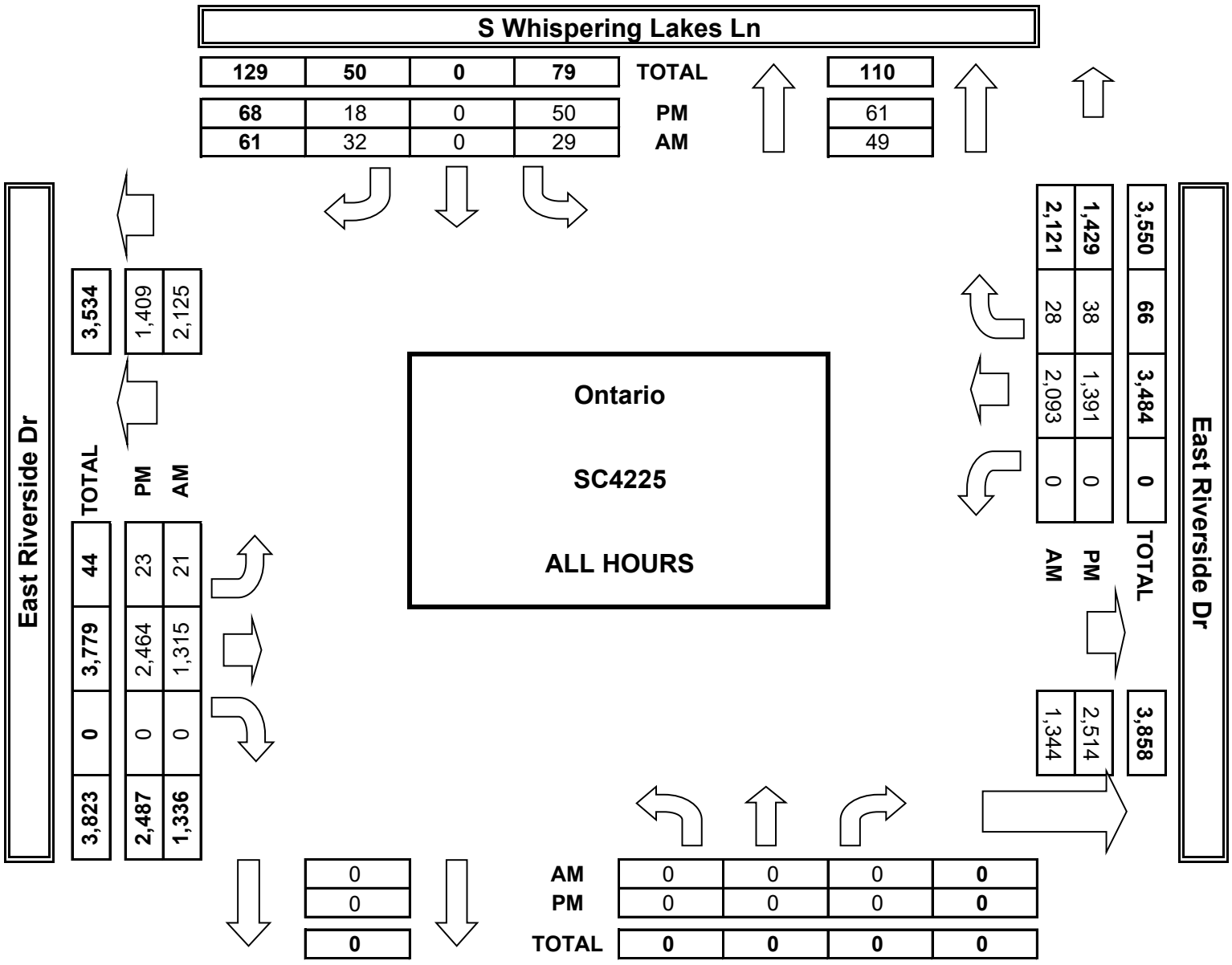
AM	NB	SB	EB	WB	TTL
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
AM VOLUMES	0	0	0	0	0

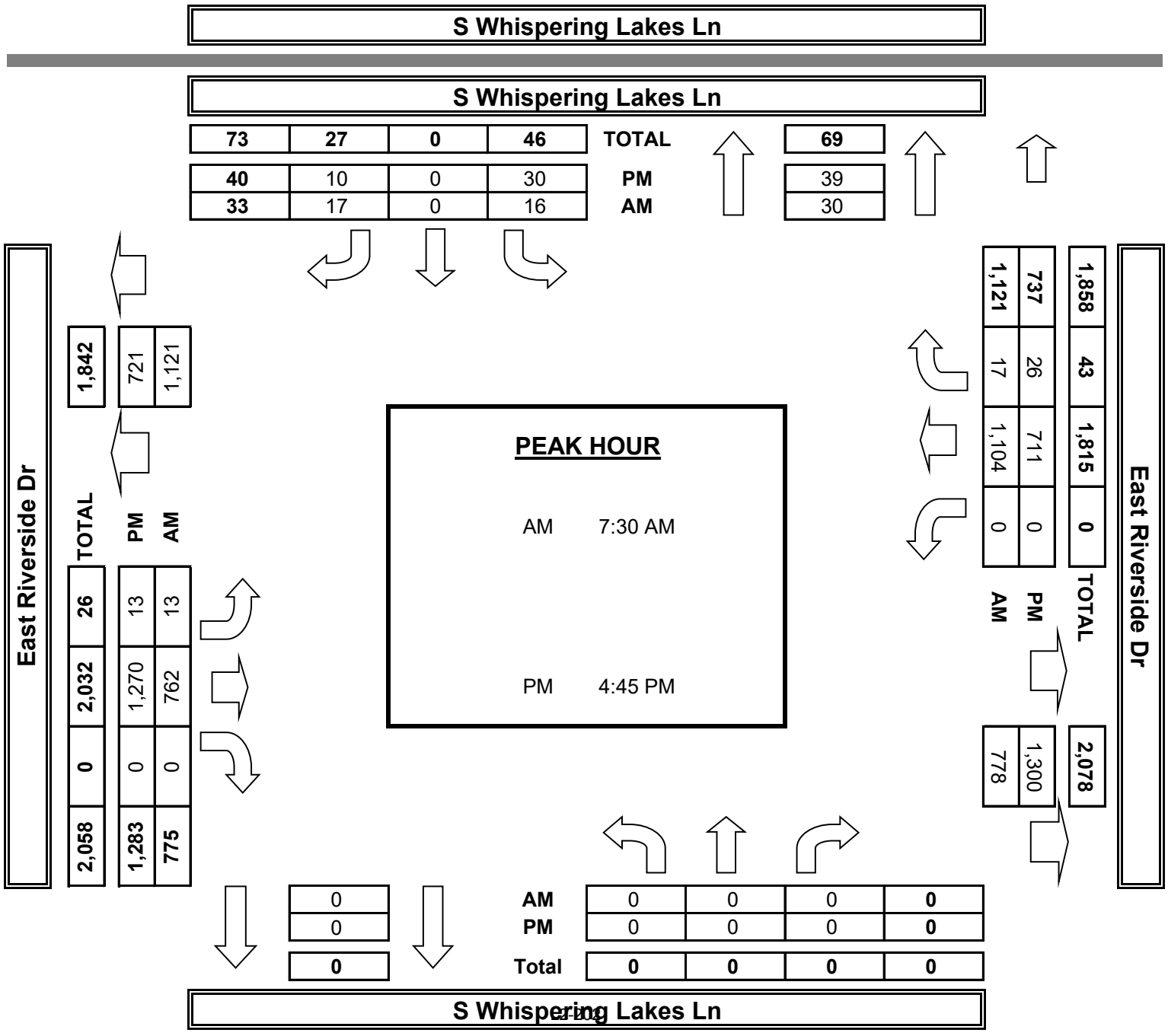
PM	NB	SB	EB	WB	TTL
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
PM VOLUMES	0	0	0	0	0



AimTD LLC

TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

T101823

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Tue, Oct 10, 23

LOCATION: Ontario
NORTH & SOUTH: Driveway
EAST & WEST: East Riverside Dr

PROJECT #: SC4225
LOCATION #: 19
CONTROL: STOP S

NOTES:

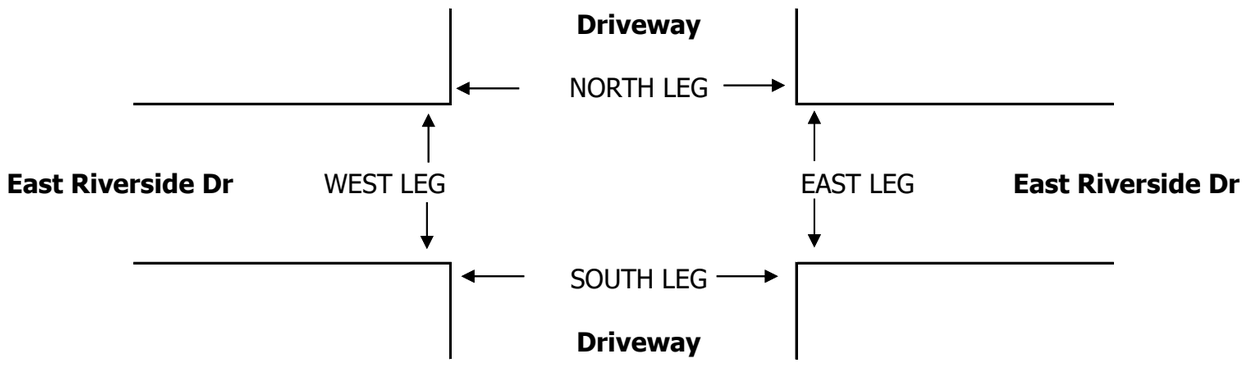
AM
PM
MD
OTHER
OTHER

N ▲
◄ W
E ►
S ▼

		NORTHBOUND Driveway			SOUTHBOUND Driveway			EASTBOUND East Riverside Dr			WESTBOUND East Riverside Dr			
	LANES:	NL X	NT X	NR X	SL 1	ST X	SR 1	EL 1	ET 1	ER X	WL X	WT 2	WR 0	TOTAL
AM	7:00 AM	0	0	0	1	0	0	2	116	0	0	242	3	364
	7:15 AM	0	0	0	0	0	0	5	145	0	0	277	4	431
	7:30 AM	0	0	0	0	0	0	4	165	0	0	289	2	460
	7:45 AM	0	0	0	0	0	0	7	202	0	0	279	3	491
	8:00 AM	0	0	0	2	0	2	11	215	0	0	285	5	520
	8:15 AM	0	0	0	0	0	2	8	160	0	0	231	5	406
	8:30 AM	0	0	0	2	0	0	3	145	0	0	279	0	429
	8:45 AM	0	0	0	2	0	1	3	159	0	0	238	4	407
	VOLUMES	0	0	0	7	0	5	43	1,307	0	0	2,120	26	3,509
	APPROACH %	0%	0%	0%	58%	0%	42%	3%	97%	0%	0%	99%	1%	
	APP/DEPART	0	/	69	12	/	0	1,350	/	1,315	2,147	/	2,125	0
	BEGIN PEAK HR		7:15 AM											
	VOLUMES	0	0	0	2	0	2	27	727	0	0	1,130	14	1,902
	APPROACH %	0%	0%	0%	50%	0%	50%	4%	96%	0%	0%	99%	1%	
	PEAK HR FACTOR		0.000			0.250			0.834			0.983		0.914
	APP/DEPART	0	/	41	4	/	0	754	/	729	1,144	/	1,132	0
PM	4:00 PM	0	0	0	0	0	3	2	315	0	0	163	1	484
	4:15 PM	0	0	0	4	0	5	2	316	0	0	178	2	507
	4:30 PM	0	0	0	6	0	2	1	275	0	0	159	2	445
	4:45 PM	0	0	0	2	0	1	0	321	0	0	193	0	517
	5:00 PM	0	0	0	6	0	9	2	320	0	0	179	5	521
	5:15 PM	0	0	0	3	0	3	3	321	0	0	175	3	508
	5:30 PM	0	0	0	0	0	4	1	335	0	0	173	2	515
	5:45 PM	0	0	0	2	0	5	0	303	0	0	169	1	480
	VOLUMES	0	0	0	23	0	32	11	2,506	0	0	1,389	16	3,977
	APPROACH %	0%	0%	0%	42%	0%	58%	0%	100%	0%	0%	99%	1%	
	APP/DEPART	0	/	27	55	/	0	2,517	/	2,529	1,405	/	1,421	0
	BEGIN PEAK HR		4:45 PM											
	VOLUMES	0	0	0	11	0	17	6	1,297	0	0	720	10	2,061
	APPROACH %	0%	0%	0%	39%	0%	61%	0%	100%	0%	0%	99%	1%	
	PEAK HR FACTOR		0.000			0.467			0.969			0.946		0.989
	APP/DEPART	0	/	16	28	/	0	1,303	/	1,308	730	/	737	0

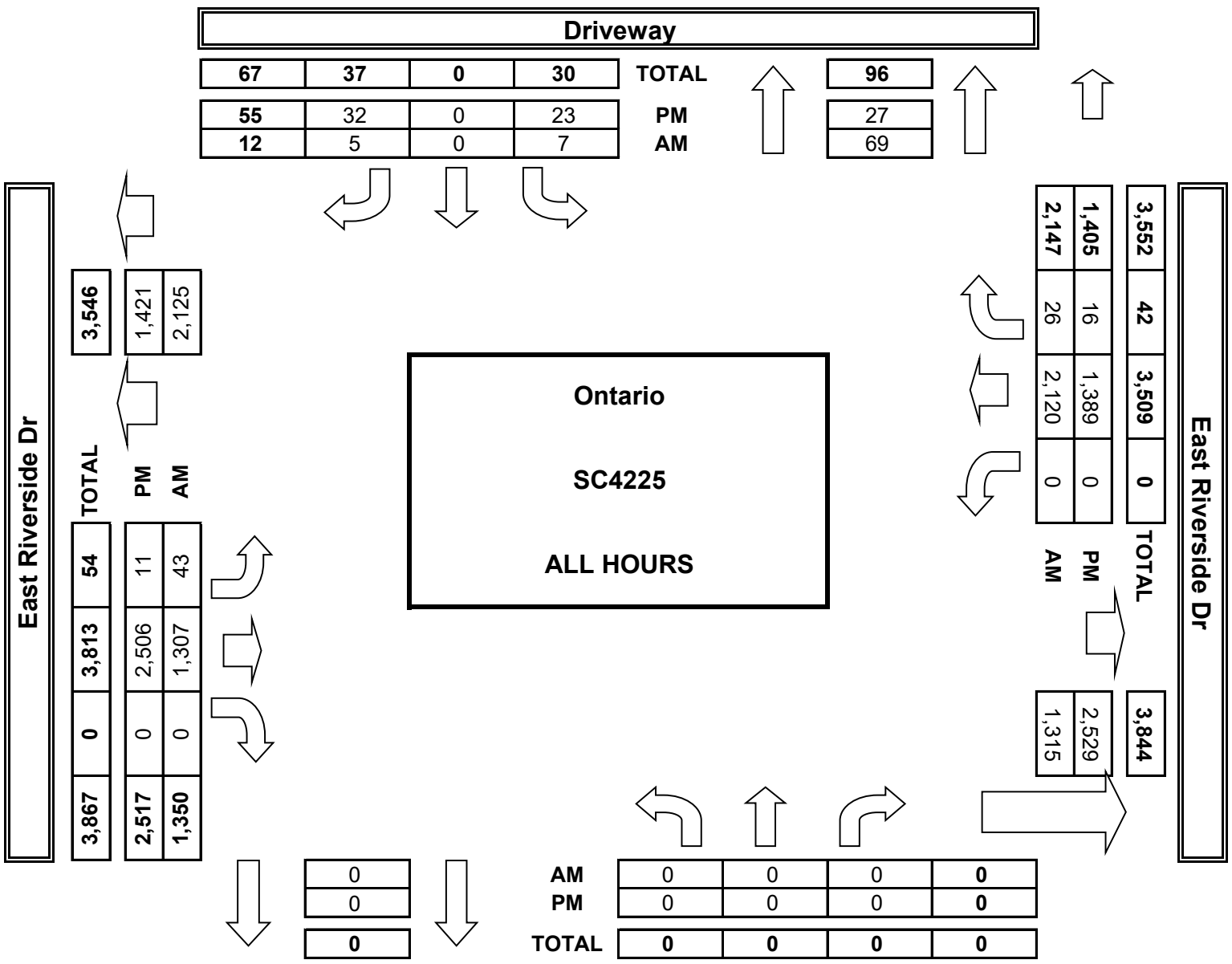
U-TURNS

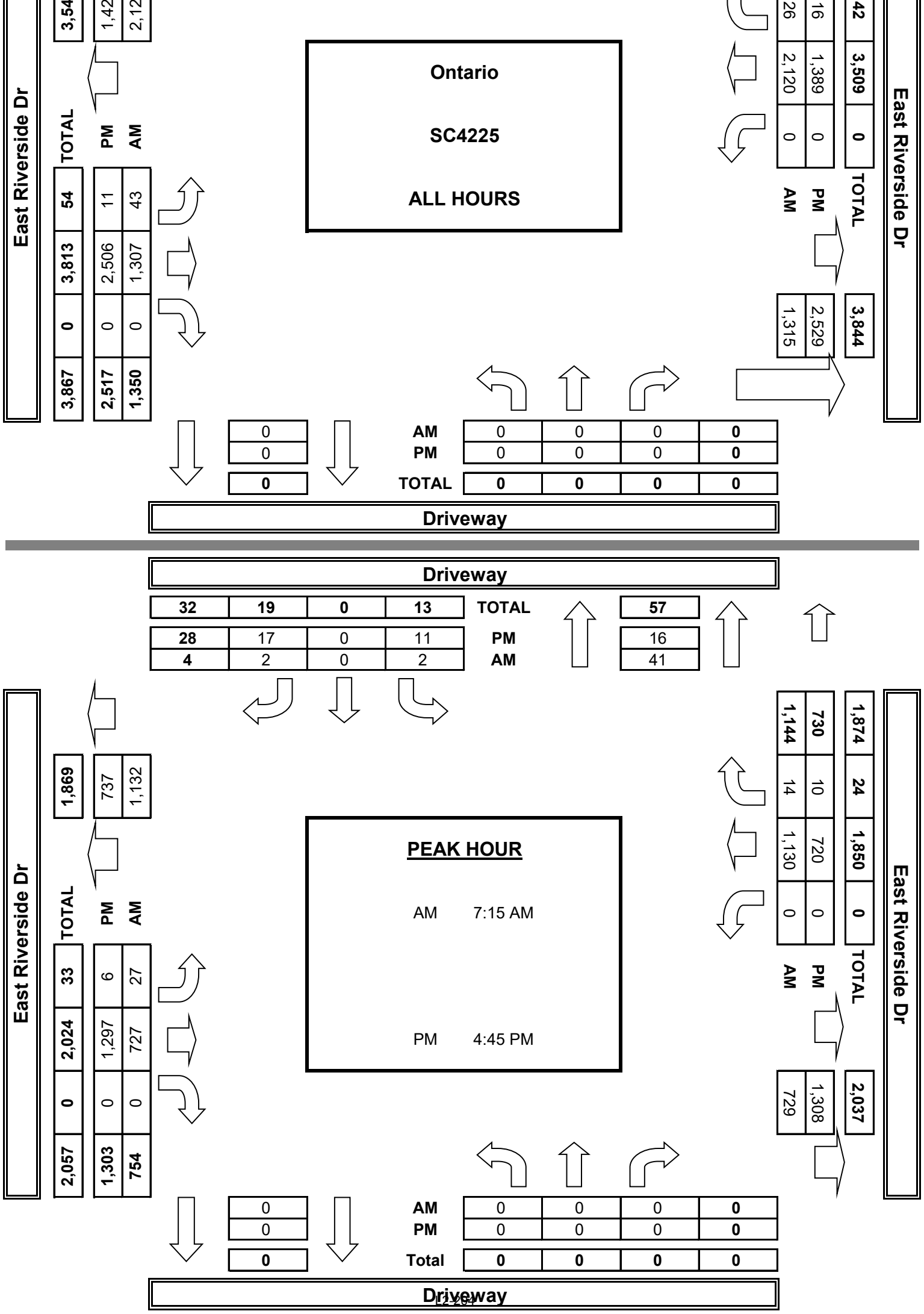
NB	SB	EB	WB	TTL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	1	1
0	0	0	0	0
0	0	0	0	0
0	0	0	1	1
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0



AimTD LLC

TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

T101823

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:				
Tue, Oct 10, 23	LOCATION:	Ontario	PROJECT #:	SC4225
	NORTH & SOUTH:	Ontario Ave	LOCATION #:	20
	EAST & WEST:	East Riverside Dr	CONTROL:	STOP N

NOTES:

AM
PM
MD
OTHER
OTHER

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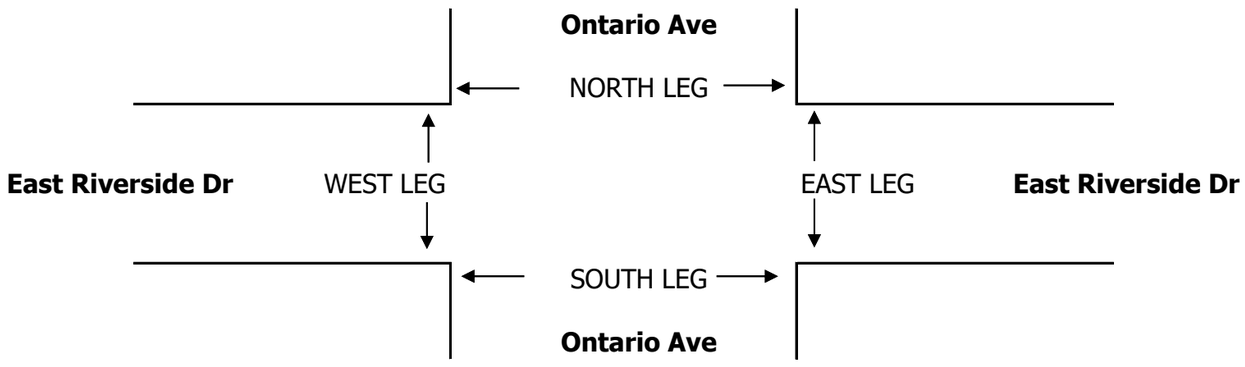
	NORTHBOUND Ontario Ave			SOUTHBOUND Ontario Ave			EASTBOUND East Riverside Dr			WESTBOUND East Riverside Dr			
LANES:	NL 0	NT X	NR 0	SL X	ST X	SR X	EL X	ET 1	ER 0	WL 0	WT 2	WR X	TOTAL
7:00 AM	2	0	2	0	0	0	0	120	5	4	207	0	340
7:15 AM	11	0	5	0	0	0	0	124	5	1	257	0	403
7:30 AM	5	0	3	0	0	0	0	153	7	2	312	0	482
7:45 AM	11	0	6	0	0	0	0	197	3	6	263	0	486
8:00 AM	9	0	2	0	0	0	0	199	10	5	287	0	512
8:15 AM	8	0	7	0	0	0	0	176	7	3	233	0	434
8:30 AM	4	0	2	0	0	0	0	139	7	3	274	0	429
8:45 AM	10	0	2	0	0	0	0	156	7	1	246	0	422
AM VOLUMES	60	0	29	0	0	0	0	1,264	51	25	2,079	0	3,508
AM APPROACH %	67%	0%	33%	0%	0%	0%	0%	96%	4%	1%	99%	0%	
AM APP/DEPART	89	/	0	0	/	76	1,315	/	1,293	2,104	/	2,139	0
AM BEGIN PEAK HR		7:30 AM											
AM VOLUMES	33	0	18	0	0	0	0	725	27	16	1,095	0	1,914
AM APPROACH %	65%	0%	35%	0%	0%	0%	0%	96%	4%	1%	99%	0%	
AM PEAK HR FACTOR		0.750			0.000			0.900			0.885		0.935
AM APP/DEPART	51	/	0	0	/	43	752	/	743	1,111	/	1,128	0
4:00 PM	9	0	2	0	0	0	0	302	10	4	156	0	483
4:15 PM	6	0	2	0	0	0	0	303	8	3	176	0	498
4:30 PM	4	0	4	0	0	0	0	285	7	1	163	0	464
4:45 PM	9	0	2	0	0	0	0	309	11	2	163	0	496
5:00 PM	8	0	3	0	0	0	0	323	14	3	201	0	552
5:15 PM	4	0	3	0	0	0	0	318	8	3	156	0	492
5:30 PM	4	0	4	0	0	0	0	313	12	3	185	0	521
5:45 PM	7	0	2	0	0	0	0	295	7	2	161	0	474
PM VOLUMES	51	0	22	0	0	0	0	2,448	77	21	1,361	0	3,980
PM APPROACH %	70%	0%	30%	0%	0%	0%	0%	97%	3%	2%	98%	0%	
PM APP/DEPART	73	/	0	0	/	98	2,525	/	2,470	1,382	/	1,412	0
PM BEGIN PEAK HR		4:45 PM											
PM VOLUMES	25	0	12	0	0	0	0	1,263	45	11	705	0	2,061
PM APPROACH %	68%	0%	32%	0%	0%	0%	0%	97%	3%	2%	98%	0%	
PM PEAK HR FACTOR		0.841			0.000			0.970			0.877		0.933
PM APP/DEPART	37	/	0	0	/	56	1,308	/	1,275	716	/	730	0

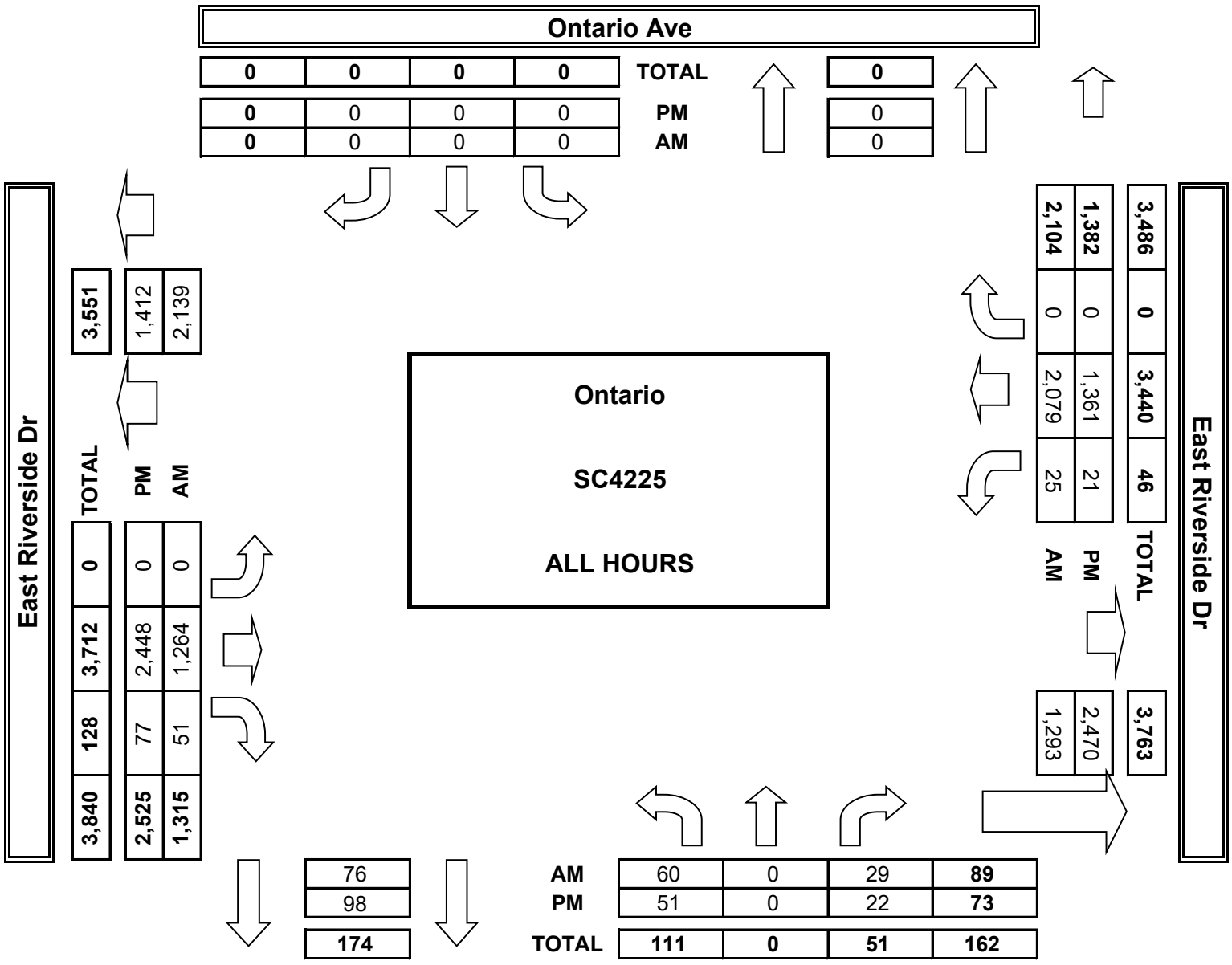
U-TURNS

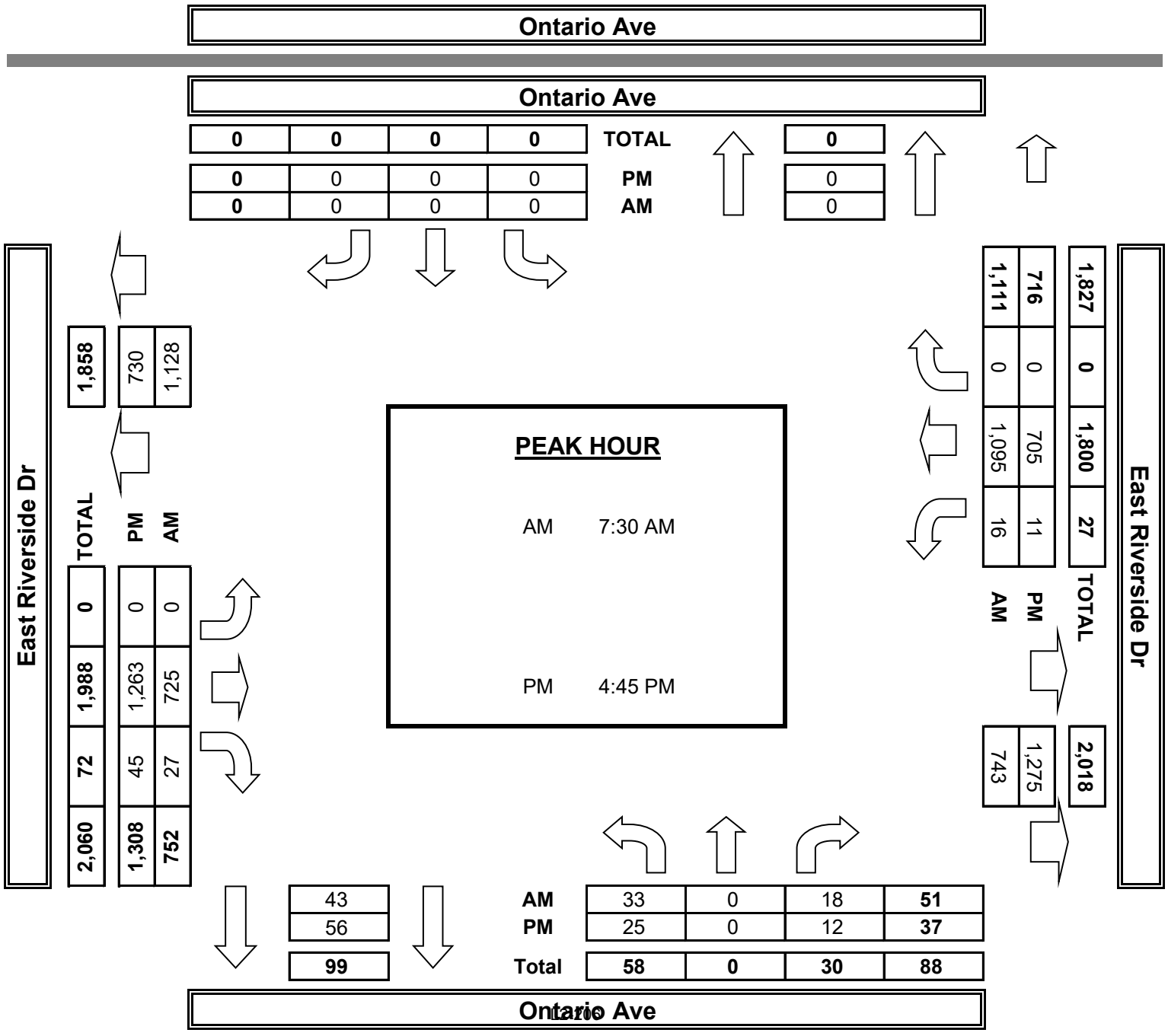
	NB	SB	EB	WB	TTL
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
AM VOLUMES	0	0	0	0	0
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
PM VOLUMES	0	0	0	0	0



AimTD LLC

TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

T101823

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:				
Tue, Oct 10, 23	LOCATION:	Ontario	PROJECT #:	SC4225
	NORTH & SOUTH:	S Colonial Ave	LOCATION #:	21
	EAST & WEST:	East Riverside Dr	CONTROL:	SIGNAL

NOTES:

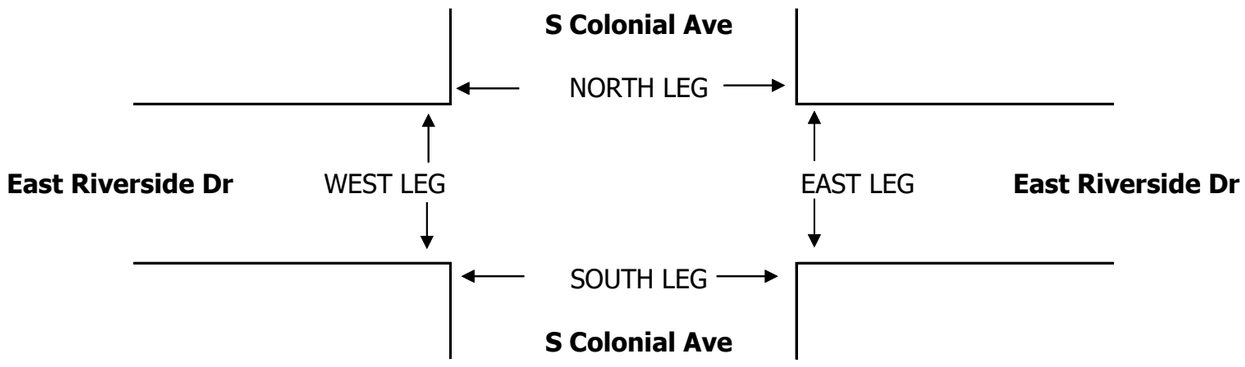
AM / PM / MD / OTHER / OTHER

▲ N ◄ W E ► S ▼

	NORTHBOUND S Colonial Ave			SOUTHBOUND S Colonial Ave			EASTBOUND East Riverside Dr			WESTBOUND East Riverside Dr			
LANES:	NL 0	NT 1	NR 0	SL 0	ST 1	SR 0	EL 1	ET 2	ER 0	WL 1	WT 2	WR 0	TOTAL
7:00 AM	9	0	7	0	0	4	0	116	0	2	209	0	347
7:15 AM	6	1	9	2	0	5	1	143	3	2	261	0	433
7:30 AM	11	2	24	3	1	7	1	157	1	0	273	1	481
7:45 AM	7	0	20	1	0	10	3	199	2	13	273	2	530
8:00 AM	10	0	9	0	0	4	3	200	3	9	277	2	517
8:15 AM	7	0	3	0	0	6	2	159	2	6	236	1	422
8:30 AM	16	0	8	1	0	5	4	129	3	5	260	3	434
8:45 AM	12	0	10	1	0	5	6	145	2	4	209	0	394
VOLUMES	78	3	90	8	1	46	20	1,248	16	41	1,998	9	3,561
APPROACH %	46%	2%	53%	15%	2%	84%	2%	97%	1%	2%	97%	0%	
APP/DEPART	171	/	32	55	/	58	1,284	/	1,349	2,051	/	2,122	0
BEGIN PEAK HR		7:15 AM											
VOLUMES	34	3	62	6	1	26	8	699	9	24	1,084	5	1,963
APPROACH %	34%	3%	63%	18%	3%	79%	1%	98%	1%	2%	97%	0%	
PEAK HR FACTOR		0.669			0.750			0.869			0.961		0.926
APP/DEPART	99	/	16	33	/	34	716	/	769	1,115	/	1,144	0
4:00 PM	1	0	4	0	0	1	5	263	6	6	146	2	434
4:15 PM	4	1	8	0	0	6	12	288	8	8	177	3	515
4:30 PM	2	1	10	3	0	3	7	261	7	9	147	2	452
4:45 PM	2	0	7	1	1	8	10	311	5	7	184	3	539
5:00 PM	5	0	6	0	1	5	9	304	9	11	165	5	520
5:15 PM	3	0	10	2	0	8	11	297	9	11	180	4	535
5:30 PM	4	0	8	0	1	1	6	293	8	7	173	5	506
5:45 PM	5	0	4	0	0	5	10	270	6	1	180	3	484
VOLUMES	26	2	57	6	3	37	70	2,287	58	60	1,352	27	3,992
APPROACH %	30%	2%	66%	13%	7%	80%	3%	95%	2%	4%	94%	2%	
APP/DEPART	86	/	99	46	/	122	2,416	/	2,355	1,444	/	1,416	0
BEGIN PEAK HR		4:45 PM											
VOLUMES	14	0	31	3	3	22	36	1,205	31	36	702	17	2,104
APPROACH %	31%	0%	69%	11%	11%	79%	3%	95%	2%	5%	93%	2%	
PEAK HR FACTOR		0.865			0.700			0.976			0.967		0.972
APP/DEPART	45	/	53	28	/	70	1,273	/	1,242	758	/	739	0

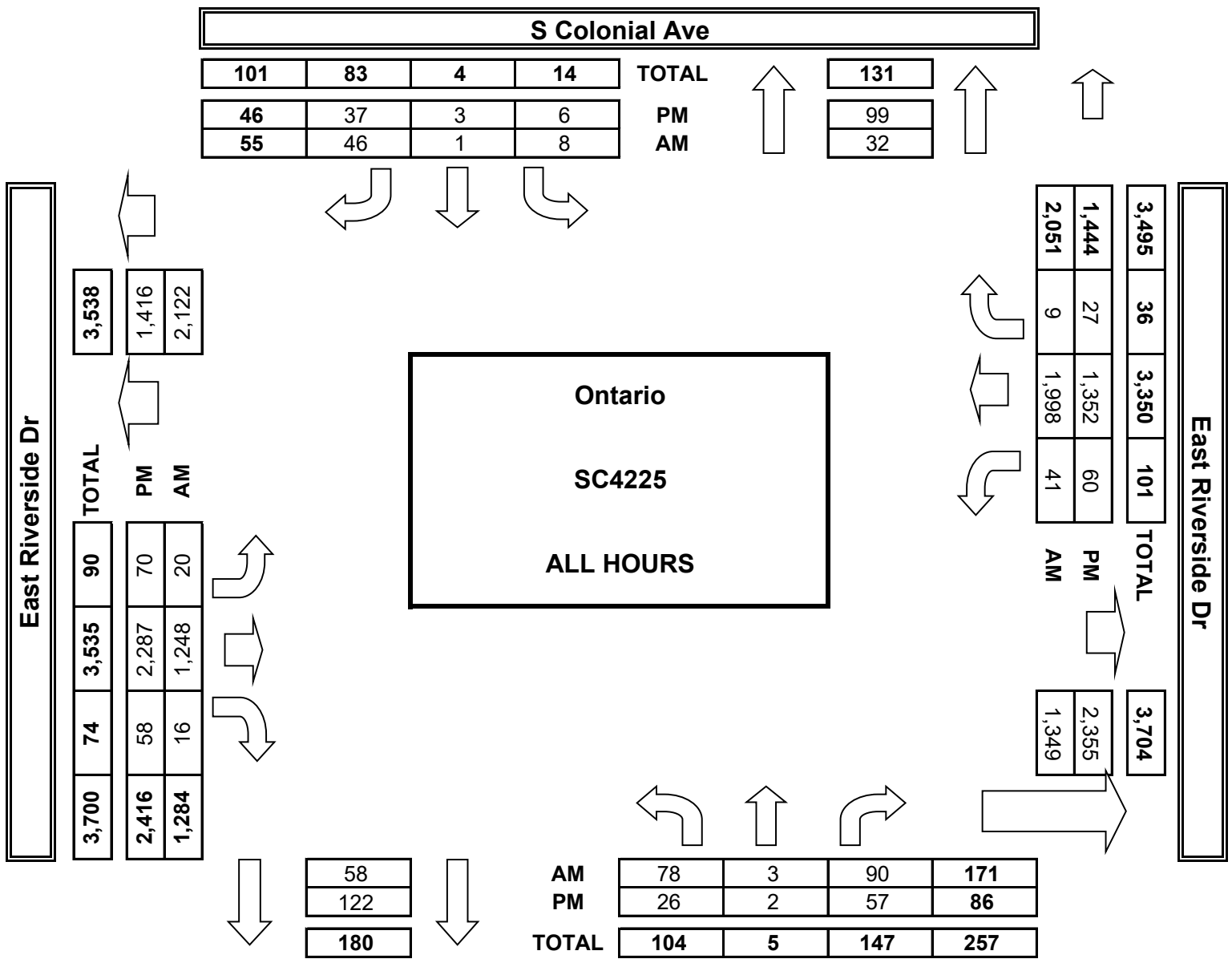
U-TURNS

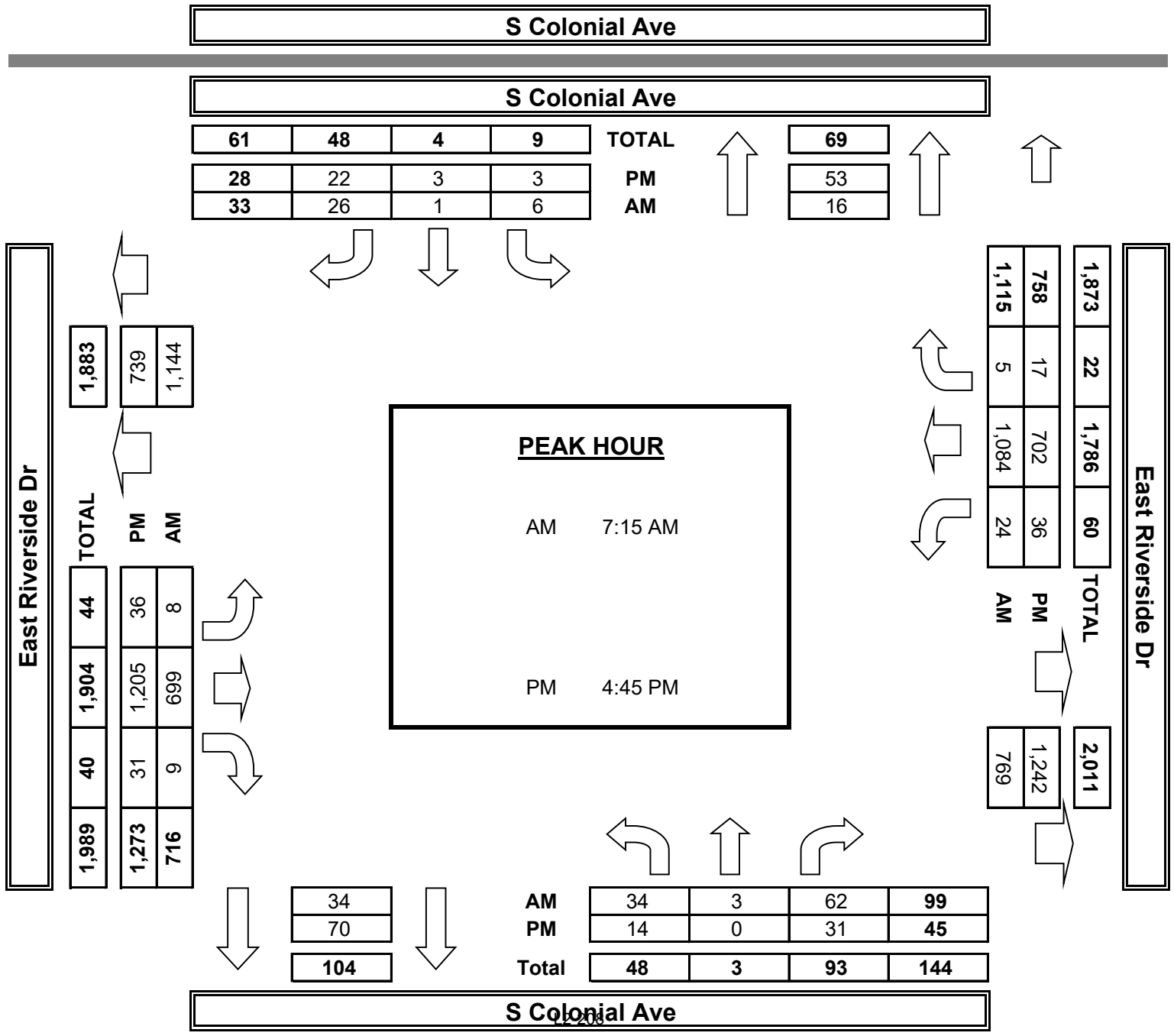
	NB	SB	EB	WB	TTL
AM	0	0	0	0	0
	0	0	0	0	0
	0	0	0	0	0
	0	0	0	0	0
	0	0	0	2	2
	0	0	0	0	0
	0	0	0	1	1
	0	0	0	0	0
	0	0	0	3	3
PM	1	0	0	0	1
	0	0	0	0	0
	0	0	0	2	2
	0	0	0	2	2
	0	0	0	0	0
	0	0	0	1	1
	0	0	1	0	1
	0	0	0	0	0
	1	0	1	5	7



AimTD LLC

TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

T101823

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Tue, Oct 10, 23

LOCATION: Ontario
NORTH & SOUTH: S Archibald Ave
EAST & WEST: East Riverside Dr

PROJECT #: SC4225
LOCATION #: 22
CONTROL: SIGNAL

NOTES:

AM
PM
MD
OTHER
OTHER

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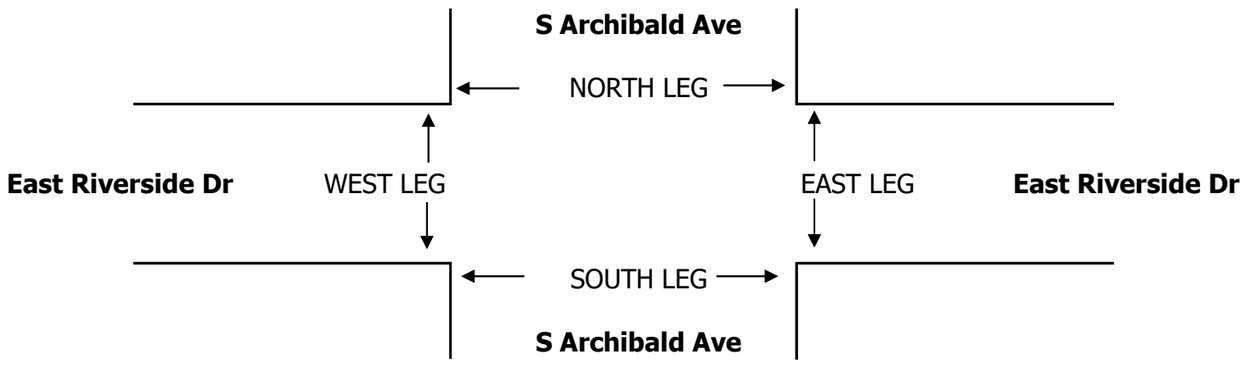
		NORTHBOUND S Archibald Ave			SOUTHBOUND S Archibald Ave			EASTBOUND East Riverside Dr			WESTBOUND East Riverside Dr			
	LANES:	NL 1	NT 3	NR 0	SL 1	ST 3	SR 0	EL 1	ET 2	ER 0	WL 1	WT 2	WR 0	TOTAL
AM	7:00 AM	62	182	5	18	40	19	23	56	46	21	132	43	647
	7:15 AM	83	247	4	14	53	30	32	59	48	21	160	43	794
	7:30 AM	84	253	15	19	77	32	51	83	43	28	157	43	885
	7:45 AM	80	259	24	37	74	63	62	100	54	23	156	79	1,011
	8:00 AM	67	245	15	31	81	59	61	107	62	29	152	51	960
	8:15 AM	79	264	17	38	58	36	43	83	56	21	124	50	869
	8:30 AM	82	216	16	16	55	35	41	45	48	22	143	56	775
	8:45 AM	69	199	11	27	67	33	35	63	54	23	117	35	733
	VOLUMES	606	1,865	107	200	505	307	348	596	411	188	1,141	400	6,695
	APPROACH %	23%	72%	4%	20%	50%	30%	26%	44%	30%	11%	66%	23%	
	APP/DEPART	2,597	/	2,614	1,013	/	1,123	1,356	/	903	1,729	/	2,055	0
	BEGIN PEAK HR		7:30 AM											
	VOLUMES	310	1,021	71	125	290	190	217	373	215	101	589	223	3,733
	APPROACH %	22%	72%	5%	21%	48%	31%	27%	46%	27%	11%	65%	24%	
	PEAK HR FACTOR		0.968			0.869			0.876			0.885		0.922
	APP/DEPART	1,409	/	1,461	605	/	613	806	/	569	913	/	1,090	0
PM	4:00 PM	52	163	15	62	103	30	56	157	74	32	97	49	890
	4:15 PM	55	182	11	43	118	31	60	168	73	24	94	42	901
	4:30 PM	55	187	18	51	137	22	45	141	84	28	77	31	876
	4:45 PM	51	169	21	46	131	22	63	164	83	39	118	52	959
	5:00 PM	67	168	17	51	151	40	71	141	95	37	77	42	957
	5:15 PM	56	178	9	58	137	40	53	157	85	41	96	48	958
	5:30 PM	57	182	14	51	147	39	52	155	101	32	93	48	971
	5:45 PM	62	194	11	39	134	32	48	131	91	36	90	47	915
	VOLUMES	455	1,423	116	401	1,058	256	448	1,214	686	269	742	359	7,476
	APPROACH %	22%	70%	6%	23%	62%	15%	19%	52%	29%	20%	54%	26%	
	APP/DEPART	2,041	/	2,232	1,717	/	2,060	2,348	/	1,731	1,370	/	1,453	0
	BEGIN PEAK HR		4:45 PM											
	VOLUMES	231	697	61	206	566	141	239	617	364	149	384	190	3,871
	APPROACH %	23%	69%	6%	23%	62%	15%	20%	51%	30%	21%	53%	26%	
	PEAK HR FACTOR		0.969			0.943			0.984			0.865		0.988
	APP/DEPART	1,015	/	1,126	913	/	1,105	1,220	/	884	723	/	756	0

U-TURNS

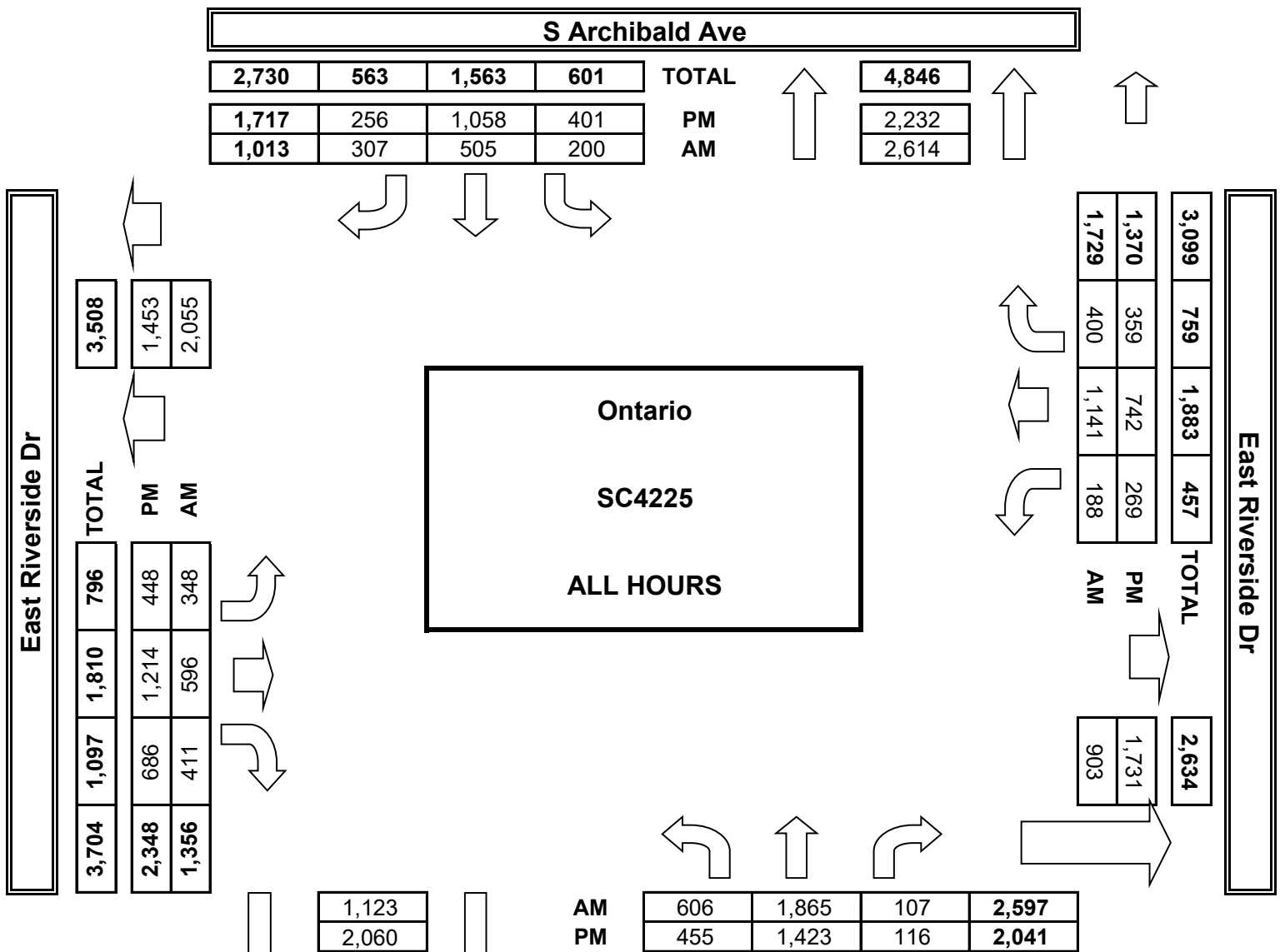
AM	NB	SB	EB	WB	TTL
7:00 AM	1	0	0	0	1
7:15 AM	2	1	0	0	3
7:30 AM	2	0	0	0	2
7:45 AM	1	0	0	0	1
8:00 AM	2	0	0	0	2
8:15 AM	2	0	1	0	3
8:30 AM	3	0	0	0	3
8:45 AM	6	0	0	0	6
VOLUMES	19	1	1	0	21

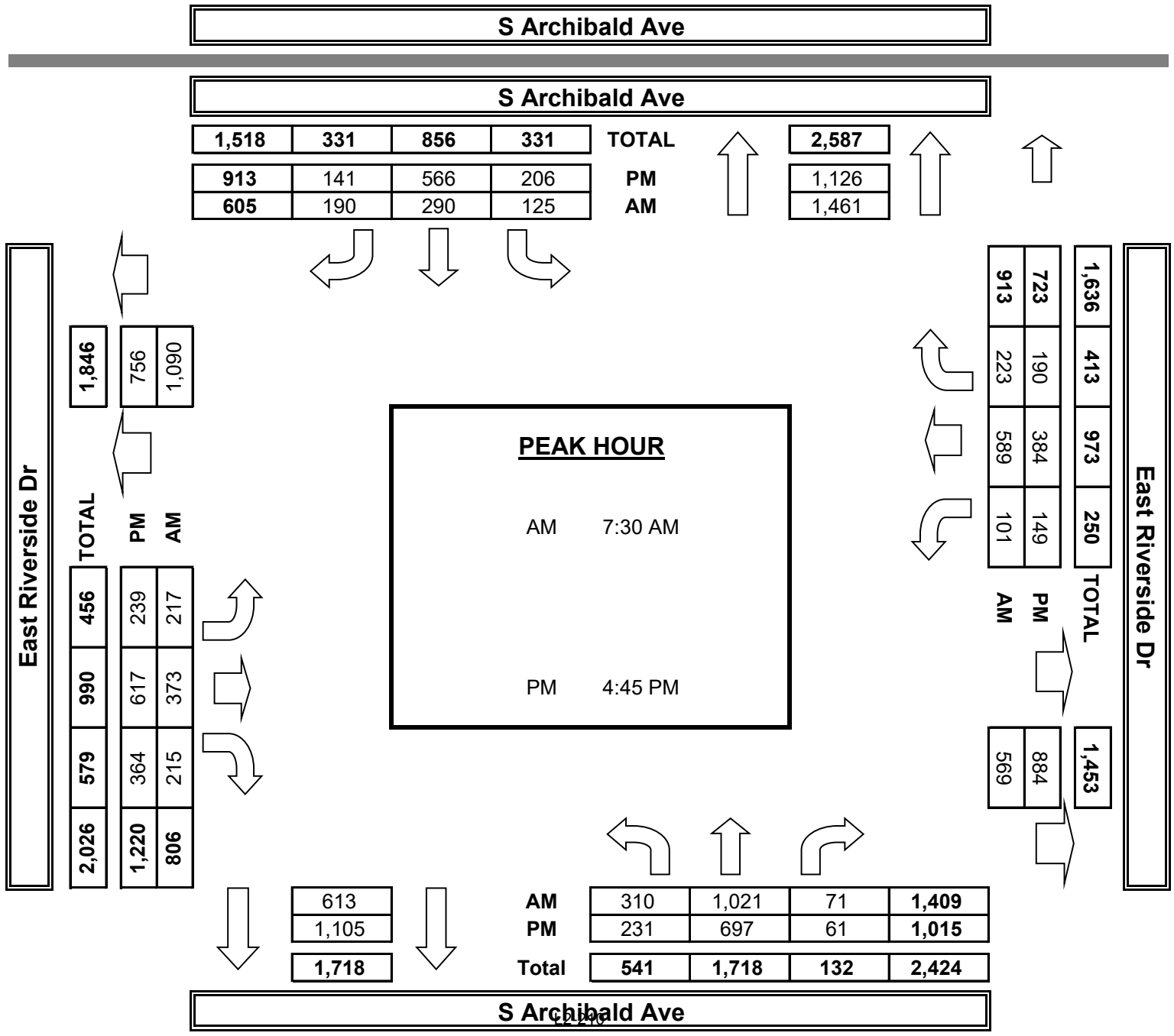
PM	NB	SB	EB	WB	TTL
4:00 PM	9	0	0	0	9
4:15 PM	4	1	0	0	5
4:30 PM	2	1	0	0	3
4:45 PM	6	0	0	0	6
5:00 PM	7	0	0	0	7
5:15 PM	4	0	0	0	4
5:30 PM	9	0	0	0	9
5:45 PM	6	0	0	0	6
VOLUMES	47	2	0	0	49



AimTD LLC

TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

T101823

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

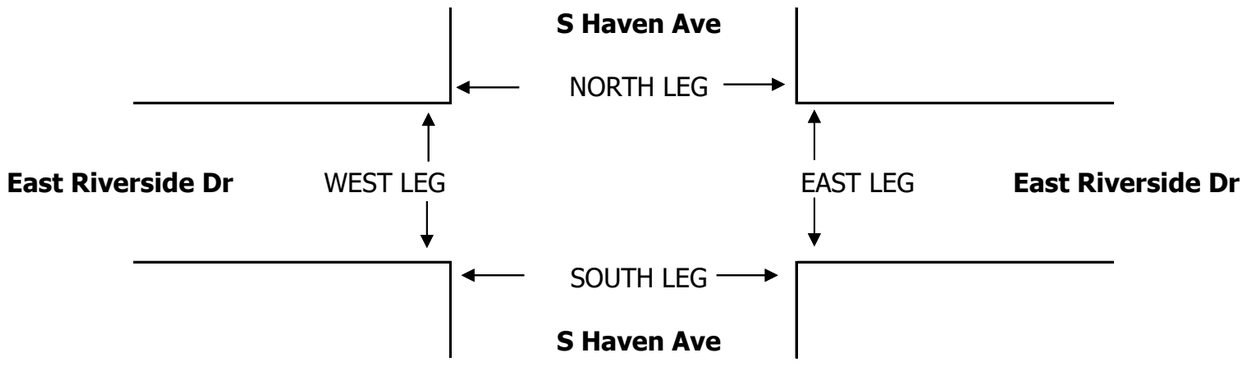
DATE:				
Tue, Oct 10, 23	LOCATION:	Ontario	PROJECT #:	SC4225
	NORTH & SOUTH:	S Haven Ave	LOCATION #:	23
	EAST & WEST:	East Riverside Dr	CONTROL:	SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER

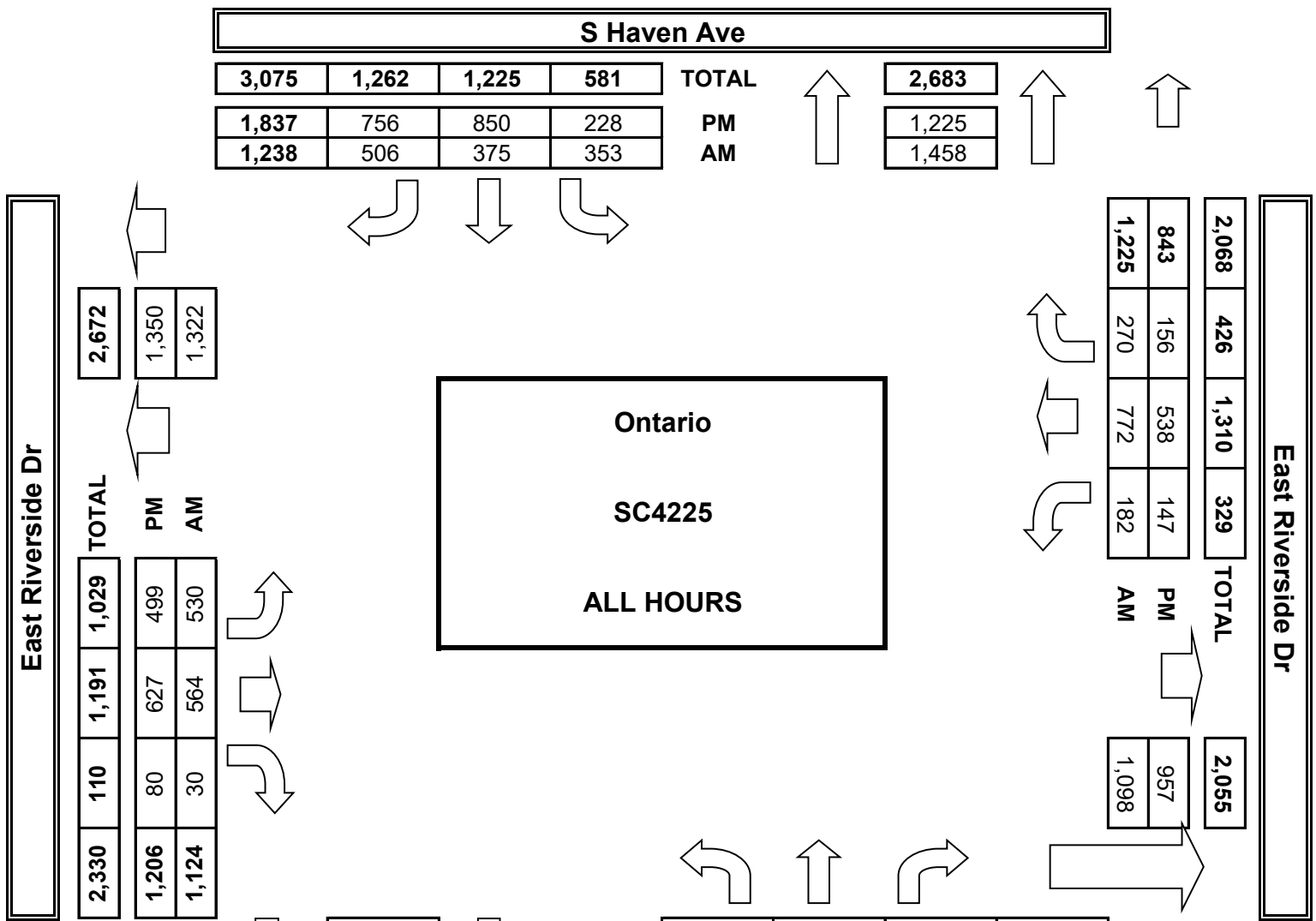
▲ N ◄ W E ► S ▼

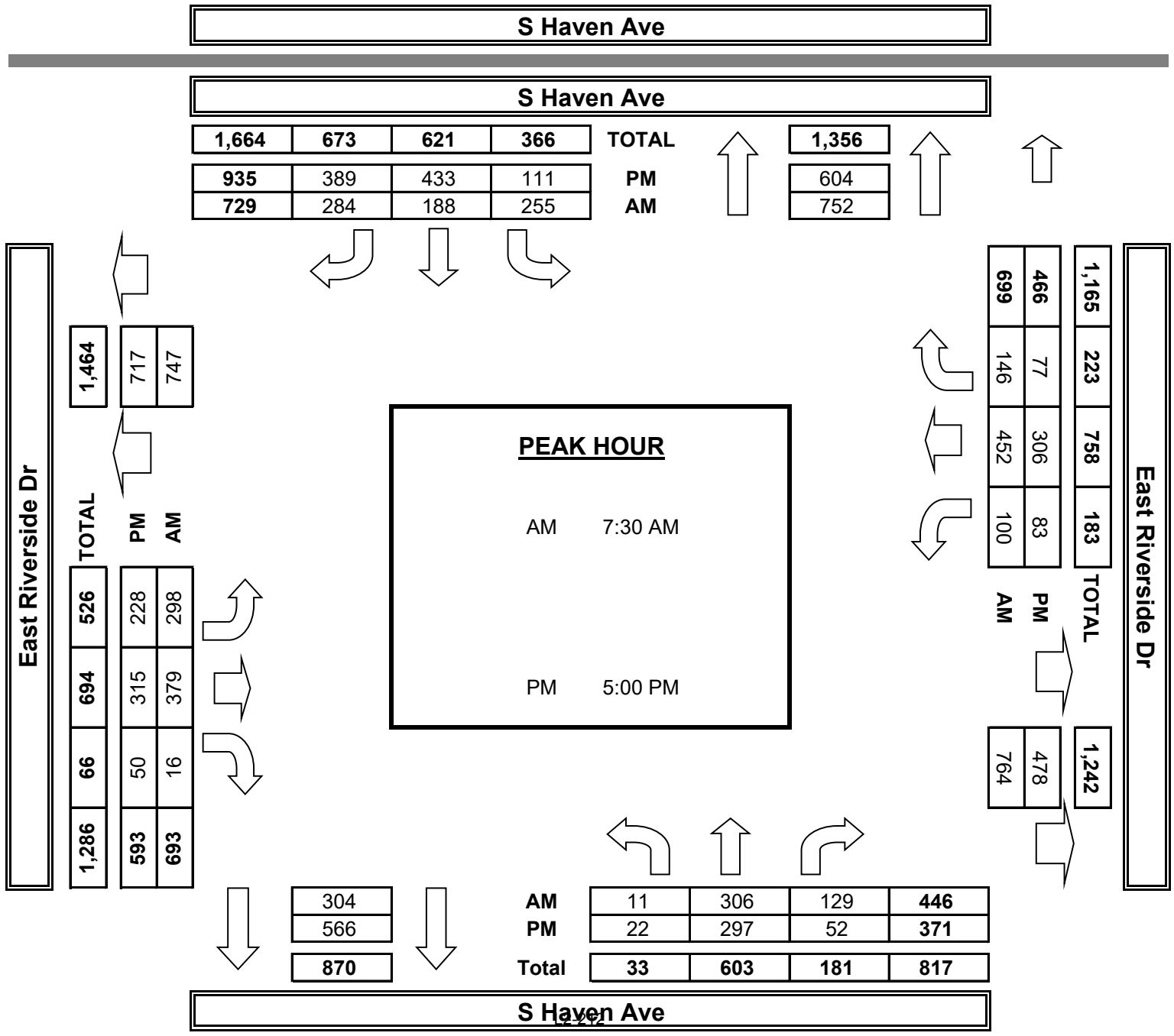
	NORTHBOUND S Haven Ave			SOUTHBOUND S Haven Ave			EASTBOUND East Riverside Dr			WESTBOUND East Riverside Dr				U-TURNS				
LANES:	NL 0	NT 1	NR 0	SL 1	ST 1	SR 1	EL 1	ET 1	ER 0	WL 1	WT 2	WR 0	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
AM 7:00 AM	13	96	10	25	49	56	54	51	2	9	87	22	474	0	0	0	0	0
7:15 AM	8	97	10	36	41	60	80	51	3	18	68	36	508	0	0	0	0	0
7:30 AM	2	105	11	36	34	89	83	64	5	18	107	37	591	0	0	0	0	0
7:45 AM	4	83	31	46	36	82	82	99	6	21	118	40	648	0	2	0	1	3
8:00 AM	2	57	33	86	58	61	67	110	1	34	116	33	658	0	0	0	0	0
8:15 AM	3	61	54	87	60	52	66	106	4	27	111	36	667	0	0	0	0	0
8:30 AM	6	78	19	22	44	57	46	42	4	44	123	44	529	0	2	0	0	2
8:45 AM	6	77	12	15	53	49	52	41	5	11	42	22	385	0	0	0	0	0
VOLUMES	44	654	180	353	375	506	530	564	30	182	772	270	4,465	0	4	0	1	5
APPROACH %	5%	74%	21%	29%	30%	41%	47%	50%	3%	15%	63%	22%						
APP/DEPART	878	/	1,458	1,238	/	587	1,124	/	1,098	1,225	/	1,322	0					
BEGIN PEAK HR		7:30 AM																
VOLUMES	11	306	129	255	188	284	298	379	16	100	452	146	2,567					
APPROACH %	2%	69%	29%	35%	26%	39%	43%	55%	2%	14%	65%	21%						
PEAK HR FACTOR		0.945			0.889			0.926			0.955		0.962					
APP/DEPART	446	/	752	729	/	304	693	/	764	699	/	747	0					
PM 4:00 PM	9	70	10	31	107	90	56	67	5	18	64	22	549	0	1	0	1	2
4:15 PM	7	50	10	39	110	90	75	80	8	12	50	18	549	0	0	0	1	1
4:30 PM	13	69	12	25	93	76	60	90	11	17	67	21	554	0	0	0	0	0
4:45 PM	5	81	16	22	107	111	80	75	6	17	51	18	589	0	0	0	0	0
5:00 PM	1	73	15	27	94	102	64	72	13	9	62	12	544	0	1	0	0	1
5:15 PM	5	60	12	24	119	97	63	76	15	24	80	23	598	0	0	0	0	0
5:30 PM	6	69	15	23	95	85	62	95	13	30	95	20	608	0	0	0	0	0
5:45 PM	10	95	10	37	125	105	39	72	9	20	69	22	613	0	1	0	0	1
VOLUMES	56	567	100	228	850	756	499	627	80	147	538	156	4,609	0	3	0	2	5
APPROACH %	8%	78%	14%	12%	46%	41%	41%	52%	7%	17%	64%	19%						
APP/DEPART	723	/	1,225	1,837	/	1,077	1,206	/	957	843	/	1,350	0					
BEGIN PEAK HR		5:00 PM																
VOLUMES	22	297	52	111	433	389	228	315	50	83	306	77	2,365					
APPROACH %	6%	80%	14%	12%	46%	42%	38%	53%	8%	18%	66%	17%						
PEAK HR FACTOR		0.807			0.872			0.872			0.803		0.963					
APP/DEPART	371	/	604	935	/	566	593	/	478	466	/	717	0					



AimTD LLC

TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

T101823

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

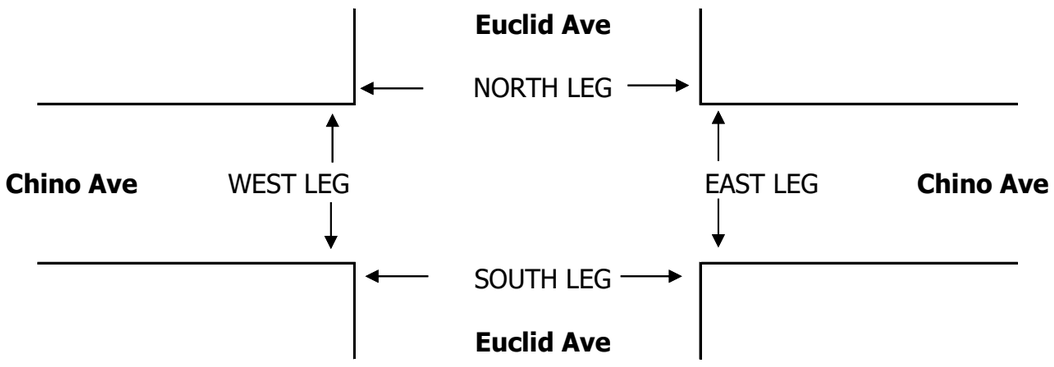
DATE:				
Tue, Oct 10, 23	LOCATION:	Ontario	PROJECT #:	SC4225
	NORTH & SOUTH:	Euclid Ave	LOCATION #:	24
	EAST & WEST:	Chino Ave	CONTROL:	SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER

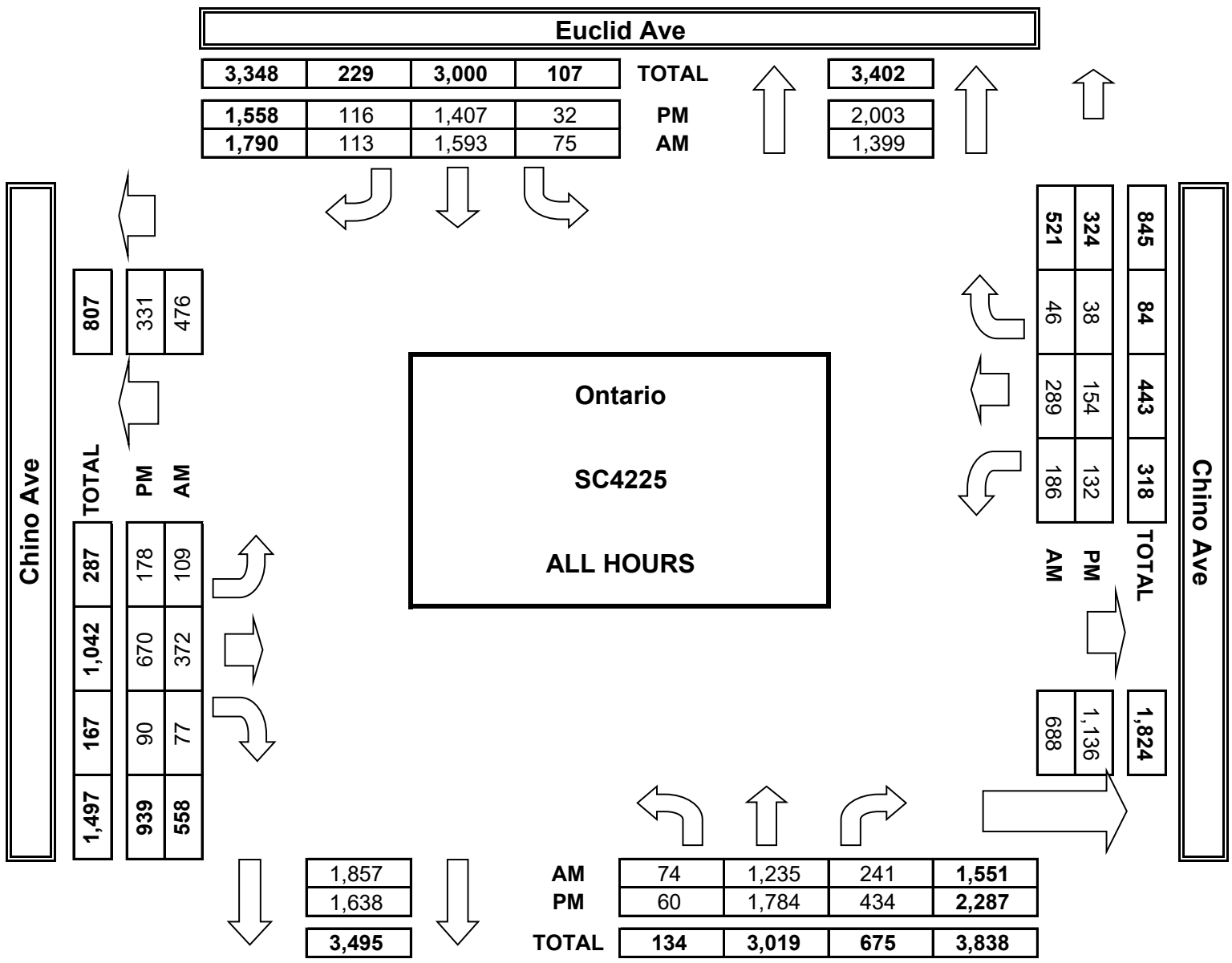
▲ N
◄ W E ►
S ▼

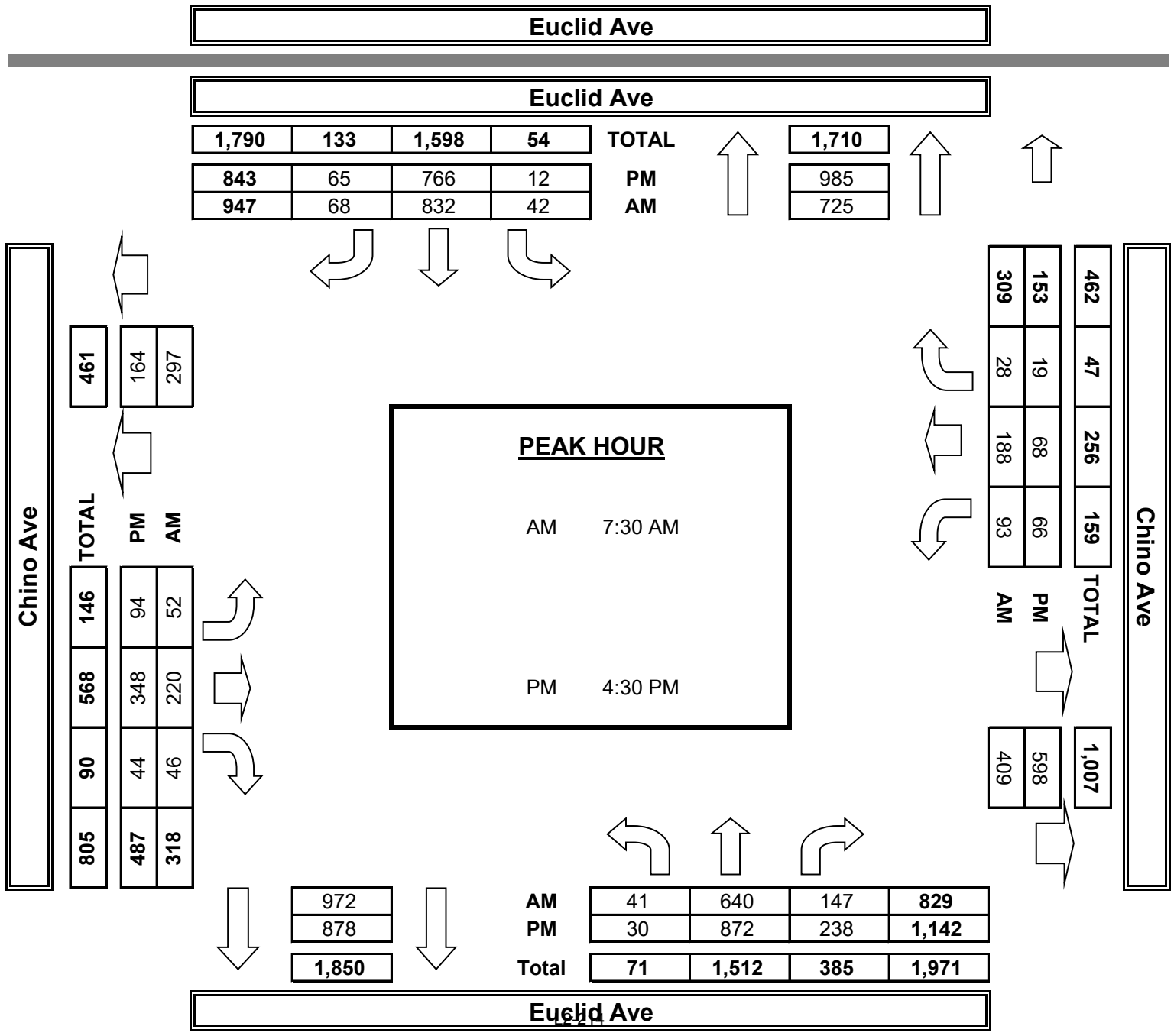
	NORTHBOUND Euclid Ave			SOUTHBOUND Euclid Ave			EASTBOUND Chino Ave			WESTBOUND Chino Ave				U-TURNS				
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB	TTL
LANES:	1	2	1	1	2	1	1	1	1	0	1	0		0	0	0	0	
AM 7:00 AM	5	135	17	5	206	8	22	26	6	33	20	6	489	0	2	0	0	2
7:15 AM	8	133	30	9	191	14	10	38	7	28	37	4	509	0	2	0	0	2
7:30 AM	18	163	31	9	205	13	12	54	8	28	58	5	604	0	2	0	0	2
7:45 AM	10	180	59	11	228	17	17	70	17	19	58	6	692	0	0	0	0	0
8:00 AM	7	148	31	12	203	22	11	50	14	26	44	10	578	0	2	0	0	2
8:15 AM	6	149	26	10	196	16	12	46	7	20	28	7	523	1	1	0	0	2
8:30 AM	6	150	23	7	222	13	6	36	10	17	17	6	513	0	0	0	0	0
8:45 AM	14	177	24	12	142	10	19	52	8	15	27	2	502	0	0	0	0	0
VOLUMES	74	1,235	241	75	1,593	113	109	372	77	186	289	46	4,420	1	9	0	0	10
APPROACH %	5%	80%	16%	4%	89%	6%	20%	67%	14%	36%	55%	9%						
APP/DEPART	1,551	/	1,399	1,790	/	1,857	558	/	688	521	/	476	0					
BEGIN PEAK HR		7:30 AM																
VOLUMES	41	640	147	42	832	68	52	220	46	93	188	28	2,403					
APPROACH %	5%	77%	18%	4%	88%	7%	16%	69%	14%	30%	61%	9%						
PEAK HR FACTOR		0.832			0.925			0.764			0.849		0.868					
APP/DEPART	829	/	725	947	/	972	318	/	409	309	/	297	0					
PM 4:00 PM	9	236	55	5	151	12	23	90	10	18	18	6	633	2	1	0	0	3
4:15 PM	6	211	53	2	149	8	18	109	12	18	16	4	606	2	1	0	0	3
4:30 PM	3	222	58	4	177	22	26	86	13	14	24	8	657	1	0	0	0	1
4:45 PM	5	211	61	4	185	8	34	90	15	23	12	3	651	1	0	1	0	2
5:00 PM	10	222	50	0	201	19	20	86	11	12	15	5	651	0	0	0	0	0
5:15 PM	12	217	69	4	203	16	14	86	5	17	17	3	663	0	0	0	0	0
5:30 PM	6	266	39	9	174	15	17	61	12	10	28	4	641	1	0	0	0	1
5:45 PM	9	199	49	4	167	16	26	62	12	20	24	5	593	2	1	0	0	3
VOLUMES	60	1,784	434	32	1,407	116	178	670	90	132	154	38	5,108	9	3	1	0	13
APPROACH %	3%	78%	19%	2%	90%	7%	19%	71%	10%	41%	48%	12%						
APP/DEPART	2,287	/	2,003	1,558	/	1,638	939	/	1,136	324	/	331	0					
BEGIN PEAK HR		4:30 PM																
VOLUMES	30	872	238	12	766	65	94	348	44	66	68	19	2,625					
APPROACH %	3%	76%	21%	1%	91%	8%	19%	71%	9%	43%	44%	12%						
PEAK HR FACTOR		0.958			0.945			0.870			0.832		0.990					
APP/DEPART	1,142	/	985	843	/	878	487	/	598	153	/	164	0					



AimTD LLC

TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

T101823

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

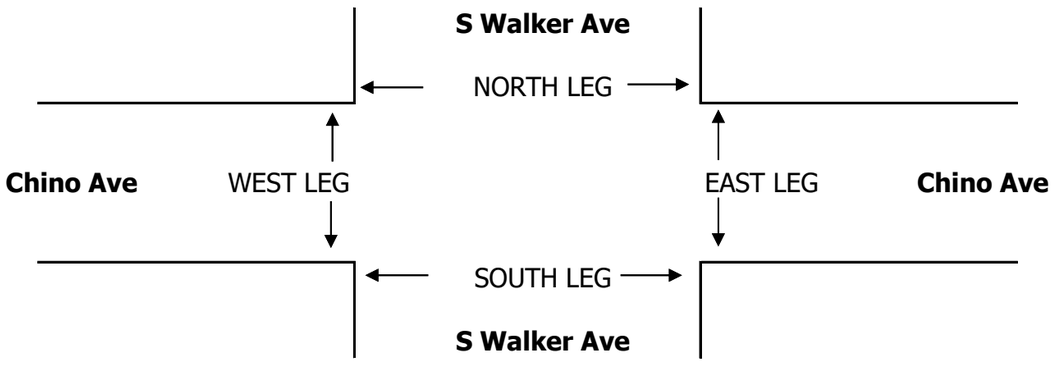
DATE:				
Tue, Oct 10, 23	LOCATION:	Ontario	PROJECT #:	SC4225
	NORTH & SOUTH:	S Walker Ave	LOCATION #:	26
	EAST & WEST:	Chino Ave	CONTROL:	STOP ALL

NOTES:

AM / PM / MD / OTHER / OTHER

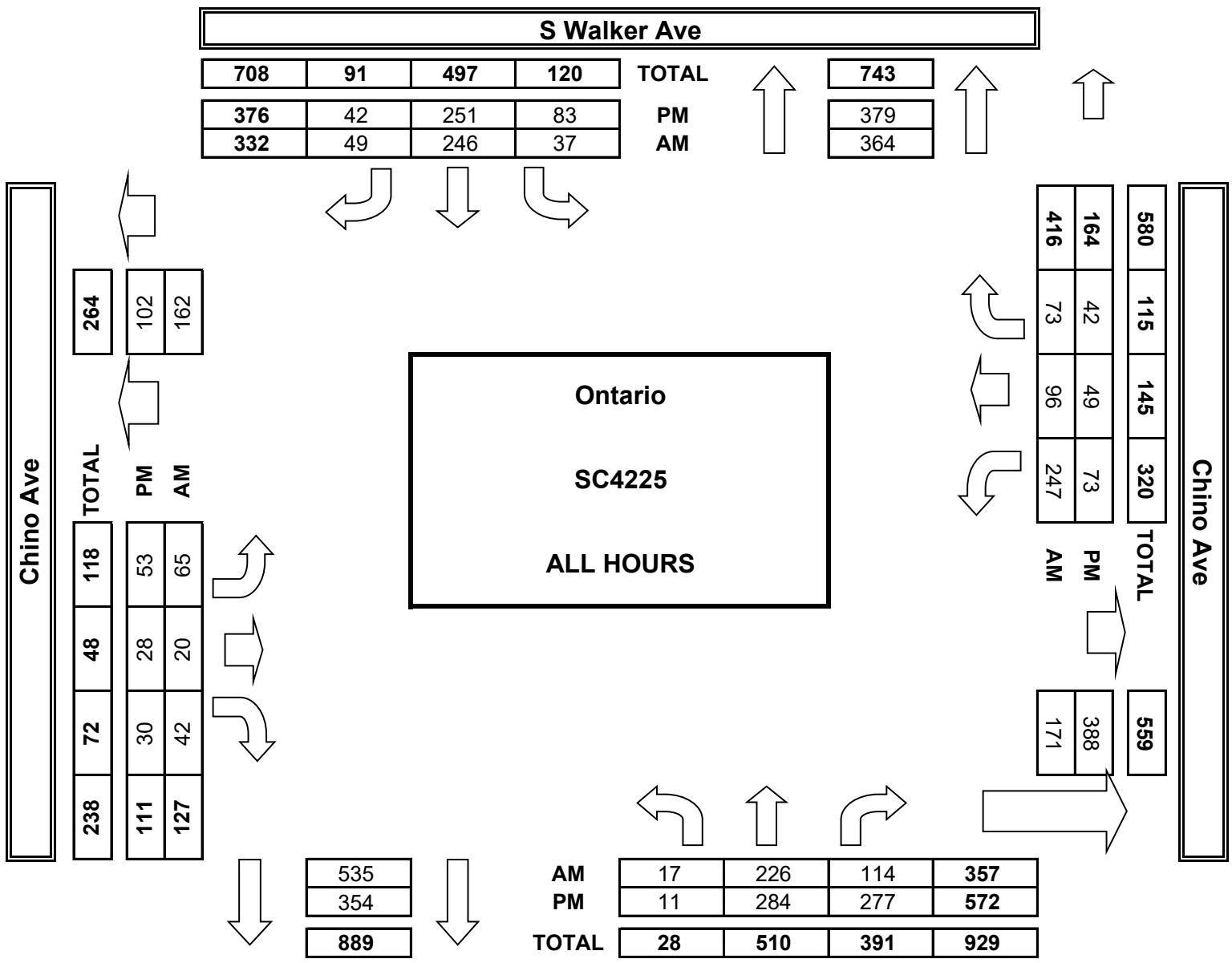
▲ N
◄ W E ►
S ▼

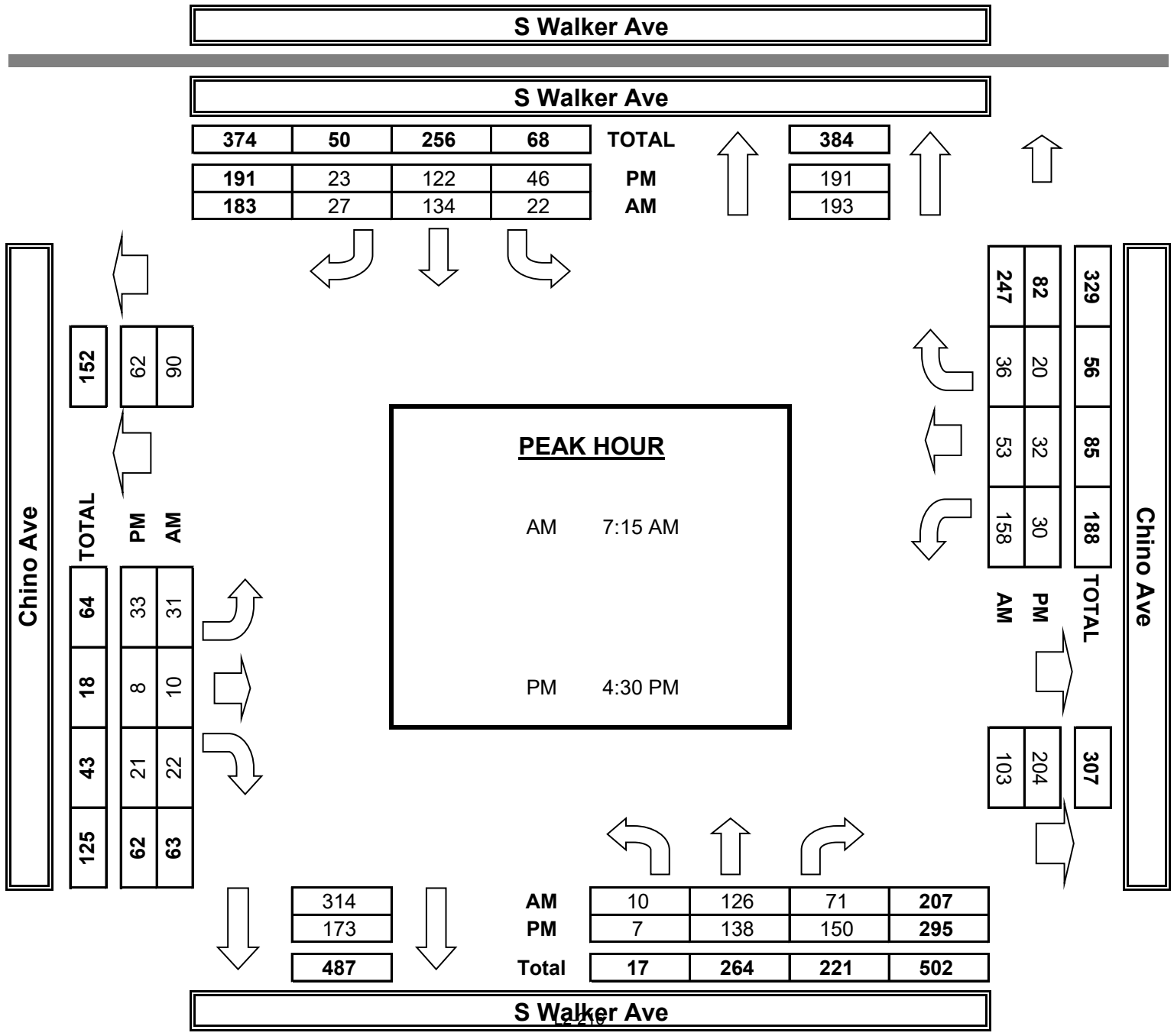
		NORTHBOUND S Walker Ave			SOUTHBOUND S Walker Ave			EASTBOUND Chino Ave			WESTBOUND Chino Ave				U-TURNS				
		NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB	TTL
	LANES:	0	1	0	0	1	0	0	1	0	0	1	0		0	0	0	0	
AM	7:00 AM	1	21	11	3	26	3	9	1	5	27	8	11	126	0	0	0	0	0
	7:15 AM	2	29	11	9	31	4	5	0	4	38	10	14	157	0	0	0	0	0
	7:30 AM	4	31	15	5	36	7	4	5	6	49	17	5	184	0	0	0	0	0
	7:45 AM	2	32	22	4	37	6	12	4	7	38	17	7	188	0	0	0	0	0
	8:00 AM	2	34	23	4	30	10	10	1	5	33	9	10	171	0	0	0	0	0
	8:15 AM	3	34	9	5	25	7	11	1	8	27	14	8	152	0	0	0	0	0
	8:30 AM	1	23	8	4	24	0	10	4	5	19	14	11	123	0	0	0	0	0
	8:45 AM	2	22	15	3	37	12	4	4	2	16	7	7	131	0	0	0	0	0
	VOLUMES	17	226	114	37	246	49	65	20	42	247	96	73	1,232	0	0	0	0	0
	APPROACH %	5%	63%	32%	11%	74%	15%	51%	16%	33%	59%	23%	18%						
	APP/DEPART	357	/	364	332	/	535	127	/	171	416	/	162	0					
	BEGIN PEAK HR		7:15 AM																
	VOLUMES	10	126	71	22	134	27	31	10	22	158	53	36	700					
	APPROACH %	5%	61%	34%	12%	73%	15%	49%	16%	35%	64%	21%	15%						
	PEAK HR FACTOR		0.877			0.953			0.685			0.870		0.931					
	APP/DEPART	207	/	193	183	/	314	63	/	103	247	/	90	0					
PM	4:00 PM	1	44	31	7	21	5	4	4	3	15	6	3	144	0	0	0	0	0
	4:15 PM	1	35	44	5	26	8	7	5	5	7	5	8	156	0	0	0	0	0
	4:30 PM	2	40	52	14	19	6	8	1	2	8	9	6	167	0	0	0	0	0
	4:45 PM	1	35	31	12	26	10	6	2	10	11	9	6	159	0	0	0	0	0
	5:00 PM	1	27	36	8	33	3	15	2	5	5	8	3	146	0	0	0	0	0
	5:15 PM	3	36	31	12	44	4	4	3	4	6	6	5	158	0	0	0	0	0
	5:30 PM	2	33	21	12	38	3	5	5	0	13	3	7	142	0	0	0	0	0
	5:45 PM	0	34	31	13	44	3	4	6	1	8	3	4	151	0	0	0	0	0
	VOLUMES	11	284	277	83	251	42	53	28	30	73	49	42	1,223	0	0	0	0	0
	APPROACH %	2%	50%	48%	22%	67%	11%	48%	25%	27%	45%	30%	26%						
	APP/DEPART	572	/	379	376	/	354	111	/	388	164	/	102	0					
	BEGIN PEAK HR		4:30 PM																
	VOLUMES	7	138	150	46	122	23	33	8	21	30	32	20	630					
	APPROACH %	2%	47%	51%	24%	64%	12%	53%	13%	34%	37%	39%	24%						
	PEAK HR FACTOR		0.785			0.796			0.705			0.788		0.943					
	APP/DEPART	295	/	191	191	/	173	62	/	204	82	/	62	0					



AimTD LLC

TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

T101823

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:				
Tue, Oct 10, 23	LOCATION:	Ontario	PROJECT #:	SC4225
	NORTH & SOUTH:	Vineyard Ave	LOCATION #:	27
	EAST & WEST:	Chino Ave	CONTROL:	STOP N

NOTES:

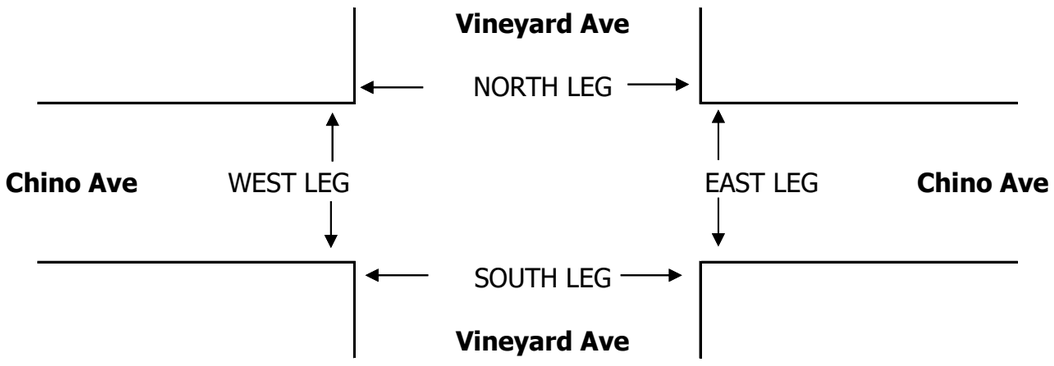
AM / PM / MD / OTHER / OTHER

▲ N ◄ W E ► S ▼

		NORTHBOUND Vineyard Ave			SOUTHBOUND Vineyard Ave			EASTBOUND Chino Ave			WESTBOUND Chino Ave			
	LANES:	NL 0	NT X	NR 0	SL X	ST X	SR X	EL X	ET 1	ER 0	WL 0	WT 1	WR X	TOTAL
AM	7:00 AM	0	0	2	0	0	0	0	15	0	1	51	0	69
	7:15 AM	0	0	1	0	0	0	0	23	1	2	57	0	84
	7:30 AM	0	0	0	0	0	0	0	21	0	0	66	0	87
	7:45 AM	0	0	1	0	0	0	0	29	0	1	71	0	102
	8:00 AM	1	0	1	0	0	0	0	28	2	0	63	0	95
	8:15 AM	0	0	0	0	0	0	0	27	1	0	47	0	75
	8:30 AM	0	0	1	0	0	0	0	17	0	0	30	0	48
	8:45 AM	0	0	2	0	0	0	0	9	0	1	48	0	60
	VOLUMES	1	0	8	0	0	0	0	169	4	5	433	0	620
	APPROACH %	11%	0%	89%	0%	0%	0%	0%	98%	2%	1%	99%	0%	
	APP/DEPART	9	/	0	0	/	9	173	/	177	438	/	434	0
	BEGIN PEAK HR		7:15 AM											
	VOLUMES	1	0	3	0	0	0	0	101	3	3	257	0	368
	APPROACH %	25%	0%	75%	0%	0%	0%	0%	97%	3%	1%	99%	0%	
	PEAK HR FACTOR		0.500			0.000			0.867			0.903		0.902
	APP/DEPART	4	/	0	0	/	6	104	/	104	260	/	258	0
PM	4:00 PM	0	0	4	0	0	0	0	53	0	1	27	0	85
	4:15 PM	0	0	2	0	0	0	0	62	0	0	26	0	90
	4:30 PM	1	0	8	0	0	0	0	61	0	0	18	0	88
	4:45 PM	0	0	4	0	0	0	0	50	0	1	13	0	68
	5:00 PM	1	0	5	0	0	0	0	44	0	2	23	0	75
	5:15 PM	1	0	2	0	0	0	0	45	0	1	14	0	63
	5:30 PM	1	0	0	0	0	0	0	43	0	0	10	0	54
	5:45 PM	0	0	3	0	0	0	0	42	0	1	14	0	60
	VOLUMES	4	0	28	0	0	0	0	400	0	6	145	0	583
	APPROACH %	13%	0%	88%	0%	0%	0%	0%	100%	0%	4%	96%	0%	
	APP/DEPART	32	/	0	0	/	6	400	/	428	151	/	149	0
	BEGIN PEAK HR		4:00 PM											
	VOLUMES	1	0	18	0	0	0	0	226	0	2	84	0	331
	APPROACH %	5%	0%	95%	0%	0%	0%	0%	100%	0%	2%	98%	0%	
	PEAK HR FACTOR		0.528			0.000			0.911			0.768		0.919
	APP/DEPART	19	/	0	0	/	2	226	/	244	86	/	85	0

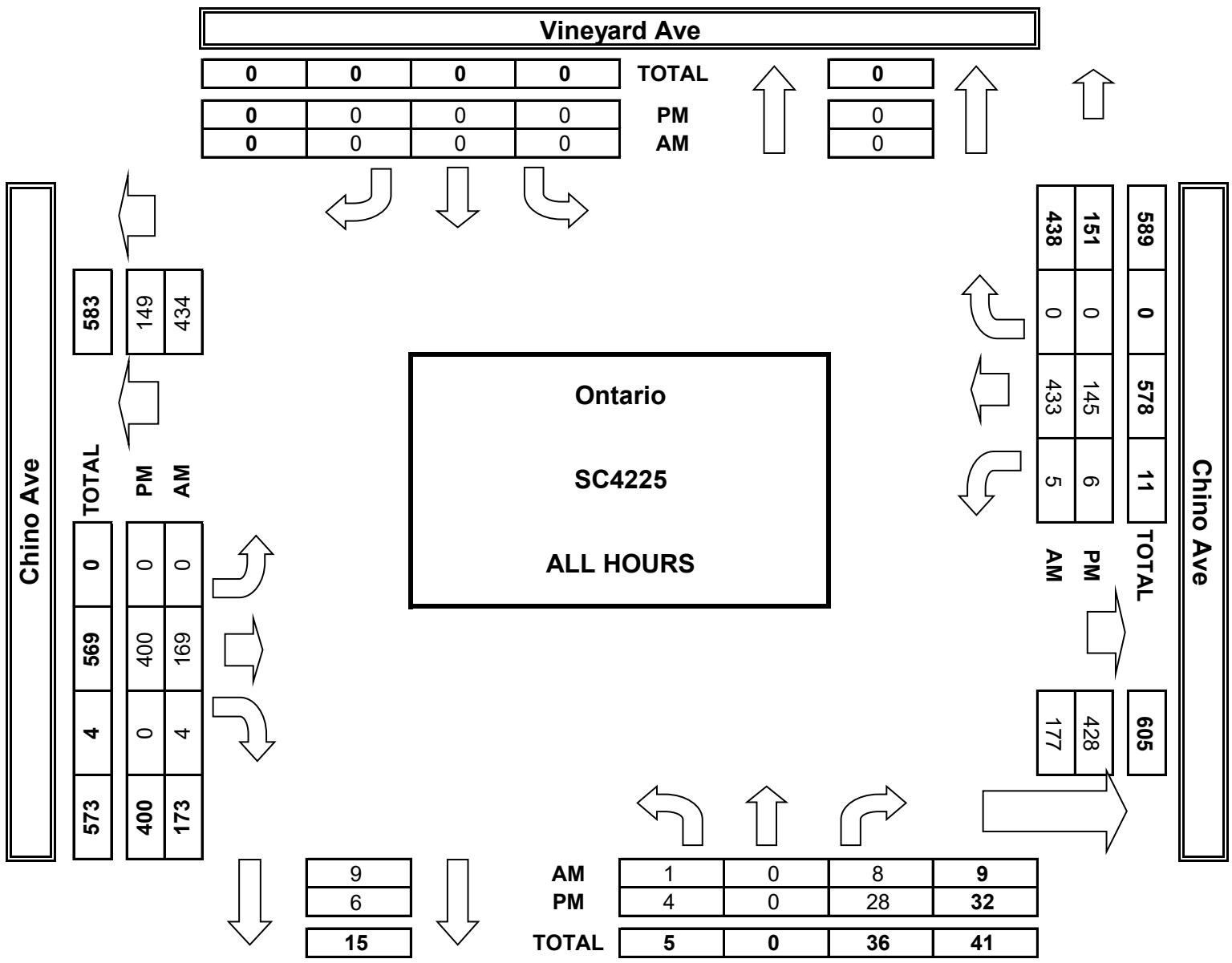
U-TURNS

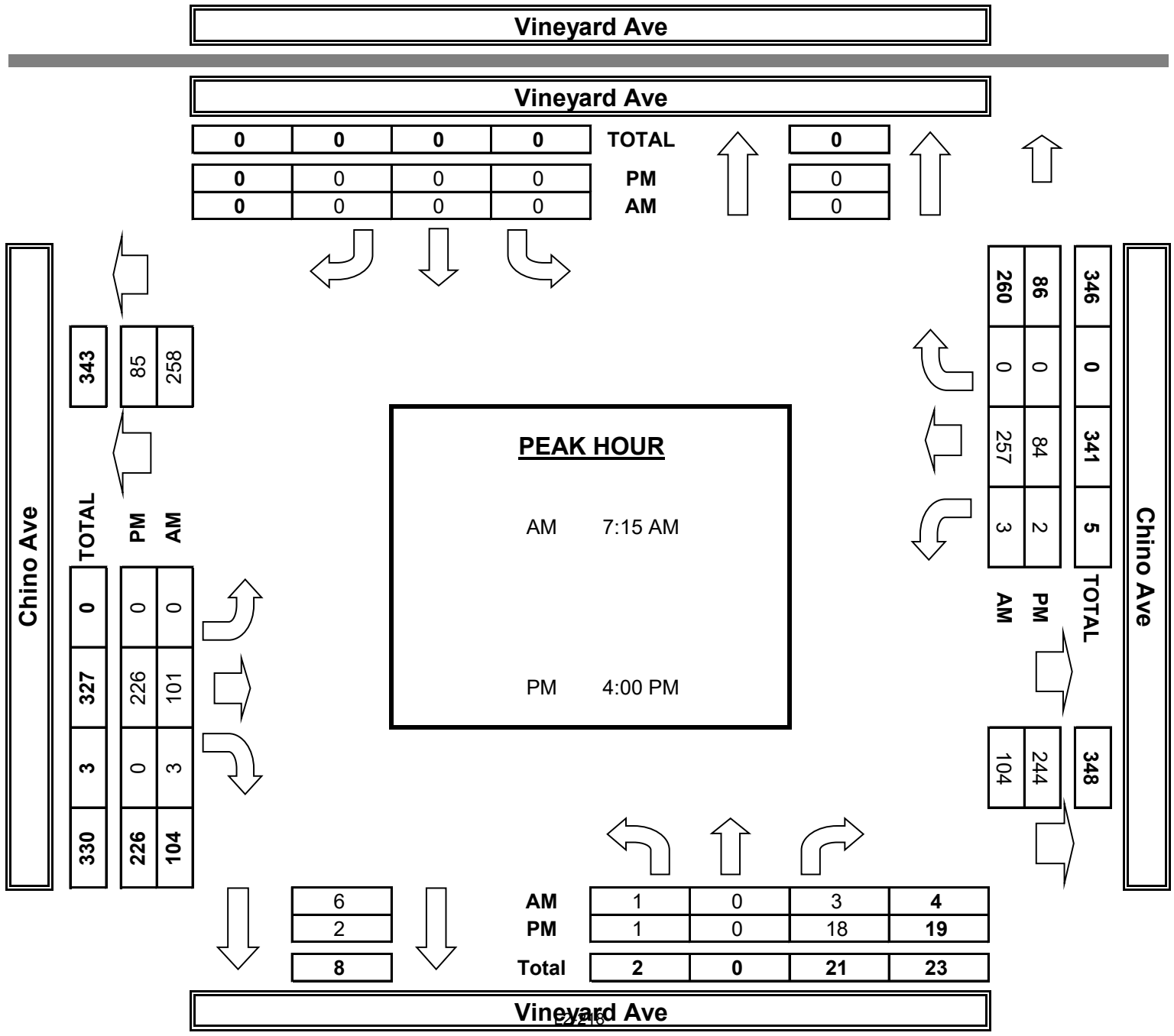
NB	SB	EB	WB	TTL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0



AimTD LLC

TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

T101823

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:				
Tue, Oct 10, 23	LOCATION:	Ontario	PROJECT #:	SC4225
	NORTH & SOUTH:	Schaefer Ave	LOCATION #:	28
	EAST & WEST:	Chino Ave	CONTROL:	NO CONTROL

NOTES:

AM
PM
MD
OTHER
OTHER

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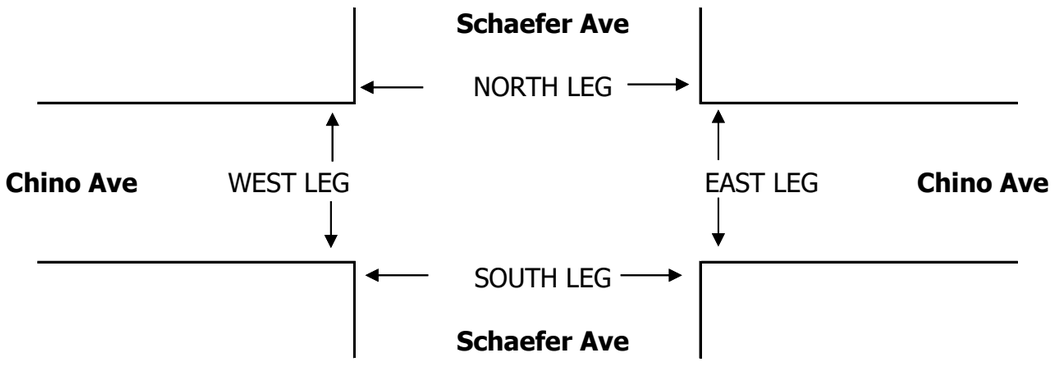
S ▼

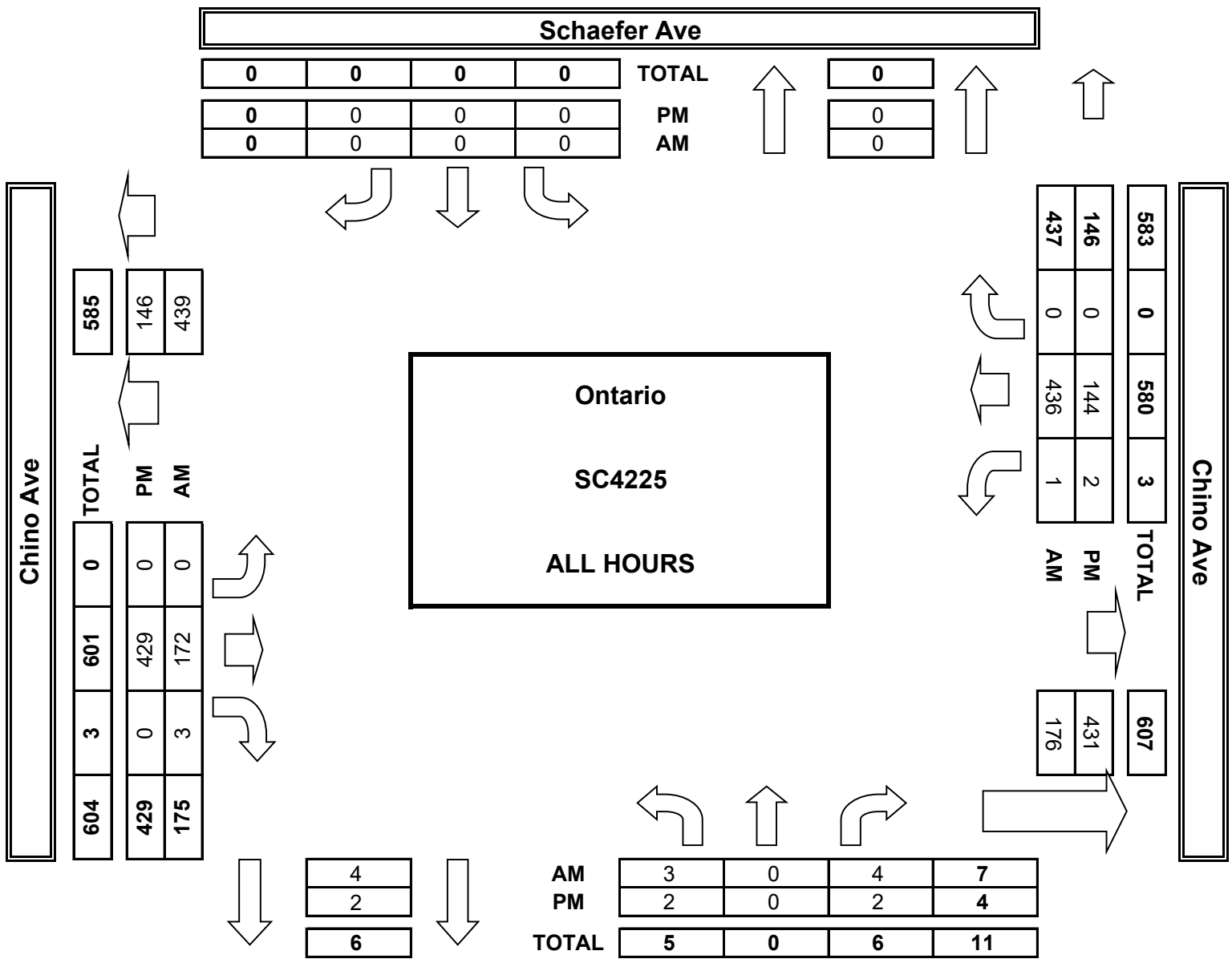
		NORTHBOUND Schaefer Ave			SOUTHBOUND Schaefer Ave			EASTBOUND Chino Ave			WESTBOUND Chino Ave			
	LANES:	NL 0	NT X	NR 0	SL X	ST X	SR X	EL X	ET 1	ER 0	WL 0	WT 1	WR X	TOTAL
AM	7:00 AM	1	0	0	0	0	0	0	13	1	0	52	0	67
	7:15 AM	0	0	0	0	0	0	0	27	0	0	56	0	83
	7:30 AM	2	0	0	0	0	0	0	20	0	0	67	0	89
	7:45 AM	0	0	0	0	0	0	0	23	0	0	71	0	94
	8:00 AM	0	0	0	0	0	0	0	34	2	0	60	0	96
	8:15 AM	0	0	1	0	0	0	0	25	0	0	49	0	75
	8:30 AM	0	0	1	0	0	0	0	17	0	0	33	0	51
	8:45 AM	0	0	2	0	0	0	0	13	0	1	48	0	64
	VOLUMES	3	0	4	0	0	0	0	172	3	1	436	0	619
	APPROACH %	43%	0%	57%	0%	0%	0%	0%	98%	2%	0%	100%	0%	
	APP/DEPART	7	/	0	0	/	4	175	/	176	437	/	439	0
	BEGIN PEAK HR		7:15 AM											
	VOLUMES	2	0	0	0	0	0	0	104	2	0	254	0	362
	APPROACH %	100%	0%	0%	0%	0%	0%	0%	98%	2%	0%	100%	0%	
	PEAK HR FACTOR		0.250			0.000			0.736			0.894		0.943
	APP/DEPART	2	/	0	0	/	2	106	/	104	254	/	256	0
PM	4:00 PM	0	0	2	0	0	0	0	60	0	2	25	0	89
	4:15 PM	2	0	0	0	0	0	0	63	0	0	23	0	88
	4:30 PM	0	0	0	0	0	0	0	62	0	0	17	0	79
	4:45 PM	0	0	0	0	0	0	0	59	0	0	16	0	75
	5:00 PM	0	0	0	0	0	0	0	50	0	0	22	0	72
	5:15 PM	0	0	0	0	0	0	0	49	0	0	17	0	66
	5:30 PM	0	0	0	0	0	0	0	42	0	0	9	0	51
	5:45 PM	0	0	0	0	0	0	0	44	0	0	15	0	59
	VOLUMES	2	0	2	0	0	0	0	429	0	2	144	0	579
	APPROACH %	50%	0%	50%	0%	0%	0%	0%	100%	0%	1%	99%	0%	
	APP/DEPART	4	/	0	0	/	2	429	/	431	146	/	146	0
	BEGIN PEAK HR		4:00 PM											
	VOLUMES	2	0	2	0	0	0	0	244	0	2	81	0	331
	APPROACH %	50%	0%	50%	0%	0%	0%	0%	100%	0%	2%	98%	0%	
	PEAK HR FACTOR		0.500			0.000			0.968			0.769		0.930
	APP/DEPART	4	/	0	0	/	2	244	/	246	83	/	83	0

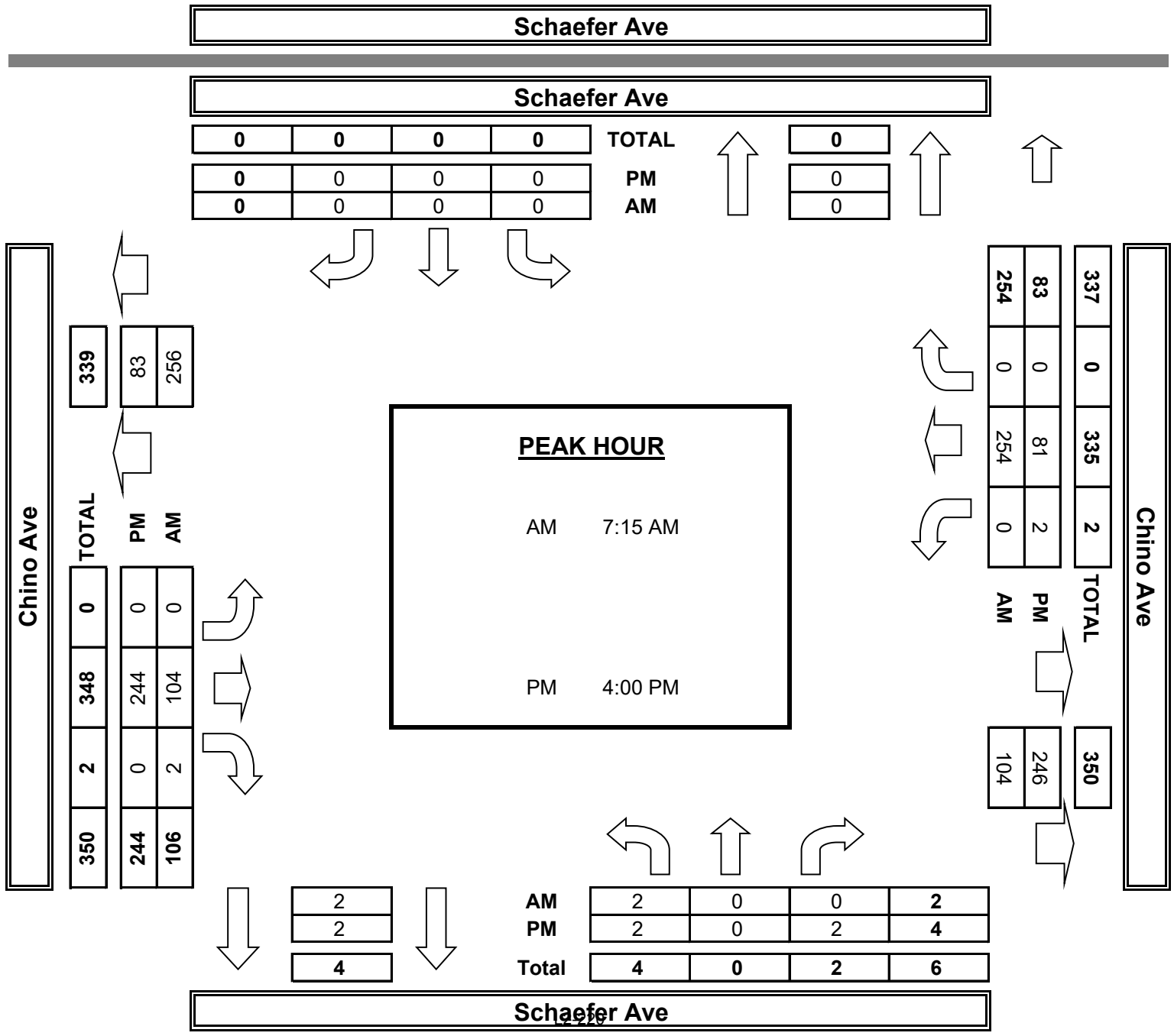
U-TURNS				
NB	SB	EB	WB	TTL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0



AimTD LLC

TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

T101823

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Tue, Oct 10, 23

LOCATION: Ontario
NORTH & SOUTH: Ontario Ave
EAST & WEST: Chino Ave

PROJECT #: SC4225
LOCATION #: 29
CONTROL: STOP N/S

NOTES:

AM
PM
MD
OTHER
OTHER

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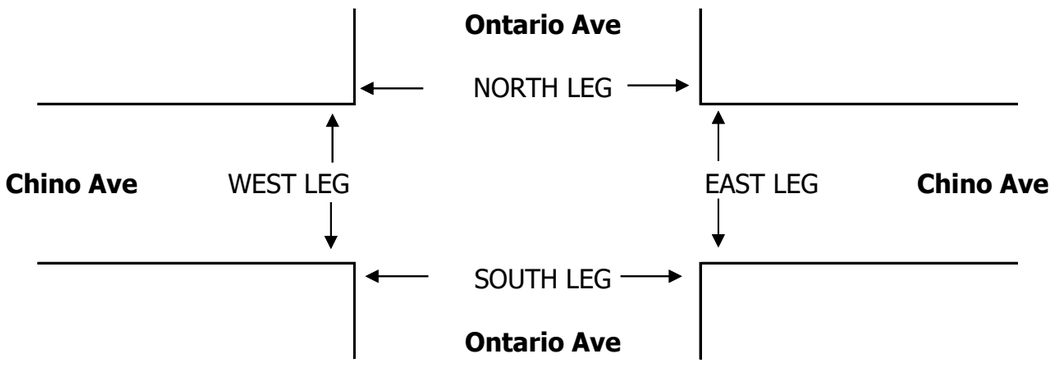
E ►
S ▼

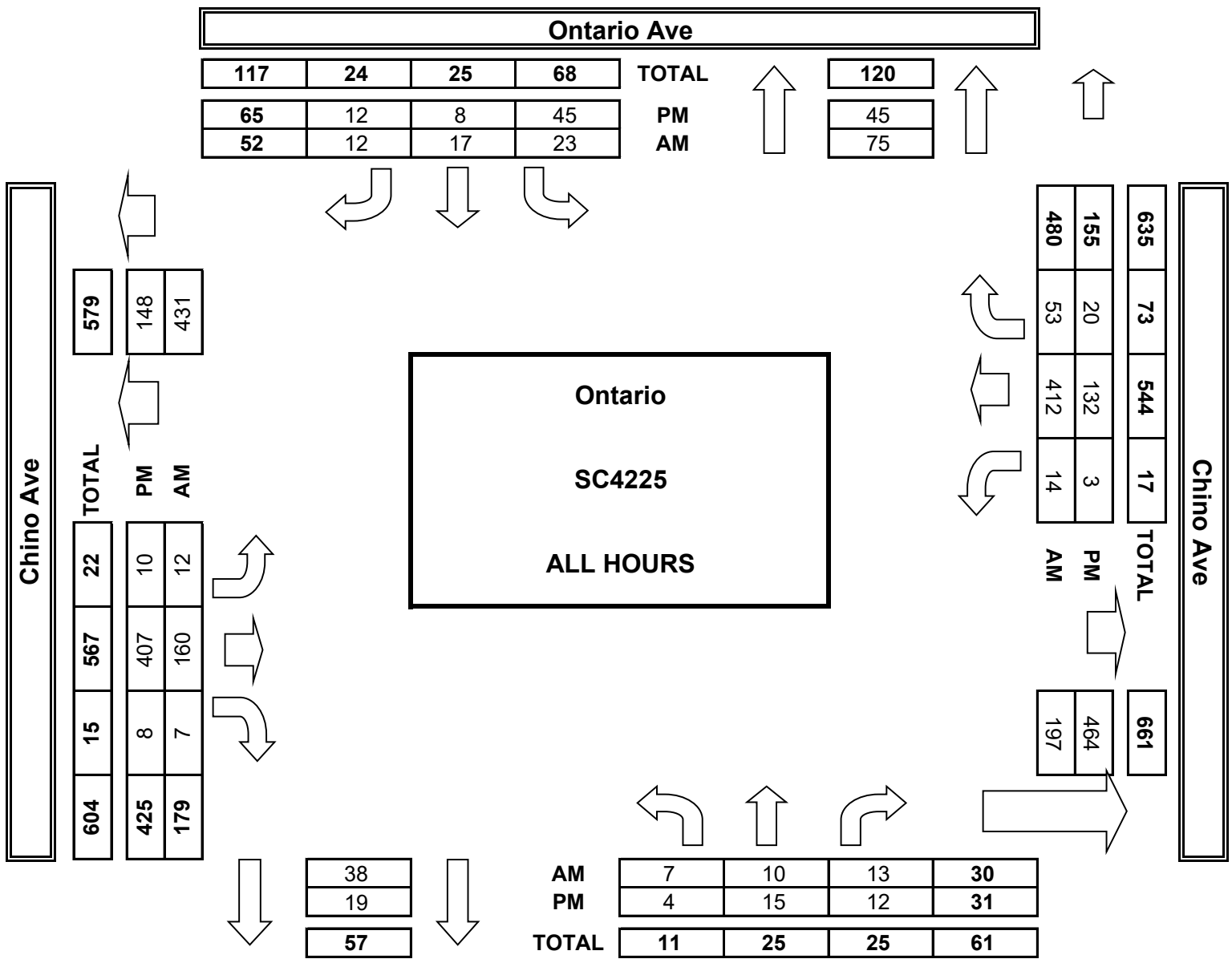
		NORTHBOUND Ontario Ave			SOUTHBOUND Ontario Ave			EASTBOUND Chino Ave			WESTBOUND Chino Ave			
	LANES:	NL 0	NT 1	NR 0	SL 0	ST 1	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL
AM	7:00 AM	0	0	0	1	4	1	1	12	0	3	49	5	76
	7:15 AM	1	2	5	2	2	2	4	24	3	2	55	9	111
	7:30 AM	2	2	2	6	0	1	4	16	0	2	62	6	103
	7:45 AM	1	0	0	1	1	3	0	29	1	1	64	9	110
	8:00 AM	0	1	1	2	2	2	0	26	0	1	61	10	106
	8:15 AM	0	1	1	4	4	2	1	25	1	2	45	5	91
	8:30 AM	1	1	3	3	2	1	1	18	0	2	29	2	63
	8:45 AM	2	3	1	4	2	0	1	10	2	1	47	7	80
	VOLUMES	7	10	13	23	17	12	12	160	7	14	412	53	741
	APPROACH %	23%	33%	43%	44%	33%	23%	7%	89%	4%	3%	86%	11%	
	APP/DEPART	30	/	75	52	/	38	179	/	197	480	/	431	0
	BEGIN PEAK HR		7:15 AM											
	VOLUMES	4	5	8	11	5	8	8	95	4	6	242	34	430
	APPROACH %	24%	29%	47%	46%	21%	33%	7%	89%	4%	2%	86%	12%	
	PEAK HR FACTOR		0.531			0.857			0.863			0.953		0.968
	APP/DEPART	17	/	47	24	/	15	107	/	114	282	/	254	0
PM	4:00 PM	1	2	2	7	1	4	1	56	0	0	21	4	99
	4:15 PM	0	3	0	3	1	2	1	63	0	0	24	2	99
	4:30 PM	0	1	3	5	1	0	1	60	4	1	17	0	93
	4:45 PM	1	6	4	5	4	1	1	54	0	1	13	5	95
	5:00 PM	1	2	0	10	0	4	1	42	3	0	24	2	89
	5:15 PM	1	0	0	2	0	0	3	47	0	1	10	3	67
	5:30 PM	0	0	0	9	1	1	0	42	0	0	10	2	65
	5:45 PM	0	1	3	4	0	0	2	43	1	0	13	2	69
	VOLUMES	4	15	12	45	8	12	10	407	8	3	132	20	676
	APPROACH %	13%	48%	39%	69%	12%	18%	2%	96%	2%	2%	85%	13%	
	APP/DEPART	31	/	45	65	/	19	425	/	464	155	/	148	0
	BEGIN PEAK HR		4:00 PM											
	VOLUMES	2	12	9	20	7	7	4	233	4	2	75	11	386
	APPROACH %	9%	52%	39%	59%	21%	21%	2%	97%	2%	2%	85%	13%	
	PEAK HR FACTOR		0.523			0.708			0.927			0.846		0.975
	APP/DEPART	23	/	27	34	/	13	241	/	262	88	/	84	0

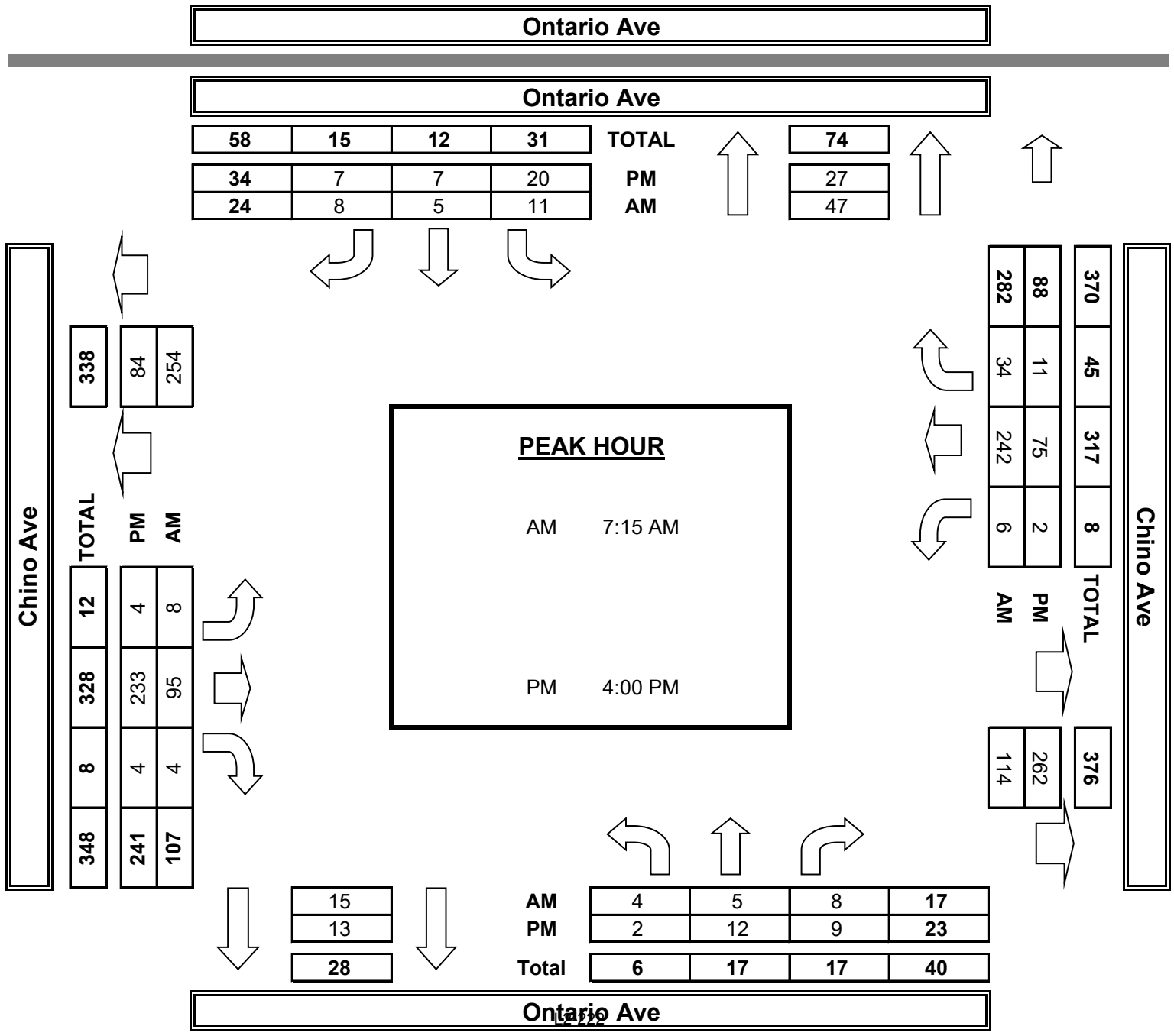
U-TURNS				
NB	SB	EB	WB	TTL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	1	1
0	0	0	0	0
0	0	0	0	0
0	0	0	1	1
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0



AimTD LLC

TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

T101823

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Tue, Oct 10, 23

LOCATION: Ontario
NORTH & SOUTH: S Archibald Ave
EAST & WEST: E Chino Ave

PROJECT #: SC4225
LOCATION #: 30
CONTROL: SIGNAL

NOTES:

AM
PM
MD
OTHER
OTHER

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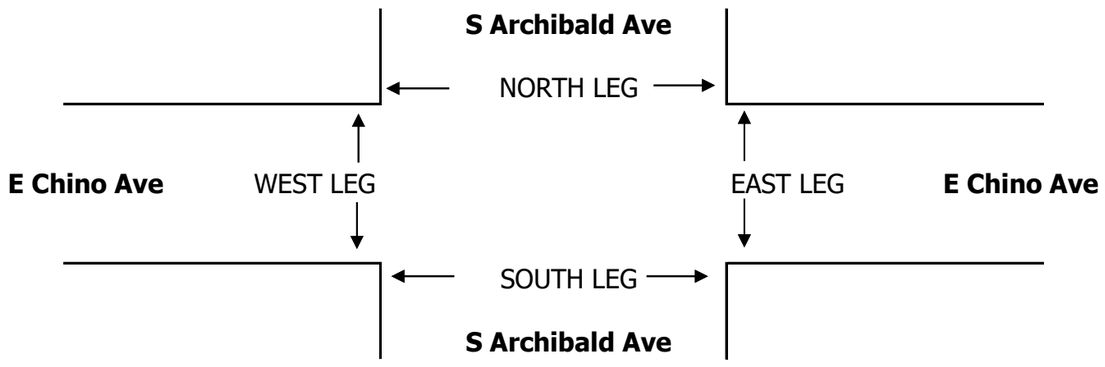
E ►
S ▼

	NORTHBOUND S Archibald Ave			SOUTHBOUND S Archibald Ave			EASTBOUND E Chino Ave			WESTBOUND E Chino Ave			
LANES:	NL 1	NT 3	NR 0	SL 1	ST 2	SR 0	EL 1	ET 1	ER 0	WL 1	WT 1	WR 1	TOTAL
7:00 AM	18	227	2	4	92	15	10	4	5	2	23	31	433
7:15 AM	27	245	5	8	110	6	16	6	7	1	26	27	484
7:30 AM	22	304	12	22	113	15	16	11	17	7	34	60	633
7:45 AM	30	303	14	29	112	16	20	12	3	18	35	61	653
8:00 AM	28	260	4	20	117	17	22	11	5	11	29	44	568
8:15 AM	18	273	2	16	113	14	19	8	8	2	27	38	538
8:30 AM	20	220	1	5	104	8	16	6	7	3	10	25	425
8:45 AM	25	242	3	13	111	11	13	5	3	1	19	22	468
AM VOLUMES	188	2,074	43	117	872	102	132	63	55	45	203	308	4,235
AM APPROACH %	8%	89%	2%	11%	80%	9%	53%	25%	22%	8%	36%	55%	
AM APP/DEPART	2,334	/	2,517	1,094	/	1,001	250	/	224	557	/	493	0
AM BEGIN PEAK HR		7:30 AM											
AM VOLUMES	98	1,140	32	87	455	62	77	42	33	38	125	203	2,410
AM APPROACH %	8%	89%	2%	14%	75%	10%	51%	28%	22%	10%	34%	55%	
AM PEAK HR FACTOR		0.913			0.963			0.864			0.805		0.916
AM APP/DEPART	1,286	/	1,421	605	/	542	152	/	162	367	/	285	0
4:00 PM	10	177	4	24	175	15	30	28	15	3	7	22	510
4:15 PM	10	218	4	28	167	10	27	30	11	2	14	15	536
4:30 PM	8	188	4	13	210	7	33	24	6	4	8	24	529
4:45 PM	6	184	5	24	206	13	23	36	15	1	7	20	540
5:00 PM	12	179	6	24	215	18	19	18	9	8	3	22	533
5:15 PM	4	195	8	25	229	10	26	22	10	2	4	24	559
5:30 PM	3	180	5	31	206	6	17	21	11	5	6	24	515
5:45 PM	4	198	8	20	221	11	26	19	10	4	6	26	553
PM VOLUMES	57	1,519	44	189	1,629	90	201	198	87	29	55	177	4,290
PM APPROACH %	3%	93%	3%	10%	85%	5%	41%	41%	18%	11%	21%	68%	
PM APP/DEPART	1,633	/	1,899	1,910	/	1,758	486	/	431	261	/	202	0
PM BEGIN PEAK HR		5:00 PM											
PM VOLUMES	23	752	27	100	871	45	88	80	40	19	19	96	2,170
PM APPROACH %	3%	93%	3%	10%	86%	4%	42%	38%	19%	14%	14%	72%	
PM PEAK HR FACTOR		0.951			0.964			0.897			0.931		0.969
PM APP/DEPART	810	/	938	1,018	/	938	208	/	207	134	/	87	0

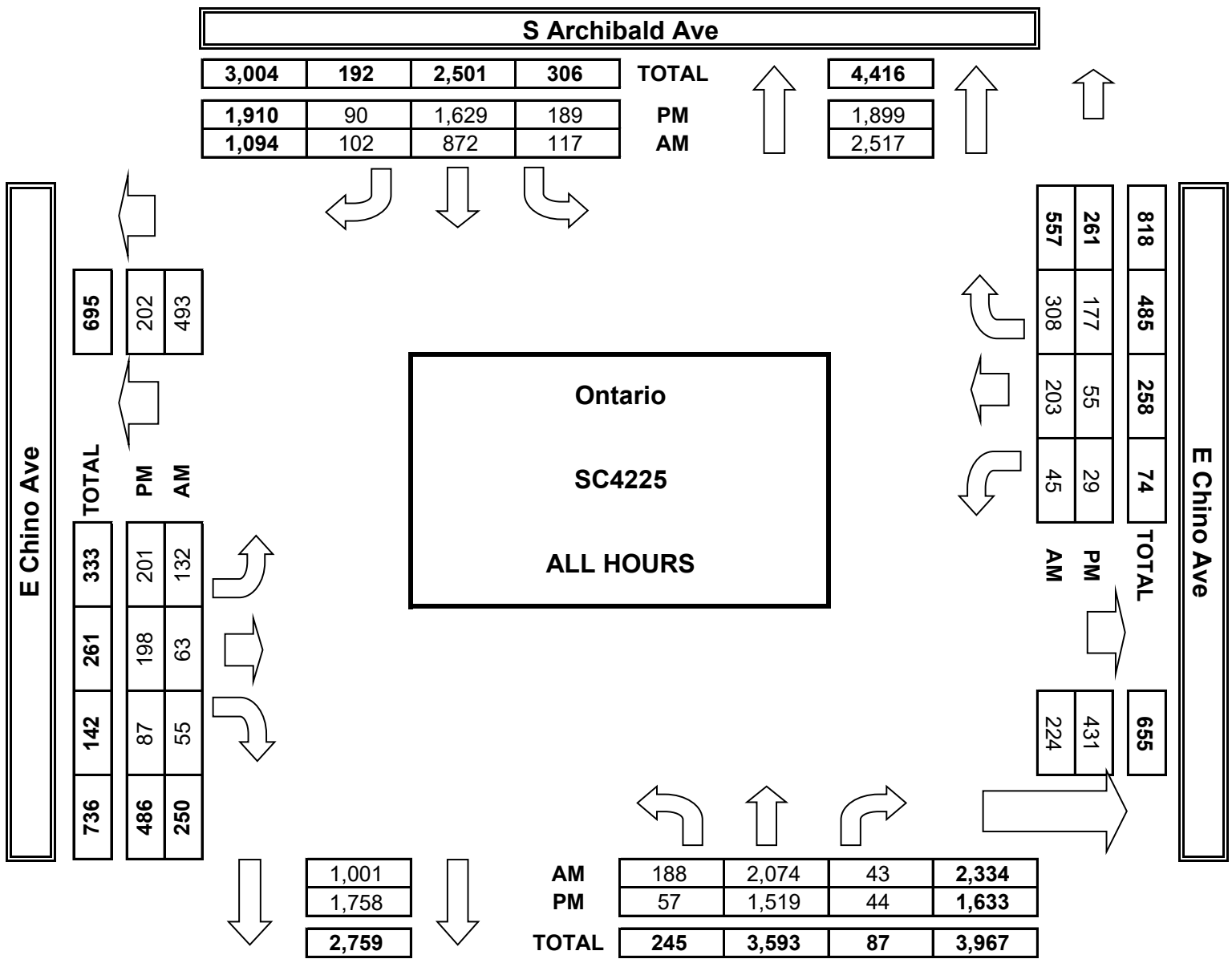
U-TURNS

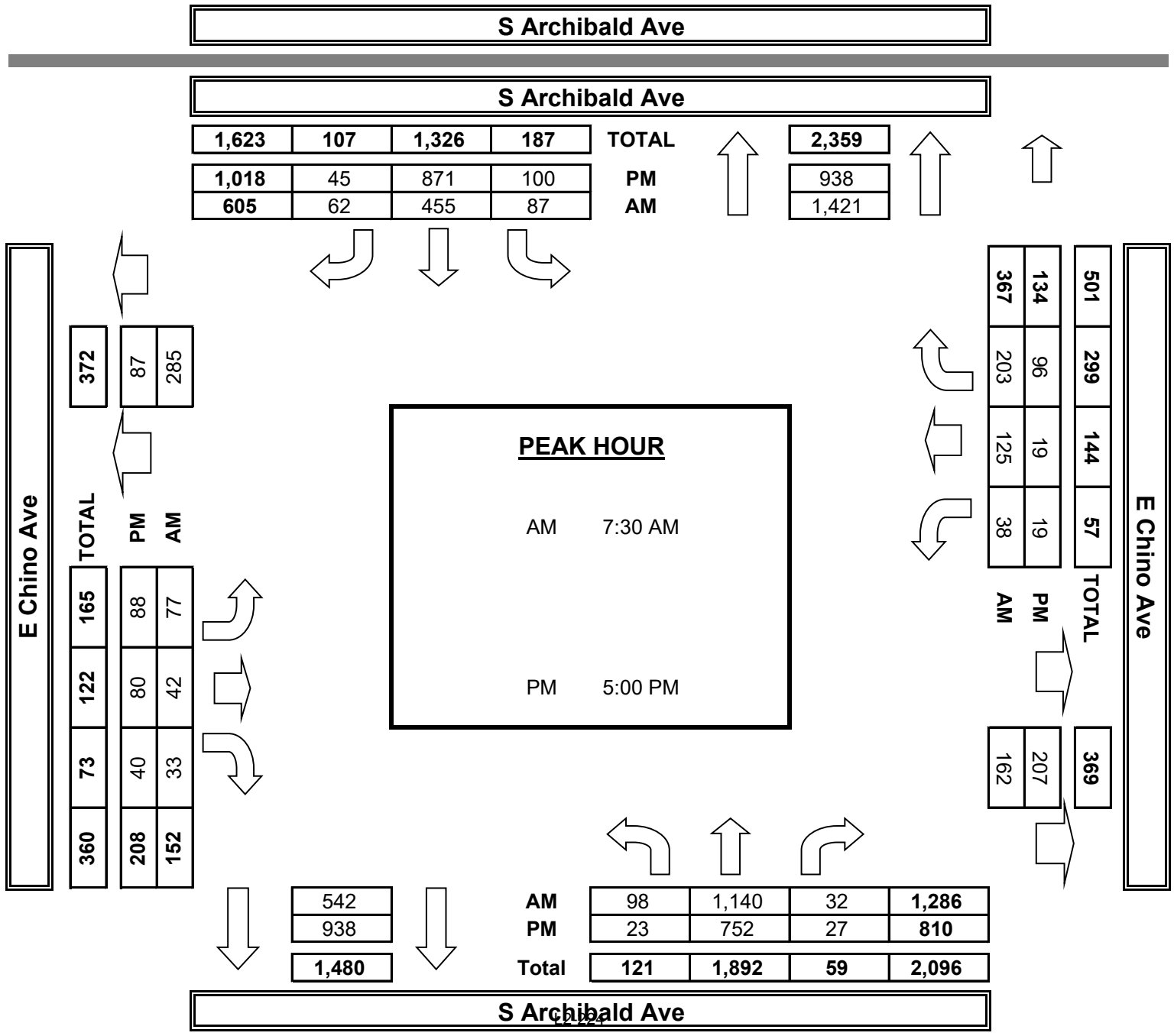
	NB	SB	EB	WB	TTL
	0	0	0	0	
AM	0	1	0	0	1
	3	1	0	0	4
	3	0	0	0	3
	5	0	0	0	5
	2	1	0	0	3
	6	0	0	1	7
	4	0	0	0	4
	6	0	0	0	6
AM	29	3	0	1	33
PM	1	0	0	0	1
	2	0	0	0	2
	1	0	0	0	1
	1	0	0	0	1
	1	0	0	0	1
	1	0	0	0	1
	3	0	0	0	3
	3	2	0	0	5
PM	13	2	0	0	15



AimTD LLC

TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

T101823

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

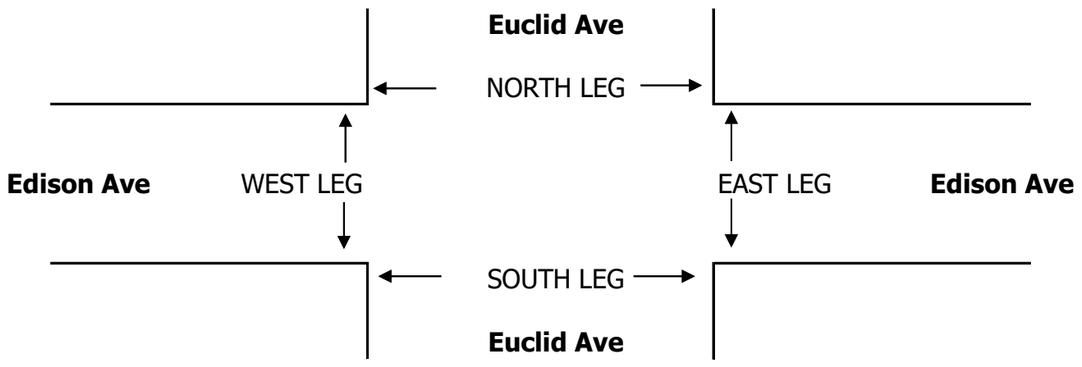
DATE:			PROJECT #:	
Tue, Oct 10, 23	LOCATION:	Ontario	PROJECT #:	SC4225
	NORTH & SOUTH:	Euclid Ave	LOCATION #:	31
	EAST & WEST:	Edison Ave	CONTROL:	SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER

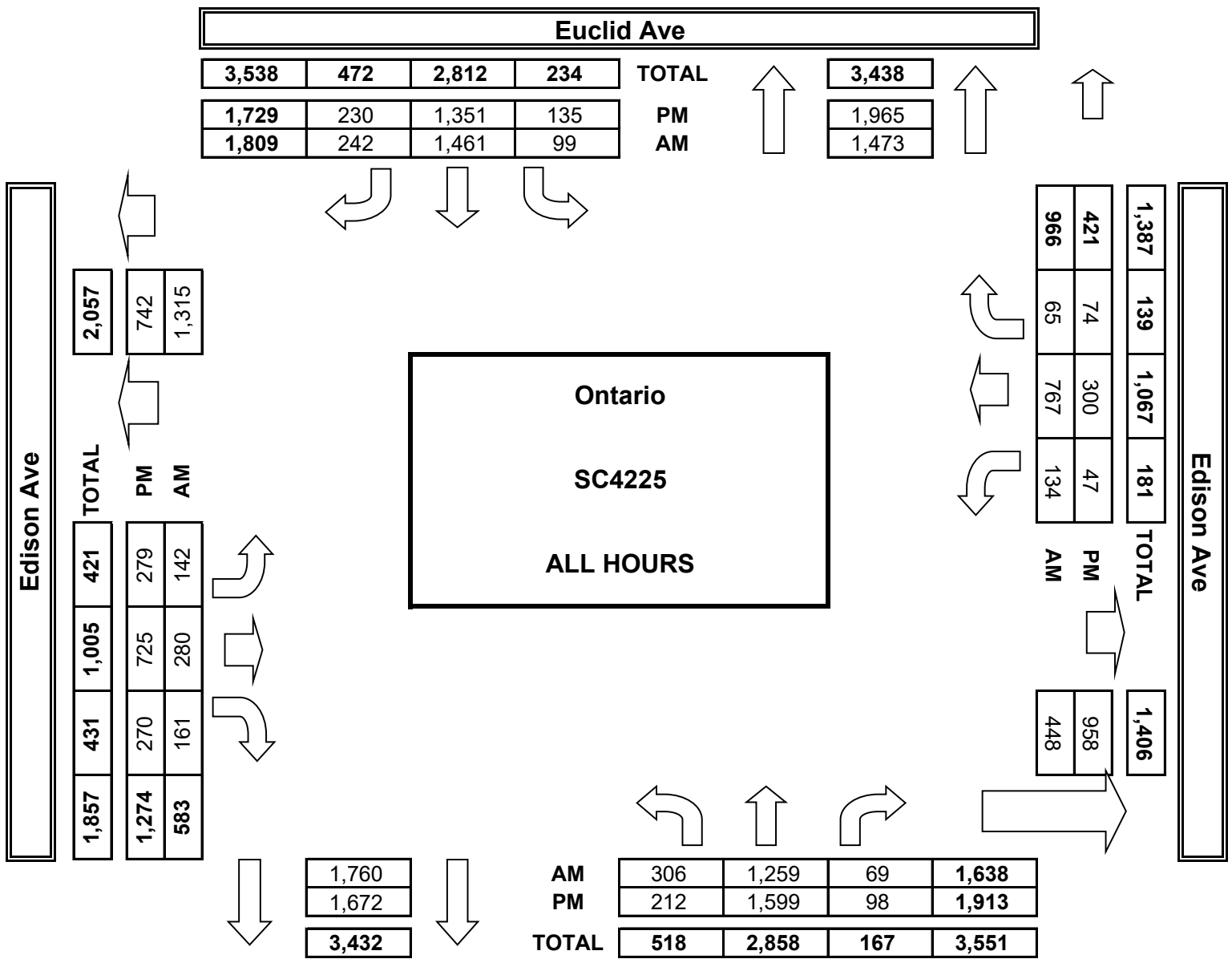
▲ N ◄ W E ► S ▼

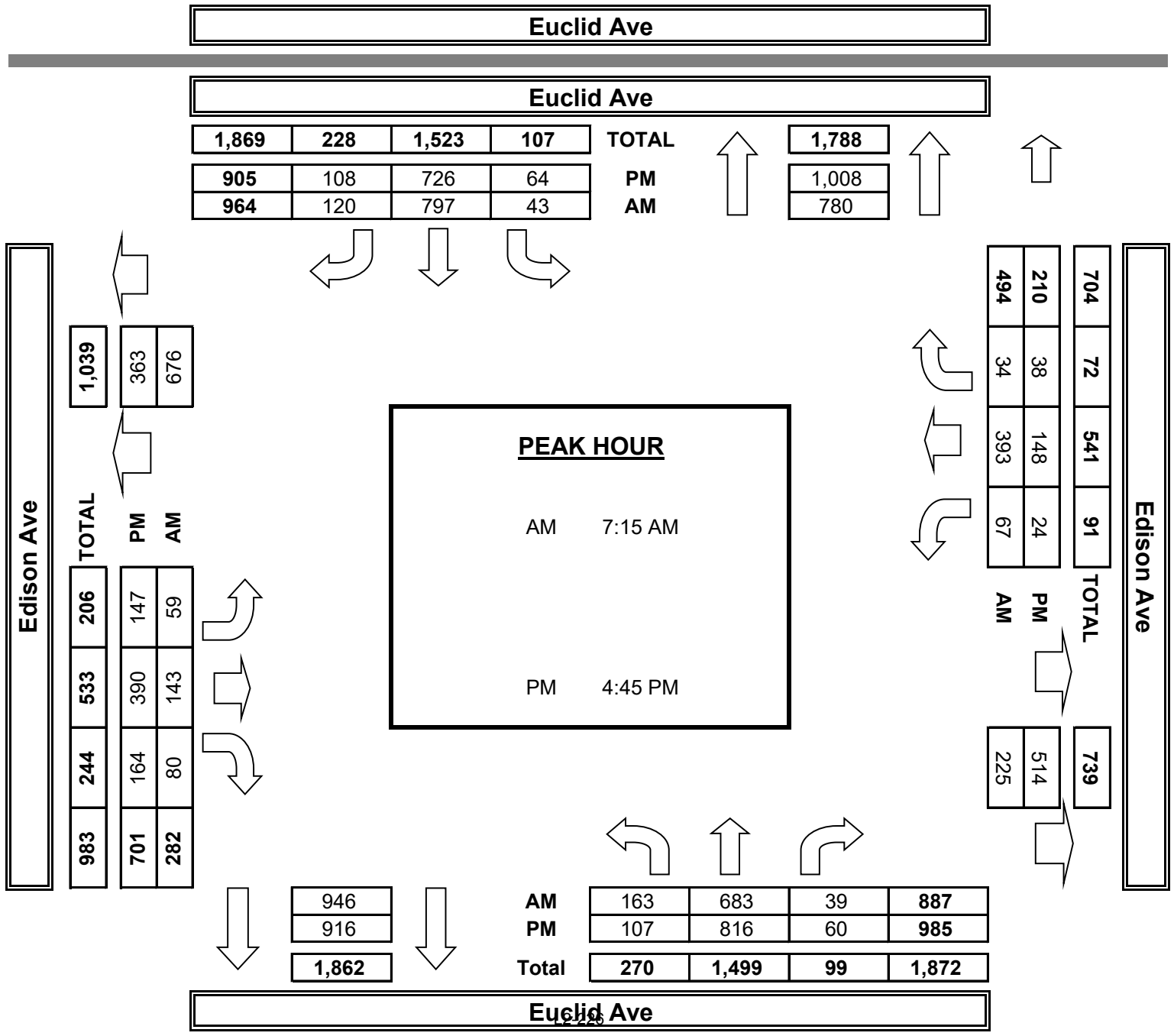
	NORTHBOUND Euclid Ave			SOUTHBOUND Euclid Ave			EASTBOUND Edison Ave			WESTBOUND Edison Ave				U-TURNS				
LANES:	NL 2	NT 2	NR 1	SL 1	ST 2	SR 1	EL 1	ET 1	ER 1	WL 1	WT 1	WR 0	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
AM 7:00 AM	30	116	4	11	171	24	24	25	17	20	104	6	552	0	0	0	0	0
7:15 AM	40	179	10	11	184	21	14	21	21	10	103	7	621	0	0	0	0	0
7:30 AM	34	151	8	13	220	33	15	49	13	17	98	5	656	2	2	0	0	4
7:45 AM	49	195	15	10	209	29	12	44	25	17	91	14	710	0	1	0	0	1
8:00 AM	40	158	6	9	184	37	18	29	21	23	101	8	634	0	1	0	0	1
8:15 AM	44	139	11	17	140	36	22	34	25	18	101	10	597	0	0	0	0	0
8:30 AM	34	147	7	11	192	32	17	41	16	11	87	5	600	2	1	0	0	3
8:45 AM	35	174	8	17	161	30	20	37	23	18	82	10	615	0	2	0	0	2
VOLUMES	306	1,259	69	99	1,461	242	142	280	161	134	767	65	4,996	4	7	0	0	11
APPROACH %	19%	77%	4%	5%	81%	13%	24%	48%	28%	14%	79%	7%						
APP/DEPART	1,638	/	1,473	1,809	/	1,760	583	/	448	966	/	1,315	0					
BEGIN PEAK HR		7:15 AM																
VOLUMES	163	683	39	43	797	120	59	143	80	67	393	34	2,627					
APPROACH %	18%	77%	4%	4%	83%	12%	21%	51%	28%	14%	80%	7%						
PEAK HR FACTOR		0.856			0.899			0.870			0.936		0.924					
APP/DEPART	887	/	780	964	/	946	282	/	225	494	/	676	0					
PM 4:00 PM	28	189	4	18	162	38	42	80	21	8	29	9	628	1	2	0	0	3
4:15 PM	31	202	7	21	164	30	41	77	26	5	37	8	649	0	0	0	0	0
4:30 PM	22	182	16	22	124	32	34	97	34	3	45	8	619	1	1	0	0	2
4:45 PM	33	195	18	20	176	27	32	85	36	7	36	10	675	0	2	0	0	2
5:00 PM	24	196	15	13	170	30	38	95	46	5	34	14	680	1	3	0	0	4
5:15 PM	27	201	12	15	200	28	45	110	34	3	48	4	727	1	1	0	0	2
5:30 PM	23	224	15	16	180	23	32	100	48	9	30	10	710	0	1	0	0	1
5:45 PM	24	210	11	10	175	22	15	81	25	7	41	11	632	0	3	0	0	3
VOLUMES	212	1,599	98	135	1,351	230	279	725	270	47	300	74	5,337	4	13	0	0	17
APPROACH %	11%	84%	5%	8%	78%	13%	22%	57%	21%	11%	71%	18%						
APP/DEPART	1,913	/	1,965	1,729	/	1,672	1,274	/	958	421	/	742	0					
BEGIN PEAK HR		4:45 PM																
VOLUMES	107	816	60	64	726	108	147	390	164	24	148	38	2,801					
APPROACH %	11%	83%	6%	7%	80%	12%	21%	56%	23%	11%	70%	18%						
PEAK HR FACTOR		0.940			0.927			0.927			0.955		0.961					
APP/DEPART	985	/	1,008	905	/	916	701	/	514	210	/	363	0					



AimTD LLC

TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

T101823

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

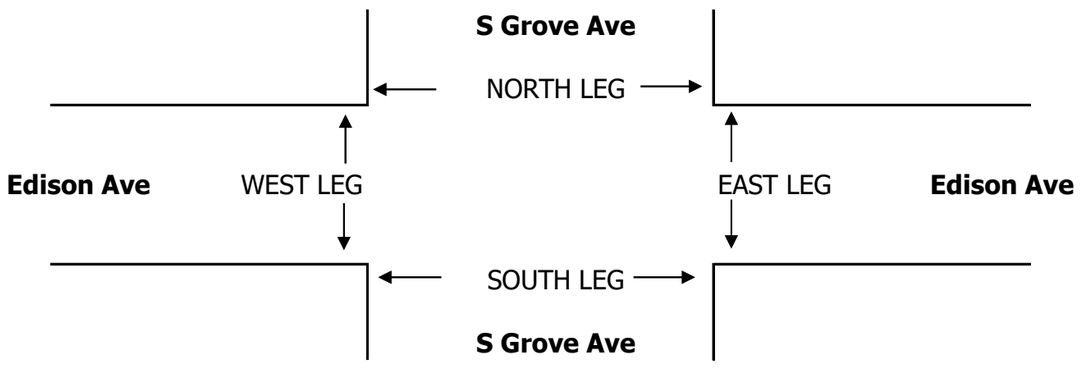
DATE:			PROJECT #:	
Tue, Oct 10, 23	LOCATION:	Ontario	PROJECT #:	SC4225
	NORTH & SOUTH:	S Grove Ave	LOCATION #:	32
	EAST & WEST:	Edison Ave	CONTROL:	STOP ALL

NOTES:

AM / PM / MD / OTHER / OTHER

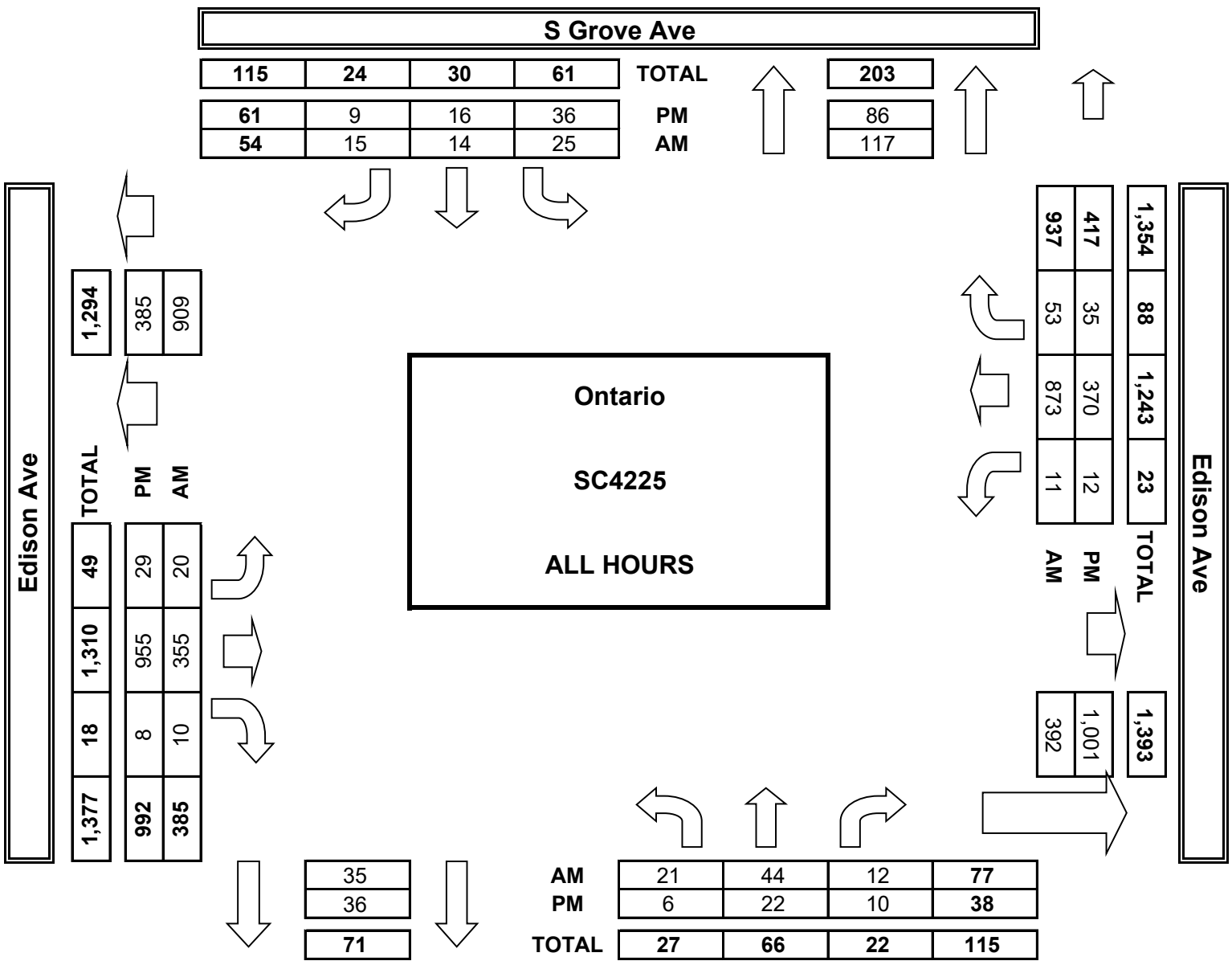
▲ N ◄ W E ► S ▼

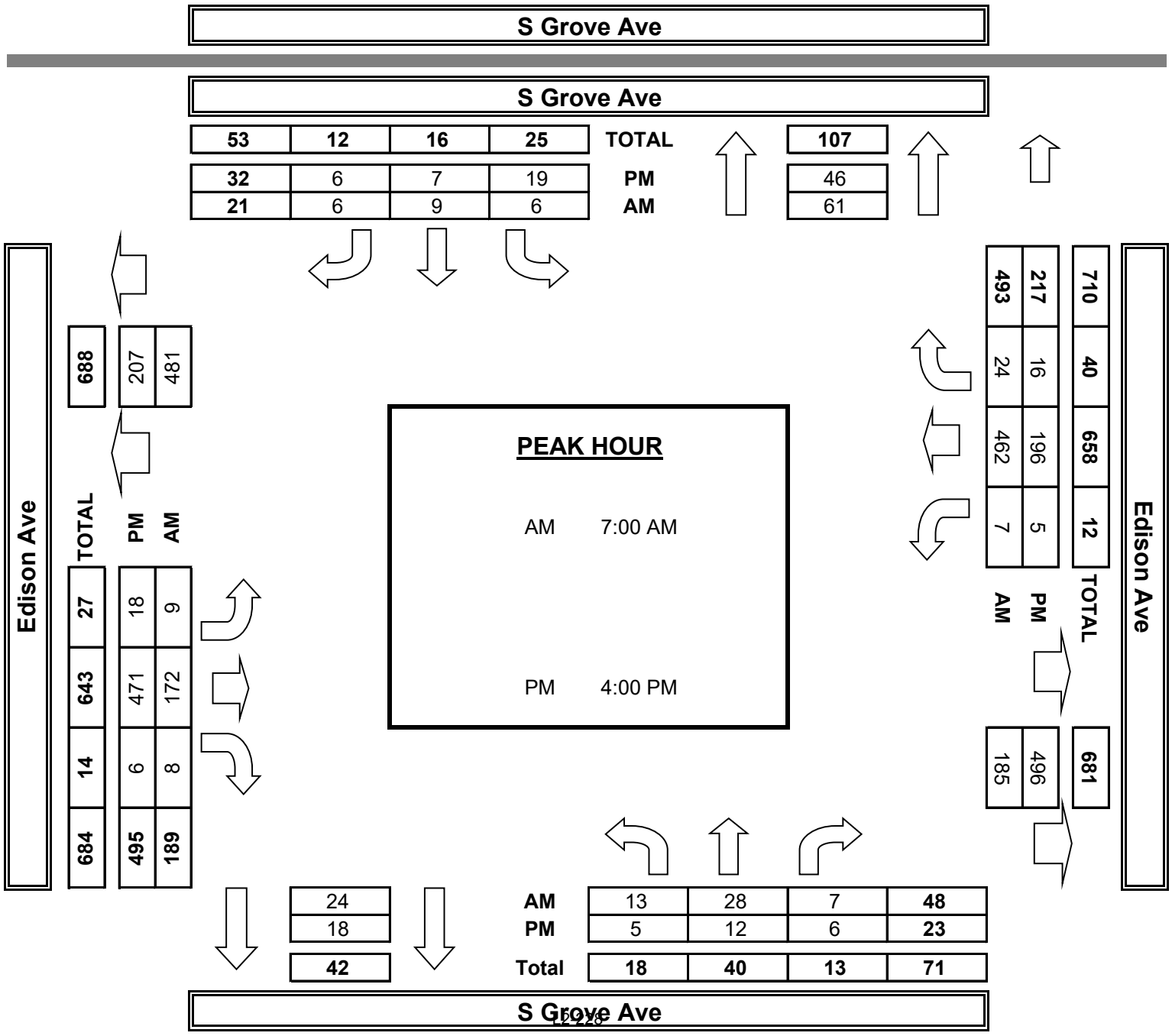
	NORTHBOUND S Grove Ave			SOUTHBOUND S Grove Ave			EASTBOUND Edison Ave			WESTBOUND Edison Ave				U-TURNS				
LANES:	NL 0	NT 1	NR 0	SL 0	ST 1	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
AM 7:00 AM	3	8	1	1	4	1	3	29	2	0	128	10	190	0	0	0	0	0
7:15 AM	1	5	1	3	2	1	1	27	1	2	129	2	175	0	0	0	0	0
7:30 AM	5	10	5	1	0	3	2	52	1	2	107	6	194	0	0	0	0	0
7:45 AM	4	5	0	1	3	1	3	64	4	3	98	6	192	0	0	0	0	0
8:00 AM	3	5	2	1	1	3	3	38	0	0	114	5	175	0	0	0	0	0
8:15 AM	2	5	0	2	1	1	4	49	1	1	100	11	177	0	0	0	0	0
8:30 AM	2	3	3	6	1	2	2	46	1	2	109	7	184	0	0	0	0	0
8:45 AM	1	3	0	10	2	3	2	50	0	1	88	6	166	0	0	0	0	0
VOLUMES	21	44	12	25	14	15	20	355	10	11	873	53	1,453	0	0	0	0	0
APPROACH %	27%	57%	16%	46%	26%	28%	5%	92%	3%	1%	93%	6%						
APP/DEPART	77	/	117	54	/	35	385	/	392	937	/	909	0					
BEGIN PEAK HR		7:00 AM																
VOLUMES	13	28	7	6	9	6	9	172	8	7	462	24	751					
APPROACH %	27%	58%	15%	29%	43%	29%	5%	91%	4%	1%	94%	5%						
PEAK HR FACTOR		0.600			0.875			0.665			0.893		0.968					
APP/DEPART	48	/	61	21	/	24	189	/	185	493	/	481	0					
PM 4:00 PM	0	4	0	5	4	1	7	134	1	2	51	8	217	0	0	0	0	0
4:15 PM	1	4	0	4	1	3	3	111	0	2	54	3	186	0	0	0	0	0
4:30 PM	2	3	4	6	1	1	7	119	4	1	48	3	199	0	0	0	0	0
4:45 PM	2	1	2	4	1	1	1	107	1	0	43	2	165	0	0	0	0	0
5:00 PM	0	3	0	5	1	2	2	113	0	1	39	5	171	0	0	0	0	0
5:15 PM	0	2	1	4	1	0	3	116	0	1	45	3	176	0	0	0	0	0
5:30 PM	0	2	1	5	6	1	5	132	0	4	41	5	202	0	0	0	0	0
5:45 PM	1	3	2	3	1	0	1	123	2	1	49	6	192	0	0	0	0	0
VOLUMES	6	22	10	36	16	9	29	955	8	12	370	35	1,508	0	0	0	0	0
APPROACH %	16%	58%	26%	59%	26%	15%	3%	96%	1%	3%	89%	8%						
APP/DEPART	38	/	86	61	/	36	992	/	1,001	417	/	385	0					
BEGIN PEAK HR		4:00 PM																
VOLUMES	5	12	6	19	7	6	18	471	6	5	196	16	767					
APPROACH %	22%	52%	26%	59%	22%	19%	4%	95%	1%	2%	90%	7%						
PEAK HR FACTOR		0.639			0.800			0.871			0.889		0.884					
APP/DEPART	23	/	46	32	/	18	495	/	496	217	/	207	0					



AimTD LLC

TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

T101823

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:				
Tue, Oct 10, 23	LOCATION:	Ontario	PROJECT #:	SC4225
	NORTH & SOUTH:	S Archibald Ave	LOCATION #:	33
	EAST & WEST:	Ontario Ranch Rd	CONTROL:	SIGNAL

NOTES:

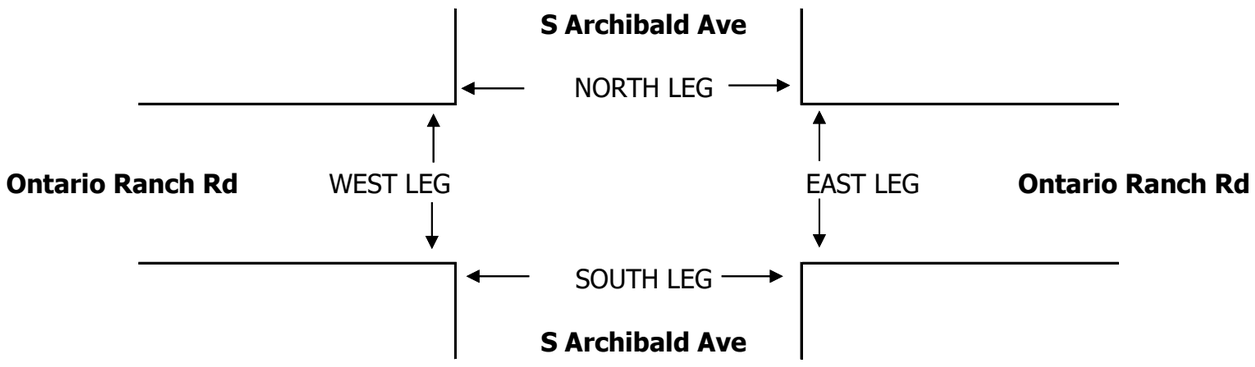
AM / PM / MD / OTHER / OTHER

▲ N ◄ W E ► S ▼

		NORTHBOUND S Archibald Ave			SOUTHBOUND S Archibald Ave			EASTBOUND Ontario Ranch Rd			WESTBOUND Ontario Ranch Rd			
	LANES:	NL 1	NT 2	NR 1	SL 1	ST 2	SR 1	EL 2	ET 2	ER 1	WL 2	WT 1	WR 1	TOTAL
AM	7:00 AM	34	159	29	8	71	13	5	30	10	47	122	18	546
	7:15 AM	33	208	35	8	111	18	4	16	10	73	121	32	669
	7:30 AM	25	255	32	18	128	24	9	30	21	78	63	21	704
	7:45 AM	17	236	47	9	98	8	9	34	24	91	69	29	671
	8:00 AM	38	215	42	21	107	20	13	32	18	45	74	26	651
	8:15 AM	15	195	30	16	82	16	6	30	15	45	82	20	552
	8:30 AM	24	181	24	10	88	8	14	34	20	42	86	30	561
	8:45 AM	16	192	38	10	99	11	8	34	17	40	59	20	544
	VOLUMES	202	1,641	277	100	784	118	68	240	135	461	676	196	4,907
	APPROACH %	10%	77%	13%	10%	78%	12%	15%	54%	30%	34%	50%	15%	
	APP/DEPART	2,121	/	1,906	1,003	/	1,381	443	/	624	1,340	/	996	0
	BEGIN PEAK HR		7:15 AM											
	VOLUMES	113	914	156	56	444	70	35	112	73	287	327	108	2,695
	APPROACH %	10%	77%	13%	10%	78%	12%	16%	51%	33%	40%	45%	15%	
	PEAK HR FACTOR		0.948			0.838			0.821			0.799		0.957
	APP/DEPART	1,183	/	1,057	570	/	804	220	/	324	722	/	510	0
PM	4:00 PM	10	148	44	22	115	9	28	118	38	39	41	24	636
	4:15 PM	13	157	60	19	133	9	24	104	35	34	23	20	631
	4:30 PM	13	142	58	14	144	11	27	91	45	34	37	21	637
	4:45 PM	14	159	61	29	179	11	30	103	31	37	29	20	703
	5:00 PM	11	135	48	30	141	8	14	99	34	41	23	12	596
	5:15 PM	16	158	75	23	188	6	17	116	38	51	30	19	737
	5:30 PM	17	145	83	24	158	5	28	90	48	46	26	20	690
	5:45 PM	15	132	43	25	159	9	18	115	42	55	32	23	668
	VOLUMES	109	1,176	472	186	1,217	68	186	836	311	337	241	159	5,298
	APPROACH %	6%	67%	27%	13%	83%	5%	14%	63%	23%	46%	33%	22%	
	APP/DEPART	1,757	/	1,521	1,471	/	1,865	1,333	/	1,494	737	/	418	0
	BEGIN PEAK HR		4:45 PM											
	VOLUMES	58	597	267	106	666	30	89	408	151	175	108	71	2,726
	APPROACH %	6%	65%	29%	13%	83%	4%	14%	63%	23%	49%	31%	20%	
	PEAK HR FACTOR		0.926			0.916			0.947			0.885		0.925
	APP/DEPART	922	/	757	802	/	992	648	/	781	354	/	196	0

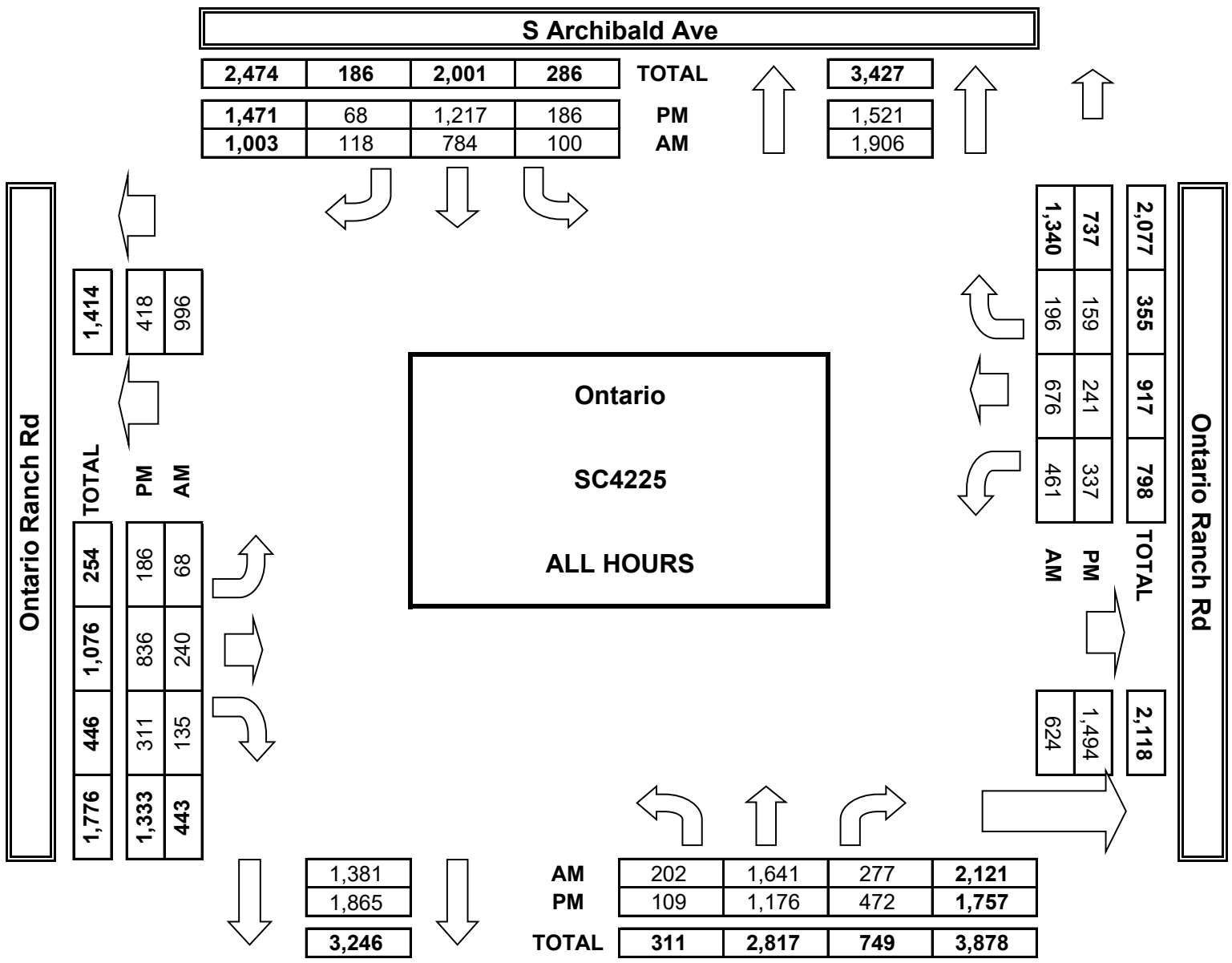
U-TURNS

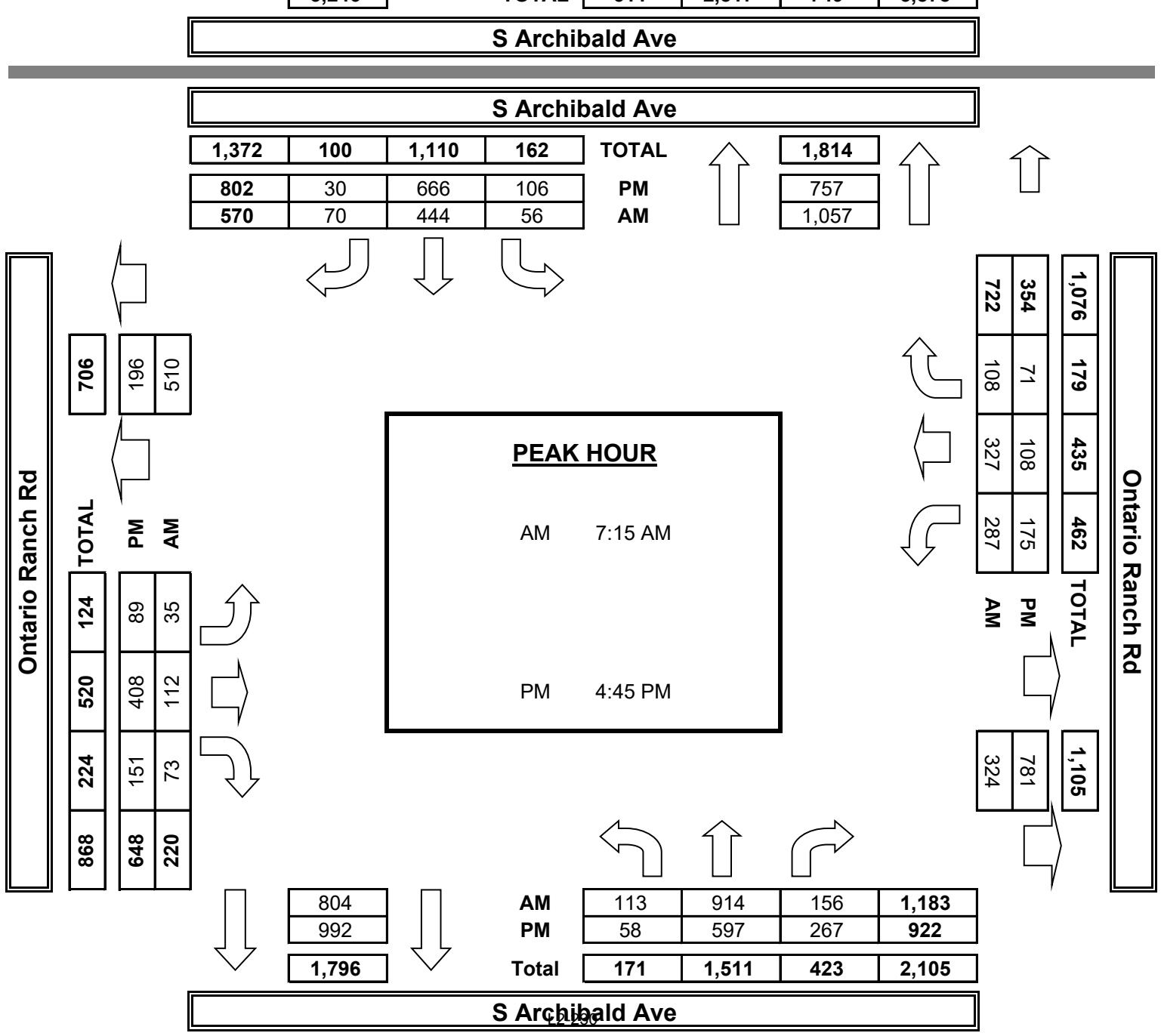
NB	SB	EB	WB	TTL
0	0	0	0	
1	1	0	1	3
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	4	4
0	0	0	1	1
0	0	0	1	1
1	1	0	7	9
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0



AimTD LLC

TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

T101823

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Tue, Oct 10, 23

LOCATION: Ontario
NORTH & SOUTH: Haven Ave
EAST & WEST: Ontario Ranch Rd

PROJECT #: SC4225
LOCATION #: 34
CONTROL: SIGNAL

NOTES:

AM
PM
MD
OTHER
OTHER

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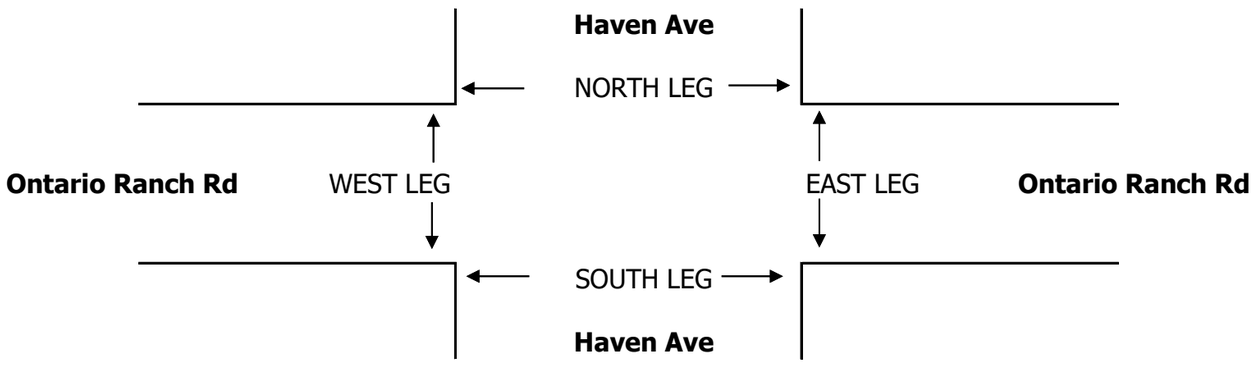
E ►
S ▼

	NORTHBOUND Haven Ave			SOUTHBOUND Haven Ave			EASTBOUND Ontario Ranch Rd			WESTBOUND Ontario Ranch Rd			
LANES:	NL 1	NT 1	NR 1	SL 1	ST 1	SR 1	EL 1	ET 3	ER 1	WL 2	WT 4	WR 1	TOTAL
7:00 AM	1	59	14	36	38	12	21	81	4	31	180	46	523
7:15 AM	6	59	23	41	48	14	25	75	3	43	146	59	542
7:30 AM	5	83	23	31	63	12	29	89	3	44	155	57	594
7:45 AM	7	90	32	40	54	11	26	81	6	52	113	33	545
8:00 AM	13	72	32	37	55	14	23	107	8	22	121	39	543
8:15 AM	7	76	23	31	56	10	27	101	8	25	137	33	534
8:30 AM	8	50	15	22	51	15	21	89	6	34	151	24	486
8:45 AM	2	33	11	34	41	5	29	83	3	37	106	35	419
VOLUMES	49	522	173	272	406	93	201	706	41	288	1,109	326	4,222
APPROACH %	7%	70%	23%	35%	52%	12%	21%	73%	4%	17%	64%	19%	
APP/DEPART	745	/	1,064	786	/	736	966	/	1,153	1,725	/	1,269	0
BEGIN PEAK HR		7:15 AM											
VOLUMES	31	304	110	149	220	51	103	352	20	161	535	188	2,242
APPROACH %	7%	68%	25%	35%	51%	12%	21%	73%	4%	18%	60%	21%	
PEAK HR FACTOR		0.862			0.991			0.858			0.864		0.937
APP/DEPART	445	/	603	428	/	401	484	/	612	885	/	626	0
4:00 PM	6	44	19	41	93	10	36	135	8	47	98	48	585
4:15 PM	6	42	15	46	91	7	26	170	11	29	87	52	582
4:30 PM	3	55	25	48	77	3	40	164	10	49	103	34	611
4:45 PM	6	42	27	43	96	11	39	161	16	41	97	53	632
5:00 PM	2	42	16	29	87	6	38	146	13	68	104	52	603
5:15 PM	8	38	16	50	87	15	41	190	7	48	116	49	665
5:30 PM	2	40	20	51	82	11	42	163	9	53	125	56	654
5:45 PM	5	58	19	50	95	12	47	141	6	59	114	36	642
VOLUMES	38	361	157	358	708	75	309	1,270	80	394	844	380	5,035
APPROACH %	7%	65%	28%	30%	60%	6%	18%	76%	5%	24%	52%	23%	
APP/DEPART	558	/	1,090	1,181	/	1,184	1,673	/	1,790	1,623	/	971	0
BEGIN PEAK HR		5:00 PM											
VOLUMES	17	178	71	180	351	44	168	640	35	228	459	193	2,594
APPROACH %	6%	66%	26%	30%	59%	7%	20%	75%	4%	26%	52%	22%	
PEAK HR FACTOR		0.817			0.932			0.885			0.940		0.959
APP/DEPART	268	/	557	593	/	616	853	/	891	880	/	530	0

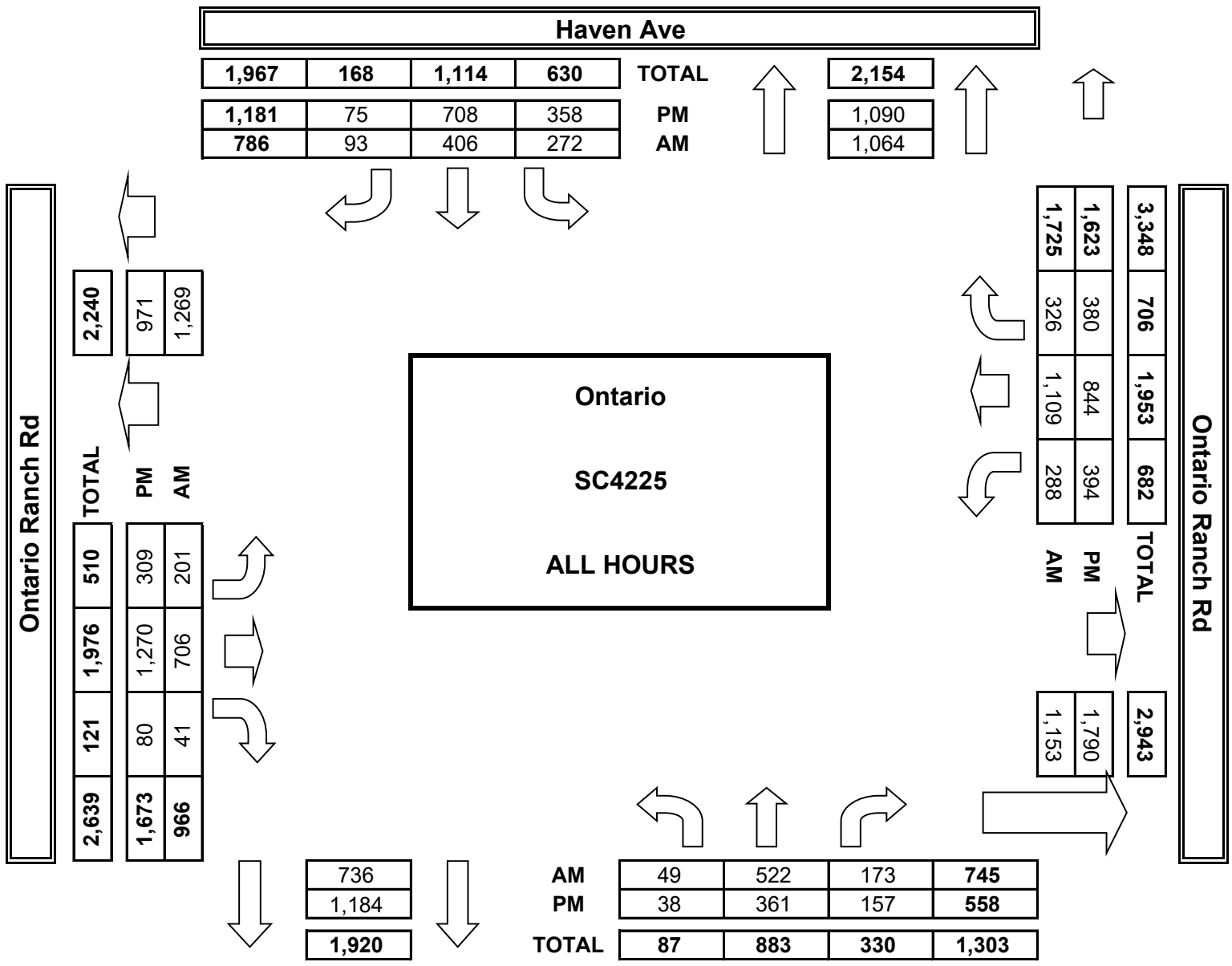
U-TURNS

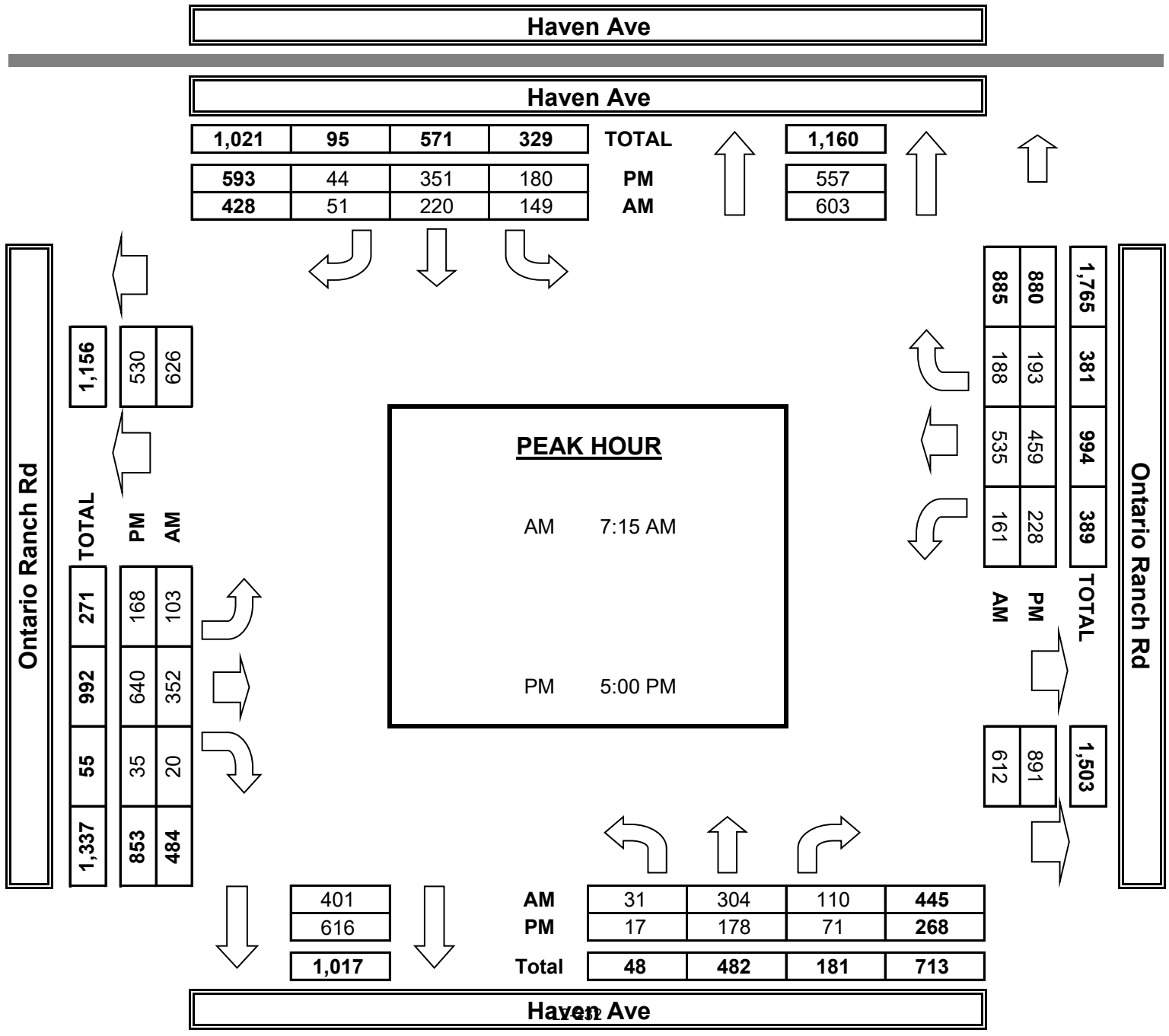
NB	SB	EB	WB	TTL
0	0	0	0	
0	3	2	0	5
0	3	3	0	6
0	2	2	0	4
0	2	1	1	4
0	1	3	0	4
1	1	2	0	4
0	2	2	0	4
0	1	3	1	5
1	15	18	2	36
0	5	0	0	5
0	3	1	4	8
0	10	2	0	12
0	4	1	1	6
0	4	4	0	8
1	7	3	0	11
1	5	1	0	7
0	2	2	0	4
2	40	14	5	61



AimTD LLC

TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

T101823

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Tue, Oct 10, 23

LOCATION: Ontario
NORTH & SOUTH: Hamner Ave
EAST & WEST: Ontario Ranch Rd

PROJECT #: SC4225
LOCATION #: 35
CONTROL: SIGNAL

NOTES:

AM
PM
MD
OTHER
OTHER

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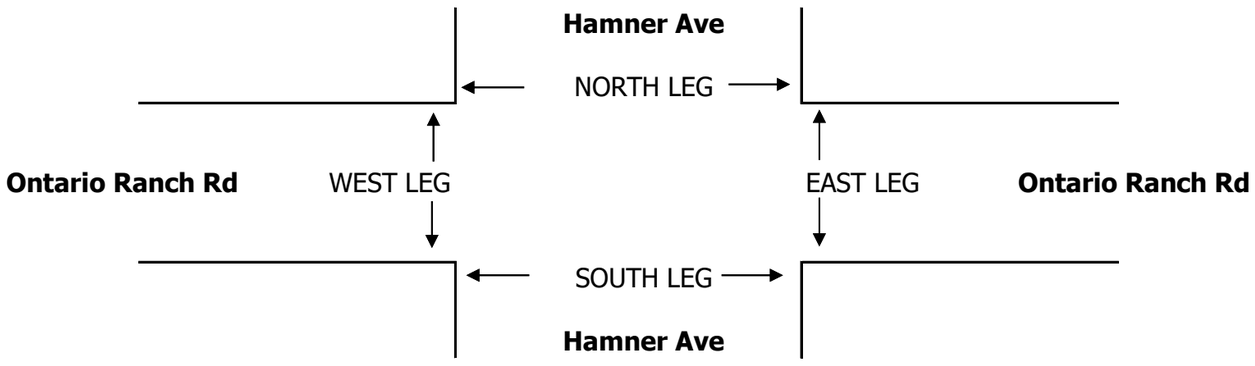
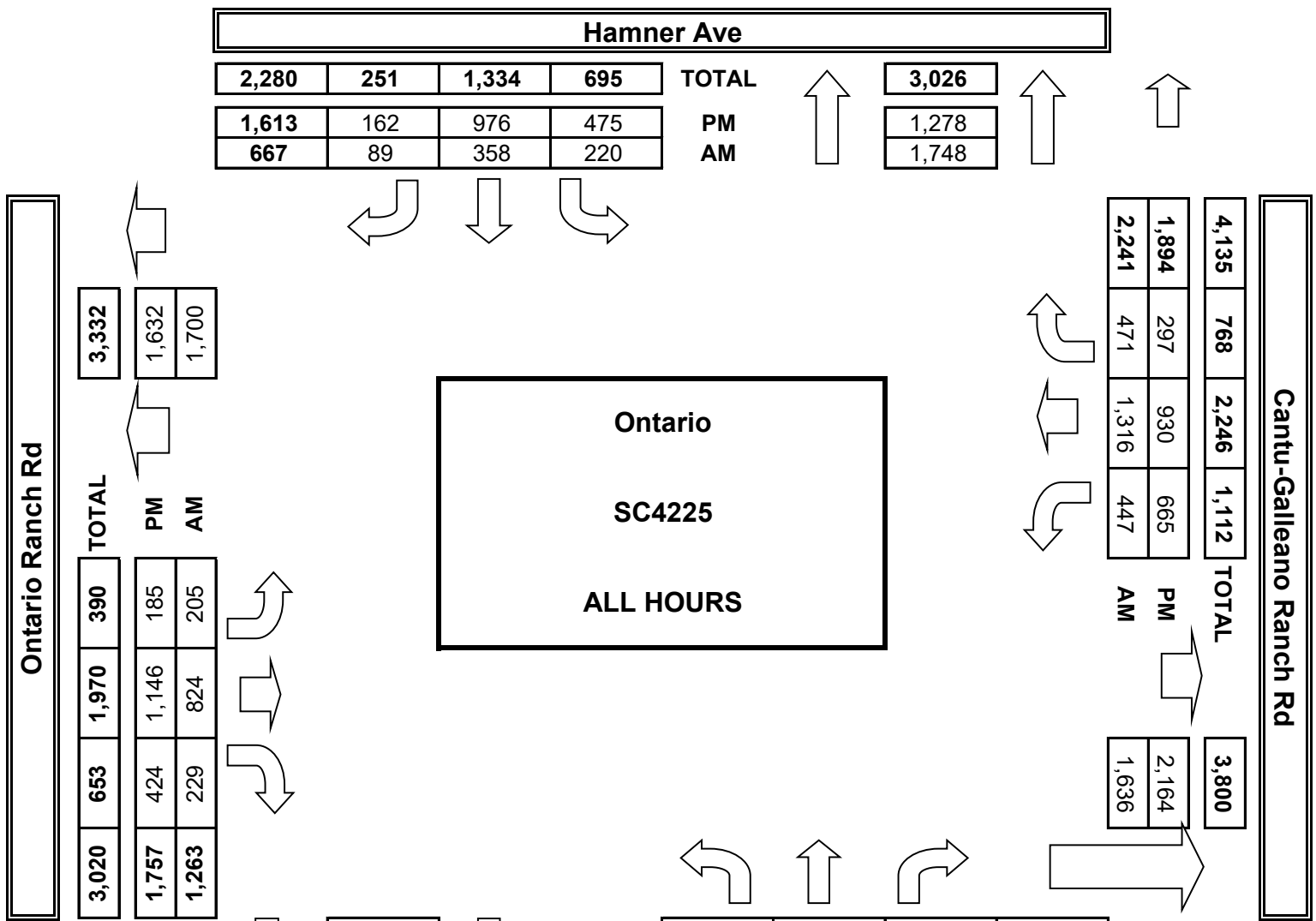
E ►
S ▼

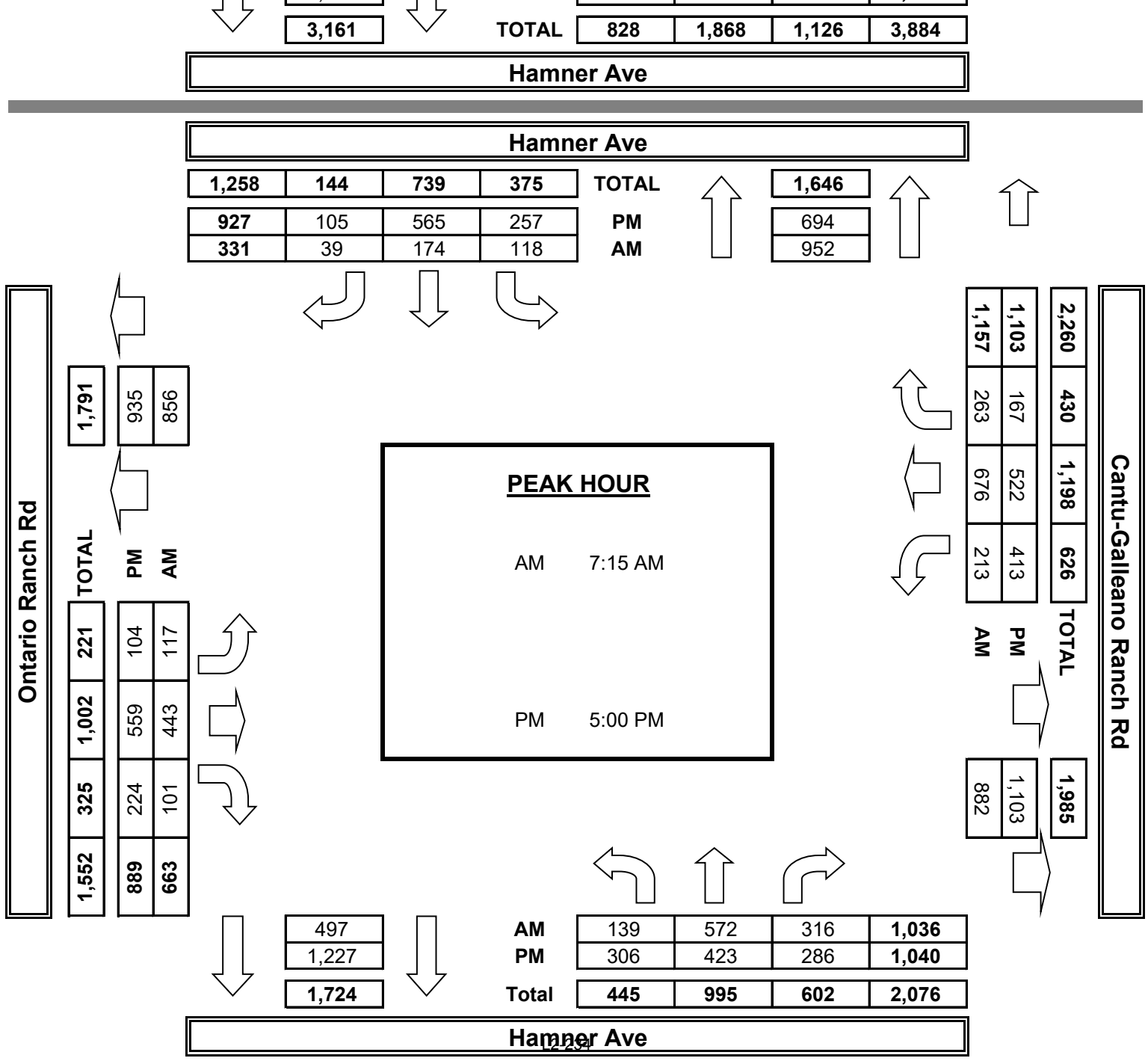
		NORTHBOUND Hamner Ave			SOUTHBOUND Hamner Ave			EASTBOUND Ontario Ranch Rd			WESTBOUND Cantu-Galleano Ranch Rd				U-TURNS				
	LANES:	NL 2	NT 3	NR 1	SL 2	ST 2	SR 1	EL 2	ET 3	ER 1	WL 2	WT 2	WR 1	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
AM	7:00 AM	28	102	61	22	38	11	13	87	20	49	221	54	706	2	0	2	1	5
	7:15 AM	36	129	86	31	39	7	16	112	22	53	211	64	806	3	0	1	3	7
	7:30 AM	34	146	73	37	35	11	33	114	21	59	185	56	804	1	0	1	1	3
	7:45 AM	30	177	93	27	41	8	37	111	28	57	143	75	827	2	0	0	1	3
	8:00 AM	39	120	64	23	59	13	31	106	30	44	137	68	734	3	0	0	0	3
	8:15 AM	46	135	52	24	49	13	29	98	30	69	132	52	729	1	0	1	0	2
	8:30 AM	42	158	80	37	56	17	23	103	38	70	155	58	837	2	0	0	1	3
	8:45 AM	35	105	76	19	41	9	23	93	40	46	132	44	663	3	0	0	0	3
	VOLUMES	290	1,072	585	220	358	89	205	824	229	447	1,316	471	6,135	17	0	5	7	29
	APPROACH %	15%	55%	30%	33%	54%	13%	16%	65%	18%	20%	59%	21%						
	APP/DEPART	1,964	/	1,748	667	/	1,051	1,263	/	1,636	2,241	/	1,700	0					
	BEGIN PEAK HR		7:15 AM																
	VOLUMES	139	572	316	118	174	39	117	443	101	213	676	263	3,187					
	APPROACH %	13%	55%	31%	36%	53%	12%	18%	67%	15%	18%	58%	23%						
	PEAK HR FACTOR		0.858			0.871			0.942			0.874		0.960					
	APP/DEPART	1,036	/	952	331	/	497	663	/	882	1,157	/	856	0					
PM	4:00 PM	32	52	54	36	68	11	16	100	23	46	90	19	547	1	0	0	0	1
	4:15 PM	77	106	65	57	107	16	16	179	58	64	96	34	875	4	0	0	0	4
	4:30 PM	50	87	60	63	105	19	22	160	60	71	121	37	855	10	0	0	1	11
	4:45 PM	73	128	76	62	131	11	27	148	59	71	101	40	927	5	0	0	0	5
	5:00 PM	61	102	79	42	125	20	35	140	56	107	121	38	926	7	0	0	0	7
	5:15 PM	92	103	64	83	124	33	25	128	74	85	123	35	969	7	0	0	0	7
	5:30 PM	75	116	70	67	176	20	21	135	47	112	129	49	1,017	6	0	1	0	7
	5:45 PM	78	102	73	65	140	32	23	156	47	109	149	45	1,019	5	0	1	1	7
	VOLUMES	538	796	541	475	976	162	185	1,146	424	665	930	297	7,184	45	0	2	2	49
	APPROACH %	28%	41%	28%	29%	61%	10%	11%	65%	24%	35%	49%	16%						
	APP/DEPART	1,920	/	1,278	1,613	/	2,110	1,757	/	2,164	1,894	/	1,632	0					
	BEGIN PEAK HR		5:00 PM																
	VOLUMES	306	423	286	257	565	105	104	559	224	413	522	167	3,959					
	APPROACH %	29%	41%	28%	28%	61%	11%	12%	63%	25%	37%	47%	15%						
	PEAK HR FACTOR		0.974			0.881			0.962			0.907		0.965					
	APP/DEPART	1,040	/	694	927	/	1,227	889	/	1,103	1,103	/	935	0					



AimTD LLC

TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

T101823

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

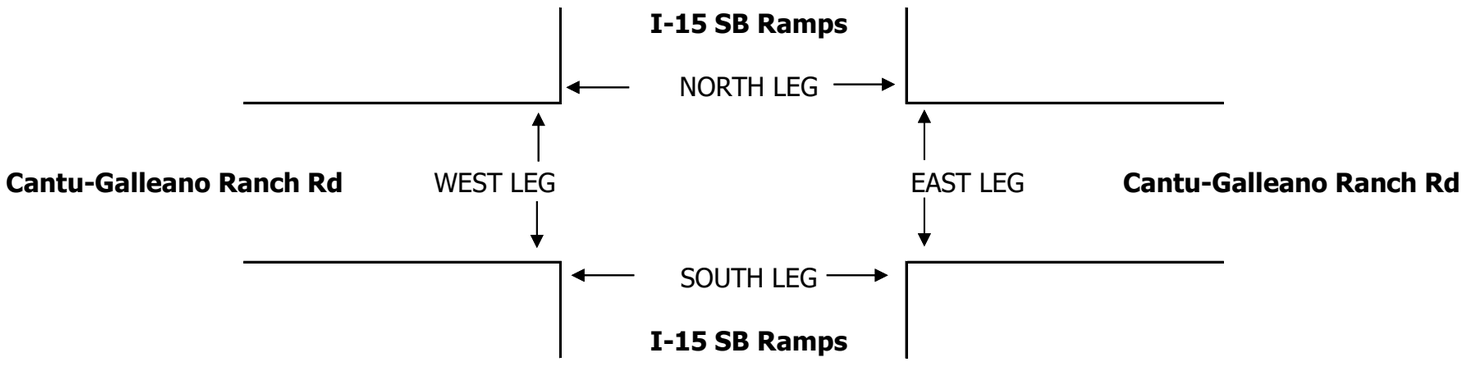
DATE:				
Tue, Oct 10, 23	LOCATION:	Ontario	PROJECT #:	SC4225
	NORTH & SOUTH:	I-15 SB Ramps	LOCATION #:	36
	EAST & WEST:	Cantu-Galleano Ranch Rd	CONTROL:	SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER

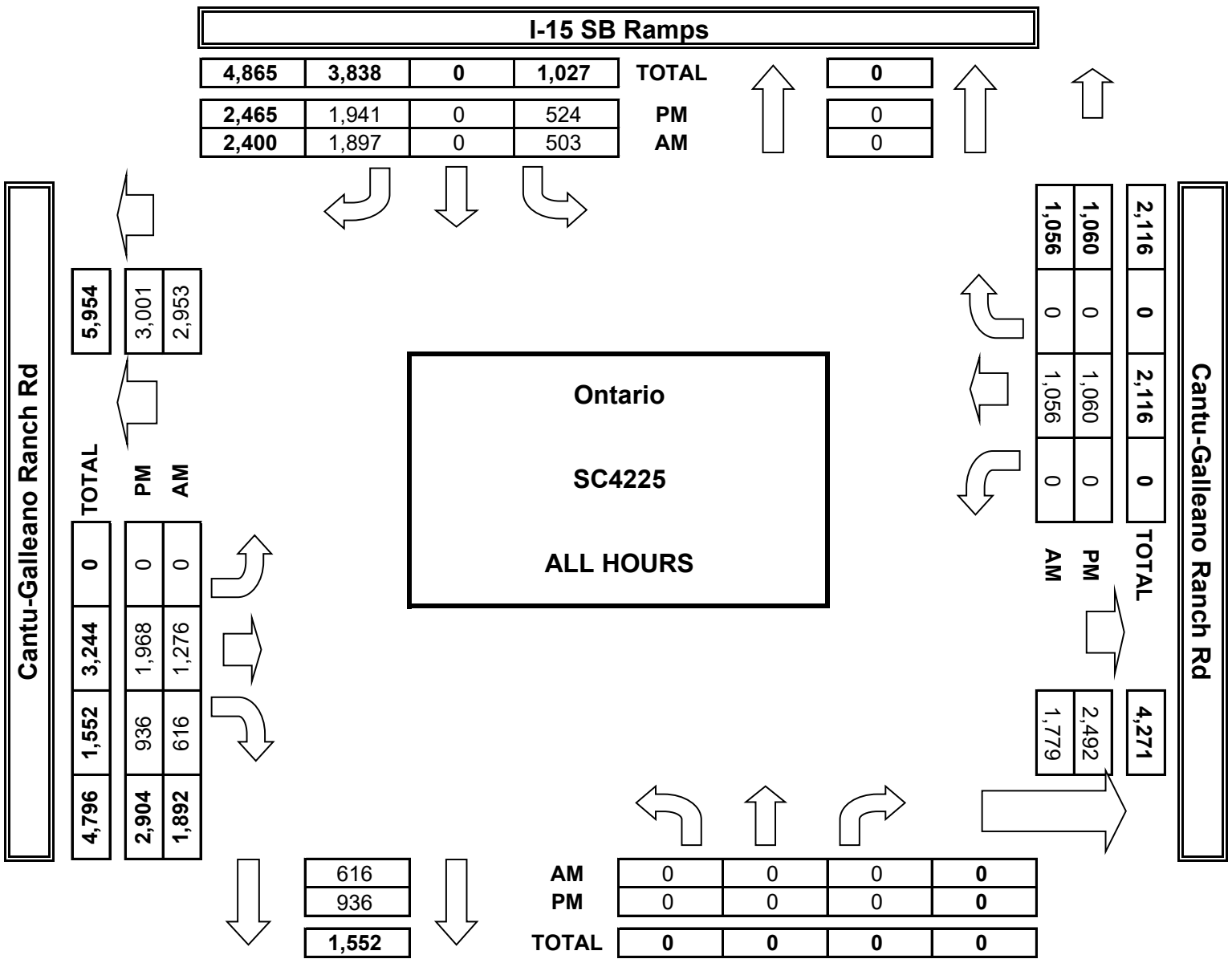
▲ N ▼ S ◄ W E ►

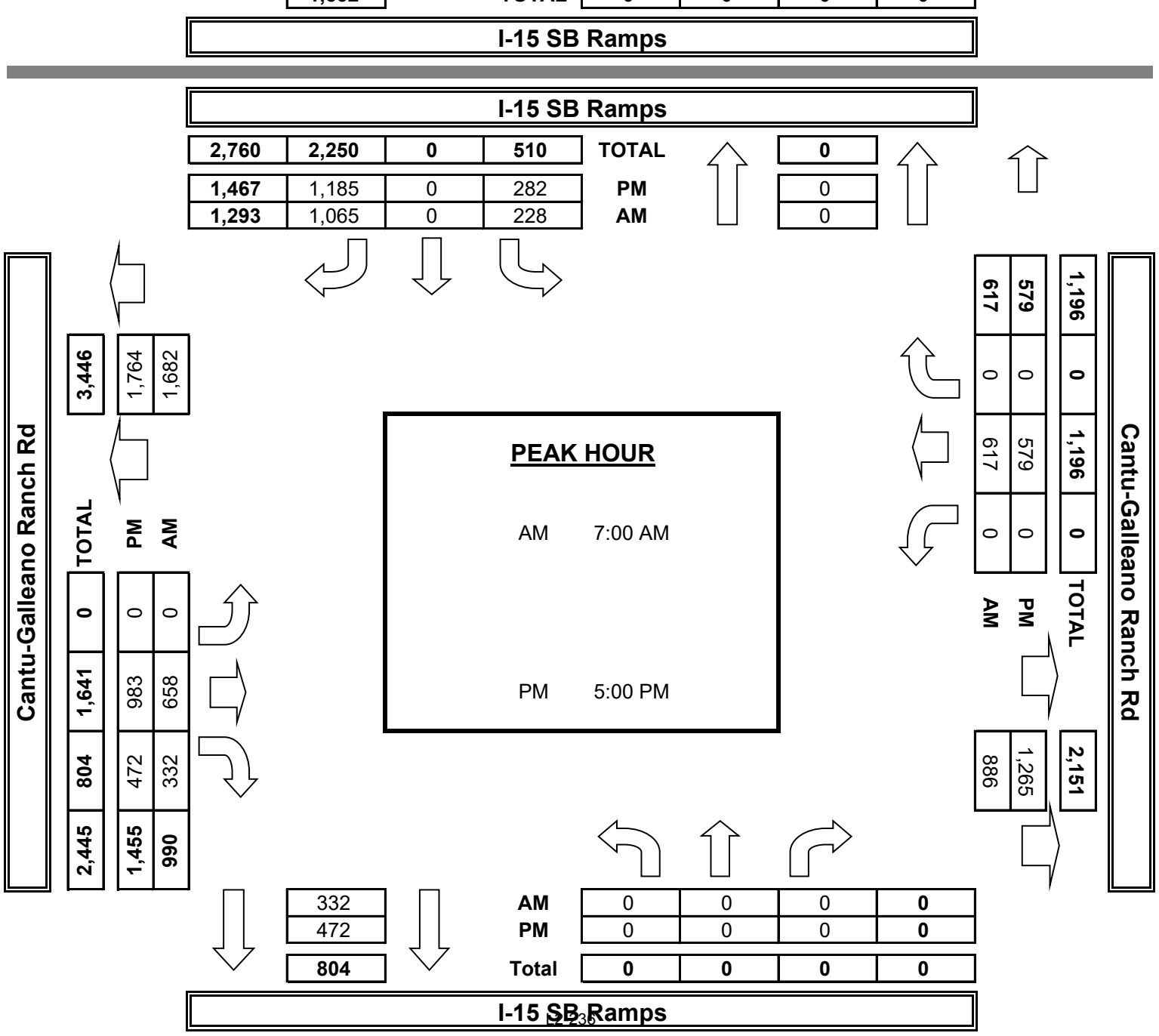
	NORTHBOUND I-15 SB Ramps			SOUTHBOUND I-15 SB Ramps			EASTBOUND Cantu-Galleano Ranch Rd			WESTBOUND Cantu-Galleano Ranch Rd				U-TURNS				
LANES:	NL X	NT X	NR X	SL 1.5	ST X	SR 1.5	EL X	ET 3	ER 1	WL X	WT 2	WR X	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
AM 7:00 AM	0	0	0	57	0	307	0	144	60	0	169	0	737	0	0	0	0	0
7:15 AM	0	0	0	45	0	302	0	183	89	0	171	0	790	0	0	0	0	0
7:30 AM	0	0	0	52	0	248	0	163	102	0	139	0	704	0	0	0	0	0
7:45 AM	0	0	0	74	0	208	0	168	81	0	138	0	669	0	0	0	0	0
8:00 AM	0	0	0	89	0	198	0	168	58	0	110	0	623	0	0	0	0	0
8:15 AM	0	0	0	65	0	245	0	137	62	0	105	0	614	0	0	0	0	0
8:30 AM	0	0	0	66	0	233	0	153	97	0	124	0	673	0	0	0	0	0
8:45 AM	0	0	0	55	0	156	0	160	67	0	100	0	538	0	0	0	0	0
VOLUMES	0	0	0	503	0	1,897	0	1,276	616	0	1,056	0	5,348	0	0	0	0	0
APPROACH %	0%	0%	0%	21%	0%	79%	0%	67%	33%	0%	100%	0%						
APP/DEPART	0	/	0	2,400	/	616	1,892	/	1,779	1,056	/	2,953	0					
BEGIN PEAK HR		7:00 AM																
VOLUMES	0	0	0	228	0	1,065	0	658	332	0	617	0	2,900					
APPROACH %	0%	0%	0%	18%	0%	82%	0%	66%	34%	0%	100%	0%						
PEAK HR FACTOR		0.000			0.888			0.910			0.902		0.918					
APP/DEPART	0	/	0	1,293	/	332	990	/	886	617	/	1,682	0					
PM 4:00 PM	0	0	0	50	0	171	0	267	125	0	123	0	736	0	0	0	0	0
4:15 PM	0	0	0	48	0	172	0	250	126	0	115	0	711	0	0	0	0	0
4:30 PM	0	0	0	54	0	213	0	203	107	0	117	0	694	0	0	0	0	0
4:45 PM	0	0	0	90	0	200	0	265	106	0	126	0	787	0	0	0	0	0
5:00 PM	0	0	0	63	0	238	0	206	113	0	132	0	752	0	0	0	0	0
5:15 PM	0	0	0	63	0	289	0	228	106	0	136	0	822	0	0	0	0	0
5:30 PM	0	0	0	79	0	325	0	303	154	0	158	0	1,019	0	0	0	0	0
5:45 PM	0	0	0	77	0	333	0	246	99	0	153	0	908	0	0	0	0	0
VOLUMES	0	0	0	524	0	1,941	0	1,968	936	0	1,060	0	6,429	0	0	0	0	0
APPROACH %	0%	0%	0%	21%	0%	79%	0%	68%	32%	0%	100%	0%						
APP/DEPART	0	/	0	2,465	/	936	2,904	/	2,492	1,060	/	3,001	0					
BEGIN PEAK HR		5:00 PM																
VOLUMES	0	0	0	282	0	1,185	0	983	472	0	579	0	3,501					
APPROACH %	0%	0%	0%	19%	0%	81%	0%	68%	32%	0%	100%	0%						
PEAK HR FACTOR		0.000			0.895			0.796			0.916		0.859					
APP/DEPART	0	/	0	1,467	/	472	1,455	/	1,265	579	/	1,764	0					



AimTD LLC

TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

T101823

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Tue, Oct 10, 23

LOCATION: Ontario
NORTH & SOUTH: I-15 NB Ramps
EAST & WEST: Cantu-Galleano Ranch Rd

PROJECT #: **SC4225**
LOCATION #: **37**
CONTROL: **SIGNAL**

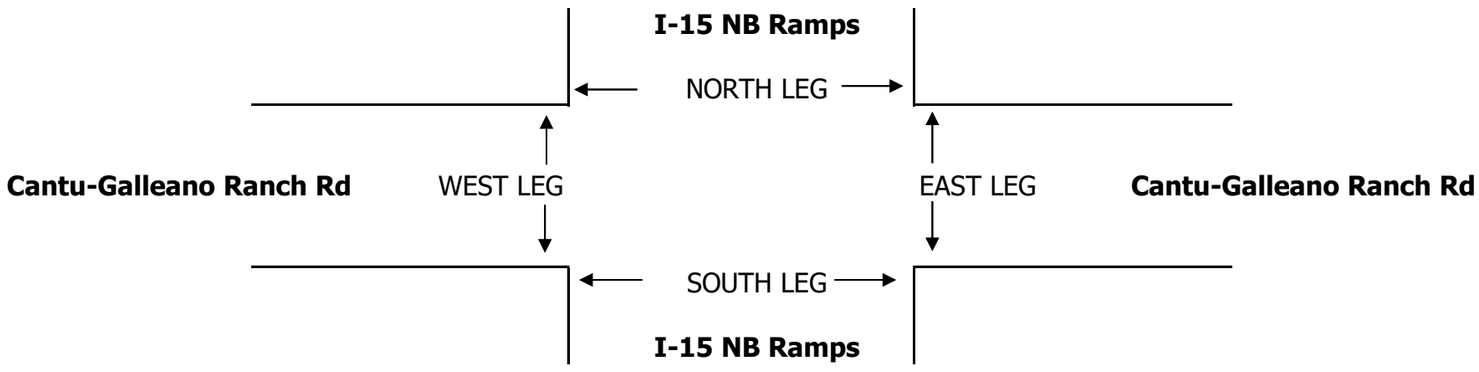
NOTES:

AM / PM / MD / OTHER / OTHER

▲ N ▼ S ◄ W E ►

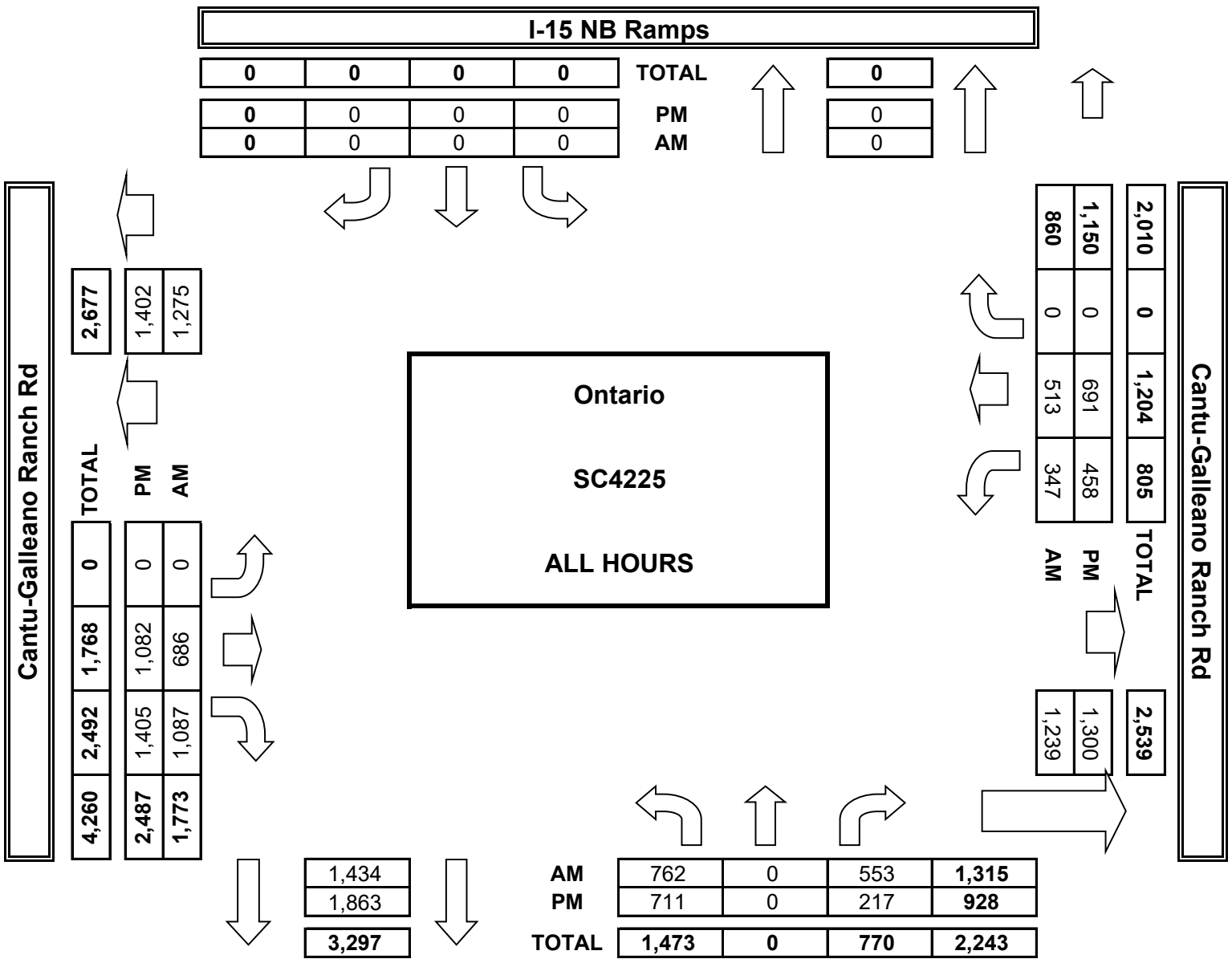
	NORTHBOUND I-15 NB Ramps			SOUTHBOUND I-15 NB Ramps			EASTBOUND Cantu-Galleano Ranch Rd			**WESTBOUND** Cantu-Galleano Ranch Rd			
LANES:	**NL** 1.5	NT X	NR 1.5	SL X	ST X	SR X	EL X	ET 3	ER 1	WL 2	**WT** 3	WR X	TOTAL
7:00 AM	**137**	0	83	0	0	0	0	57	144	36	**70**	0	527
7:15 AM	**125**	0	72	0	0	0	0	71	157	33	**74**	0	532
7:30 AM	**100**	0	89	0	0	0	0	79	136	64	**69**	0	537
7:45 AM	**92**	0	74	0	0	0	0	100	142	39	**68**	0	515
8:00 AM	**82**	0	84	0	0	0	0	112	139	33	**59**	0	509
8:15 AM	**68**	0	71	0	0	0	0	82	120	48	**56**	0	445
8:30 AM	**87**	0	49	0	0	0	0	94	125	49	**64**	0	468
8:45 AM	**71**	0	31	0	0	0	0	91	124	45	**53**	0	415
AM VOLUMES	**762**	0	553	0	0	0	0	686	1,087	347	**513**	0	3,948
AM APPROACH %	**58%**	0%	42%	0%	0%	0%	0%	39%	61%	40%	**60%**	0%	
AM APP/DEPART	**1,315**	/	0	0	/	1,434	1,773	/	1,239	860	/	1,275	0
AM BEGIN PEAK HR		7:00 AM											
AM VOLUMES	**454**	0	318	0	0	0	0	307	579	172	**281**	0	2,111
AM APPROACH %	**59%**	0%	41%	0%	0%	0%	0%	35%	65%	38%	**62%**	0%	
AM PEAK HR FACTOR		0.877			0.000			0.915			**0.852**		0.983
AM APP/DEPART	**772**	/	0	0	/	751	886	/	625	453	/	735	0
4:00 PM	**83**	0	33	0	0	0	0	131	186	55	**97**	0	585
4:15 PM	**79**	0	19	0	0	0	0	132	166	38	**72**	0	506
4:30 PM	**76**	0	25	0	0	0	0	118	139	60	**94**	0	512
4:45 PM	**87**	0	33	0	0	0	0	175	180	47	**72**	0	594
5:00 PM	**70**	0	29	0	0	0	0	114	155	77	**102**	0	547
5:15 PM	**94**	0	24	0	0	0	0	129	162	62	**92**	0	563
5:30 PM	**113**	0	29	0	0	0	0	159	218	71	**81**	0	671
5:45 PM	**109**	0	25	0	0	0	0	124	199	48	**81**	0	586
PM VOLUMES	**711**	0	217	0	0	0	0	1,082	1,405	458	**691**	0	4,565
PM APPROACH %	**77%**	0%	23%	0%	0%	0%	0%	44%	56%	40%	**60%**	0%	
PM APP/DEPART	**928**	/	0	0	/	1,863	2,487	/	1,300	1,150	/	1,402	0
PM BEGIN PEAK HR		4:45 PM											
PM VOLUMES	**364**	0	115	0	0	0	0	577	715	257	**347**	0	2,375
PM APPROACH %	**76%**	0%	24%	0%	0%	0%	0%	45%	55%	43%	**57%**	0%	
PM PEAK HR FACTOR		0.843			0.000			0.857			**0.844**		0.885
PM APP/DEPART	**479**	/	0	0	/	972	1,292	/	692	604	/	711	0

U-TURNS				
NB	SB	EB	WB	TTL
0	0	0	0	
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	1	1
0	0	0	1	1

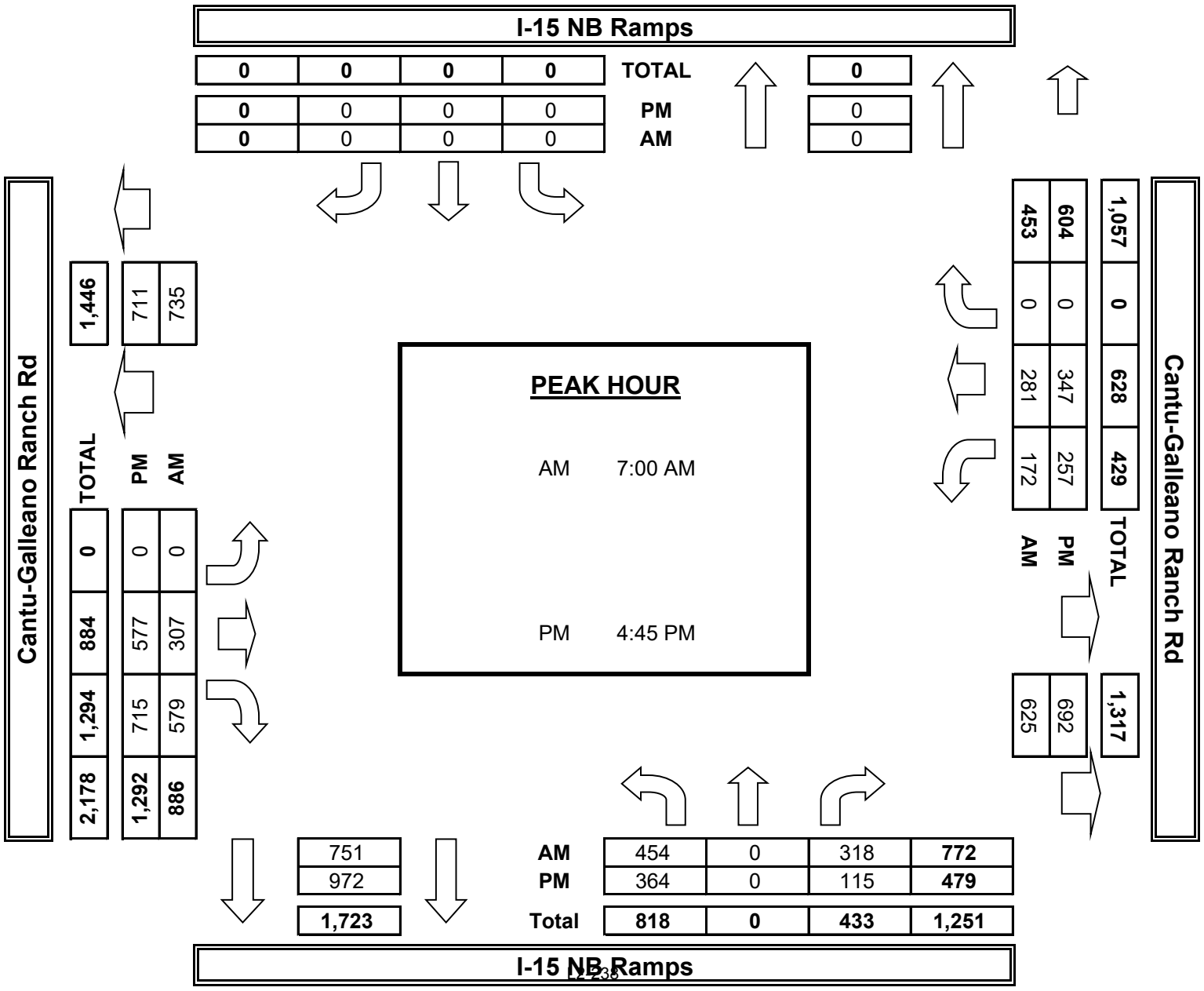


AimTD LLC

TURNING MOVEMENT COUNTS



I-15 NB Ramps



I-15 NB Ramps

INTERSECTION TURNING MOVEM

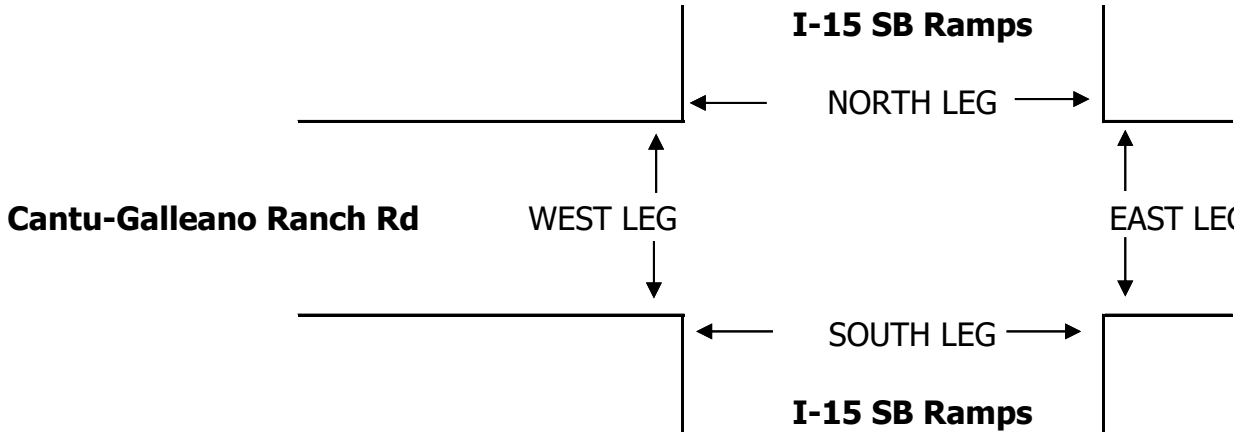
PREPARED BY: AimTD LLC. tel: 714 253 7888

DATE:	LOCATION:	Ontario
Tue, Oct 10, 23	NORTH & SOUTH:	I-15 SB Ramps
	EAST & WEST:	Cantu-Galleano Ranch Rd

NOTES:

		NORTHBOUND I-15 SB Ramps			SOUTHBOUND I-15 SB Ramps			EA Cantu
	LANES:	NL X	NT X	NR X	SL 1.5	ST X	SR 1.5	EL X
AM	7:00 AM	0	0	0	57	0	307	0
	7:15 AM	0	0	0	45	0	302	0
	7:30 AM	0	0	0	52	0	248	0
	7:45 AM	0	0	0	74	0	208	0
	8:00 AM	0	0	0	89	0	198	0
	8:15 AM	0	0	0	65	0	245	0
	8:30 AM	0	0	0	66	0	233	0
	8:45 AM	0	0	0	55	0	156	0
	VOLUMES	0	0	0	503	0	1,897	0
	APPROACH %	0%	0%	0%	21%	0%	79%	0%
	APP/DEPART	0	/	0	2,400	/	616	1,892
	BEGIN PEAK HR		7:00 AM					
	VOLUMES	0	0	0	228	0	1,065	0
	APPROACH %	0%	0%	0%	18%	0%	82%	0%
	PEAK HR FACTOR		0.000			0.888		
	APP/DEPART	0	/	0	1,293	/	332	990
PM	4:00 PM	0	0	0	50	0	171	0
	4:15 PM	0	0	0	48	0	172	0
	4:30 PM	0	0	0	54	0	213	0
	4:45 PM	0	0	0	90	0	200	0
	5:00 PM	0	0	0	63	0	238	0
	5:15 PM	0	0	0	63	0	289	0
	5:30 PM	0	0	0	79	0	325	0
	5:45 PM	0	0	0	77	0	333	0
	VOLUMES	0	0	0	524	0	1,941	0
	APPROACH %	0%	0%	0%	21%	0%	79%	0%

	APP/DEPART	0	/	0	2,465	/	936	2,904
	BEGIN PEAK HR		5:00 PM					
	VOLUMES	0	0	0	282	0	1,185	0
	APPROACH %	0%	0%	0%	19%	0%	81%	0%
	PEAK HR FACTOR		0.000			0.895		
	APP/DEPART	0	/	0	1,467	/	472	1,455



ENT COUNTS

cs@aimtd.com

PROJECT #: SC4225
LOCATION #: 36
CONTROL: SIGNAL

AM		▲	
PM		N	
MD	◄ W		E ►
OTHER		S	
OTHER		▼	

ASTBOUND -Galleano Ranch Rd		WESTBOUND Cantu-Galleano Ranch Rd				
ET 3	ER 1	WL X	WT 2	WR X	TOTAL	
144	60	0	169	38	737	
183	89	0	171	28	790	
163	102	0	139	30	704	
168	81	0	138	22	669	OnRamp calc'd
						118
168	58	0	110	31	623	
137	62	0	105	19	614	
153	97	0	124	27	673	
160	67	0	100	24	538	
						101
1,276	616	0	1,056	0	5,348	
67%	33%	0%	100%	0%		
/	1,779	1,056	/	2,953	0	
658	332	0	617	0	2,900	
66%	34%	0%	100%	0%		
0.910			0.902		0.918	
/	886	617	/	1,682	0	
267	125	0	123	57	736	
250	126	0	115	36	711	
203	107	0	117	53	694	
265	106	0	126	33	787	
						179
206	113	0	132	40	752	
228	106	0	136	50	822	
303	154	0	158	36	1,019	
246	99	0	153	37	908	
						163
1,968	936	0	1,060	0	6,429	
68%	32%	0%	100%	0%		

/	2,492	1,060	/	3,001	0
983	472	0	579	0	3,501
68%	32%	0%	100%	0%	
0.796			0.916		0.859
/	1,265	579	/	1,764	0

G **Cantu-Galleano Ranch Rd**

			U-TURNS				
			NB	SB	EB	WB	TTL
			0	0	0	0	
			0	0	0	0	0
			0	0	0	0	0
			0	0	0	0	0
2022 PEMS		%_Diff	0	0	0	0	0
	124	5%					
			0	0	0	0	0
			0	0	0	0	0
			0	0	0	0	0
			0	0	0	0	0
	105	4%					
			0	0	0	0	0

			0	0	0	0	0
			0	0	0	0	0
			0	0	0	0	0
			0	0	0	0	0
148		-21%					
			0	0	0	0	0
			0	0	0	0	0
			0	0	0	0	0
			0	0	0	0	0
151		-8%					
			0	0	0	0	0

INTERSECTION TURNING MOVEMENT COUNTS

T1018

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Sat, Oct 7, 23

LOCATION: Ontario
NORTH & SOUTH: Euclid Ave
EAST & WEST: SR-60 WB Ramps

PROJECT #: SC4225
LOCATION #: 1
CONTROL: SIGNAL

NOTES:

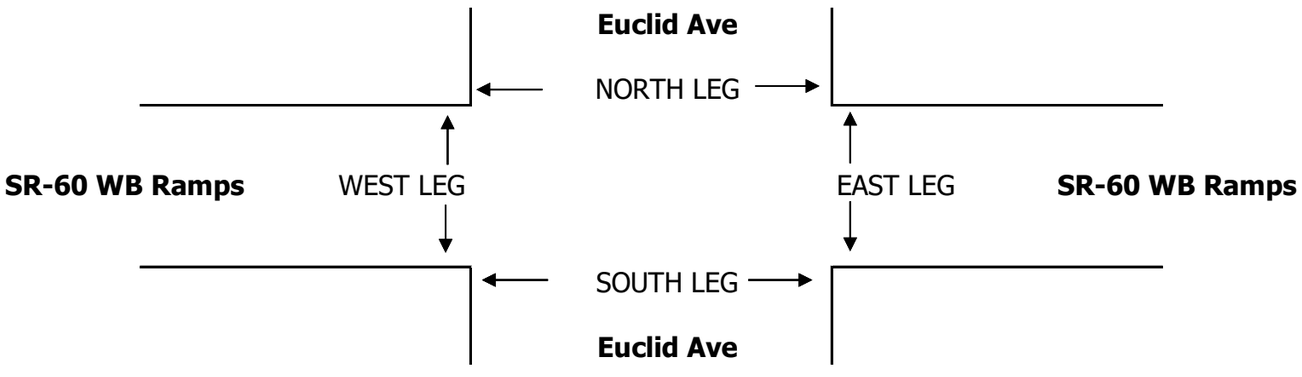
AM
PM
MD
OTHER
OTHER

◄ W
N ▲
E ►
S ▼

	NORTHBOUND Euclid Ave			SOUTHBOUND Euclid Ave			EASTBOUND SR-60 WB Ramps			WESTBOUND SR-60 WB Ramps			
LANES:	NL 1	NT 2	NR X	SL X	ST 2	SR 1	EL X	ET X	ER X	WL 1.3	WT 0.3	WR 1.3	TOTAL

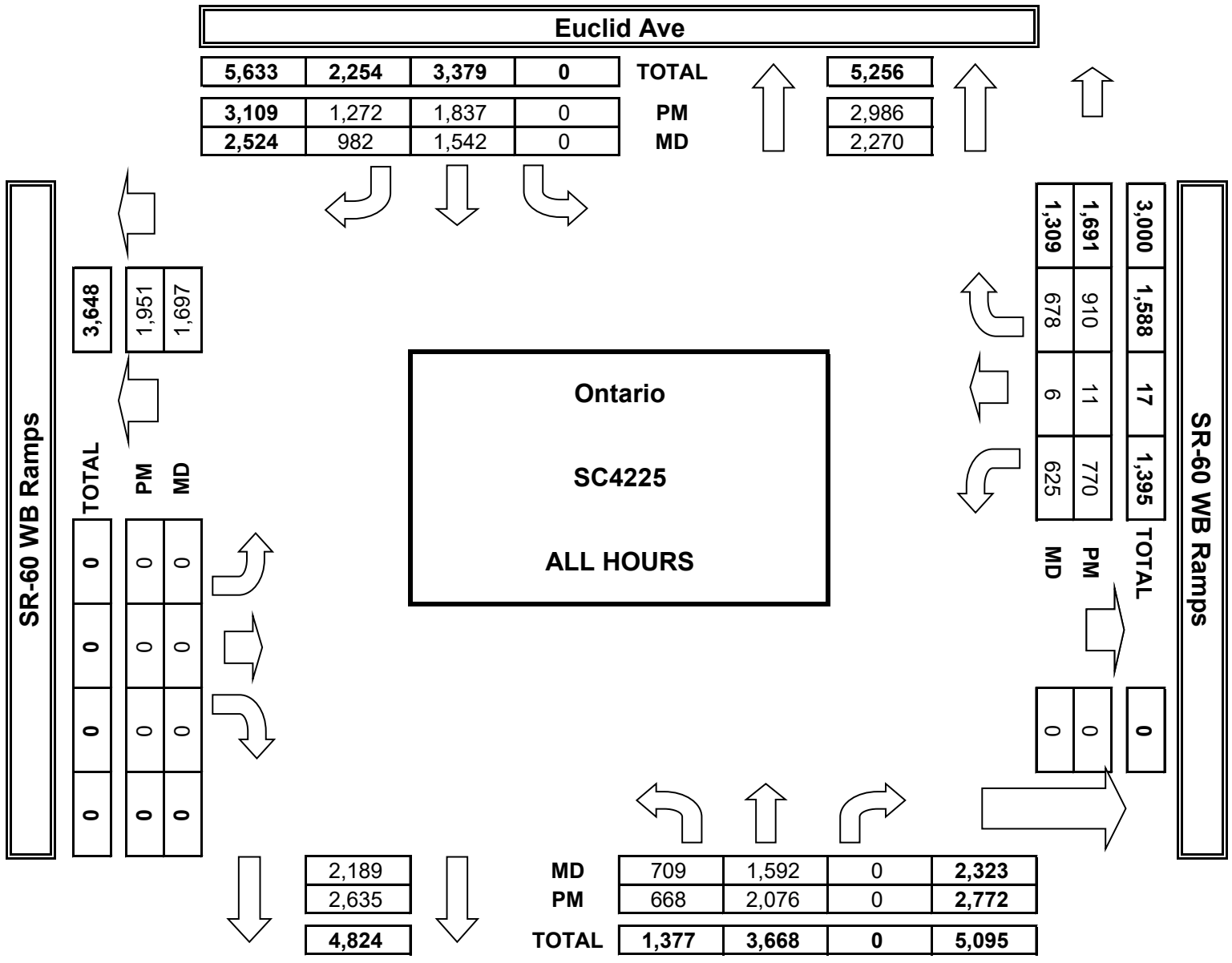
U-TURNS				
NB	SB	EB	WB	TTL
0	0	0	0	

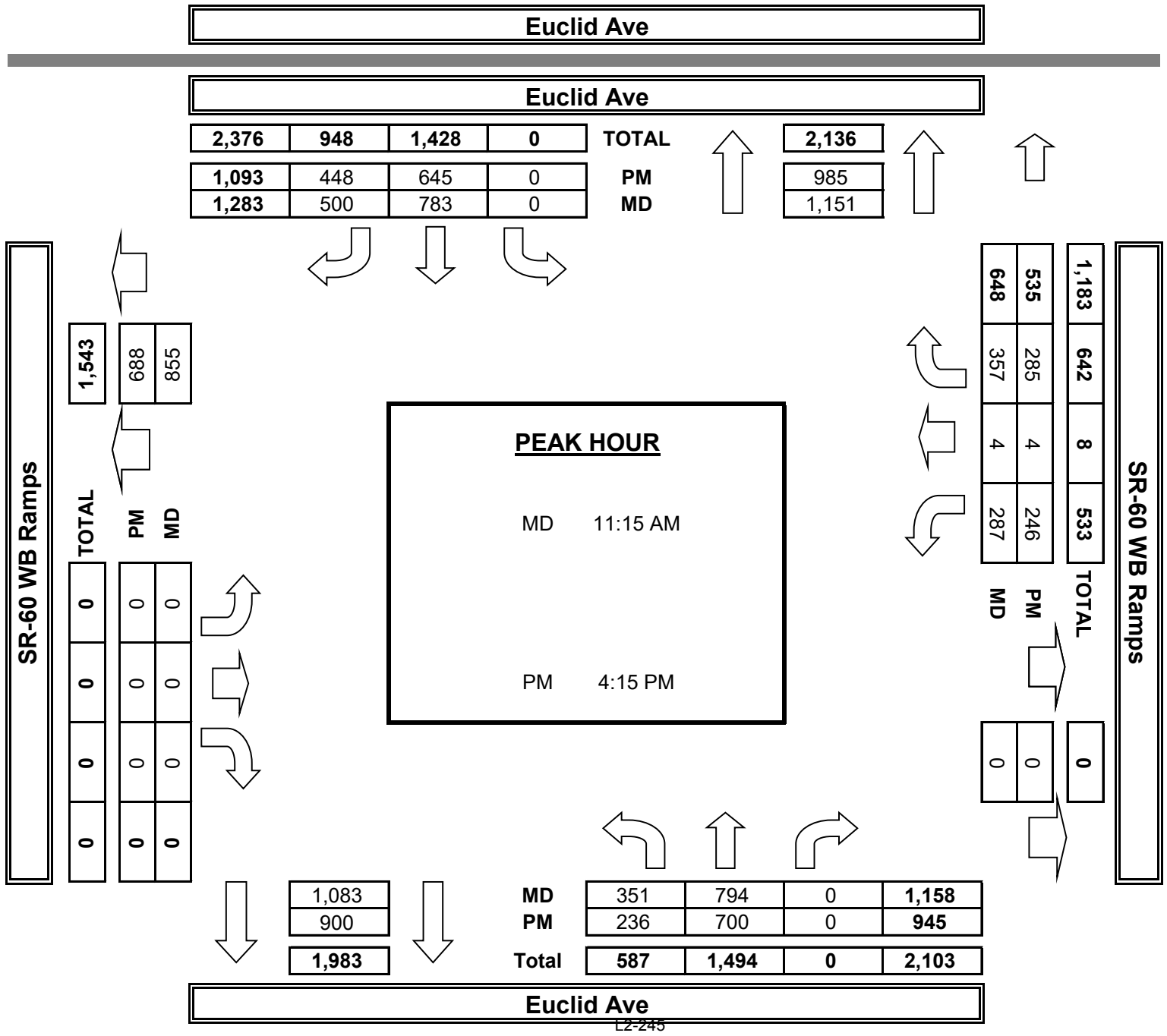
MD	11:00 AM	76	199	0	0	192	116	0	0	0	71	0	87	741	2	0	0	0	2
	11:15 AM	84	205	0	0	186	147	0	0	0	81	2	95	800	2	0	0	0	2
	11:30 AM	85	184	0	0	203	120	0	0	0	76	0	81	749	3	0	0	0	3
	11:45 AM	97	210	0	0	193	122	0	0	0	71	1	88	782	2	0	0	0	2
	12:00 PM	85	195	0	0	201	111	0	0	0	59	1	93	745	6	0	0	0	6
	12:15 PM	96	191	0	0	198	111	0	0	0	83	0	85	764	2	0	0	0	2
	12:30 PM	90	200	0	0	196	121	0	0	0	89	1	69	766	2	0	0	0	2
	12:45 PM	96	208	0	0	173	134	0	0	0	95	1	80	787	3	0	0	0	3
	VOLUMES	709	1,592	0	0	1,542	982	0	0	0	625	6	678	6,156	22	0	0	0	22
	APPROACH %	31%	69%	0%	0%	61%	39%	0%	0%	0%	48%	0%	52%						
	APP/DEPART	2,323	/	2,270	2,524	/	2,189	0	/	0	1,309	/	1,697	0					
	BEGIN PEAK HR		11:15 AM																
	VOLUMES	351	794	0	0	783	500	0	0	0	287	4	357	3,089					
	APPROACH %	30%	69%	0%	0%	61%	39%	0%	0%	0%	44%	1%	55%						
	PEAK HR FACTOR		0.937			0.963			0.000			0.910		0.963					
	APP/DEPART	1,158	/	1,151	1,283	/	1,083	0	/	0	648	/	855	0					
PM	4:00 PM	49	177	0	0	151	96	0	0	0	77	1	73	624	2	0	0	0	2
	4:15 PM	73	177	0	0	151	124	0	0	0	60	1	74	660	2	0	0	0	2
	4:30 PM	52	177	0	0	142	111	0	0	0	56	1	71	610	3	0	0	0	3
	4:45 PM	63	182	0	0	169	100	0	0	0	72	0	69	655	2	0	0	0	2
	5:00 PM	48	164	0	0	183	113	0	0	0	58	2	71	639	2	0	0	0	2
	5:15 PM	52	157	0	0	158	108	0	0	0	64	1	78	618	2	0	0	0	2
	5:30 PM	46	145	0	0	163	109	0	0	0	66	2	75	606	0	0	0	0	0
	5:45 PM	41	212	0	0	135	90	0	0	0	59	0	80	617	1	0	0	0	1
	6:00 PM	59	174	0	0	146	103	0	0	0	52	1	76	611	5	0	0	0	5
	6:15 PM	61	168	0	0	161	109	0	0	0	60	0	86	645	2	0	0	0	2
	6:30 PM	54	176	0	0	145	108	0	0	0	69	1	87	640	3	0	0	0	3
	6:45 PM	70	167	0	0	133	101	0	0	0	77	1	70	619	4	0	0	0	4
	VOLUMES	668	2,076	0	0	1,837	1,272	0	0	0	770	11	910	7,572	28	0	0	0	28
	APPROACH %	24%	75%	0%	0%	59%	41%	0%	0%	0%	46%	1%	54%						
	APP/DEPART	2,772	/	2,986	3,109	/	2,635	0	/	0	1,691	/	1,951	0					
	BEGIN PEAK HR		4:15 PM																
	VOLUMES	236	700	0	0	645	448	0	0	0	246	4	285	2,573					
	APPROACH %	25%	74%	0%	0%	59%	41%	0%	0%	0%	46%	1%	53%						
	PEAK HR FACTOR		0.938			0.923			0.000			0.949		0.972					
	APP/DEPART	945	/	985	1,093	/	900	0	/	0	535	/	688	0					



AimTD LLC

TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

T1018

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:				
Sat, Oct 7, 23	LOCATION:	Ontario	PROJECT #:	SC4225
	NORTH & SOUTH:	Euclid Ave	LOCATION #:	2
	EAST & WEST:	SR-60 EB Ramps	CONTROL:	SIGNAL

NOTES:

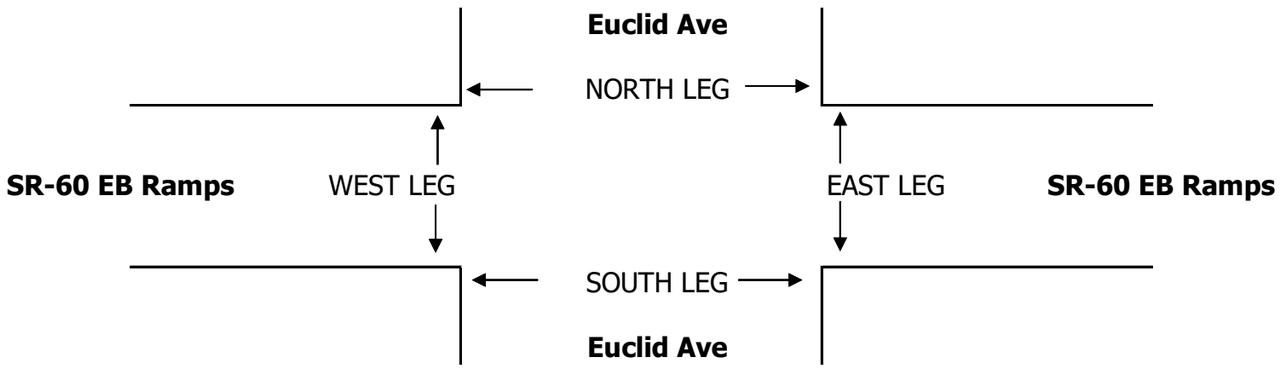
AM / PM / MD / OTHER / OTHER

▲ N ◄ W E ► S ▼

		NORTHBOUND Euclid Ave			SOUTHBOUND Euclid Ave			EASTBOUND SR-60 EB Ramps			WESTBOUND SR-60 EB Ramps			
	LANES:	NL X	NT 2	NR 1	SL 1	ST 2	SR X	EL 1.5	ET 0	ER 0.5	WL X	WT X	WR X	TOTAL
MD	11:00 AM	0	204	107	82	182	0	72	0	87	0	0	0	734
	11:15 AM	0	215	104	65	199	0	74	1	102	0	0	0	760
	11:30 AM	0	201	98	78	202	0	71	0	73	0	0	0	723
	11:45 AM	0	230	97	77	186	0	76	1	86	0	0	0	753
	12:00 PM	0	205	99	72	192	0	79	0	98	0	0	0	745
	12:15 PM	0	203	95	77	202	0	88	1	82	0	0	0	748
	12:30 PM	0	192	93	92	194	0	99	0	72	0	0	0	742
	12:45 PM	0	231	97	69	200	0	74	0	81	0	0	0	752
	VOLUMES	0	1,681	790	612	1,557	0	633	3	681	0	0	0	5,971
	APPROACH %	0%	68%	32%	28%	71%	0%	48%	0%	52%	0%	0%	0%	
	APP/DEPART	2,471	/	2,328	2,183	/	2,238	1,317	/	1,405	0	/	0	0
	BEGIN PEAK HR		11:45 AM											
	VOLUMES	0	830	384	318	774	0	342	2	338	0	0	0	2,995
	APPROACH %	0%	68%	32%	29%	70%	0%	50%	0%	50%	0%	0%	0%	
	PEAK HR FACTOR		0.928			0.957			0.963			0.000		0.990
	APP/DEPART	1,214	/	1,179	1,099	/	1,112	682	/	704	0	/	0	0
PM	4:00 PM	0	162	86	72	157	0	65	1	67	0	0	0	610
	4:15 PM	0	192	73	68	142	0	57	0	58	0	0	0	590
	4:30 PM	0	145	70	49	147	0	85	0	68	0	0	0	564
	4:45 PM	0	168	77	64	176	0	78	2	57	0	0	0	622
	5:00 PM	0	131	65	95	144	0	79	0	52	0	0	0	566
	5:15 PM	0	141	83	75	146	0	67	0	59	0	0	0	571
	5:30 PM	0	130	82	77	151	0	62	1	47	0	0	0	550
	5:45 PM	0	163	102	64	128	0	88	0	51	0	0	0	596
	6:00 PM	0	172	69	62	137	0	65	1	58	0	0	0	564
	6:15 PM	0	150	79	68	150	0	76	0	69	0	0	0	592
	6:30 PM	0	150	74	74	139	0	81	0	76	0	0	0	594
	6:45 PM	0	159	55	55	153	0	79	0	61	0	0	0	562
	VOLUMES	0	1,863	915	823	1,770	0	882	5	723	0	0	0	7,015
	APPROACH %	0%	67%	33%	31%	67%	0%	55%	0%	45%	0%	0%	0%	
	APP/DEPART	2,778	/	2,779	2,627	/	2,493	1,610	/	1,743	0	/	0	0
	BEGIN PEAK HR		4:00 PM											
	VOLUMES	0	667	306	253	622	0	285	3	250	0	0	0	2,396
	APPROACH %	0%	69%	31%	29%	70%	0%	53%	1%	46%	0%	0%	0%	
	PEAK HR FACTOR		0.918			0.918			0.879			0.000		0.961
	APP/DEPART	973	/	962	885	/	872	538	/	562	0	/	0	0

U-TURNS

NB	SB	EB	WB	TTL
0	0	0	0	
0	1	0	0	1
0	2	0	0	2
0	2	0	0	2
0	3	0	0	3
0	2	0	0	2
0	1	0	0	1
0	1	0	0	1
0	2	0	0	2
0	14	0	0	14
0	1	0	0	1
0	3	0	0	3
0	5	0	0	5
0	1	0	0	1
0	4	0	0	4
0	3	0	0	3
0	1	0	0	1
0	3	0	0	3
0	1	0	0	1
0	5	0	0	5
0	4	0	0	4
0	3	0	0	3
0	34	0	0	34



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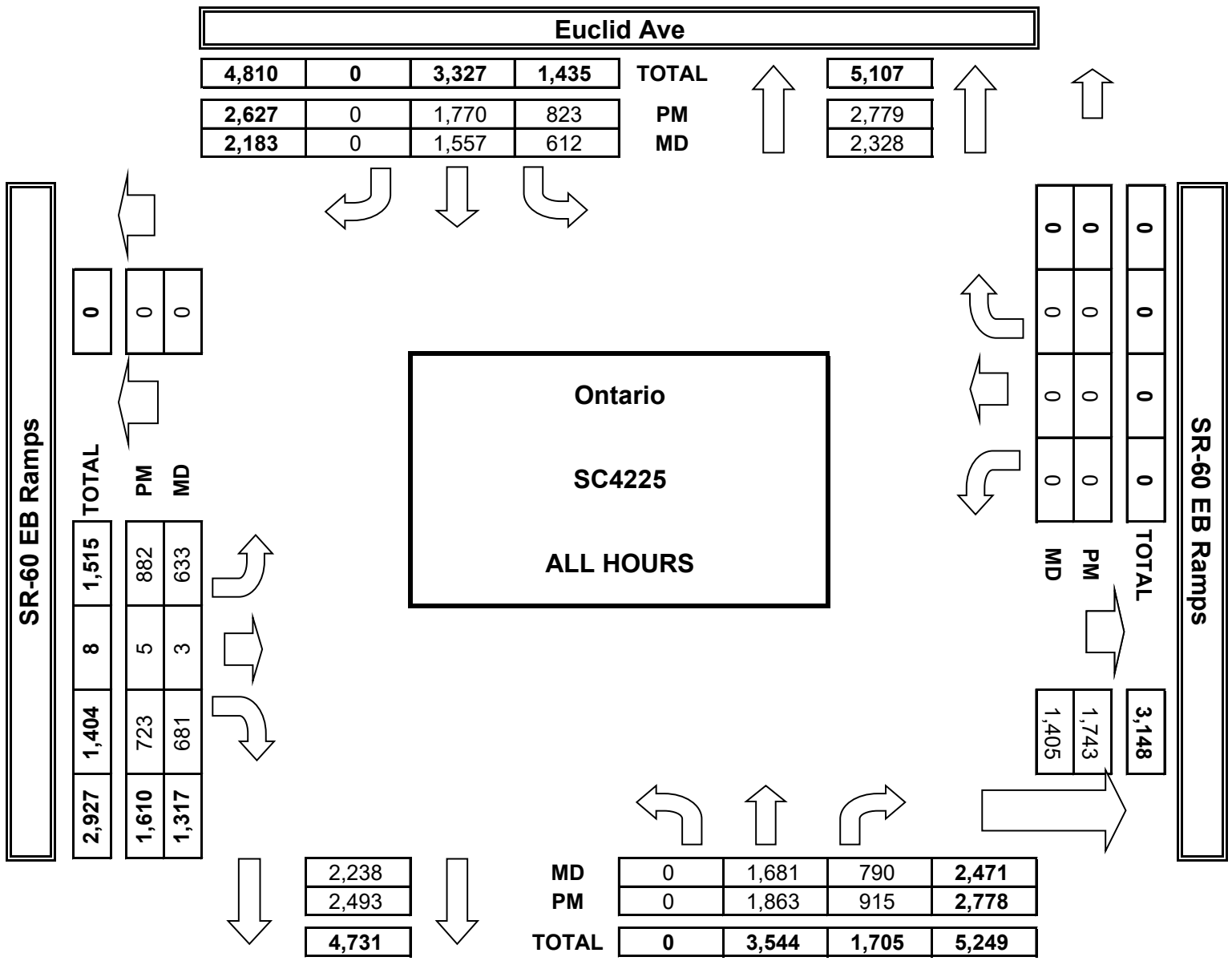
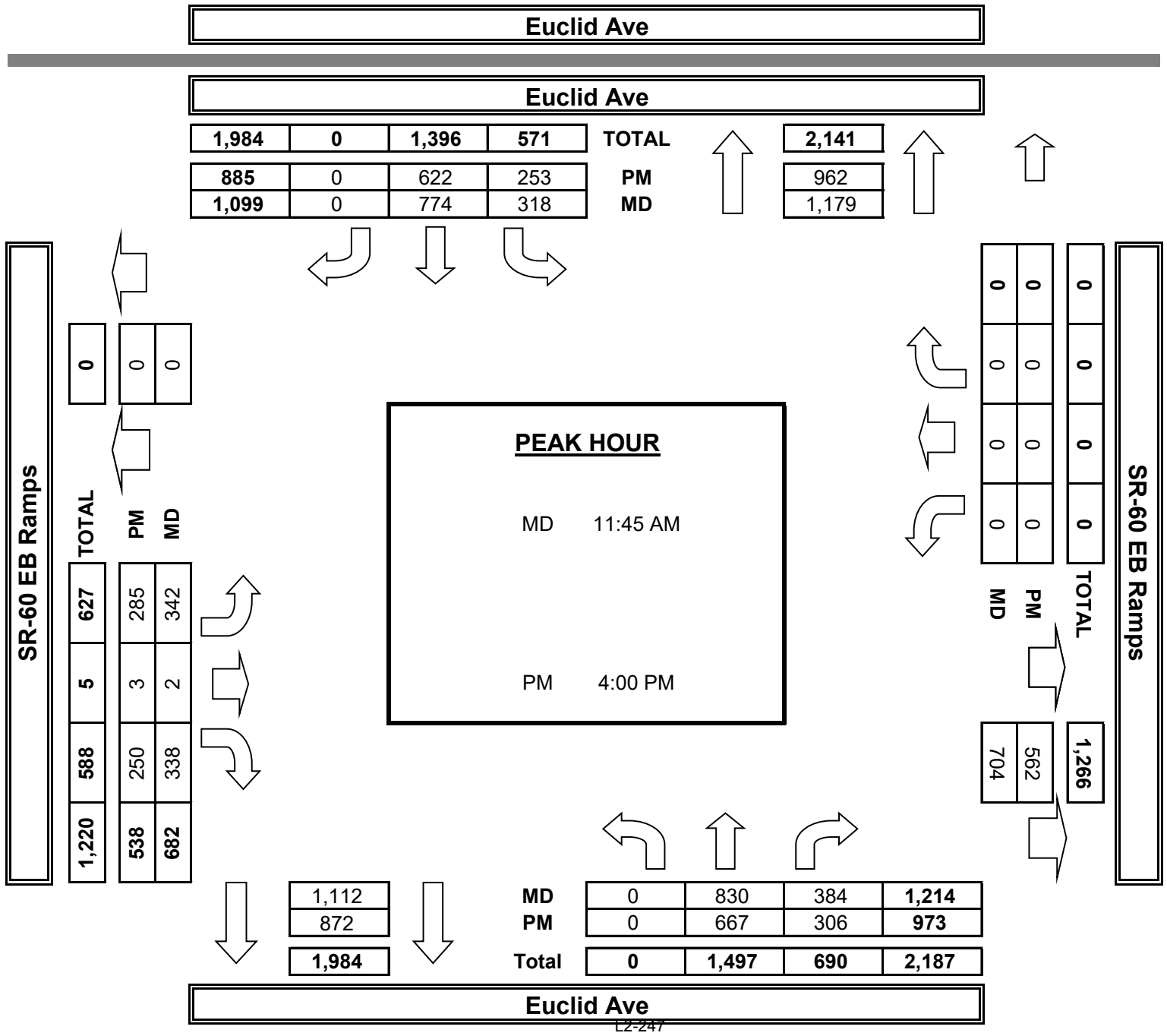
TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

T1018

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:				
Sat, Oct 7, 23	LOCATION:	Ontario	PROJECT #:	SC4225
	NORTH & SOUTH:	S Vineyard Ave	LOCATION #:	3
	EAST & WEST:	SR-60 WB Ramps	CONTROL:	SIGNAL

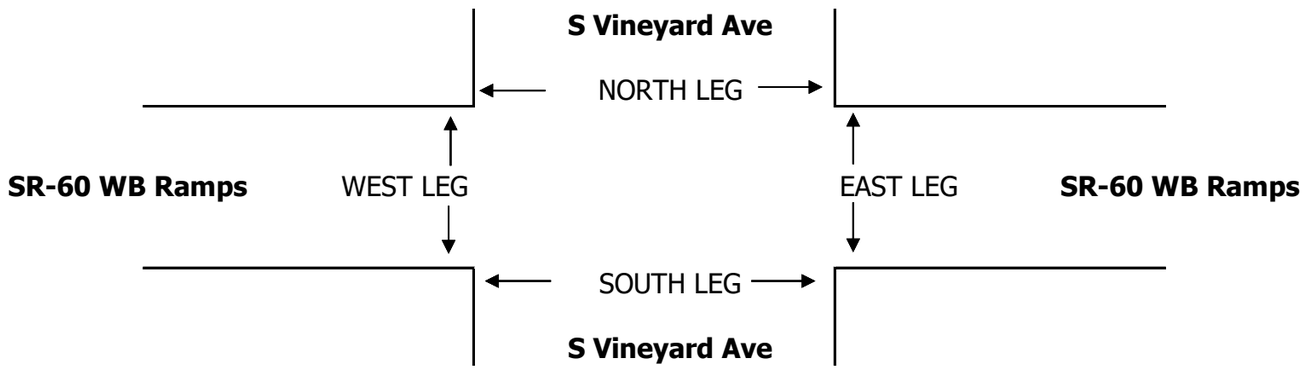
NOTES:

AM / PM / MD / OTHER / OTHER

▲ N ◄ W E ► S ▼

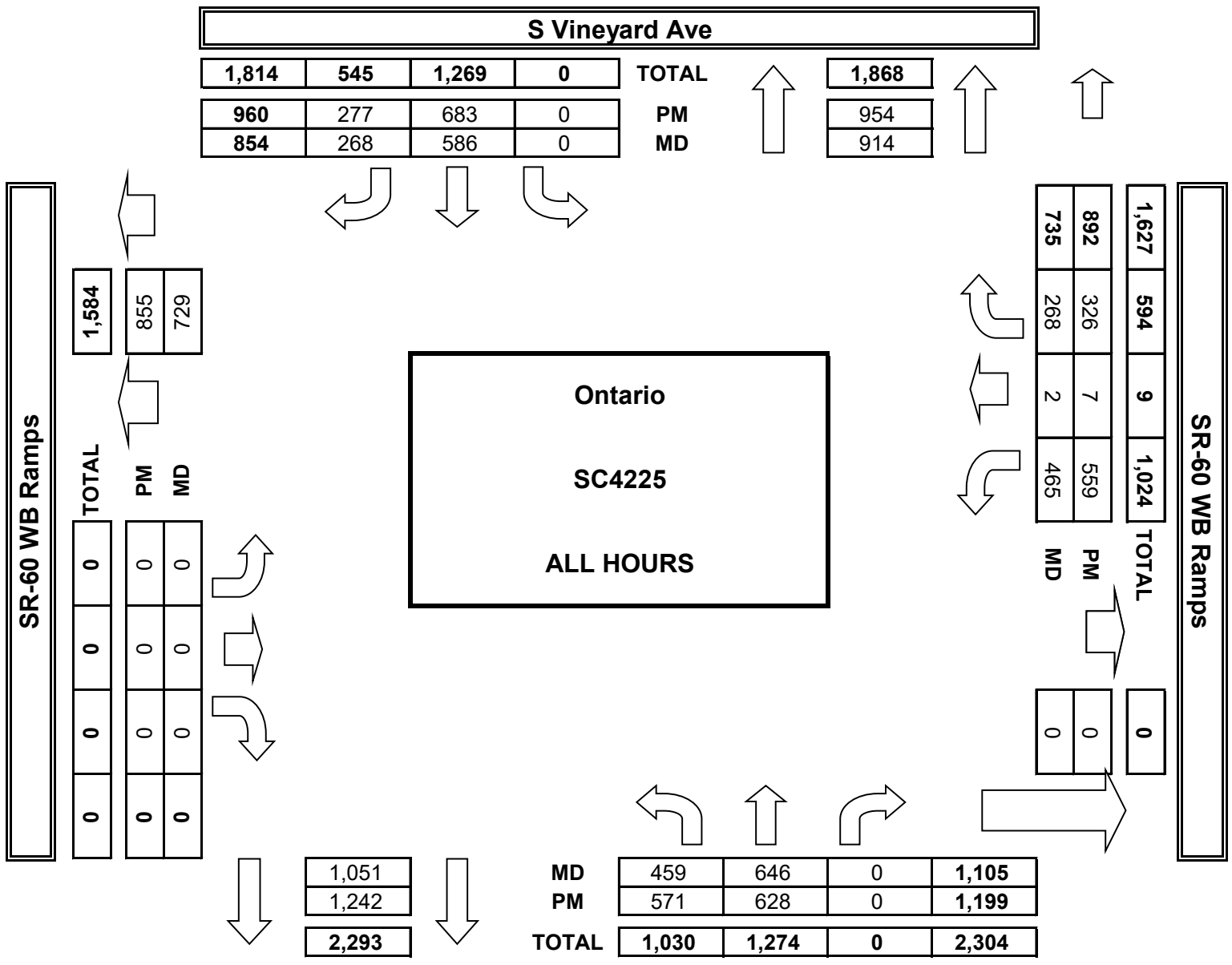
	NORTHBOUND S Vineyard Ave			SOUTHBOUND S Vineyard Ave			EASTBOUND SR-60 WB Ramps			WESTBOUND SR-60 WB Ramps			
LANES:	NL 1	NT 2	NR X	SL X	ST 2	SR 0	EL X	ET X	ER X	WL 0.5	WT 0.5	WR 1	TOTAL

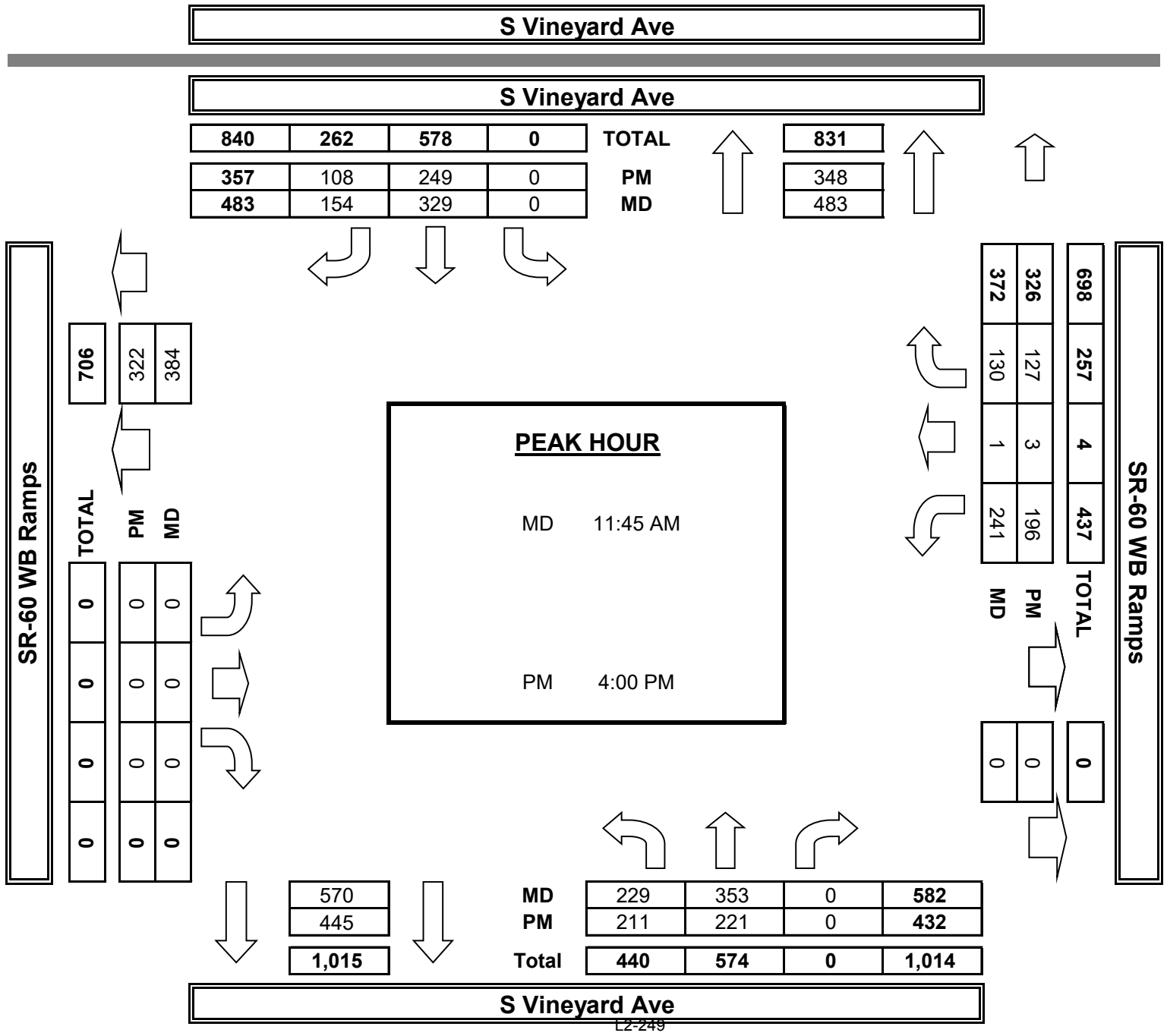
		NORTHBOUND S Vineyard Ave			SOUTHBOUND S Vineyard Ave			EASTBOUND SR-60 WB Ramps			WESTBOUND SR-60 WB Ramps				U-TURNS				
		NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB	TTL
MD	11:00 AM	50	58	0	0	52	27	0	0	0	44	0	41	272	0	0	0	0	0
	11:15 AM	74	76	0	0	61	34	0	0	0	63	0	36	344	0	0	0	0	0
	11:30 AM	53	78	0	0	78	24	0	0	0	55	1	21	310	0	0	0	0	0
	11:45 AM	54	89	0	0	77	28	0	0	0	55	0	35	338	0	0	0	0	0
	12:00 PM	64	82	0	0	81	39	0	0	0	55	1	32	354	0	0	0	0	0
	12:15 PM	46	87	0	0	83	49	0	0	0	71	0	33	369	0	0	0	0	0
	12:30 PM	65	95	0	0	88	38	0	0	0	60	0	30	376	0	0	0	0	0
	12:45 PM	53	81	0	0	66	29	0	0	0	62	0	40	331	0	0	0	0	0
	VOLUMES	459	646	0	0	586	268	0	0	0	465	2	268	2,694	0	0	0	0	0
	APPROACH %	42%	58%	0%	0%	69%	31%	0%	0%	0%	63%	0%	36%						
	APP/DEPART	1,105	/	914	854	/	1,051	0	/	0	735	/	729	0					
	BEGIN PEAK HR		11:45 AM																
	VOLUMES	229	353	0	0	329	154	0	0	0	241	1	130	1,437					
	APPROACH %	39%	61%	0%	0%	68%	32%	0%	0%	0%	65%	0%	35%						
	PEAK HR FACTOR		0.909			0.915			0.000			0.894		0.955					
	APP/DEPART	582	/	483	483	/	570	0	/	0	372	/	384	0					
PM	4:00 PM	53	49	0	0	42	28	0	0	0	60	3	35	270	0	0	0	0	0
	4:15 PM	57	61	0	0	74	35	0	0	0	46	0	30	303	0	0	0	0	0
	4:30 PM	60	52	0	0	75	27	0	0	0	39	0	33	286	0	0	0	0	0
	4:45 PM	41	59	0	0	58	18	0	0	0	51	0	29	256	0	0	0	0	0
	5:00 PM	45	53	0	0	65	15	0	0	0	36	0	22	236	0	0	0	0	0
	5:15 PM	40	49	0	0	50	28	0	0	0	36	0	33	236	0	0	0	0	0
	5:30 PM	56	42	0	0	59	25	0	0	0	51	0	30	263	0	0	0	0	0
	5:45 PM	46	55	0	0	55	21	0	0	0	47	1	23	248	0	0	0	0	0
	6:00 PM	38	42	0	0	69	17	0	0	0	40	0	17	223	0	0	0	0	0
	6:15 PM	41	55	0	0	43	19	0	0	0	47	1	29	235	0	0	0	0	0
	6:30 PM	43	66	0	0	53	24	0	0	0	54	1	20	261	0	0	0	0	0
	6:45 PM	51	45	0	0	40	20	0	0	0	52	1	25	234	0	0	0	0	0
	VOLUMES	571	628	0	0	683	277	0	0	0	559	7	326	3,051	0	0	0	0	0
	APPROACH %	48%	52%	0%	0%	71%	29%	0%	0%	0%	63%	1%	37%						
	APP/DEPART	1,199	/	954	960	/	1,242	0	/	0	892	/	855	0					
	BEGIN PEAK HR		4:00 PM																
	VOLUMES	211	221	0	0	249	108	0	0	0	196	3	127	1,115					
	APPROACH %	49%	51%	0%	0%	70%	30%	0%	0%	0%	60%	1%	39%						
	PEAK HR FACTOR		0.915			0.819			0.000			0.832		0.920					
	APP/DEPART	432	/	348	357	/	445	0	/	0	326	/	322	0					



AimTD LLC

TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

T1018

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:				
Sat, Oct 7, 23	LOCATION:	Ontario	PROJECT #:	SC4225
	NORTH & SOUTH:	S Vineyard Ave	LOCATION #:	4
	EAST & WEST:	SR-60 EB Ramps	CONTROL:	SIGNAL

NOTES:

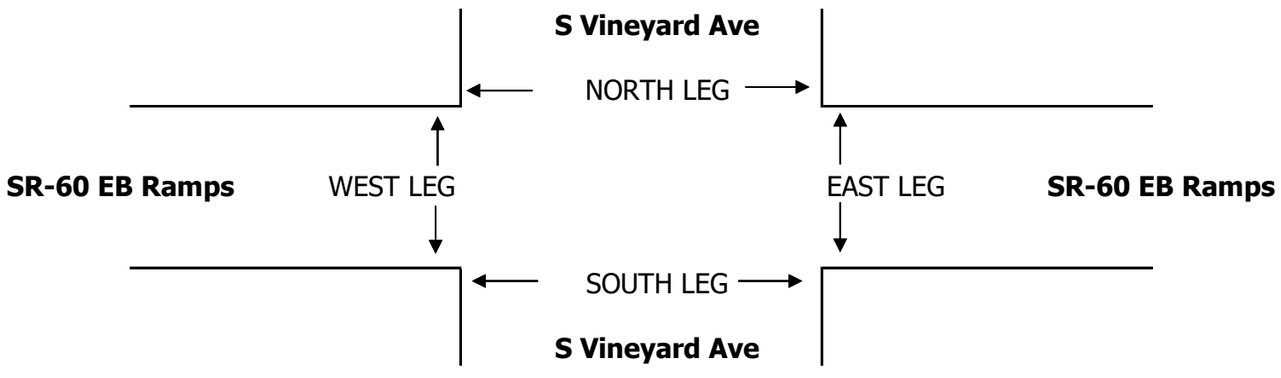
AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

	NORTHBOUND S Vineyard Ave			SOUTHBOUND S Vineyard Ave			EASTBOUND SR-60 EB Ramps			WESTBOUND SR-60 EB Ramps			
LANES:	NL X	NT 2	NR 0	SL 1	ST 2	SR X	EL 0.5	ET 0.5	ER 1	WL X	WT X	WR X	TOTAL

U-TURNS

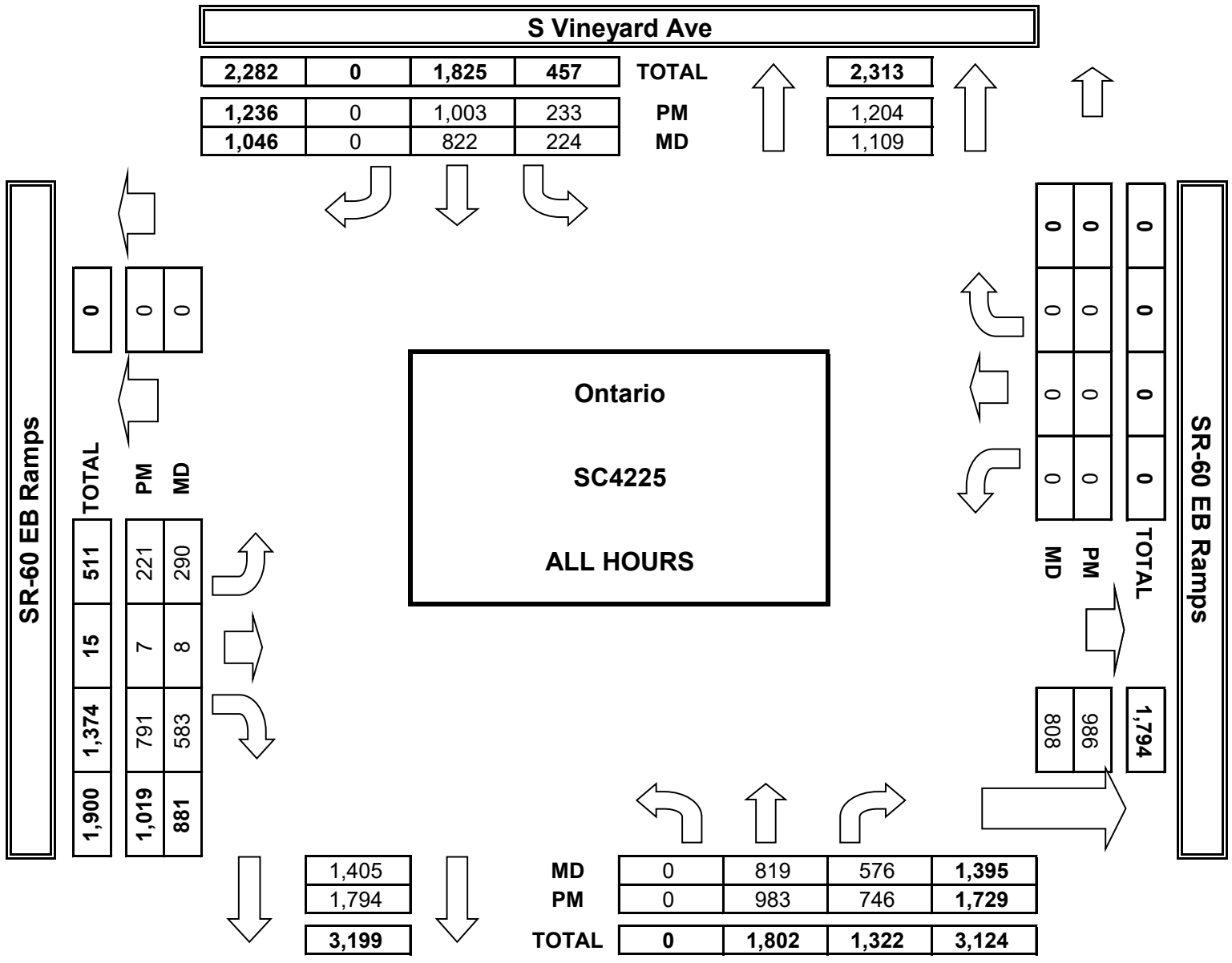
NB	SB	EB	WB	TTL
0	0	0	0	

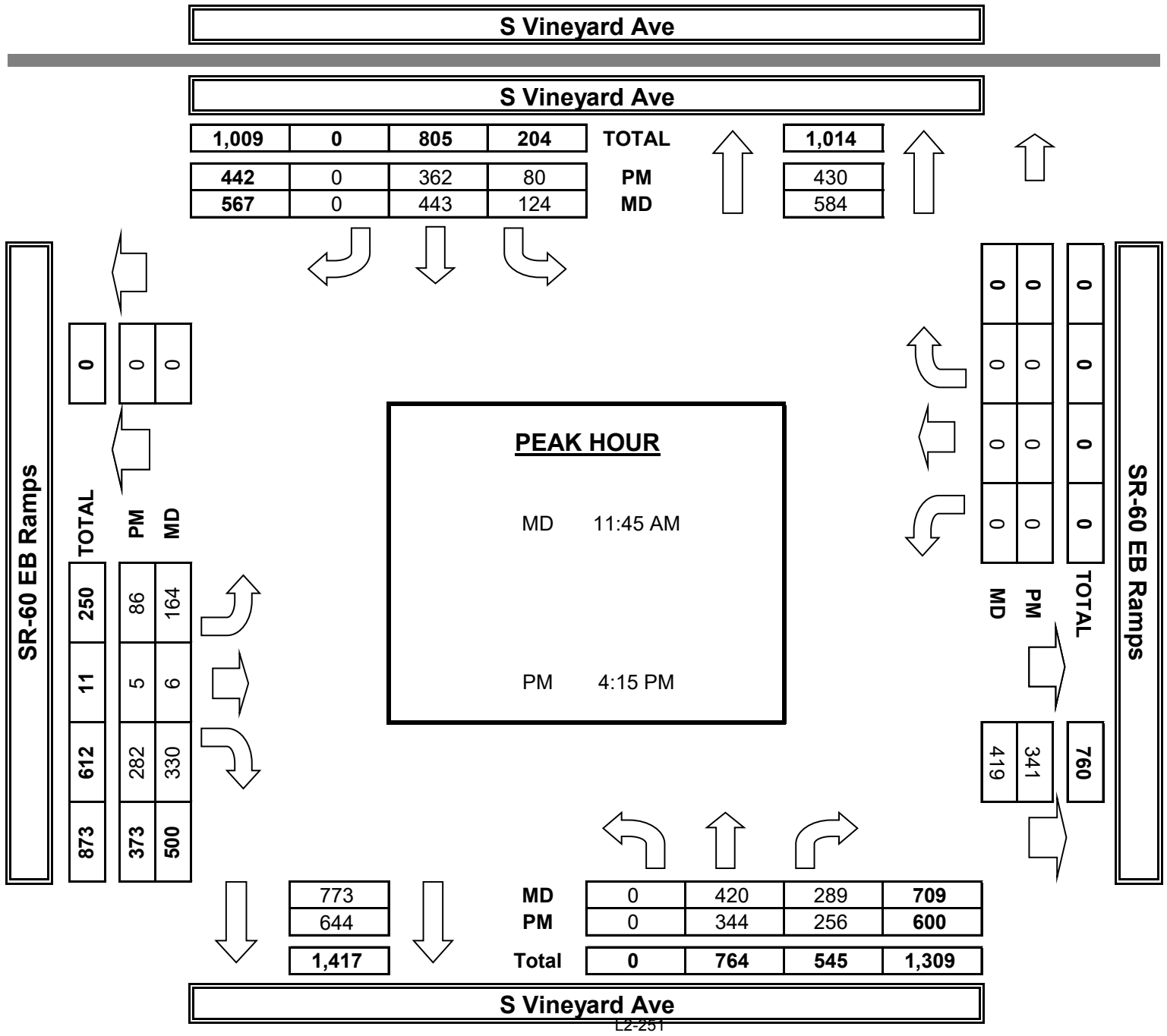
		NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND				U-TURNS				
		NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB	TTL
MD	11:00 AM	0	71	77	26	70	0	37	1	58	0	0	0	340	0	0	0	0	0
	11:15 AM	0	116	64	16	106	0	36	0	53	0	0	0	391	0	0	0	0	0
	11:30 AM	0	102	61	32	101	0	29	1	66	0	0	0	392	0	0	0	0	0
	11:45 AM	0	103	74	27	105	0	40	0	82	0	0	0	431	0	0	0	0	0
	12:00 PM	0	102	74	32	101	0	44	1	93	0	0	0	447	0	0	0	0	0
	12:15 PM	0	99	63	31	123	0	36	3	84	0	0	0	439	0	0	0	0	0
	12:30 PM	0	116	78	34	114	0	44	2	71	0	0	0	459	0	0	0	0	0
	12:45 PM	0	110	85	26	102	0	24	0	76	0	0	0	423	0	0	0	0	0
	VOLUMES	0	819	576	224	822	0	290	8	583	0	0	0	3,322	0	0	0	0	0
	APPROACH %	0%	59%	41%	21%	79%	0%	33%	1%	66%	0%	0%	0%						
	APP/DEPART	1,395	/	1,109	1,046	/	1,405	881	/	808	0	/	0	0					
	BEGIN PEAK HR		11:45 AM																
	VOLUMES	0	420	289	124	443	0	164	6	330	0	0	0	1,776					
	APPROACH %	0%	59%	41%	22%	78%	0%	33%	1%	66%	0%	0%	0%						
	PEAK HR FACTOR		0.914			0.920			0.906			0.000		0.967					
	APP/DEPART	709	/	584	567	/	773	500	/	419	0	/	0	0					
PM	4:00 PM	0	88	57	19	83	0	14	0	52	0	0	0	313	0	0	0	0	0
	4:15 PM	0	93	62	20	100	0	27	1	70	0	0	0	373	0	0	0	0	0
	4:30 PM	0	92	66	24	90	0	20	0	66	0	0	0	358	0	0	0	0	0
	4:45 PM	0	82	65	23	84	0	18	4	63	0	0	0	339	0	0	0	0	0
	5:00 PM	0	77	63	13	88	0	21	0	83	0	0	0	345	0	0	0	0	0
	5:15 PM	0	71	76	16	70	0	20	0	77	0	0	0	330	0	0	0	0	0
	5:30 PM	0	84	57	20	90	0	14	1	61	0	0	0	327	0	0	0	0	0
	5:45 PM	0	78	56	20	80	0	23	0	50	0	0	0	307	0	0	0	0	0
	6:00 PM	0	67	51	20	89	0	13	0	74	0	0	0	314	0	0	0	0	0
	6:15 PM	0	73	76	21	67	0	23	0	58	0	0	0	318	0	0	0	0	0
	6:30 PM	0	93	60	20	87	0	17	0	57	0	0	0	334	0	0	0	0	0
	6:45 PM	0	85	57	17	75	0	11	1	80	0	0	0	326	0	0	0	0	0
	VOLUMES	0	983	746	233	1,003	0	221	7	791	0	0	0	3,984	0	0	0	0	0
	APPROACH %	0%	57%	43%	19%	81%	0%	22%	1%	78%	0%	0%	0%						
	APP/DEPART	1,729	/	1,204	1,236	/	1,794	1,019	/	986	0	/	0	0					
	BEGIN PEAK HR		4:15 PM																
	VOLUMES	0	344	256	80	362	0	86	5	282	0	0	0	1,415					
	APPROACH %	0%	57%	43%	18%	82%	0%	23%	1%	76%	0%	0%	0%						
	PEAK HR FACTOR		0.949			0.921			0.897			0.000		0.948					
	APP/DEPART	600	/	430	442	/	644	373	/	341	0	/	0	0					



AimTD LLC

TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

T1018

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Sat, Oct 7, 23

LOCATION: Ontario
NORTH & SOUTH: S Archibald Ave
EAST & WEST: SR-60 WB Ramps

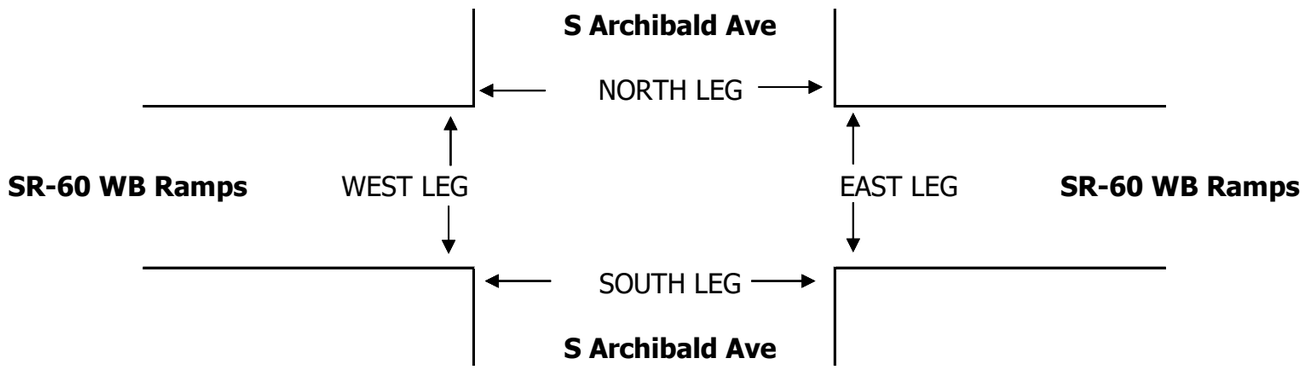
PROJECT #: SC4225
LOCATION #: 5
CONTROL: SIGNAL

NOTES:

AM
PM
MD
OTHER
OTHER

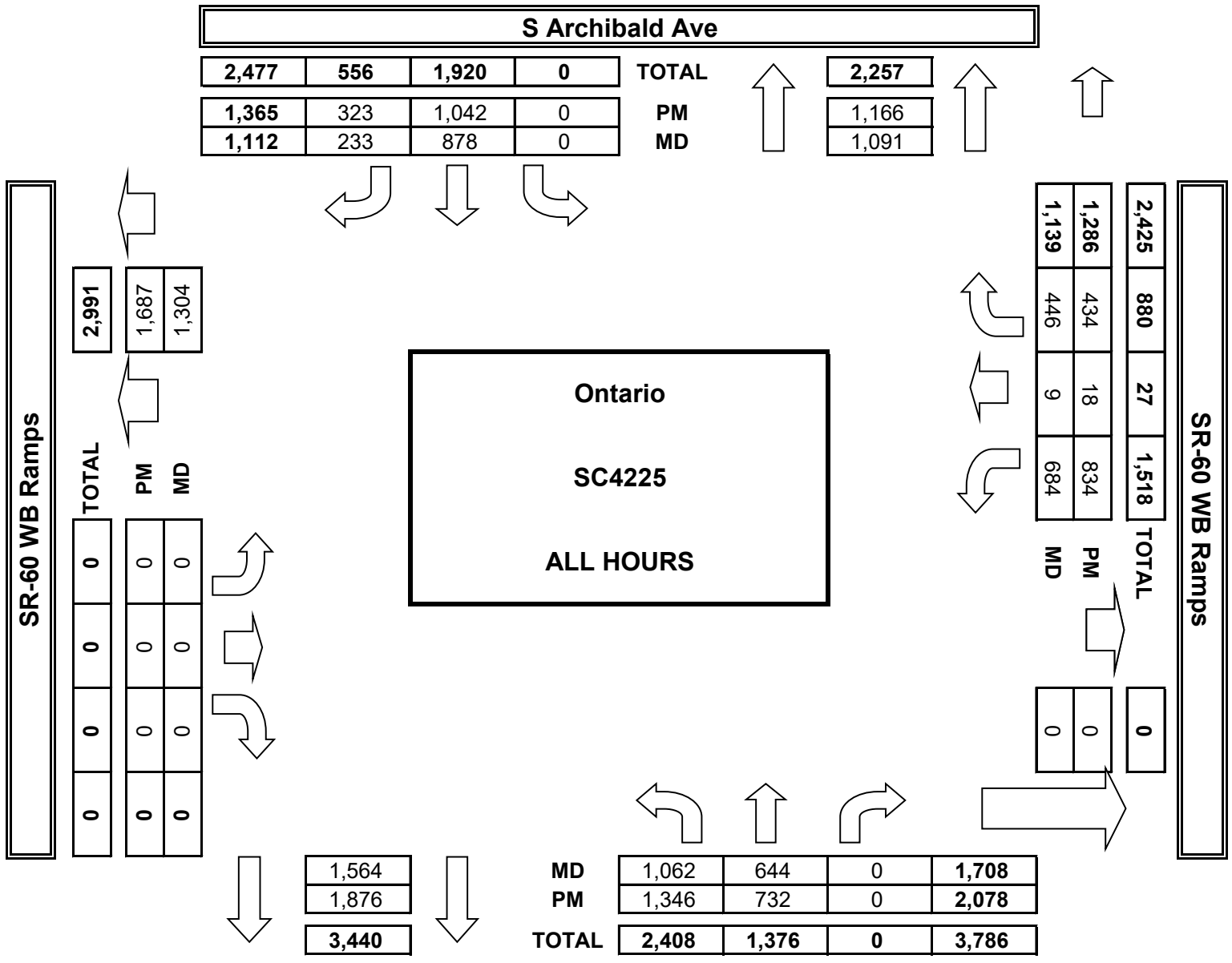
N
W
E
S

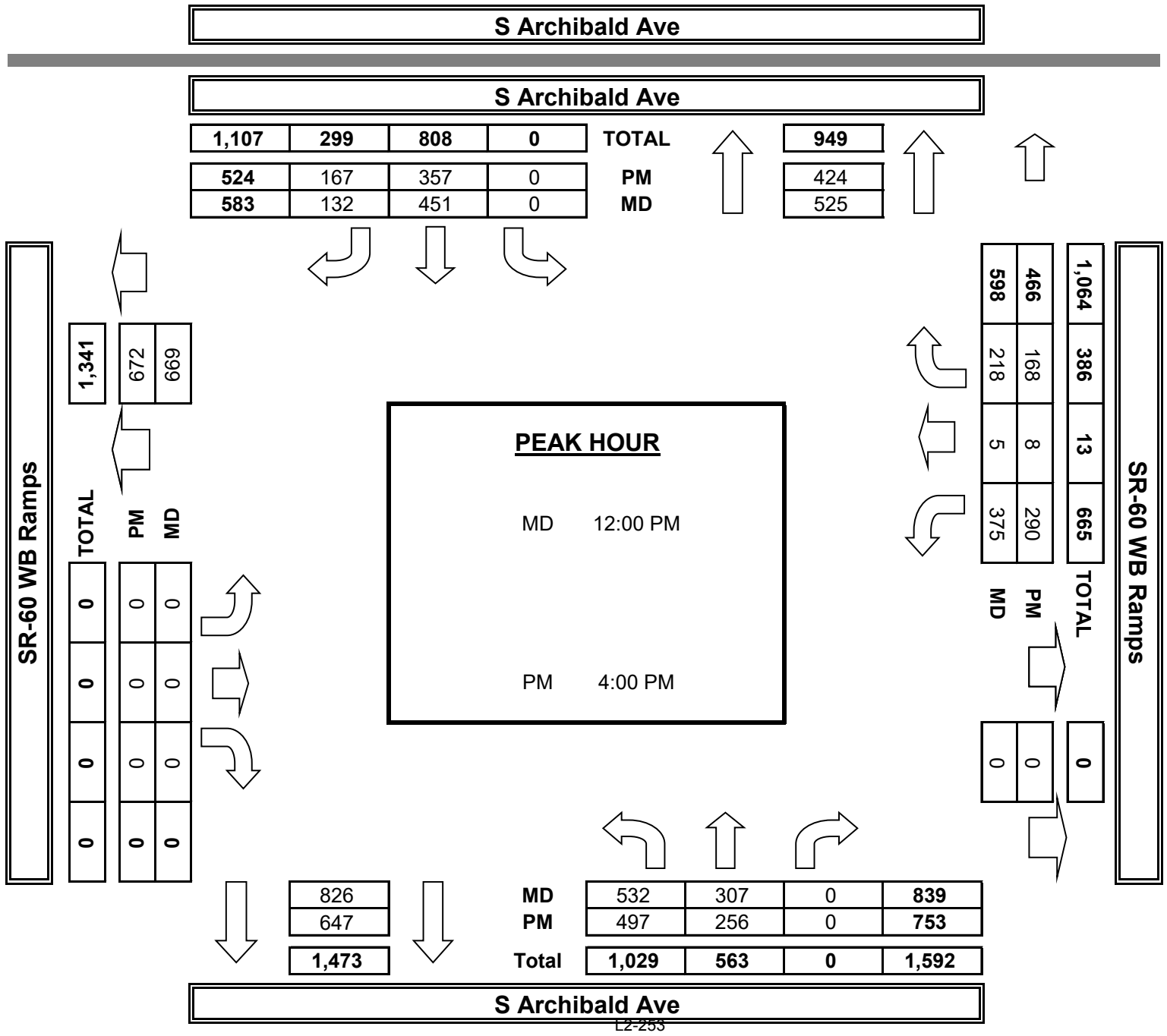
		NORTHBOUND S Archibald Ave			SOUTHBOUND S Archibald Ave			EASTBOUND SR-60 WB Ramps			WESTBOUND SR-60 WB Ramps				U-TURNS				
	LANES:	NL 2	NT 3	NR X	SL X	ST 4	SR 1	EL X	ET X	ER X	WL 1.3	WT 0.3	WR 1.3	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
MD	11:00 AM	131	67	0	0	117	21	0	0	0	64	1	65	466	1	0	0	0	1
	11:15 AM	137	85	0	0	109	31	0	0	0	96	2	53	513	0	0	0	0	0
	11:30 AM	127	95	0	0	113	25	0	0	0	69	0	46	475	0	1	0	0	1
	11:45 AM	135	90	0	0	88	24	0	0	0	80	1	64	482	1	0	0	0	1
	12:00 PM	143	73	0	0	121	42	0	0	0	78	1	49	507	0	0	0	0	0
	12:15 PM	144	77	0	0	120	27	0	0	0	90	1	51	510	0	0	0	0	0
	12:30 PM	136	84	0	0	111	33	0	0	0	97	1	51	513	0	0	0	0	0
	12:45 PM	109	73	0	0	99	30	0	0	0	110	2	67	490	0	0	0	0	0
	VOLUMES	1,062	644	0	0	878	233	0	0	0	684	9	446	3,959	2	1	0	0	3
	APPROACH %	62%	38%	0%	0%	79%	21%	0%	0%	0%	60%	1%	39%						
	APP/DEPART	1,708	/	1,091	1,112	/	1,564	0	/	0	1,139	/	1,304	0					
	BEGIN PEAK HR		12:00 PM																
	VOLUMES	532	307	0	0	451	132	0	0	0	375	5	218	2,020					
	APPROACH %	63%	37%	0%	0%	77%	23%	0%	0%	0%	63%	1%	36%						
	PEAK HR FACTOR		0.949			0.894			0.000			0.835		0.984					
	APP/DEPART	839	/	525	583	/	826	0	/	0	598	/	669	0					
PM	4:00 PM	113	66	0	0	97	31	0	0	0	87	3	35	432	0	0	0	0	0
	4:15 PM	128	63	0	0	82	36	0	0	0	60	2	38	409	0	0	0	0	0
	4:30 PM	134	66	0	0	101	48	0	0	0	73	2	40	464	0	0	0	0	0
	4:45 PM	122	61	0	0	77	52	0	0	0	70	1	55	438	0	0	0	0	0
	5:00 PM	83	54	0	0	86	46	0	0	0	70	2	42	383	0	0	0	0	0
	5:15 PM	108	71	0	0	100	18	0	0	0	75	0	42	414	0	0	0	0	0
	5:30 PM	109	48	0	0	84	22	0	0	0	66	4	45	378	0	0	0	0	0
	5:45 PM	106	81	0	0	85	15	0	0	0	68	2	30	387	0	0	0	0	0
	6:00 PM	101	53	0	0	83	14	0	0	0	68	1	38	358	0	0	0	0	0
	6:15 PM	105	56	0	0	82	10	0	0	0	65	0	28	346	0	0	0	0	0
	6:30 PM	125	52	0	0	91	13	0	0	0	66	1	17	365	0	0	0	0	0
	6:45 PM	112	61	0	0	74	18	0	0	0	66	0	24	355	0	0	0	0	0
	VOLUMES	1,346	732	0	0	1,042	323	0	0	0	834	18	434	4,729	0	0	0	0	0
	APPROACH %	65%	35%	0%	0%	76%	24%	0%	0%	0%	65%	1%	34%						
	APP/DEPART	2,078	/	1,166	1,365	/	1,876	0	/	0	1,286	/	1,687	0					
	BEGIN PEAK HR		4:00 PM																
	VOLUMES	497	256	0	0	357	167	0	0	0	290	8	168	1,743					
	APPROACH %	66%	34%	0%	0%	68%	32%	0%	0%	0%	62%	2%	36%						
	PEAK HR FACTOR		0.941			0.879			0.000			0.925		0.939					
	APP/DEPART	753	/	424	524	/	647	0	/	0	466	/	672	0					



AimTD LLC

TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

T1018

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Sat, Oct 7, 23	LOCATION:	Ontario	PROJECT #: SC4225
	NORTH & SOUTH:	S Archibald Ave	LOCATION #: 6
	EAST & WEST:	SR-60 EB Ramps	CONTROL: SIGNAL

NOTES:

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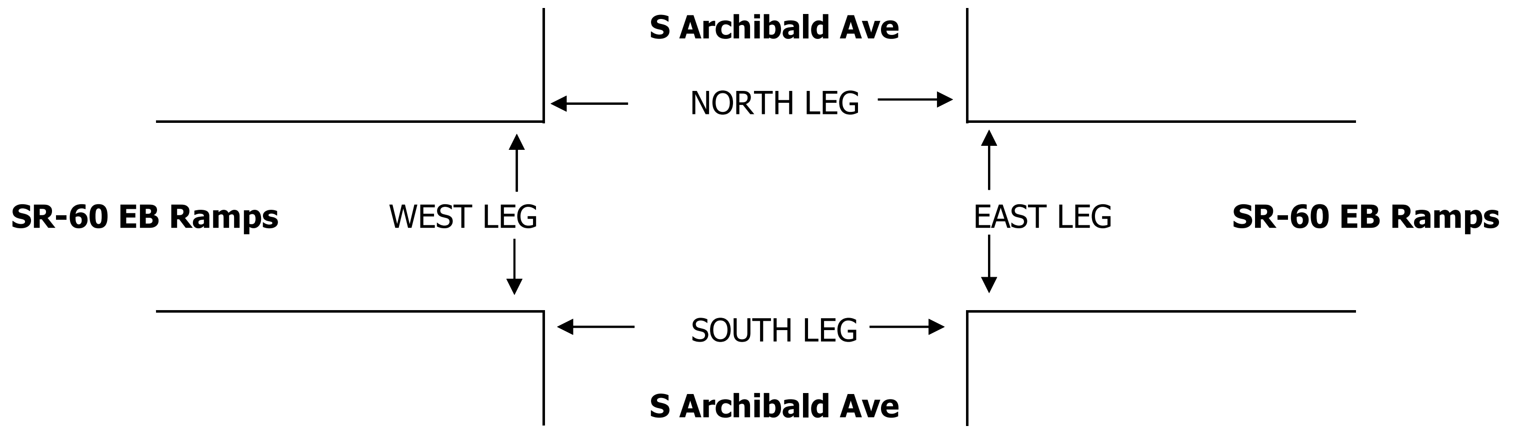
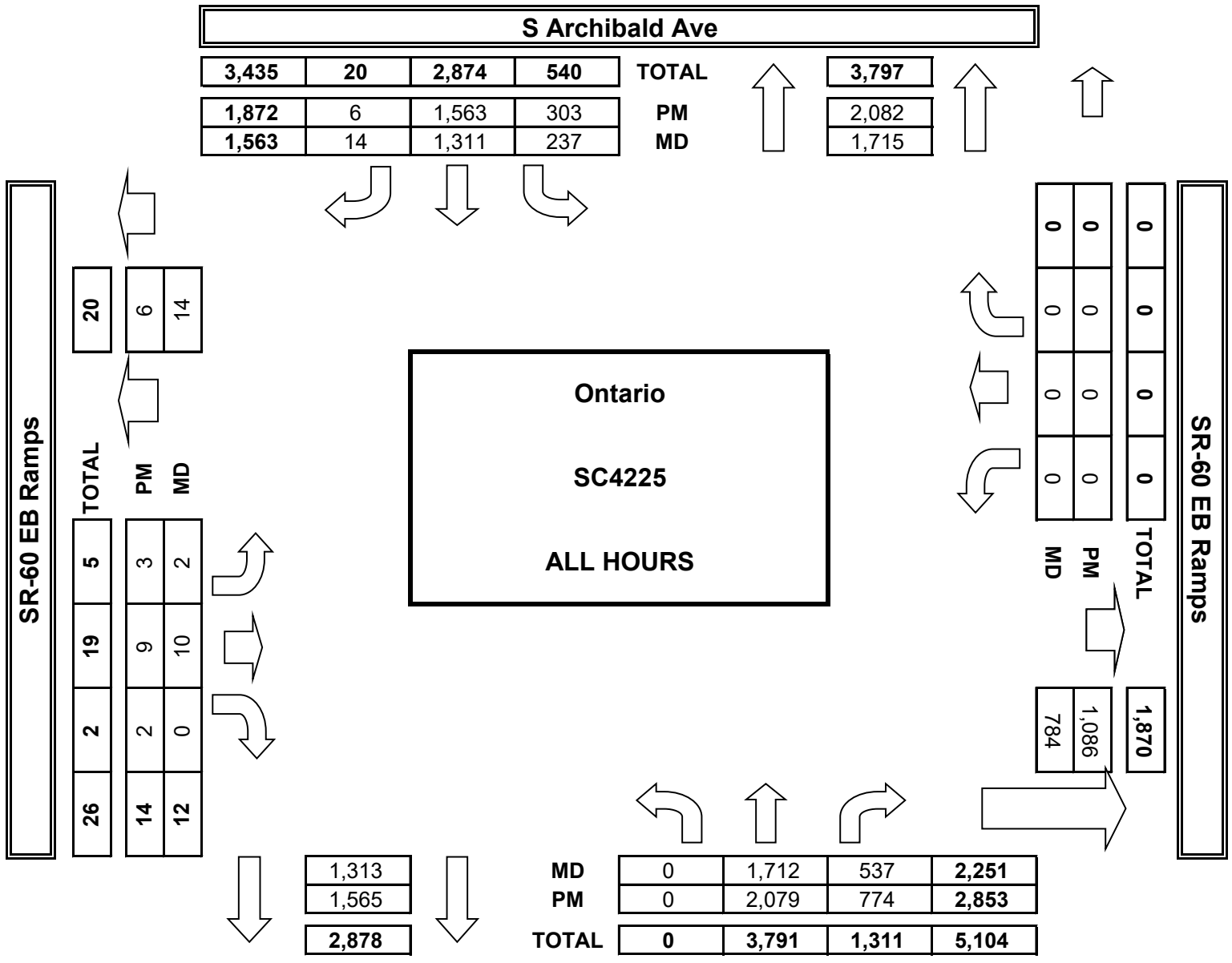
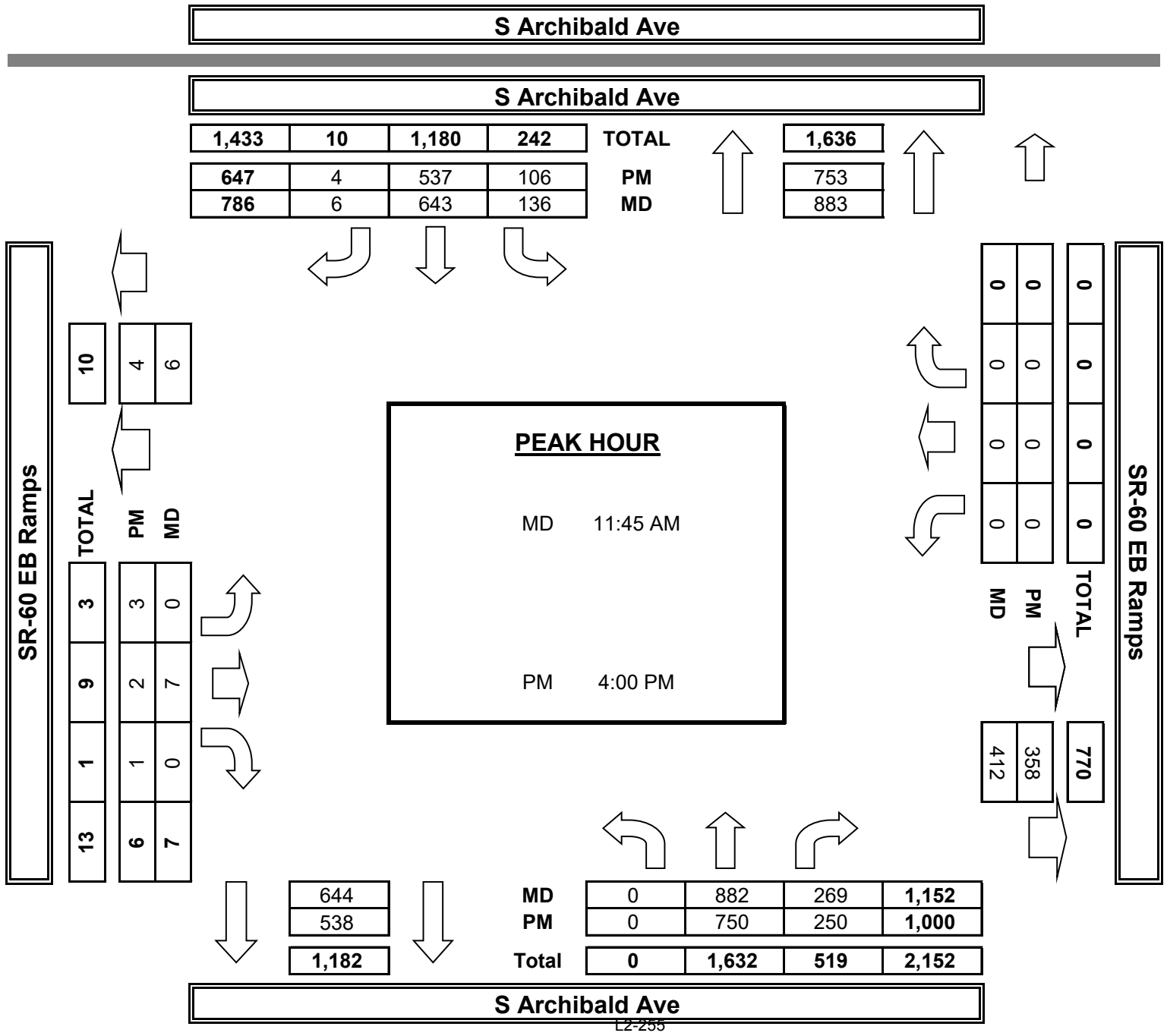
		NORTHBOUND S Archibald Ave			SOUTHBOUND S Archibald Ave			EASTBOUND SR-60 EB Ramps			WESTBOUND SR-60 EB Ramps				U-TURNS				
		NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB	TTL
	LANES:	X	4	1	2	3	0	1.3	0.3	1.3	X	X	X		0	0	0	0	
MD	11:00 AM	0	198	80	22	157	2	0	1	0	0	0	0	460	0	0	0	0	0
	11:15 AM	0	222	63	29	176	0	0	0	0	0	0	0	490	0	0	0	0	0
	11:30 AM	0	221	69	32	149	1	1	0	0	0	0	0	473	1	0	0	0	1
	11:45 AM	0	225	82	34	130	4	0	2	0	0	0	0	477	0	0	0	0	0
	12:00 PM	0	216	58	34	164	1	0	4	0	0	0	0	477	0	1	0	0	1
	12:15 PM	0	221	59	26	184	0	0	0	0	0	0	0	490	0	0	0	0	0
	12:30 PM	0	220	70	42	165	1	0	1	0	0	0	0	499	1	0	0	0	1
	12:45 PM	0	189	56	18	186	5	1	2	0	0	0	0	457	0	0	0	0	0
	VOLUMES	0	1,712	537	237	1,311	14	2	10	0	0	0	0	3,826	2	1	0	0	3
	APPROACH %	0%	76%	24%	15%	84%	1%	17%	83%	0%	0%	0%	0%						
	APP/DEPART	2,251	/	1,715	1,563	/	1,313	12	/	784	0	/	14	0					
	BEGIN PEAK HR		11:45 AM																
	VOLUMES	0	882	269	136	643	6	0	7	0	0	0	0	1,945					
	APPROACH %	0%	77%	23%	17%	82%	1%	0%	100%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.938			0.936			0.438			0.000		0.973					
	APP/DEPART	1,152	/	883	786	/	644	7	/	412	0	/	6	0					
PM	4:00 PM	0	178	65	37	146	1	1	0	0	0	0	0	428	0	0	0	0	0
	4:15 PM	0	191	54	22	118	2	0	0	1	0	0	0	388	0	0	0	0	0
	4:30 PM	0	199	66	26	148	0	1	2	0	0	0	0	442	0	0	0	0	0
	4:45 PM	0	182	65	21	125	1	1	0	0	0	0	0	395	0	0	0	0	0
	5:00 PM	0	141	64	25	131	0	0	0	0	0	0	0	361	0	0	0	0	0
	5:15 PM	0	179	76	33	141	1	0	0	0	0	0	0	430	0	0	0	0	0
	5:30 PM	0	157	81	22	128	0	0	3	0	0	0	0	391	0	0	0	0	0
	5:45 PM	0	187	36	27	125	1	0	3	0	0	0	0	379	0	0	0	0	0
	6:00 PM	0	154	81	18	133	0	0	1	0	0	0	0	387	0	0	0	0	0
	6:15 PM	0	161	62	18	129	0	0	0	0	0	0	0	370	0	0	0	0	0
	6:30 PM	0	177	63	28	125	0	0	0	0	0	0	0	393	0	0	0	0	0
	6:45 PM	0	173	61	26	114	0	0	0	1	0	0	0	375	0	0	0	0	0
	VOLUMES	0	2,079	774	303	1,563	6	3	9	2	0	0	0	4,739	0	0	0	0	0
	APPROACH %	0%	73%	27%	16%	83%	0%	21%	64%	14%	0%	0%	0%						
	APP/DEPART	2,853	/	2,082	1,872	/	1,565	14	/	1,086	0	/	6	0					
	BEGIN PEAK HR		4:00 PM																
	VOLUMES	0	750	250	106	537	4	3	2	1	0	0	0	1,653					
	APPROACH %	0%	75%	25%	16%	83%	1%	50%	33%	17%	0%	0%	0%						
	PEAK HR FACTOR		0.943			0.879			0.500			0.000		0.935					
	APP/DEPART	1,000	/	753	647	/	538	6	/	358	0	/	4	0					



AimTD LLC

TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

T1018

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Sat, Oct 7, 23

LOCATION: Ontario
NORTH & SOUTH: S Archibald Ave
EAST & WEST: E Walnut St

PROJECT #: SC4225
LOCATION #: 7
CONTROL: SIGNAL

NOTES:

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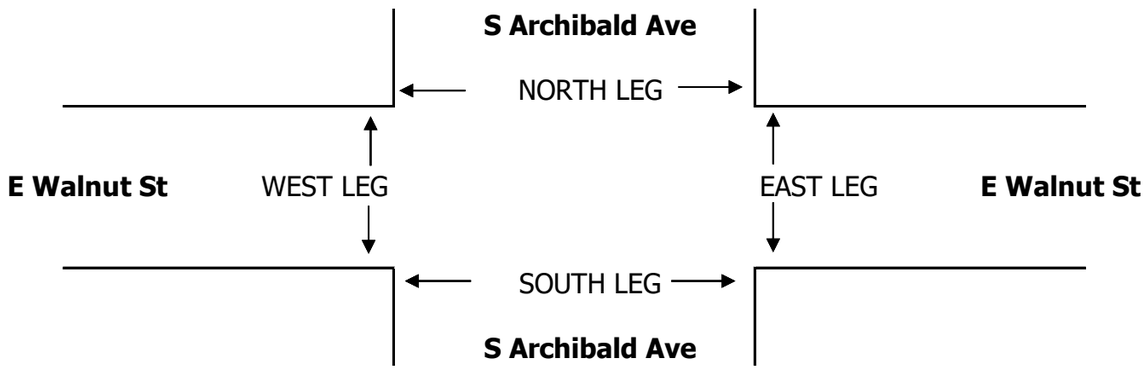
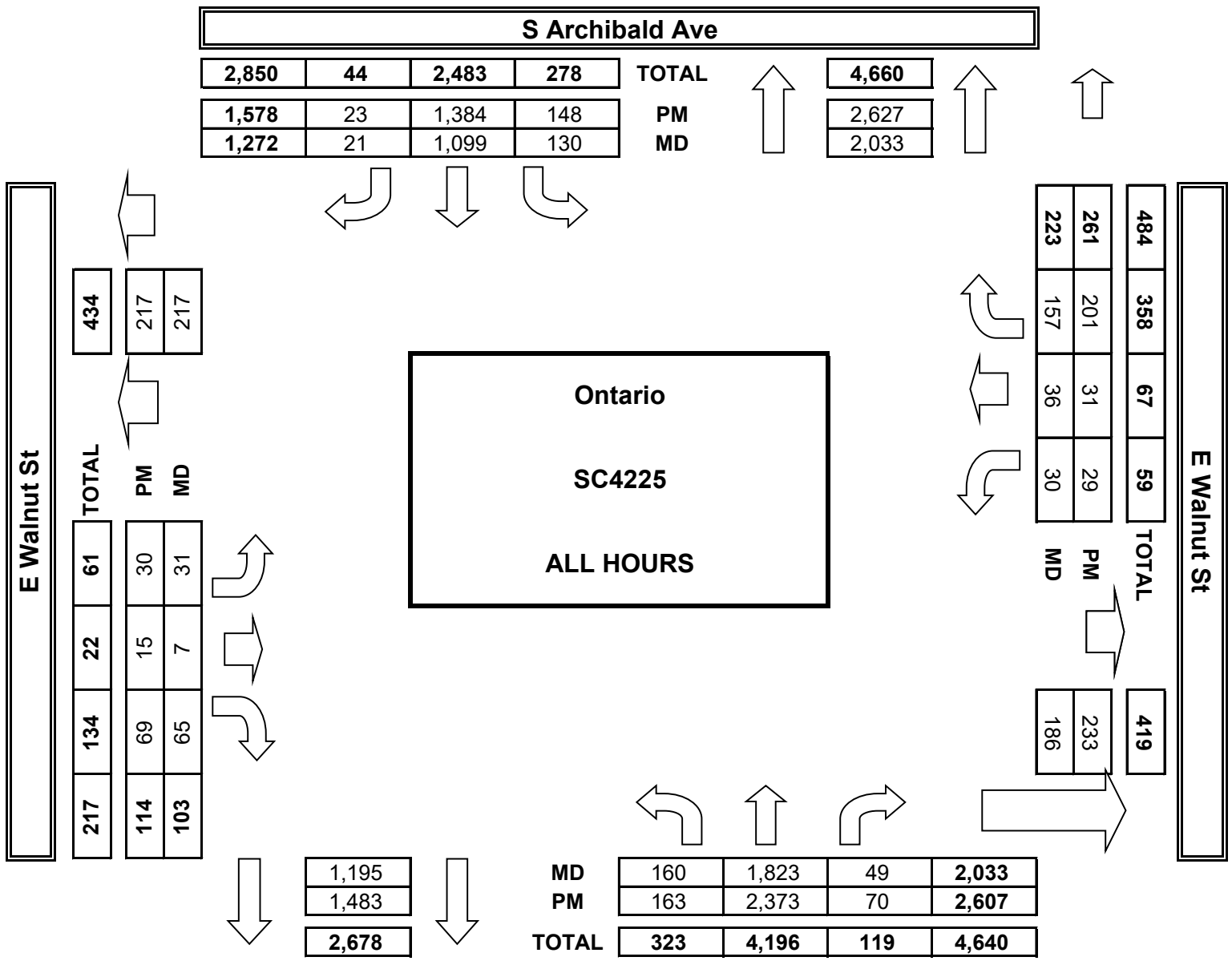
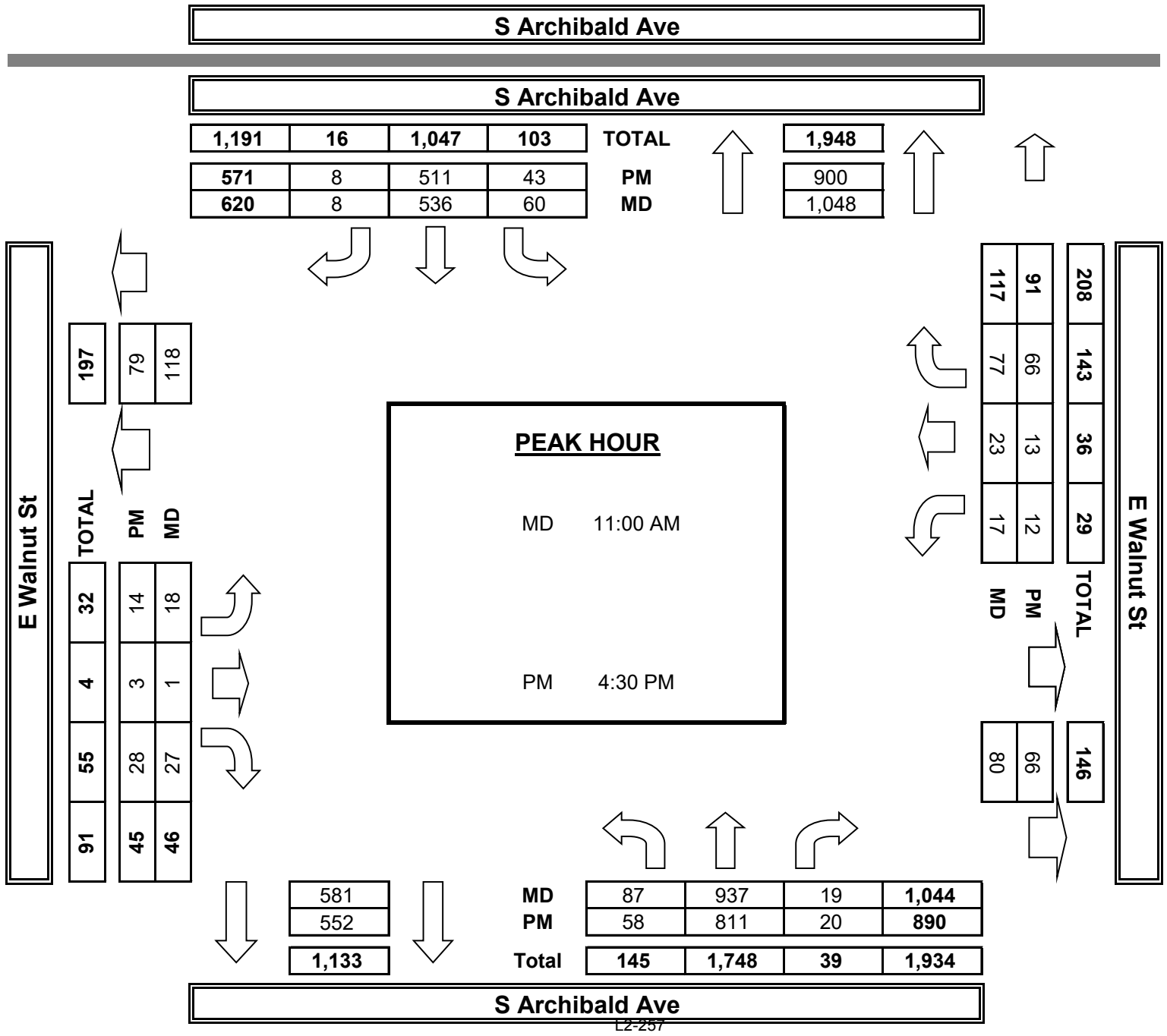
		NORTHBOUND S Archibald Ave			SOUTHBOUND S Archibald Ave			EASTBOUND E Walnut St			WESTBOUND E Walnut St				U-TURNS				
		NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB	TTL
	LANES:	1	3	0	1	3	0	1	1	0	1	1	0		0	0	0	0	
MD	11:00 AM	19	248	3	16	156	2	5	0	6	2	4	18	479	0	5	0	0	5
	11:15 AM	22	212	5	15	137	1	3	0	9	3	9	16	432	0	3	0	0	3
	11:30 AM	29	255	6	17	123	4	3	0	5	5	8	23	478	1	6	0	0	7
	11:45 AM	17	222	5	12	120	1	7	1	7	7	2	20	421	0	2	0	0	2
	12:00 PM	17	213	6	16	133	4	3	1	4	1	4	17	419	0	3	0	0	3
	12:15 PM	14	233	9	18	133	4	5	3	12	6	4	27	468	0	0	0	0	0
	12:30 PM	18	227	9	12	160	1	2	1	8	4	3	25	470	0	3	0	0	3
	12:45 PM	24	213	6	24	137	4	3	1	14	2	2	11	441	0	0	0	0	0
	VOLUMES	160	1,823	49	130	1,099	21	31	7	65	30	36	157	3,631	1	22	0	0	23
	APPROACH %	8%	90%	2%	10%	86%	2%	30%	7%	63%	13%	16%	70%						
	APP/DEPART	2,033	/	2,033	1,272	/	1,195	103	/	186	223	/	217	0					
	BEGIN PEAK HR		11:00 AM																
	VOLUMES	87	937	19	60	536	8	18	1	27	17	23	77	1,827					
	APPROACH %	8%	90%	2%	10%	86%	1%	39%	2%	59%	15%	20%	66%						
	PEAK HR FACTOR		0.897			0.866			0.767			0.813		0.942					
	APP/DEPART	1,044	/	1,048	620	/	581	46	/	80	117	/	118	0					
PM	4:00 PM	10	178	6	13	114	0	3	2	6	0	0	14	346	0	3	0	0	3
	4:15 PM	17	216	4	11	99	3	1	1	4	5	3	14	378	0	4	0	0	4
	4:30 PM	17	200	5	11	141	2	4	0	11	4	5	24	424	0	4	0	0	4
	4:45 PM	15	215	4	8	111	0	5	0	4	2	3	22	389	0	2	0	0	2
	5:00 PM	12	190	4	15	123	2	3	0	7	2	3	11	372	1	3	0	0	4
	5:15 PM	14	206	7	9	136	4	2	3	6	4	2	9	402	0	0	0	0	0
	5:30 PM	9	191	5	11	106	1	2	0	7	2	2	20	356	0	0	0	0	0
	5:45 PM	15	208	6	15	102	3	0	1	7	2	1	19	379	0	2	0	0	2
	6:00 PM	14	185	8	18	127	2	2	1	6	2	4	14	383	0	2	0	0	2
	6:15 PM	17	194	6	10	128	1	3	6	4	2	5	17	393	0	2	0	0	2
	6:30 PM	8	194	4	12	110	4	3	1	6	0	0	25	367	0	0	0	0	0
	6:45 PM	15	196	11	15	87	1	2	0	1	4	3	12	347	0	1	0	0	1
	VOLUMES	163	2,373	70	148	1,384	23	30	15	69	29	31	201	4,560	1	23	0	0	24
	APPROACH %	6%	91%	3%	9%	88%	1%	26%	13%	61%	11%	12%	77%						
	APP/DEPART	2,607	/	2,627	1,578	/	1,483	114	/	233	261	/	217	0					
	BEGIN PEAK HR		4:30 PM																
	VOLUMES	58	811	20	43	511	8	14	3	28	12	13	66	1,597					
	APPROACH %	7%	91%	2%	8%	89%	1%	31%	7%	62%	13%	14%	73%						
	PEAK HR FACTOR		0.951			0.903			0.750			0.689		0.933					
	APP/DEPART	890	/	900	571	/	552	45	/	66	91	/	79	0					



AimTD LLC

TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

T1018

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:				
Sat, Oct 7, 23	LOCATION:	Ontario	PROJECT #:	SC4225
	NORTH & SOUTH:	Euclid Ave	LOCATION #:	8
	EAST & WEST:	East Riverside Dr	CONTROL:	SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER

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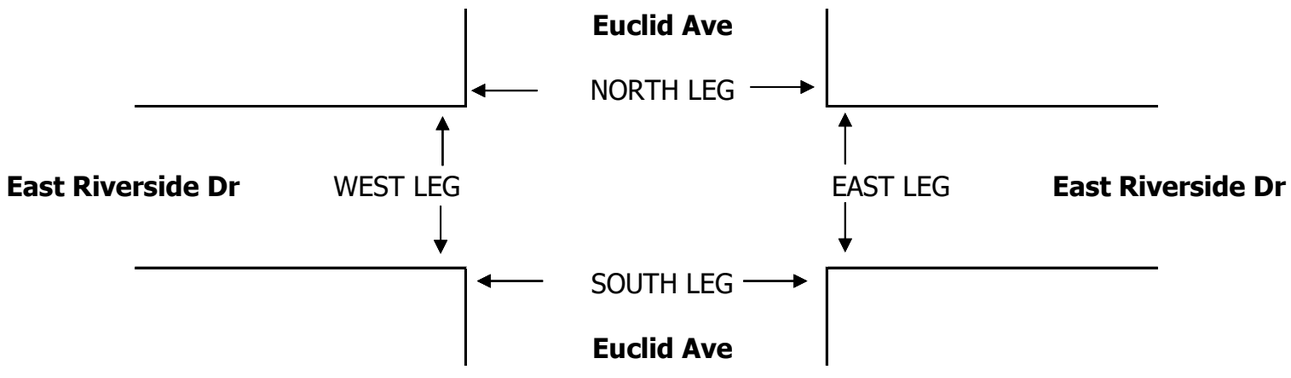
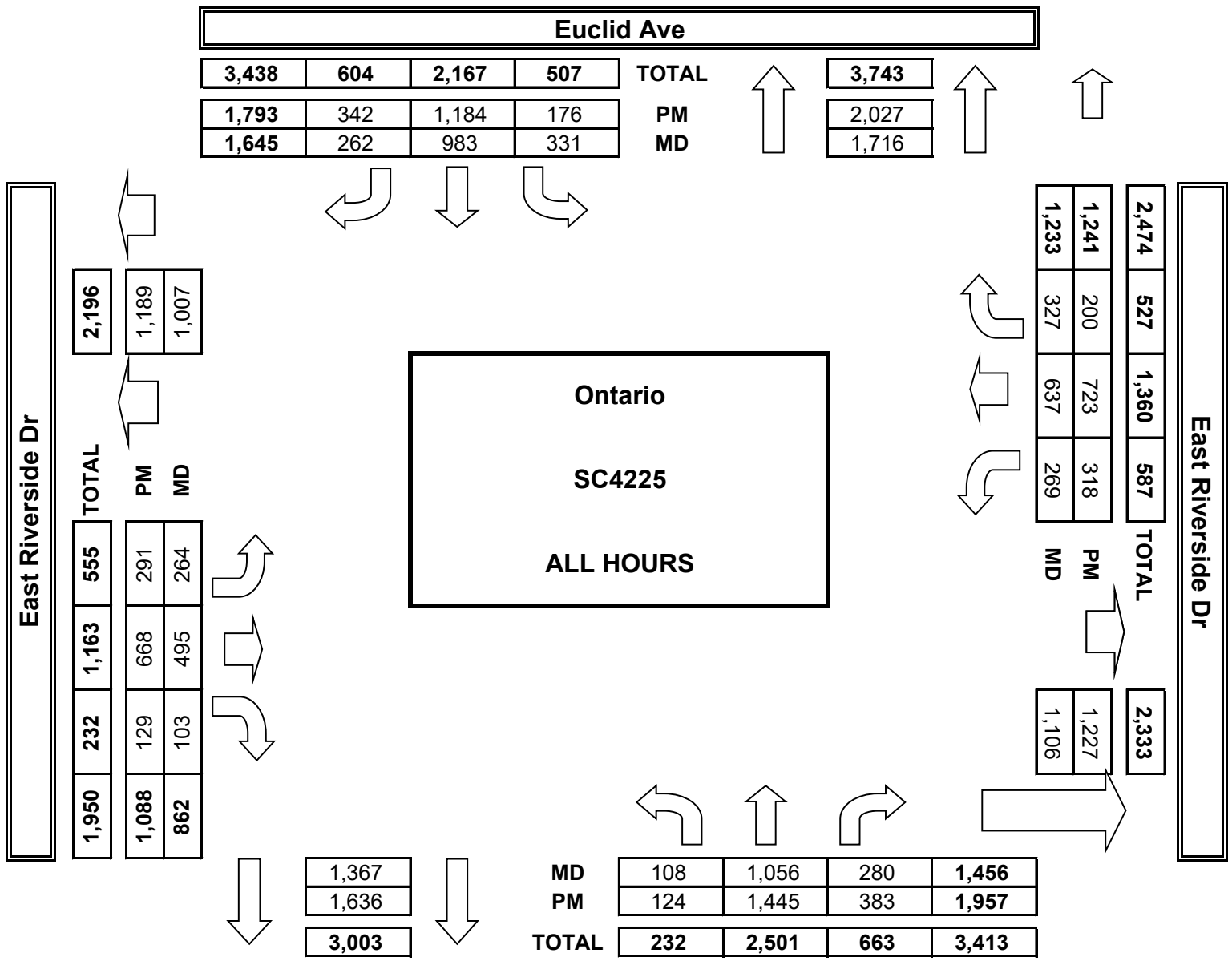
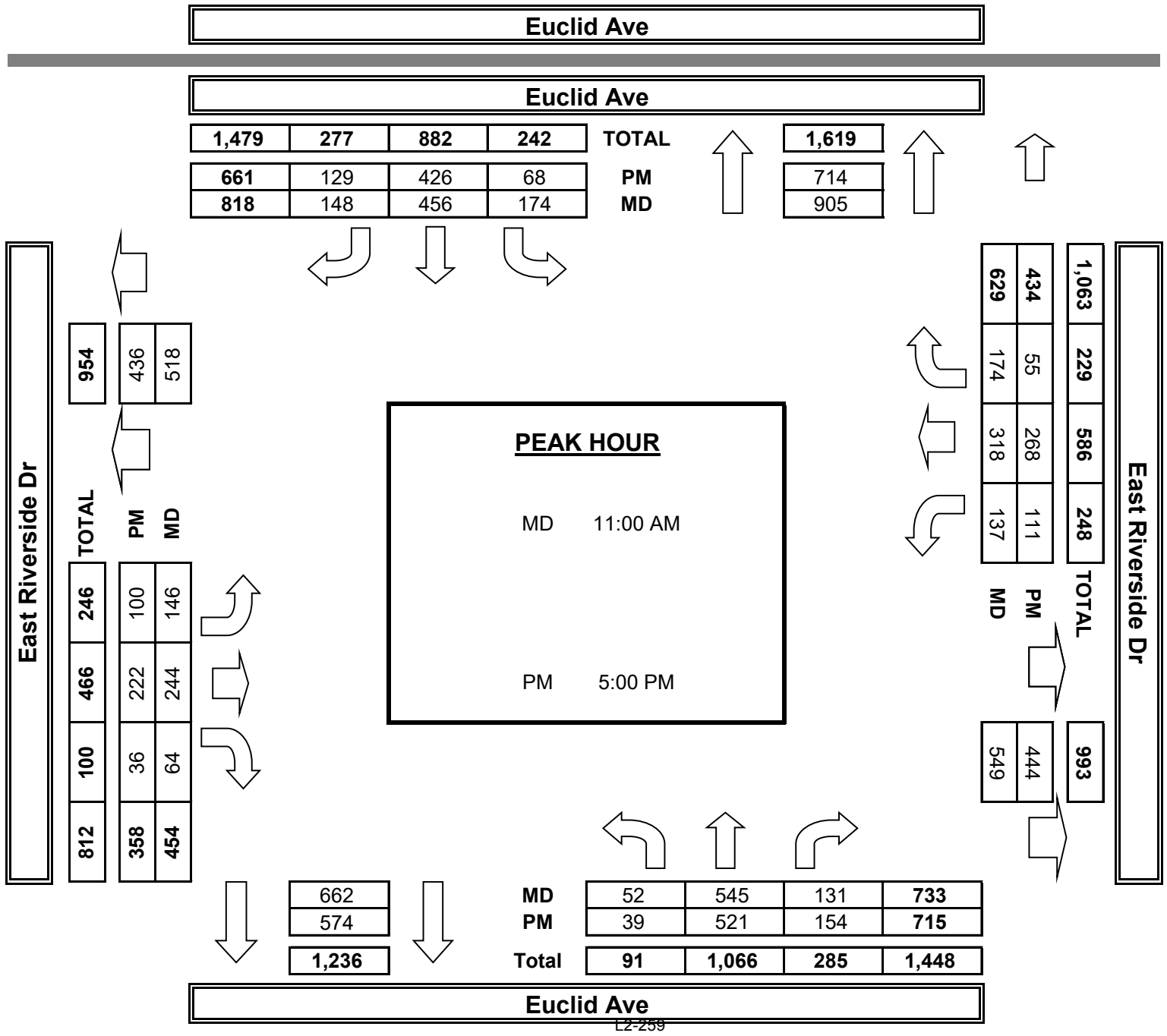
	NORTHBOUND Euclid Ave			SOUTHBOUND Euclid Ave			EASTBOUND East Riverside Dr			WESTBOUND East Riverside Dr				U-TURNS				
LANES:	NL 1	NT 2	NR 1	SL 1	ST 2	SR 1	EL 1	ET 1	ER 0	WL 1	WT 2	WR 0	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
MD 11:00 AM	12	141	29	49	105	34	38	60	15	32	94	46	655	0	5	0	0	5
11:15 AM	16	162	34	45	139	33	28	66	15	36	83	37	694	2	12	0	0	14
11:30 AM	14	111	33	48	100	46	40	72	20	38	78	54	654	2	10	0	0	12
11:45 AM	10	131	35	32	112	35	40	46	14	31	63	37	586	1	13	0	0	14
12:00 PM	12	110	38	47	131	28	36	70	10	34	91	36	643	2	4	0	0	6
12:15 PM	13	140	39	39	136	38	18	65	14	35	87	38	662	0	11	0	0	11
12:30 PM	17	143	46	41	118	27	30	55	4	22	49	41	593	2	6	0	0	8
12:45 PM	14	118	26	30	142	21	34	61	11	41	92	38	628	3	8	0	0	11
VOLUMES	108	1,056	280	331	983	262	264	495	103	269	637	327	5,196	12	69	0	0	81
APPROACH %	7%	73%	19%	20%	60%	16%	31%	57%	12%	22%	52%	27%						
APP/DEPART	1,456	/	1,716	1,645	/	1,367	862	/	1,106	1,233	/	1,007	0					
BEGIN PEAK HR		11:00 AM																
VOLUMES	52	545	131	174	456	148	146	244	64	137	318	174	2,634					
APPROACH %	7%	74%	18%	21%	56%	18%	32%	54%	14%	22%	51%	28%						
PEAK HR FACTOR		0.856			0.893			0.860			0.914		0.930					
APP/DEPART	733	/	905	818	/	662	454	/	549	629	/	518	0					
PM 4:00 PM	14	126	26	11	104	38	28	67	15	27	60	21	537	0	4	0	0	4
4:15 PM	9	121	32	11	103	24	23	66	11	28	59	19	506	2	10	0	0	12
4:30 PM	11	123	27	9	94	33	26	50	8	33	86	12	512	0	9	0	0	9
4:45 PM	12	98	36	10	104	23	27	55	12	29	72	23	501	0	7	0	0	7
5:00 PM	9	123	42	17	119	32	29	55	6	21	58	13	524	0	12	0	0	12
5:15 PM	8	110	39	18	98	39	23	58	8	29	78	18	526	0	4	0	0	4
5:30 PM	10	152	31	21	102	30	23	49	11	29	66	14	538	1	14	0	0	15
5:45 PM	12	136	42	12	107	28	25	60	11	32	66	10	541	0	8	0	0	8
6:00 PM	4	141	21	20	79	22	23	65	18	33	63	13	502	0	3	0	0	3
6:15 PM	18	123	28	20	90	20	22	57	16	16	47	22	479	0	10	0	0	10
6:30 PM	8	97	35	17	95	28	24	46	6	22	30	17	425	1	4	0	0	5
6:45 PM	9	95	24	10	89	25	18	40	7	19	38	18	392	1	6	0	0	7
VOLUMES	124	1,445	383	176	1,184	342	291	668	129	318	723	200	6,079	5	91	0	0	96
APPROACH %	6%	74%	20%	10%	66%	19%	27%	61%	12%	26%	58%	16%						
APP/DEPART	1,957	/	2,027	1,793	/	1,636	1,088	/	1,227	1,241	/	1,189	0					
BEGIN PEAK HR		5:00 PM																
VOLUMES	39	521	154	68	426	129	100	222	36	111	268	55	2,168					
APPROACH %	5%	73%	22%	10%	64%	20%	28%	62%	10%	26%	62%	13%						
PEAK HR FACTOR		0.921			0.918			0.932			0.868		0.980					
APP/DEPART	715	/	714	661	/	574	358	/	444	434	/	436	0					



AimTD LLC

TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

T1018

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Sat, Oct 7, 23

LOCATION: Ontario
NORTH & SOUTH: S Capmus Ave
EAST & WEST: East Riverside Dr

PROJECT #: SC4225
LOCATION #: 9
CONTROL: SIGNAL

NOTES:

AM
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OTHER
OTHER

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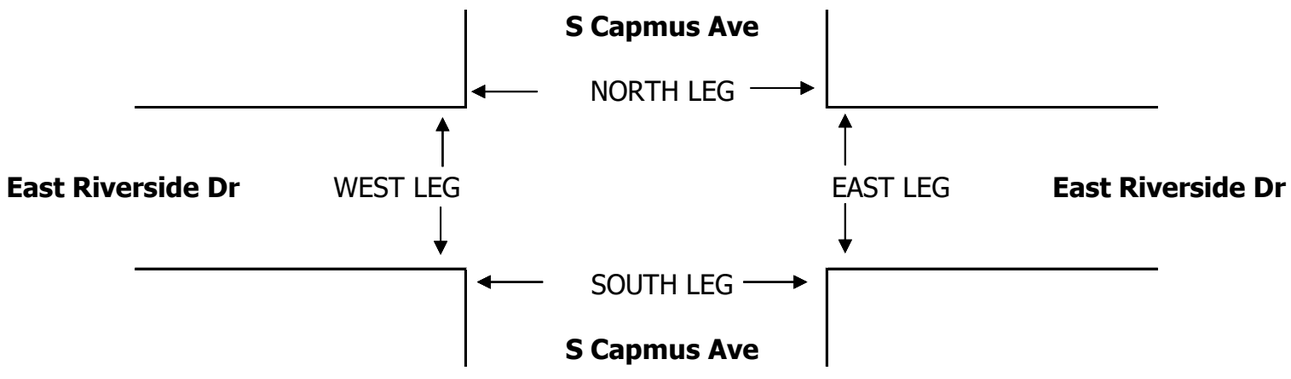
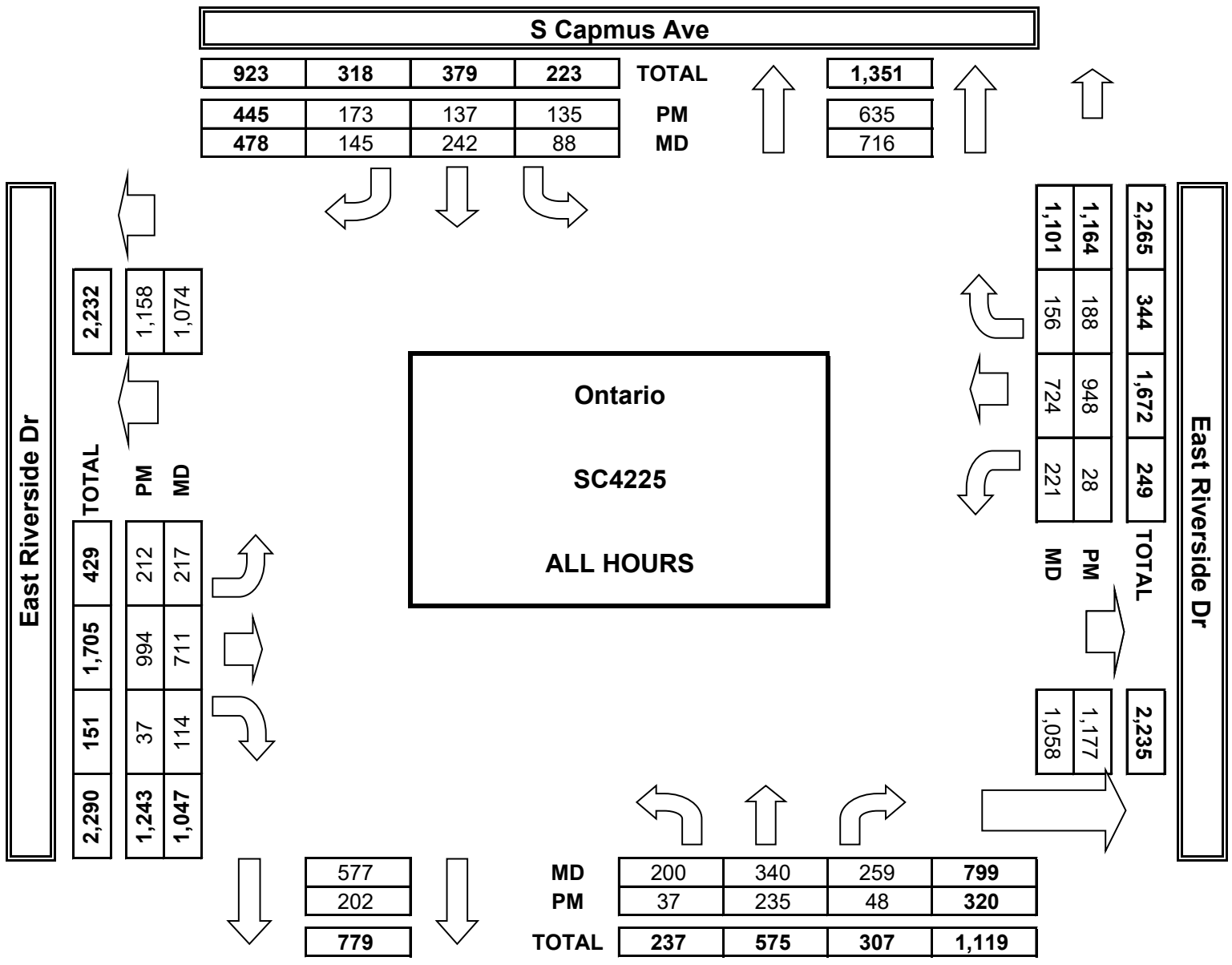
		NORTHBOUND S Capmus Ave			SOUTHBOUND S Capmus Ave			EASTBOUND East Riverside Dr			WESTBOUND East Riverside Dr				U-TURNS				
	LANES:	NL 1	NT 1	NR 0	SL 1	ST 1	SR 1	EL 1	ET 1	ER 1	WL 1	WT 2	WR 0	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
MD	11:00 AM	24	42	39	14	47	20	25	73	13	37	104	20	458	0	1	1	0	2
	11:15 AM	35	29	34	10	28	20	23	91	17	36	94	22	439	0	0	0	0	0
	11:30 AM	28	63	29	11	34	17	32	91	14	34	93	18	464	0	1	1	0	2
	11:45 AM	28	39	25	8	32	23	28	81	14	22	87	26	413	0	1	0	0	1
	12:00 PM	23	46	41	9	27	14	27	93	13	26	81	19	419	0	0	0	0	0
	12:15 PM	21	46	27	16	28	19	31	96	19	21	96	16	436	0	0	0	0	0
	12:30 PM	26	49	35	7	28	13	31	101	11	24	77	21	423	0	0	3	0	3
	12:45 PM	15	26	29	13	18	19	20	85	13	21	92	14	365	0	0	0	0	0
	VOLUMES	200	340	259	88	242	145	217	711	114	221	724	156	3,425	0	3	5	0	8
	APPROACH %	25%	43%	32%	18%	51%	30%	21%	68%	11%	20%	66%	14%						
	APP/DEPART	799	/	716	478	/	577	1,047	/	1,058	1,101	/	1,074	0					
	BEGIN PEAK HR		11:00 AM																
	VOLUMES	115	173	127	43	141	80	108	336	58	129	378	86	1,779					
	APPROACH %	28%	42%	31%	16%	53%	30%	21%	67%	12%	22%	64%	15%						
	PEAK HR FACTOR		0.865			0.814			0.913			0.921		0.954					
	APP/DEPART	415	/	370	267	/	328	504	/	506	593	/	575	0					
PM	4:00 PM	6	17	3	12	11	14	24	85	4	0	83	14	273	0	0	0	0	0
	4:15 PM	5	26	9	10	11	20	18	87	6	3	80	22	297	0	0	0	0	0
	4:30 PM	2	23	3	15	12	14	16	69	2	4	87	17	264	0	0	0	0	0
	4:45 PM	1	19	4	7	13	17	23	89	1	3	90	16	283	0	0	0	0	0
	5:00 PM	2	26	3	8	10	20	14	93	4	1	78	21	280	0	0	0	0	0
	5:15 PM	2	14	6	12	14	12	17	84	2	3	91	18	275	0	0	0	0	0
	5:30 PM	1	27	4	10	10	10	10	97	3	4	95	11	282	0	0	0	0	0
	5:45 PM	4	19	8	11	18	12	17	91	4	3	85	14	286	0	0	0	0	0
	6:00 PM	6	21	3	9	7	14	15	78	3	1	79	9	245	0	0	0	0	0
	6:15 PM	5	18	1	16	10	10	20	87	4	1	63	16	251	0	0	0	0	0
	6:30 PM	2	12	1	14	9	13	18	80	3	3	56	21	232	0	0	0	0	0
	6:45 PM	1	13	3	11	12	17	20	54	1	2	61	9	204	0	0	0	0	0
	VOLUMES	37	235	48	135	137	173	212	994	37	28	948	188	3,172	0	0	0	0	0
	APPROACH %	12%	73%	15%	30%	31%	39%	17%	80%	3%	2%	81%	16%						
	APP/DEPART	320	/	635	445	/	202	1,243	/	1,177	1,164	/	1,158	0					
	BEGIN PEAK HR		4:15 PM																
	VOLUMES	10	94	19	40	46	71	71	338	13	11	335	76	1,124					
	APPROACH %	8%	76%	15%	25%	29%	45%	17%	80%	3%	3%	79%	18%						
	PEAK HR FACTOR		0.769			0.957			0.934			0.968		0.946					
	APP/DEPART	123	/	241	157	/	70	422	/	397	422	/	416	0					



AimTD LLC

TURNING MOVEMENT COUNTS



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Sat, Oct 7, 23

LOCATION: Ontario
NORTH & SOUTH: S Bon View Ave
EAST & WEST: East Riverside Dr

PROJECT #: SC4225
LOCATION #: 10
CONTROL: STOP N/S

NOTES:

AM / PM / MD / OTHER / OTHER

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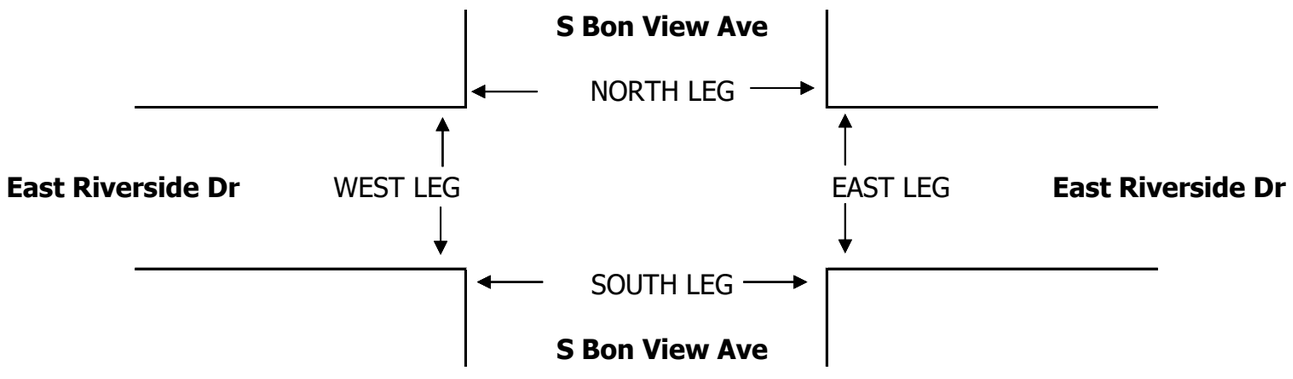
	NORTHBOUND S Bon View Ave			SOUTHBOUND S Bon View Ave			EASTBOUND East Riverside Dr			WESTBOUND East Riverside Dr			
LANES:	NL 0	NT 1	NR 0	SL 0	ST 1	SR 0	EL 1	ET 1	ER 0	WL 1	WT 2	WR 0	TOTAL

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND				U-TURNS				
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB	TTL
MD																		
11:00 AM	12	3	25	4	2	4	3	123	4	19	156	3	358	0	0	0	0	0
11:15 AM	5	2	26	3	5	6	8	117	9	15	140	5	341	0	0	0	0	0
11:30 AM	8	2	28	0	4	3	5	117	5	14	125	2	313	0	0	0	0	0
11:45 AM	10	2	27	1	3	2	5	107	3	11	120	3	294	0	0	1	0	1
12:00 PM	9	3	28	1	3	1	5	126	6	13	118	3	316	0	0	0	0	0
12:15 PM	4	4	23	1	2	3	5	128	9	9	120	2	310	0	0	0	0	0
12:30 PM	4	7	34	0	3	5	7	134	5	10	108	6	323	0	0	1	0	1
12:45 PM	2	4	35	0	0	6	6	115	5	23	124	3	323	0	0	0	0	0
VOLUMES	54	27	226	10	22	30	44	967	46	114	1,011	27	2,580	0	0	2	0	2
APPROACH %	18%	9%	74%	16%	35%	48%	4%	91%	4%	10%	88%	2%						
APP/DEPART	307	/	98	62	/	182	1,059	/	1,203	1,152	/	1,097	0					
BEGIN PEAK HR	11:00 AM																	
VOLUMES	35	9	106	8	14	15	21	464	21	59	541	13	1,307					
APPROACH %	23%	6%	71%	22%	38%	41%	4%	92%	4%	10%	88%	2%						
PEAK HR FACTOR	0.938			0.661			0.946			0.861			0.913					
APP/DEPART	150	/	43	37	/	94	507	/	578	613	/	592	0					
PM																		
4:00 PM	3	3	14	1	5	4	2	100	0	13	91	2	238	0	0	0	0	0
4:15 PM	7	5	13	3	2	5	2	97	2	7	102	1	246	0	0	0	0	0
4:30 PM	8	3	24	0	2	4	4	83	2	8	96	1	235	0	0	0	0	0
4:45 PM	6	3	30	2	2	4	6	92	3	17	94	3	262	0	0	0	0	0
5:00 PM	2	5	14	1	1	4	7	93	4	4	86	5	226	0	0	0	0	0
5:15 PM	11	8	20	1	2	5	5	95	2	12	106	3	270	0	0	0	0	0
5:30 PM	2	2	17	3	2	6	11	100	3	12	90	2	250	0	0	0	0	0
5:45 PM	0	8	17	0	3	8	6	103	0	8	96	2	251	0	0	0	0	0
6:00 PM	4	2	19	3	3	8	7	84	0	10	80	12	232	0	0	0	0	0
6:15 PM	8	6	19	2	1	0	6	95	3	10	72	5	227	0	0	0	0	0
6:30 PM	6	6	14	2	1	2	2	88	2	8	72	1	204	0	0	0	0	0
6:45 PM	5	5	13	2	2	3	0	70	2	4	61	6	173	0	0	0	0	0
VOLUMES	62	56	214	20	26	53	58	1,100	23	113	1,046	43	2,814	0	0	0	0	0
APPROACH %	19%	17%	64%	20%	26%	54%	5%	93%	2%	9%	87%	4%						
APP/DEPART	332	/	157	99	/	162	1,181	/	1,334	1,202	/	1,161	0					
BEGIN PEAK HR	4:45 PM																	
VOLUMES	21	18	81	7	7	19	29	380	12	45	376	13	1,008					
APPROACH %	18%	15%	68%	21%	21%	58%	7%	90%	3%	10%	87%	3%						
PEAK HR FACTOR	0.769			0.750			0.923			0.897			0.933					
APP/DEPART	120	/	60	33	/	64	421	/	468	434	/	416	0					



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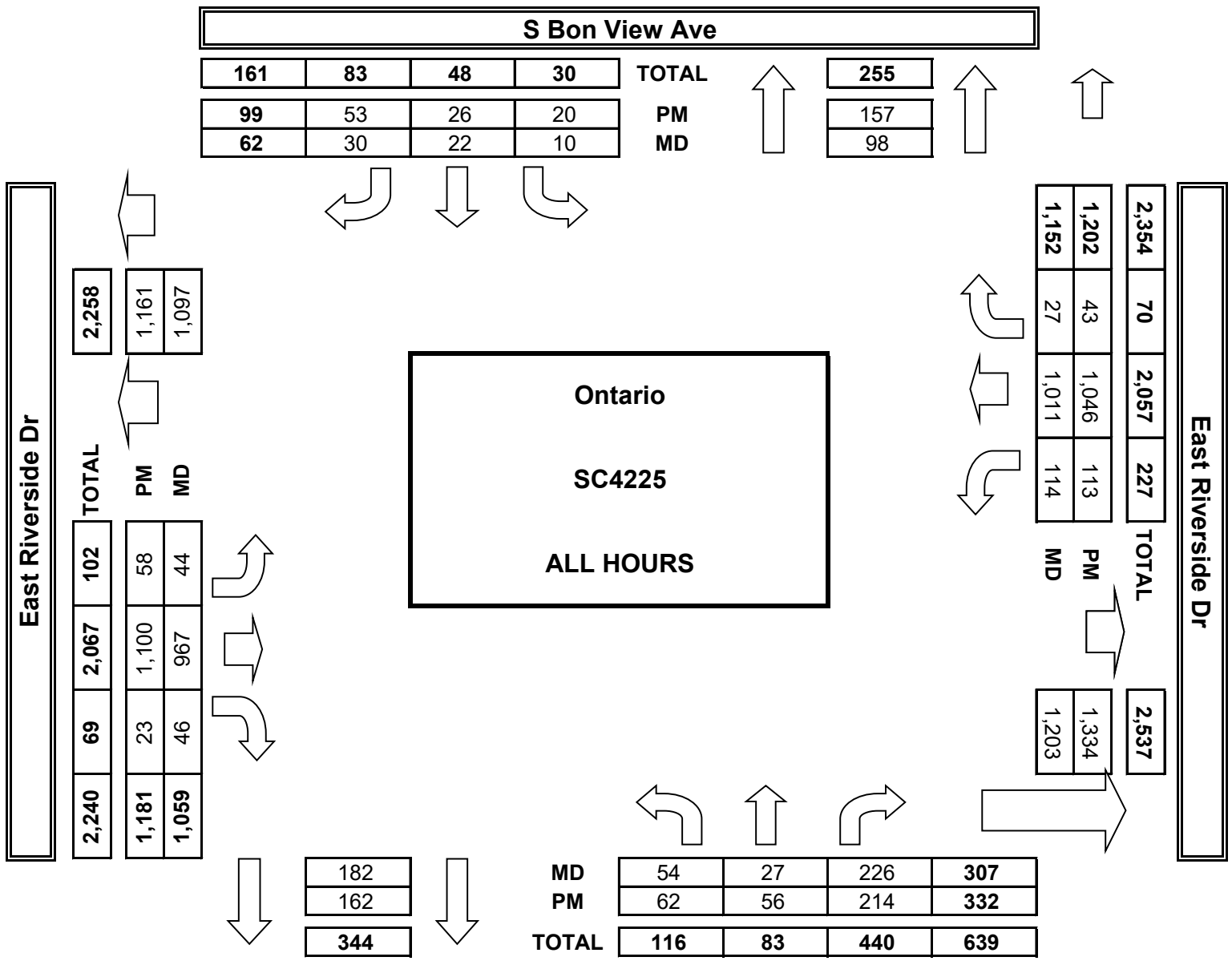
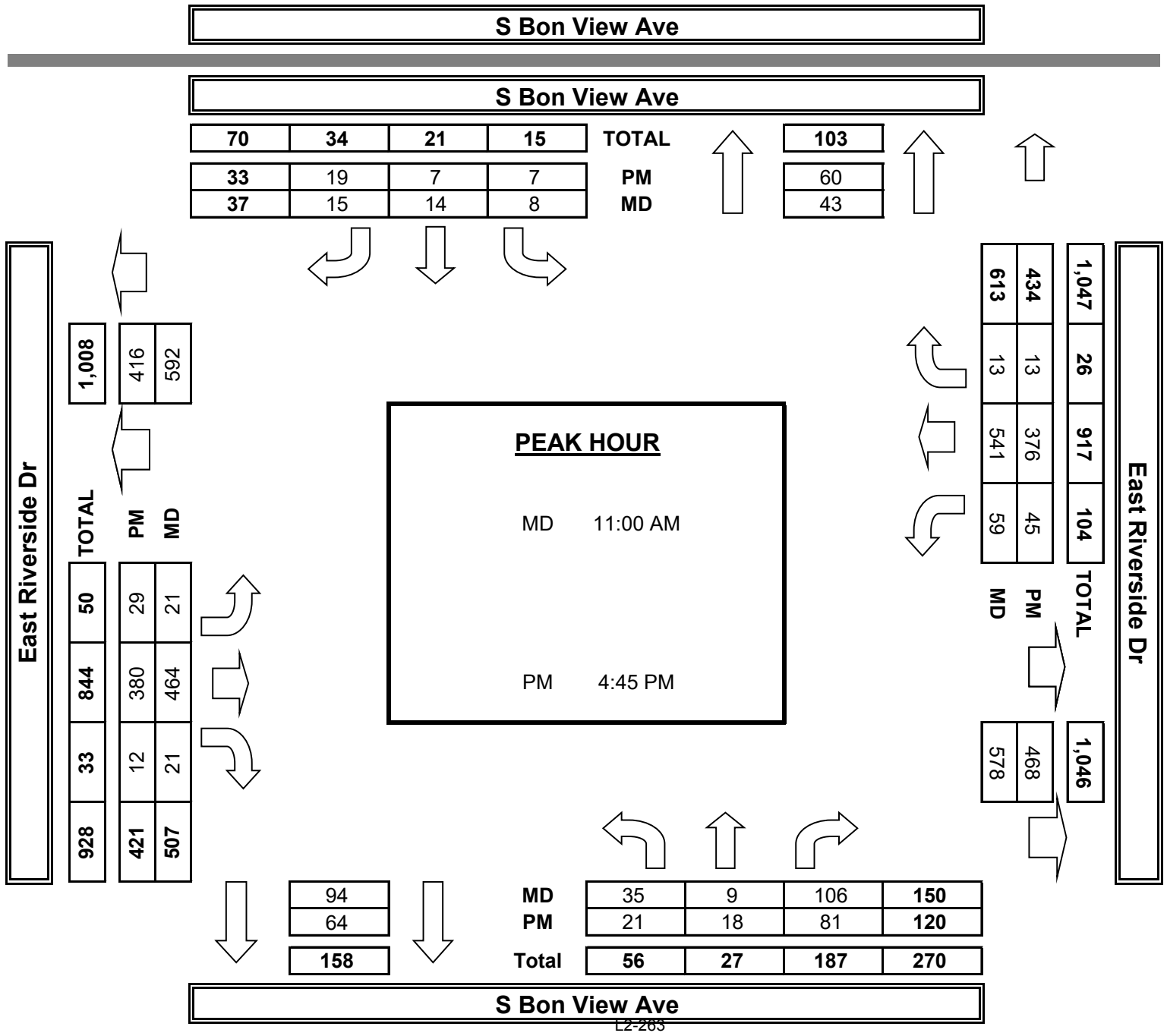
TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Sat, Oct 7, 23	LOCATION:	Ontario	PROJECT #: SC4225
	NORTH & SOUTH:	S Grove Ave	LOCATION #: 11
	EAST & WEST:	East Riverside Dr	CONTROL: SIGNAL

NOTES:

18:48 S-leg closed.

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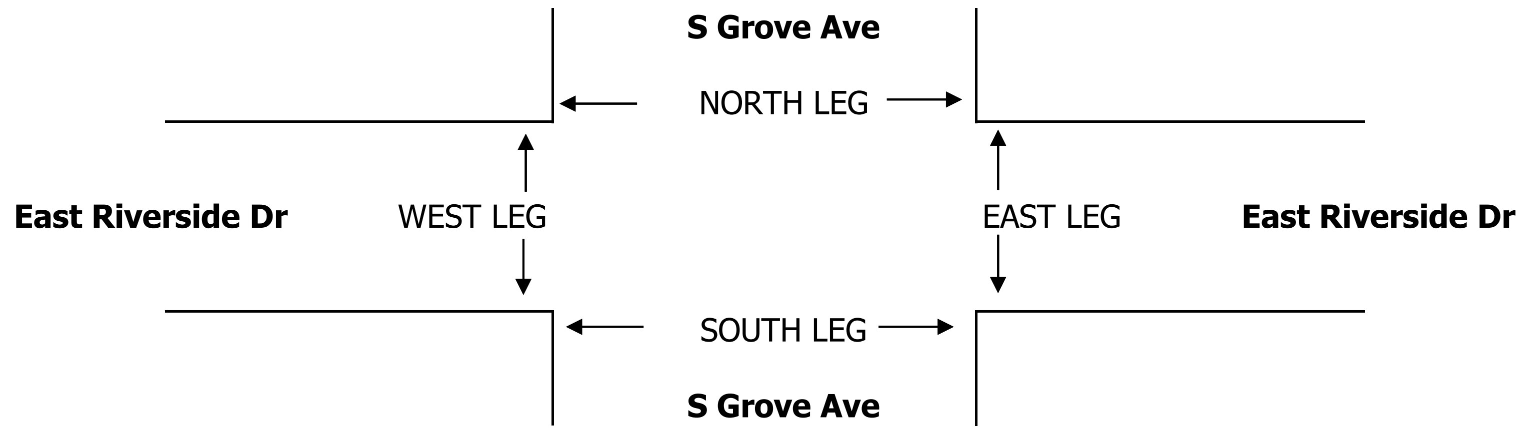
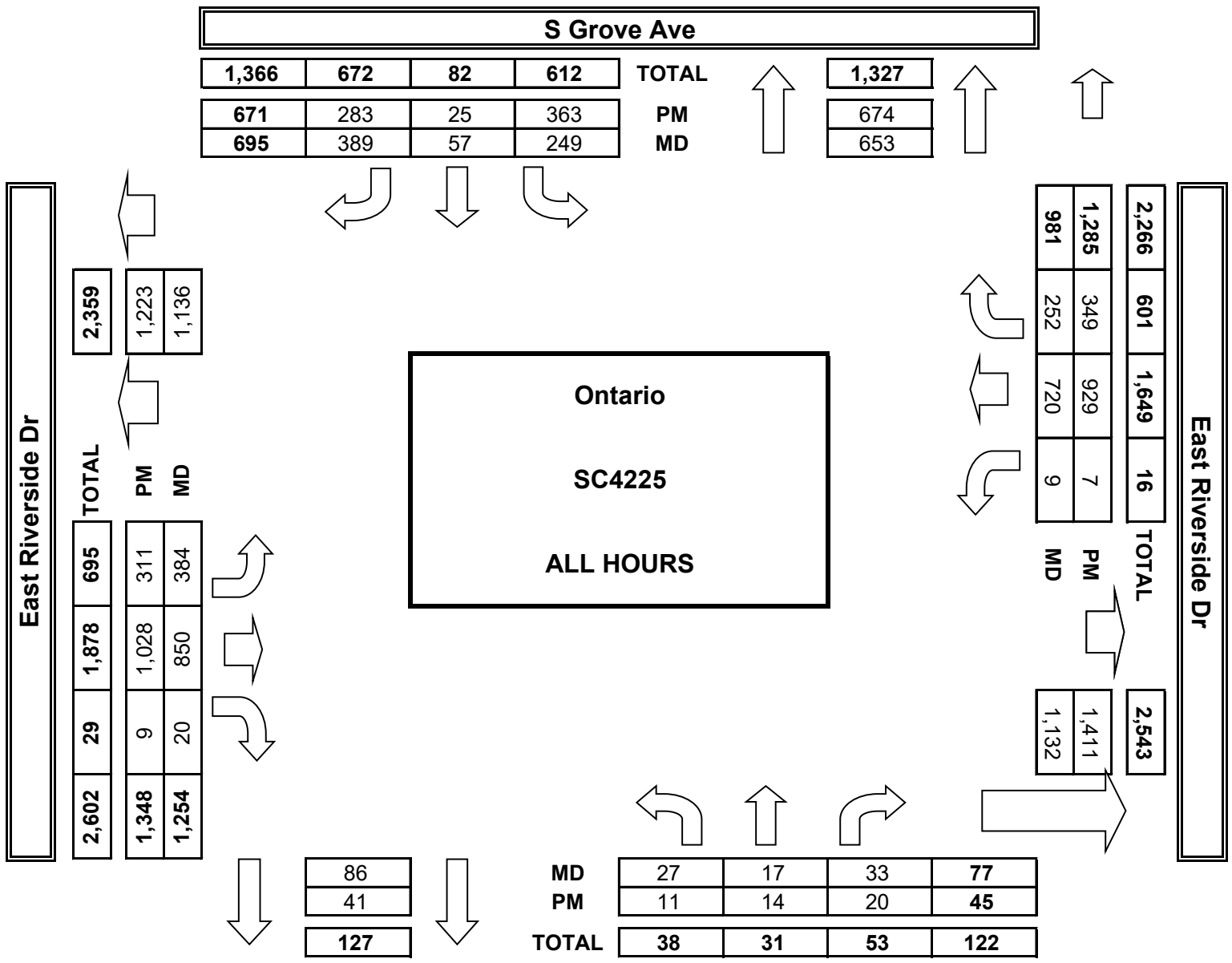
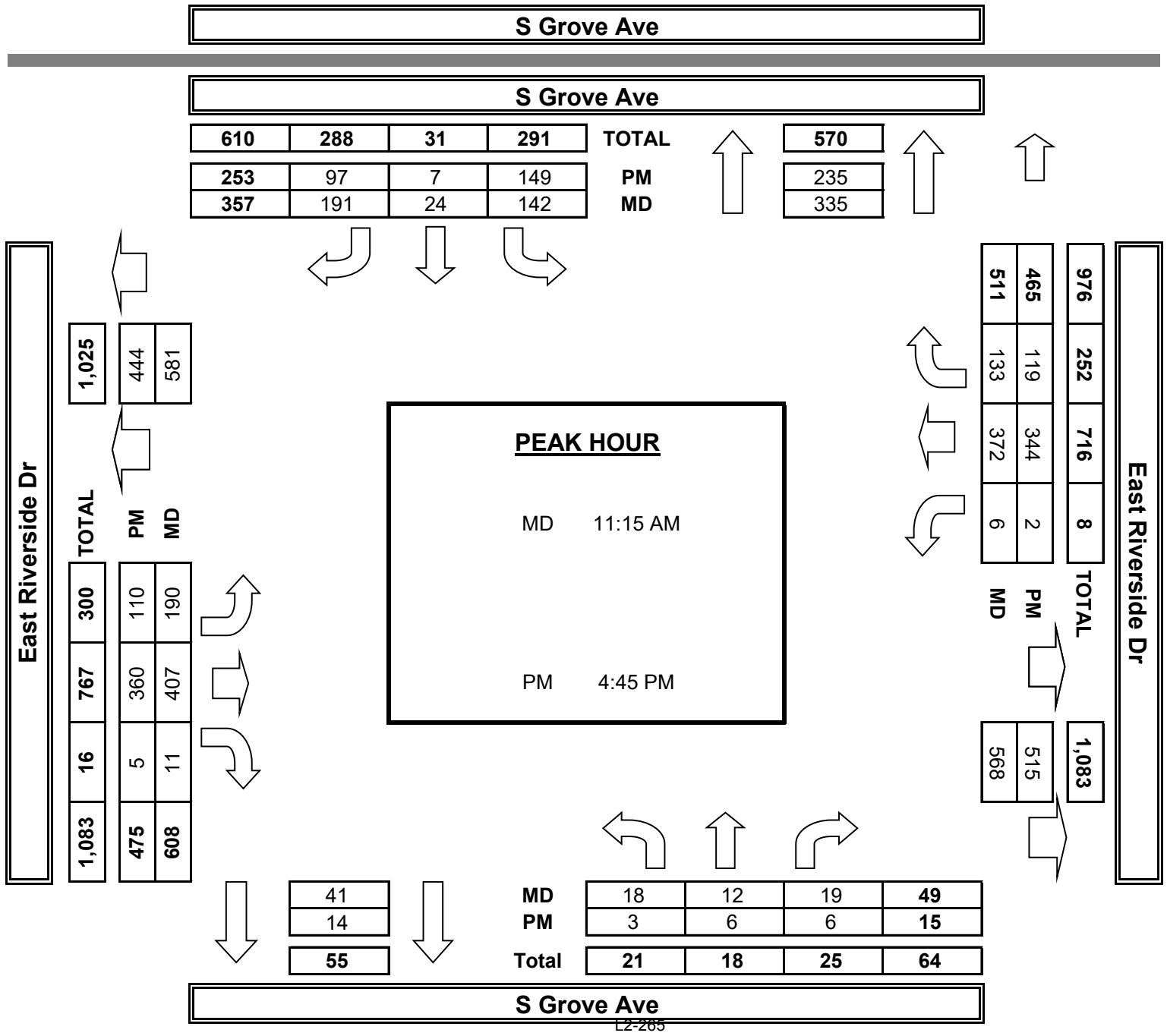
		NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND				U-TURNS				
		S Grove Ave			S Grove Ave			East Riverside Dr			East Riverside Dr								
		NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB	TTL
	LANES:	1	1	0	1	1	1	1	1	0	1	2	0		0	0	0	0	
MD	11:00 AM	0	0	0	24	16	60	54	102	0	0	80	22	358	0	0	0	0	0
	11:15 AM	7	1	4	29	2	54	42	118	4	1	111	30	403	0	0	0	0	0
	11:30 AM	5	2	7	34	13	48	55	91	3	2	97	39	396	0	0	0	0	0
	11:45 AM	0	5	7	33	7	51	52	91	2	1	78	28	355	0	0	0	0	0
	12:00 PM	6	4	1	46	2	38	41	107	2	2	86	36	371	0	0	0	0	0
	12:15 PM	2	0	3	27	2	47	47	130	1	0	101	32	392	0	0	0	0	0
	12:30 PM	0	3	5	31	5	44	46	106	5	2	69	32	348	0	0	0	0	0
	12:45 PM	7	2	6	25	10	47	47	105	3	1	98	33	384	0	0	0	0	0
	VOLUMES	27	17	33	249	57	389	384	850	20	9	720	252	3,007	0	0	0	0	0
	APPROACH %	35%	22%	43%	36%	8%	56%	31%	68%	2%	1%	73%	26%						
	APP/DEPART	77	/	653	695	/	86	1,254	/	1,132	981	/	1,136	0					
	BEGIN PEAK HR		11:15 AM																
	VOLUMES	18	12	19	142	24	191	190	407	11	6	372	133	1,525					
	APPROACH %	37%	24%	39%	40%	7%	54%	31%	67%	2%	1%	73%	26%						
	PEAK HR FACTOR		0.875			0.939			0.927			0.900		0.946					
	APP/DEPART	49	/	335	357	/	41	608	/	568	511	/	581	0					
PM	4:00 PM	0	0	2	28	1	34	26	97	1	0	78	31	298	0	0	0	0	0
	4:15 PM	1	2	4	27	5	23	23	87	1	1	79	32	285	0	0	0	0	0
	4:30 PM	2	0	2	35	3	27	24	73	0	2	89	41	298	0	0	0	0	0
	4:45 PM	2	2	1	30	1	19	33	98	2	1	95	21	305	0	0	0	0	0
	5:00 PM	0	2	1	40	3	27	24	88	2	0	60	34	281	0	0	0	0	0
	5:15 PM	0	0	4	48	1	20	20	83	1	1	103	27	308	0	0	0	0	0
	5:30 PM	1	2	0	31	2	31	33	91	0	0	86	37	314	0	0	0	0	0
	5:45 PM	2	1	3	34	5	21	27	91	0	0	80	37	301	0	0	0	0	0
	6:00 PM	0	1	0	20	0	23	22	92	0	1	72	25	256	0	0	0	0	0
	6:15 PM	2	3	0	30	2	21	22	75	2	1	64	28	250	0	0	0	0	0
	6:30 PM	1	0	1	24	2	22	36	81	0	0	65	18	250	0	0	0	0	0
	6:45 PM	0	1	2	16	0	15	21	72	0	0	58	18	203	0	0	0	0	0
	VOLUMES	11	14	20	363	25	283	311	1,028	9	7	929	349	3,349	0	0	0	0	0
	APPROACH %	24%	31%	44%	54%	4%	42%	23%	76%	1%	1%	72%	27%						
	APP/DEPART	45	/	674	671	/	41	1,348	/	1,411	1,285	/	1,223	0					
	BEGIN PEAK HR		4:45 PM																
	VOLUMES	3	6	6	149	7	97	110	360	5	2	344	119	1,208					
	APPROACH %	20%	40%	40%	59%	3%	38%	23%	76%	1%	0%	74%	26%						
	PEAK HR FACTOR		0.750			0.904			0.893			0.887		0.962					
	APP/DEPART	15	/	235	253	/	14	475	/	515	465	/	444	0					



AimTD LLC

TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

T1018

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Sat, Oct 7, 23

LOCATION: Ontario
NORTH & SOUTH: S Walker Ave
EAST & WEST: East Riverside Dr

PROJECT #: SC4225
LOCATION #: 12
CONTROL: STOP N/S

NOTES:

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OTHER

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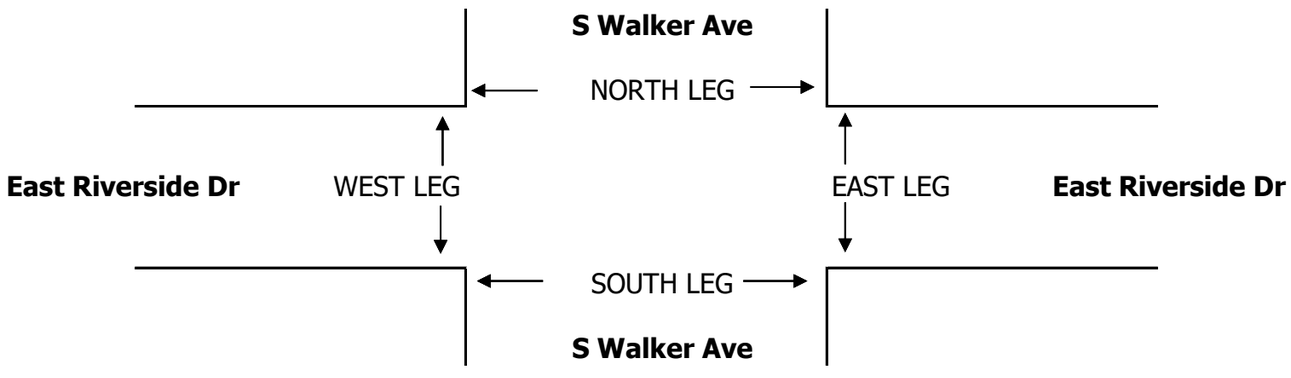
	NORTHBOUND S Walker Ave			SOUTHBOUND S Walker Ave			EASTBOUND East Riverside Dr			WESTBOUND East Riverside Dr			
LANES:	NL 0	NT 1	NR 0	SL 0	ST 1	SR 0	EL 1	ET 1	ER 0	WL 1	WT 2	WR 0	TOTAL

U-TURNS

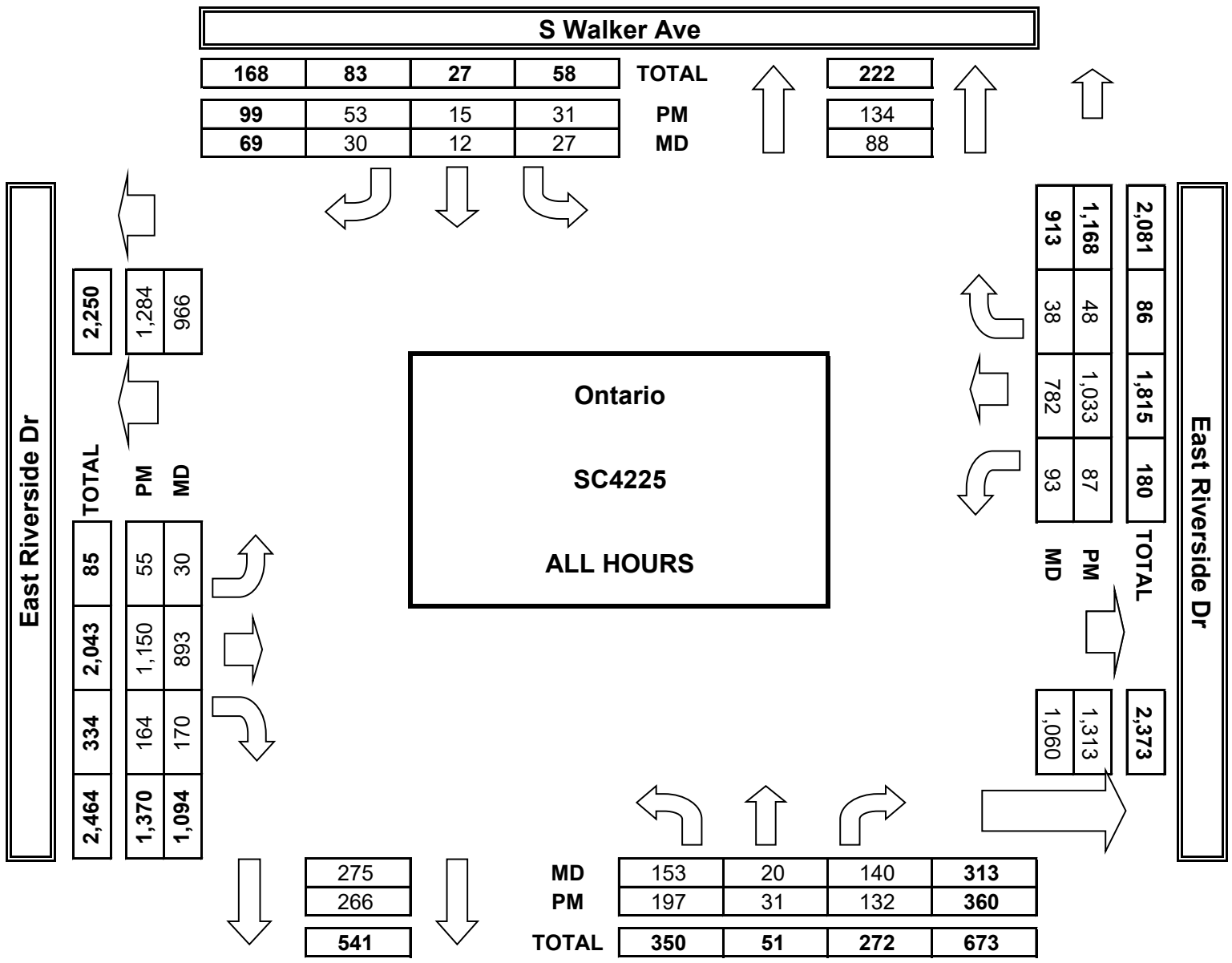
NB	SB	EB	WB	TTL
0	0	0	0	

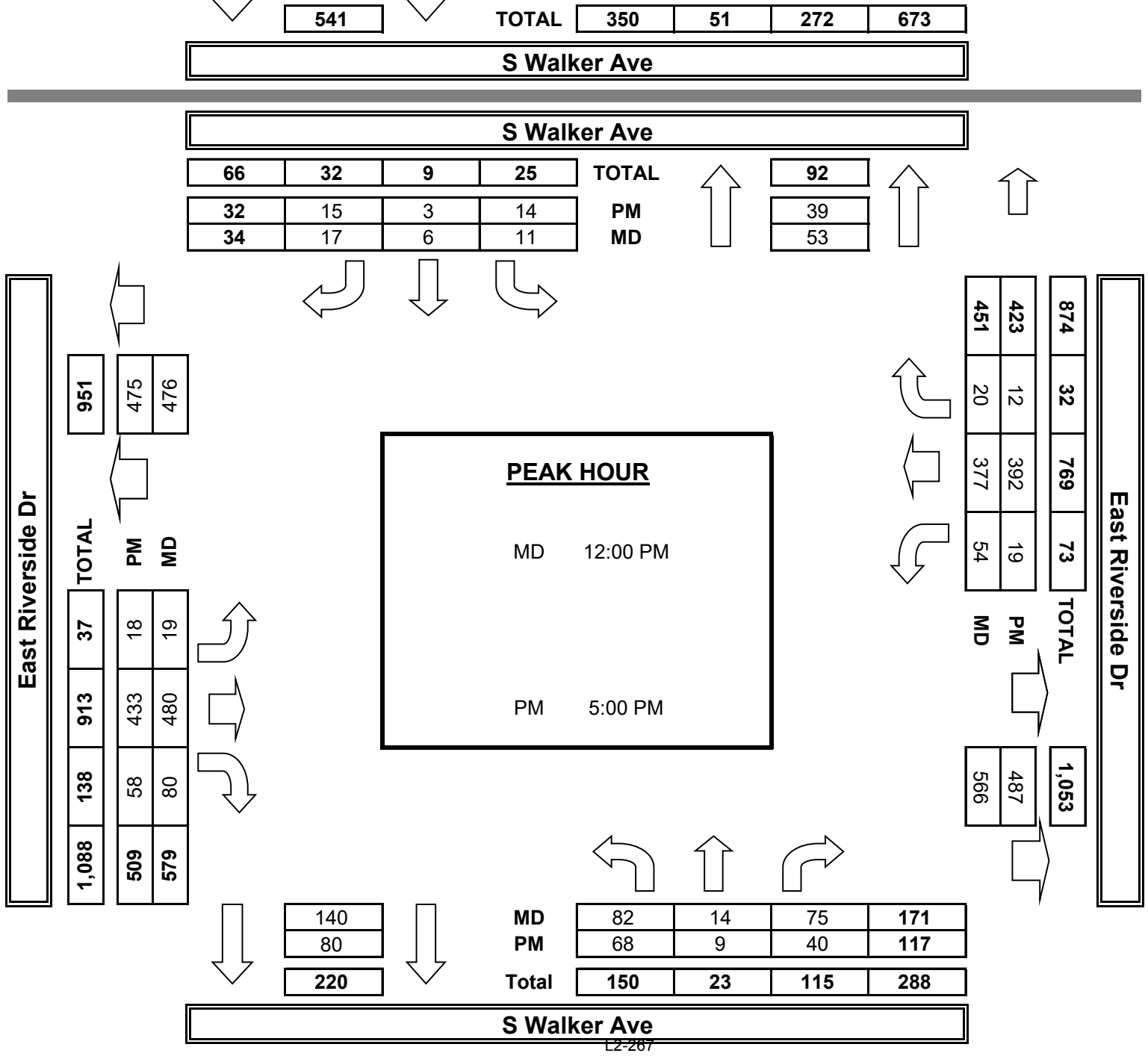
		NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND				U-TURNS				
		NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB	TTL
MD	11:00 AM	17	3	15	7	2	5	0	105	20	12	118	4	308	0	0	0	0	0
	11:15 AM	23	0	19	1	1	3	4	102	26	7	88	3	277	0	0	1	0	1
	11:30 AM	20	1	18	5	2	3	4	106	24	11	111	3	308	0	0	0	0	0
	11:45 AM	11	2	13	3	1	2	3	100	20	9	88	8	260	0	0	0	0	0
	12:00 PM	24	5	20	2	1	3	4	127	22	14	91	4	317	0	0	0	0	0
	12:15 PM	15	2	16	3	1	7	7	127	23	15	98	5	319	0	0	0	0	0
	12:30 PM	19	2	15	5	3	3	3	131	13	12	99	6	311	0	0	0	0	0
	12:45 PM	24	5	24	1	1	4	5	95	22	13	89	5	288	0	0	0	0	0
	VOLUMES	153	20	140	27	12	30	30	893	170	93	782	38	2,389	0	0	1	0	1
	APPROACH %	49%	6%	45%	39%	17%	43%	3%	82%	16%	10%	86%	4%						
	APP/DEPART	313	/	88	69	/	275	1,094	/	1,060	913	/	966	0					
	BEGIN PEAK HR		12:00 PM																
	VOLUMES	82	14	75	11	6	17	19	480	80	54	377	20	1,235					
	APPROACH %	48%	8%	44%	32%	18%	50%	3%	83%	14%	12%	84%	4%						
	PEAK HR FACTOR		0.807			0.773			0.922			0.956		0.968					
	APP/DEPART	171	/	53	34	/	140	579	/	566	451	/	476	0					
PM	4:00 PM	15	3	8	1	1	6	4	99	17	11	97	5	267	0	0	0	0	0
	4:15 PM	24	3	15	1	1	2	3	98	17	11	93	7	275	0	0	0	0	0
	4:30 PM	22	3	13	4	3	5	1	92	16	7	95	4	265	0	0	0	0	0
	4:45 PM	18	1	8	3	2	5	6	94	19	9	78	3	246	0	0	0	0	0
	5:00 PM	18	4	10	1	2	1	4	112	14	5	85	3	259	0	0	0	0	0
	5:15 PM	14	2	8	2	0	4	3	110	11	3	119	4	280	0	0	0	0	0
	5:30 PM	16	2	12	5	1	3	6	101	18	7	96	3	270	0	0	0	0	0
	5:45 PM	20	1	10	6	0	7	5	110	15	4	92	2	272	0	0	0	0	0
	6:00 PM	16	2	10	2	1	8	4	87	8	8	79	4	229	0	0	1	0	1
	6:15 PM	14	2	10	1	1	2	6	99	11	11	71	1	229	0	0	0	0	0
	6:30 PM	10	5	16	4	2	4	7	76	10	4	75	6	219	0	0	0	0	0
	6:45 PM	10	3	12	1	1	6	6	72	8	7	53	6	185	0	0	0	0	0
	VOLUMES	197	31	132	31	15	53	55	1,150	164	87	1,033	48	2,997	0	0	1	0	1
	APPROACH %	55%	9%	37%	31%	15%	54%	4%	84%	12%	7%	88%	4%						
	APP/DEPART	360	/	134	99	/	266	1,370	/	1,313	1,168	/	1,284	0					
	BEGIN PEAK HR		5:00 PM																
	VOLUMES	68	9	40	14	3	15	18	433	58	19	392	12	1,081					
	APPROACH %	58%	8%	34%	44%	9%	47%	4%	85%	11%	4%	93%	3%						
	PEAK HR FACTOR		0.914			0.615			0.979			0.839		0.965					
	APP/DEPART	117	/	39	32	/	80	509	/	487	423	/	475	0					



AimTD LLC

TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

T1018

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:				
Sat, Oct 7, 23	LOCATION:	Ontario	PROJECT #:	SC4225
	NORTH & SOUTH:	S Baker Ave	LOCATION #:	13
	EAST & WEST:	East Riverside Dr	CONTROL:	STOP N/S

NOTES:

AM / PM / MD / OTHER / OTHER

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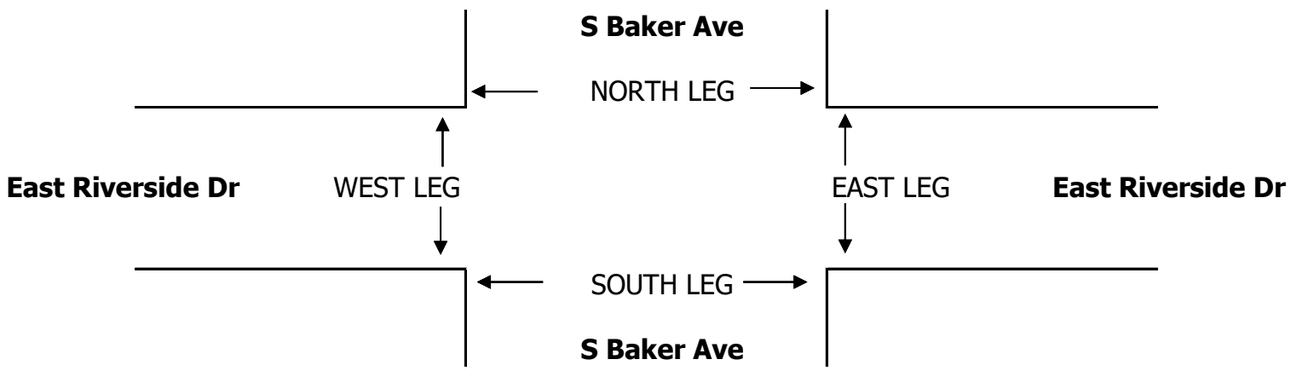
	NORTHBOUND S Baker Ave			SOUTHBOUND S Baker Ave			EASTBOUND East Riverside Dr			WESTBOUND East Riverside Dr			
LANES:	NL 0	NT 1	NR 0	SL 0	ST 1	SR 0	EL 1	ET 1	ER 0	WL 1	WT 2	WR 0	TOTAL

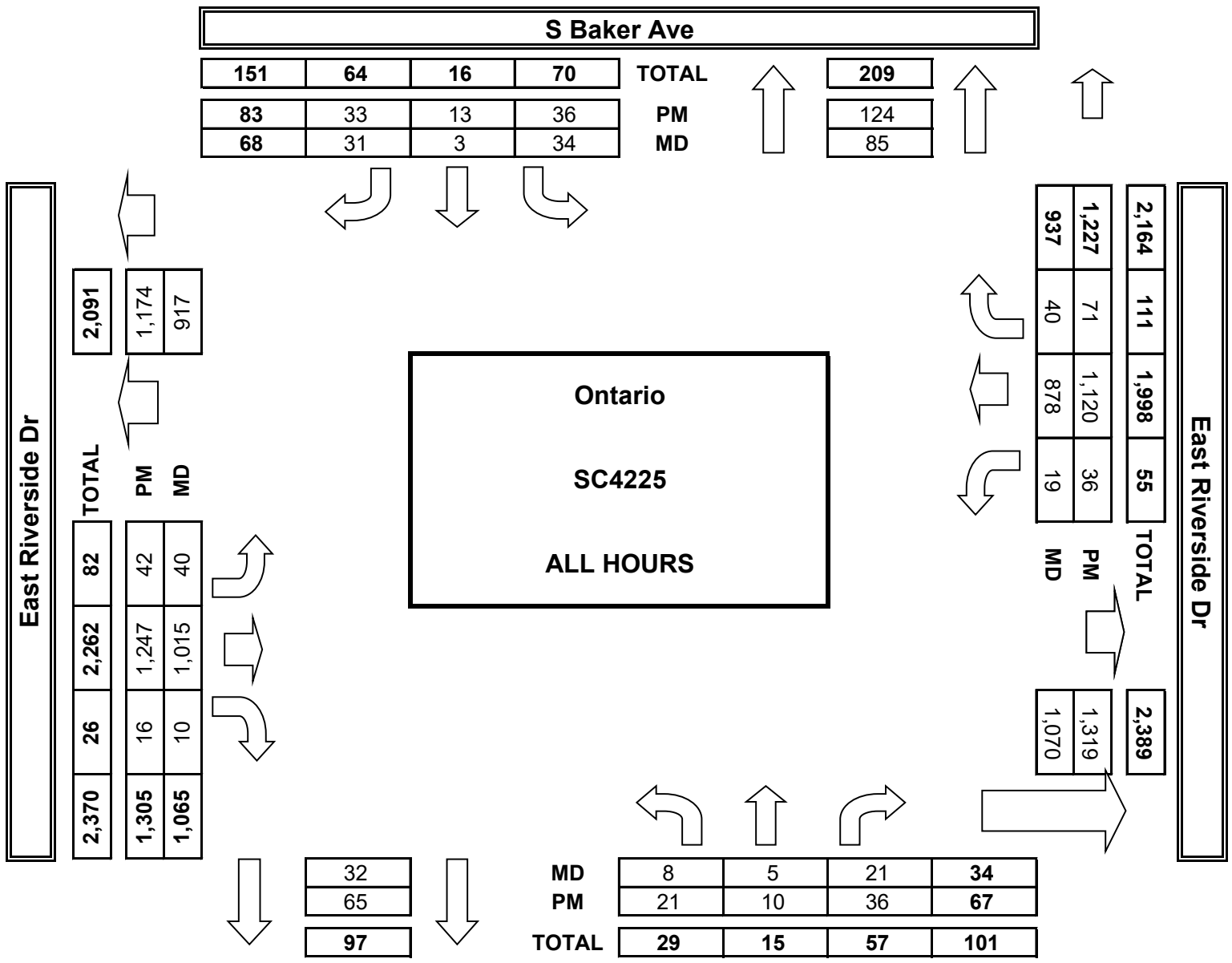
U-TURNS				
NB 0	SB 0	EB 0	WB 0	TTL

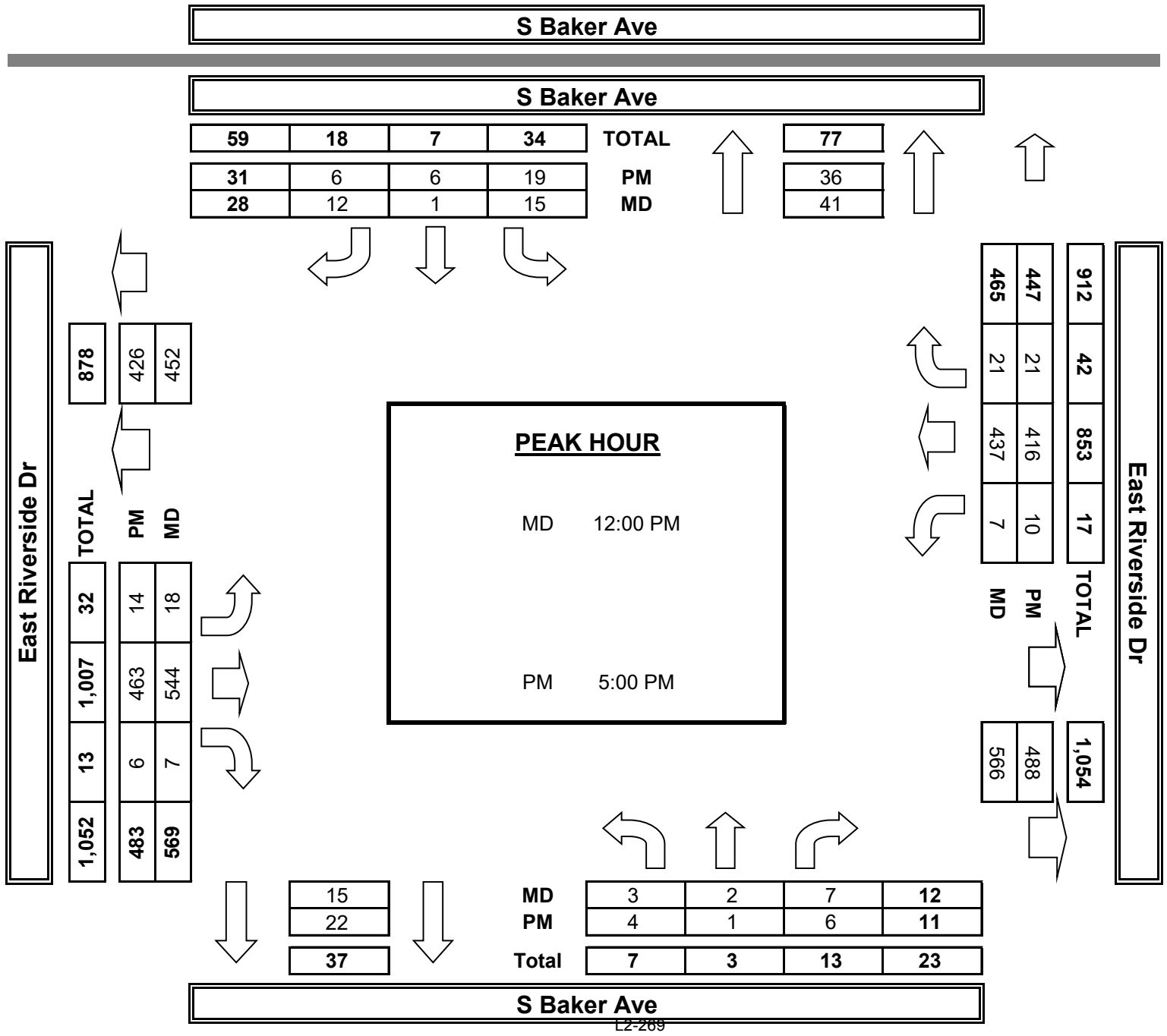
		NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND				U-TURNS				
		NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB	TTL
MD	11:00 AM	2	1	4	8	0	7	3	126	1	2	126	7	287	0	0	0	0	0
	11:15 AM	0	0	6	5	1	3	7	113	1	5	101	5	247	0	0	0	0	0
	11:30 AM	3	2	2	3	0	7	8	123	0	3	115	3	269	0	0	0	0	0
	11:45 AM	0	0	2	3	1	2	4	109	1	2	99	4	227	0	0	0	0	0
	12:00 PM	1	0	3	2	0	1	2	142	4	2	109	5	271	0	0	0	0	0
	12:15 PM	0	1	2	3	0	3	4	142	3	1	122	4	285	0	0	0	0	0
	12:30 PM	1	1	2	4	0	3	7	143	0	3	105	3	272	0	0	0	0	0
	12:45 PM	1	0	0	6	1	5	5	117	0	1	101	9	246	0	0	0	0	0
	VOLUMES	8	5	21	34	3	31	40	1,015	10	19	878	40	2,104	0	0	0	0	0
	APPROACH %	24%	15%	62%	50%	4%	46%	4%	95%	1%	2%	94%	4%						
	APP/DEPART	34	/	85	68	/	32	1,065	/	1,070	937	/	917	0					
	BEGIN PEAK HR		12:00 PM																
	VOLUMES	3	2	7	15	1	12	18	544	7	7	437	21	1,074					
	APPROACH %	25%	17%	58%	54%	4%	43%	3%	96%	1%	2%	94%	5%						
	PEAK HR FACTOR		0.750			0.583			0.948			0.915		0.942					
	APP/DEPART	12	/	41	28	/	15	569	/	566	465	/	452	0					
PM	4:00 PM	1	1	2	3	1	2	0	105	2	5	111	5	238	0	0	0	0	0
	4:15 PM	4	0	6	1	1	3	6	110	0	3	101	5	240	0	0	0	0	0
	4:30 PM	4	3	6	2	2	7	2	101	1	4	93	8	233	0	0	0	0	0
	4:45 PM	2	1	6	1	0	5	3	102	2	4	89	10	225	0	0	0	0	0
	5:00 PM	2	0	3	2	2	1	5	117	0	4	92	6	234	0	0	0	0	0
	5:15 PM	2	0	0	6	1	3	4	115	1	2	121	5	260	0	0	0	0	0
	5:30 PM	0	1	1	6	2	1	3	113	2	2	107	6	244	0	0	0	0	0
	5:45 PM	0	0	2	5	1	1	2	118	3	2	96	4	234	0	0	0	0	0
	6:00 PM	2	1	4	3	0	2	5	95	1	3	90	3	209	0	0	0	0	0
	6:15 PM	0	0	3	4	2	3	1	101	2	0	84	5	205	0	1	0	0	1
	6:30 PM	1	2	2	0	1	3	8	85	2	4	74	10	192	0	0	0	0	0
	6:45 PM	3	1	1	3	0	2	3	85	0	3	62	4	167	0	0	0	0	0
	VOLUMES	21	10	36	36	13	33	42	1,247	16	36	1,120	71	2,682	0	1	0	0	1
	APPROACH %	31%	15%	54%	43%	16%	40%	3%	96%	1%	3%	91%	6%						
	APP/DEPART	67	/	124	83	/	65	1,305	/	1,319	1,227	/	1,174	0					
	BEGIN PEAK HR		5:00 PM																
	VOLUMES	4	1	6	19	6	6	14	463	6	10	416	21	972					
	APPROACH %	36%	9%	55%	61%	19%	19%	3%	96%	1%	2%	93%	5%						
	PEAK HR FACTOR		0.550			0.775			0.982			0.873		0.935					
	APP/DEPART	11	/	36	31	/	22	483	/	488	447	/	426	0					



AimTD LLC

TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

T10182

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Sat, Oct 7, 23

LOCATION: Ontario
NORTH & SOUTH: S Vineyard Ave
EAST & WEST: East Riverside Dr

PROJECT #: SC4225
LOCATION #: 14
CONTROL: SIGNAL

NOTES:

AM
PM
MD
OTHER
OTHER

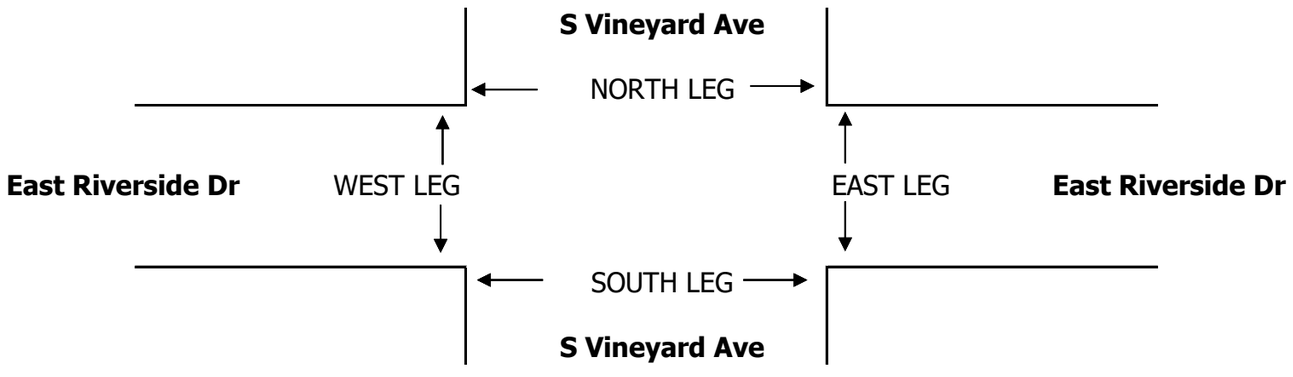
N ▲ | ◄ W | E ► | S ▼

	NORTHBOUND S Vineyard Ave			SOUTHBOUND S Vineyard Ave			EASTBOUND East Riverside Dr			WESTBOUND East Riverside Dr			
LANES:	NL X	NT X	NR X	SL 1	ST X	SR 1	EL 1	ET 1	ER X	WL X	WT 2	WR 0	TOTAL

U-TURNS

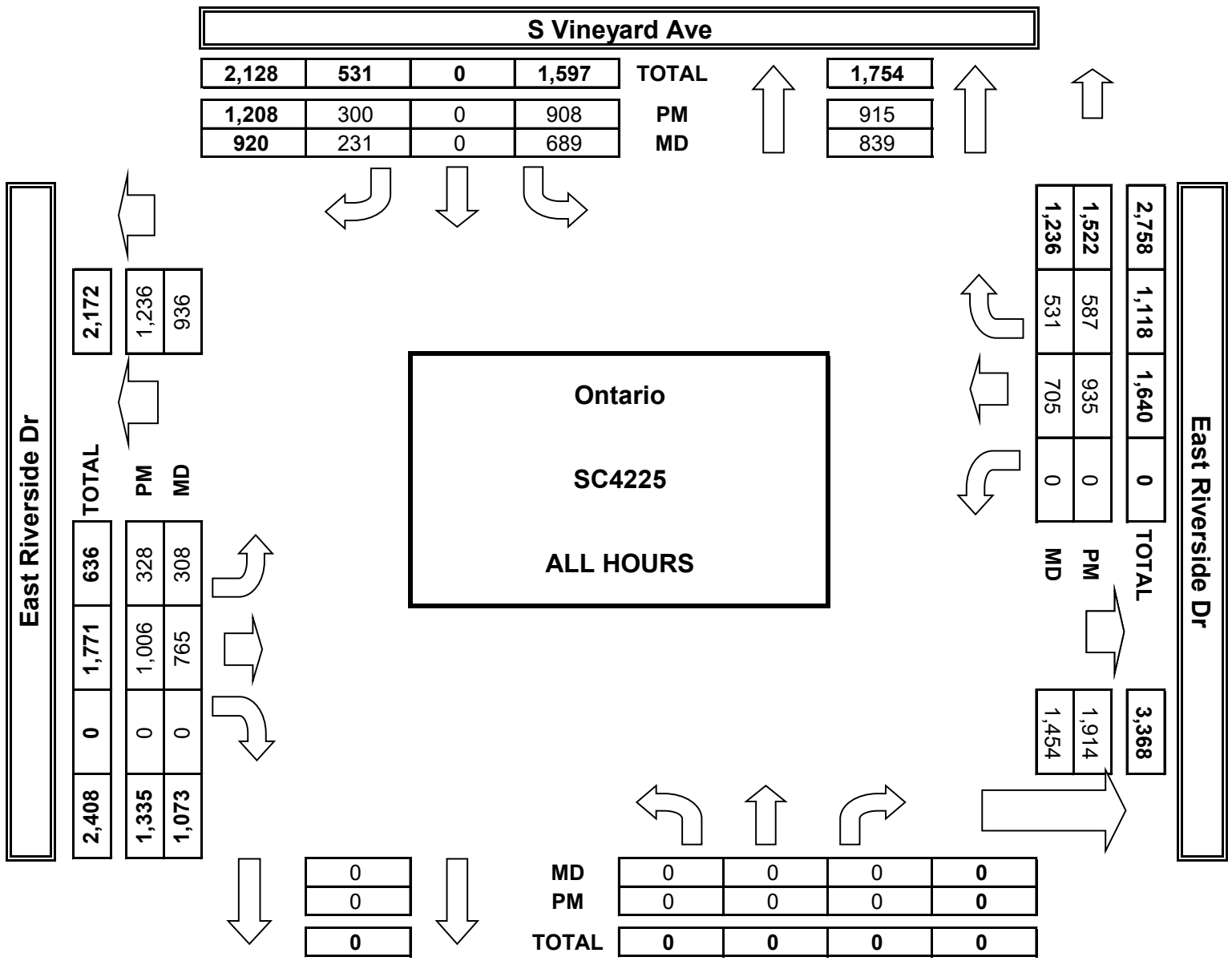
NB	SB	EB	WB	TTL
0	0	0	0	

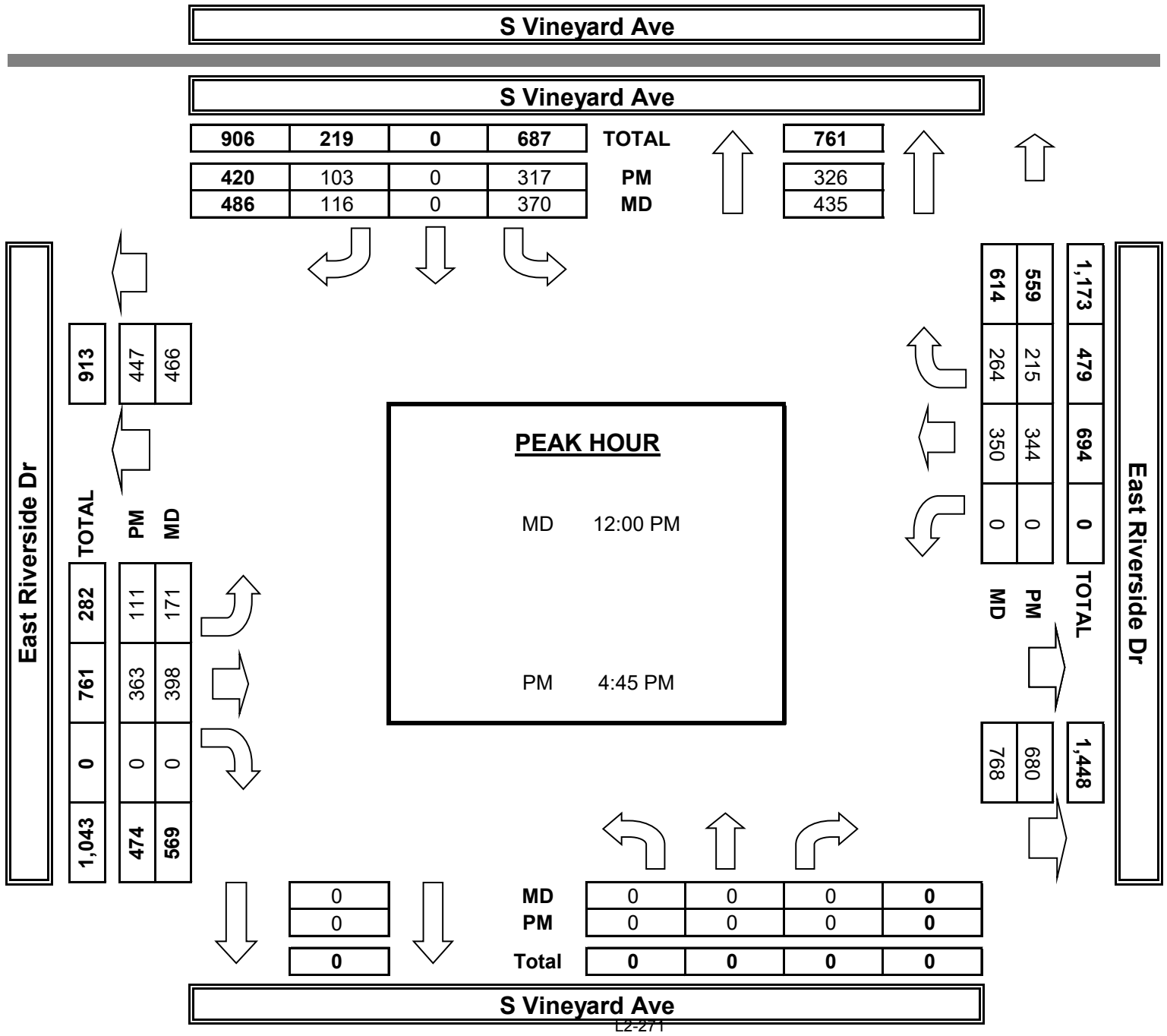
		NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND				U-TURNS				
		NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB	TTL
MD	11:00 AM	0	0	0	77	0	30	35	94	0	0	95	57	388	0	0	0	0	0
	11:15 AM	0	0	0	76	0	33	39	97	0	0	77	82	404	0	0	0	0	0
	11:30 AM	0	0	0	70	0	26	30	94	0	0	103	52	375	0	0	0	0	0
	11:45 AM	0	0	0	96	0	26	33	82	0	0	80	76	393	0	0	0	0	0
	12:00 PM	0	0	0	96	0	34	47	103	0	0	79	77	436	0	0	0	0	0
	12:15 PM	0	0	0	94	0	36	40	106	0	0	90	48	414	0	0	0	0	0
	12:30 PM	0	0	0	87	0	26	41	106	0	0	96	69	425	0	0	0	0	0
	12:45 PM	0	0	0	93	0	20	43	83	0	0	85	70	394	0	0	0	0	0
	VOLUMES	0	0	0	689	0	231	308	765	0	0	705	531	3,229	0	0	0	0	0
	APPROACH %	0%	0%	0%	75%	0%	25%	29%	71%	0%	0%	57%	43%						
	APP/DEPART	0	/	839	920	/	0	1,073	/	1,454	1,236	/	936	0					
	BEGIN PEAK HR		12:00 PM																
	VOLUMES	0	0	0	370	0	116	171	398	0	0	350	264	1,669					
	APPROACH %	0%	0%	0%	76%	0%	24%	30%	70%	0%	0%	57%	43%						
	PEAK HR FACTOR		0.000			0.935			0.948			0.930		0.957					
	APP/DEPART	0	/	435	486	/	0	569	/	768	614	/	466	0					
PM	4:00 PM	0	0	0	86	0	31	20	96	0	0	92	64	389	0	0	0	0	0
	4:15 PM	0	0	0	78	0	23	37	85	0	0	80	52	355	0	0	0	0	0
	4:30 PM	0	0	0	75	0	23	36	70	0	0	90	59	353	0	0	0	0	0
	4:45 PM	0	0	0	78	0	18	36	79	0	0	78	53	342	0	0	0	0	0
	5:00 PM	0	0	0	79	0	15	18	104	0	0	94	55	365	0	0	0	0	0
	5:15 PM	0	0	0	82	0	33	23	97	0	0	93	48	376	0	0	0	0	0
	5:30 PM	0	0	0	78	0	37	34	83	0	0	79	59	370	0	0	0	0	0
	5:45 PM	0	0	0	67	0	25	33	91	0	0	74	42	332	0	0	0	0	0
	6:00 PM	0	0	0	93	0	22	25	83	0	0	75	36	334	0	0	0	0	0
	6:15 PM	0	0	0	54	0	27	21	89	0	0	63	45	299	0	0	0	0	0
	6:30 PM	0	0	0	75	0	27	24	62	0	0	67	37	292	0	0	0	0	0
	6:45 PM	0	0	0	63	0	19	21	67	0	0	50	37	257	0	0	1	0	1
	VOLUMES	0	0	0	908	0	300	328	1,006	0	0	935	587	4,065	0	0	1	0	1
	APPROACH %	0%	0%	0%	75%	0%	25%	25%	75%	0%	0%	61%	39%						
	APP/DEPART	0	/	915	1,208	/	0	1,335	/	1,914	1,522	/	1,236	0					
	BEGIN PEAK HR		4:45 PM																
	VOLUMES	0	0	0	317	0	103	111	363	0	0	344	215	1,453					
	APPROACH %	0%	0%	0%	75%	0%	25%	23%	77%	0%	0%	62%	38%						
	PEAK HR FACTOR		0.000			0.913			0.971			0.938		0.966					
	APP/DEPART	0	/	326	420	/	0	474	/	680	559	/	447	0					



AimTD LLC

TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Sat, Oct 7, 23

LOCATION: Ontario
NORTH & SOUTH: Western DWY
EAST & WEST: East Riverside Dr

PROJECT #: SC4225
LOCATION #: 15
CONTROL: NO CONTROL

NOTES:

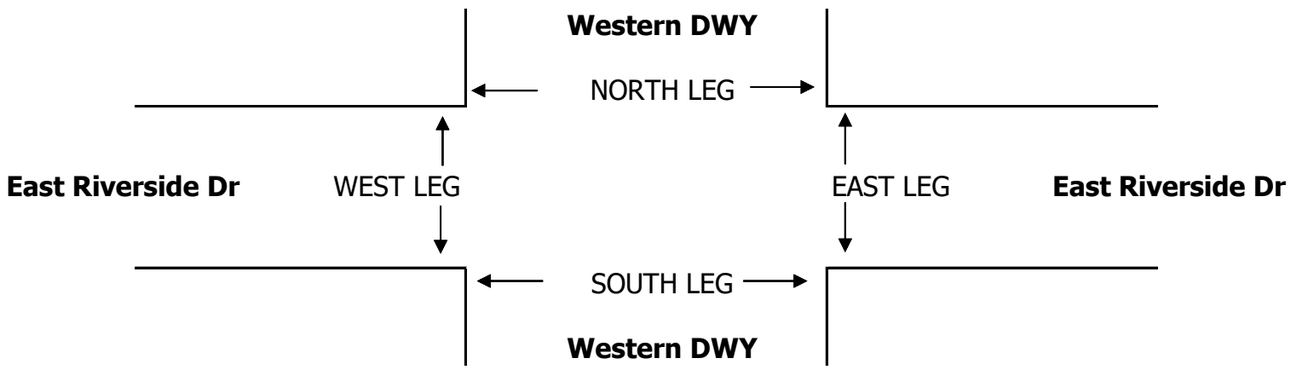
AM / PM / MD / OTHER / OTHER

N ▲ | ◄ W | E ► | S ▼

	NORTHBOUND Western DWY			SOUTHBOUND Western DWY			EASTBOUND East Riverside Dr			WESTBOUND East Riverside Dr			
LANES:	NL X	NT X	NR X	SL 0	ST X	SR 0	EL 0	ET 1	ER X	WL X	WT 2	WR 0	TOTAL

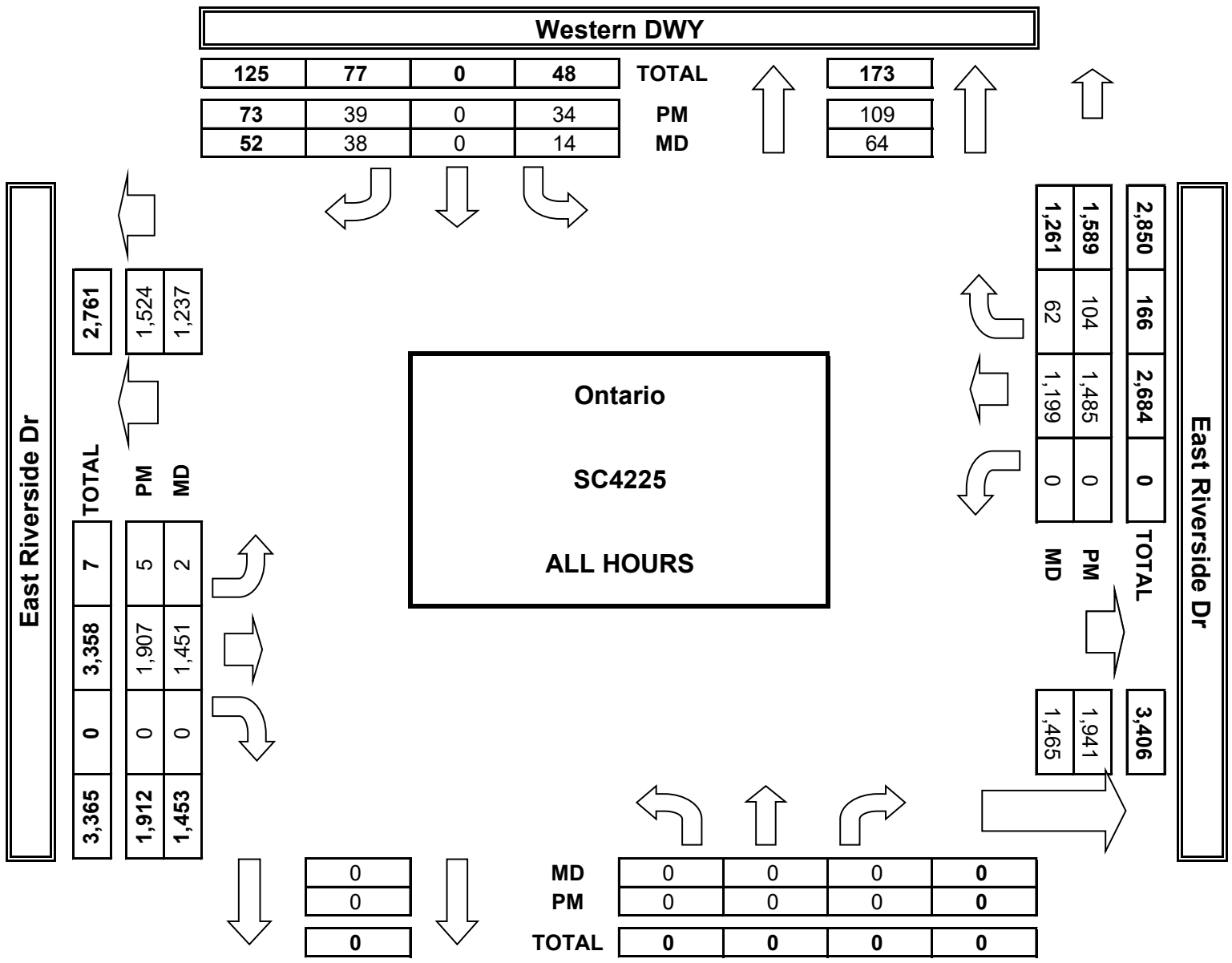
U-TURNS				
NB 0	SB 0	EB 0	WB 0	TTL

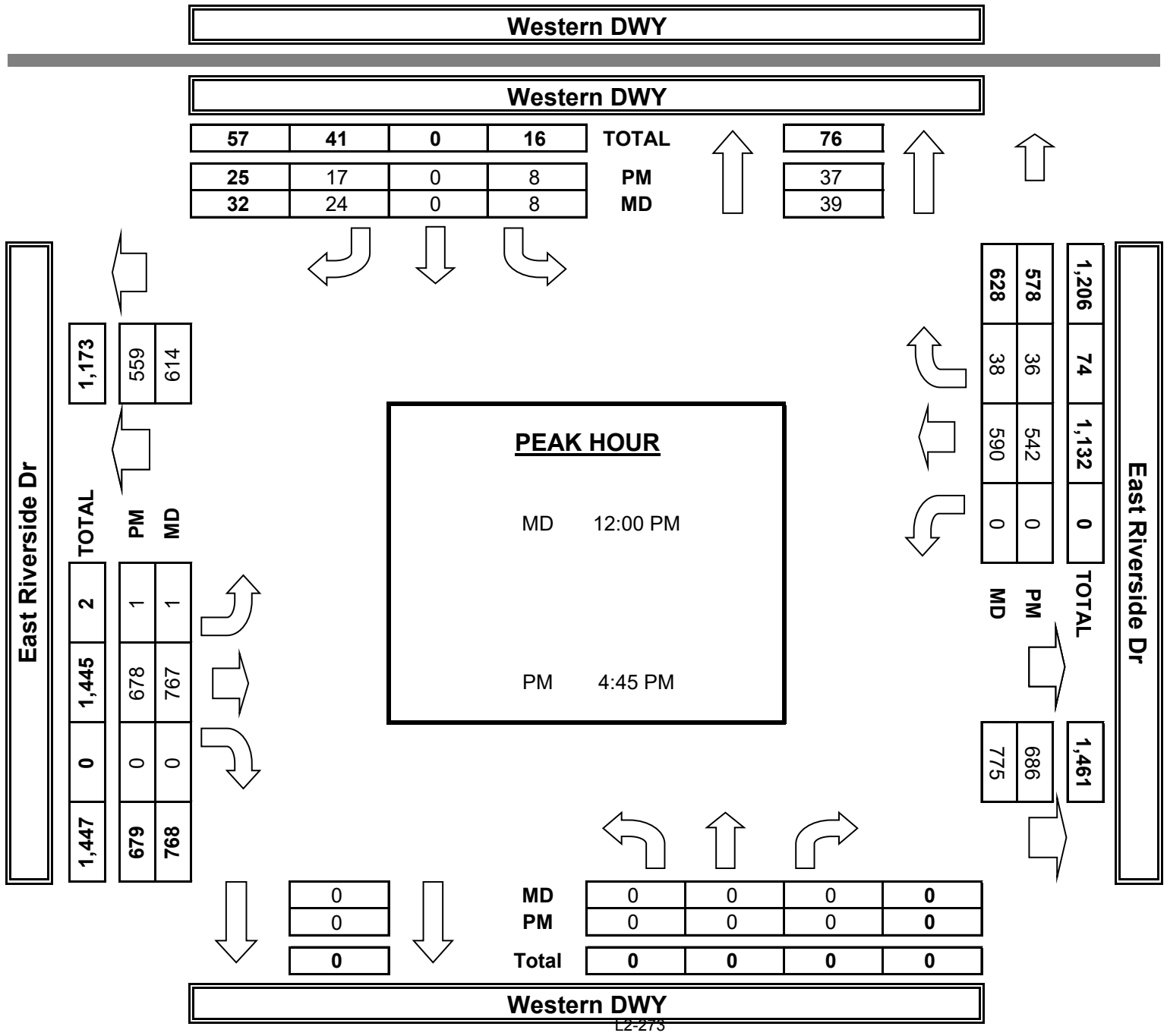
		NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND				U-TURNS				
		NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB	TTL
MD	11:00 AM	0	0	0	1	0	2	0	171	0	0	150	3	327	0	0	0	0	0
	11:15 AM	0	0	0	3	0	2	0	173	0	0	157	7	342	0	0	0	0	0
	11:30 AM	0	0	0	1	0	4	0	164	0	0	152	10	331	0	0	0	0	0
	11:45 AM	0	0	0	1	0	6	1	176	0	0	150	4	338	0	0	0	0	0
	12:00 PM	0	0	0	0	0	6	0	199	0	0	150	4	359	0	0	0	0	0
	12:15 PM	0	0	0	1	0	5	0	200	0	0	133	8	347	0	0	0	0	0
	12:30 PM	0	0	0	5	0	6	1	192	0	0	159	14	377	0	0	0	0	0
	12:45 PM	0	0	0	2	0	7	0	176	0	0	148	12	345	0	0	0	0	0
	VOLUMES	0	0	0	14	0	38	2	1,451	0	0	1,199	62	2,766	0	0	0	0	0
	APPROACH %	0%	0%	0%	27%	0%	73%	0%	100%	0%	0%	95%	5%						
	APP/DEPART	0	/	64	52	/	0	1,453	/	1,465	1,261	/	1,237	0					
	BEGIN PEAK HR		12:00 PM																
	VOLUMES	0	0	0	8	0	24	1	767	0	0	590	38	1,428					
	APPROACH %	0%	0%	0%	25%	0%	75%	0%	100%	0%	0%	94%	6%						
	PEAK HR FACTOR		0.000			0.727			0.960			0.908		0.947					
	APP/DEPART	0	/	39	32	/	0	768	/	775	628	/	614	0					
PM	4:00 PM	0	0	0	5	0	5	0	182	0	0	151	9	352	0	0	0	0	0
	4:15 PM	0	0	0	1	0	3	0	162	0	0	130	7	303	0	0	0	0	0
	4:30 PM	0	0	0	1	0	5	1	144	0	0	144	4	299	0	0	0	0	0
	4:45 PM	0	0	0	1	0	4	0	157	0	0	127	9	298	0	0	0	0	0
	5:00 PM	0	0	0	1	0	7	1	182	0	0	142	10	343	0	0	0	0	0
	5:15 PM	0	0	0	4	0	1	0	179	0	0	140	9	333	0	0	0	0	0
	5:30 PM	0	0	0	2	0	5	0	160	0	0	133	8	308	0	0	0	0	0
	5:45 PM	0	0	0	3	0	2	1	157	0	0	115	12	290	0	0	0	0	0
	6:00 PM	0	0	0	7	0	2	1	175	0	0	109	10	304	0	0	0	0	0
	6:15 PM	0	0	0	1	0	3	0	143	0	0	105	16	268	0	0	0	0	0
	6:30 PM	0	0	0	6	0	2	1	136	0	0	102	9	256	0	0	0	0	0
	6:45 PM	0	0	0	2	0	0	0	130	0	0	87	1	220	0	0	0	0	0
	VOLUMES	0	0	0	34	0	39	5	1,907	0	0	1,485	104	3,574	0	0	0	0	0
	APPROACH %	0%	0%	0%	47%	0%	53%	0%	100%	0%	0%	93%	7%						
	APP/DEPART	0	/	109	73	/	0	1,912	/	1,941	1,589	/	1,524	0					
	BEGIN PEAK HR		4:45 PM																
	VOLUMES	0	0	0	8	0	17	1	678	0	0	542	36	1,282					
	APPROACH %	0%	0%	0%	32%	0%	68%	0%	100%	0%	0%	94%	6%						
	PEAK HR FACTOR		0.000			0.781			0.928			0.951		0.934					
	APP/DEPART	0	/	37	25	/	0	679	/	686	578	/	559	0					



AimTD LLC

TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:
Sat, Oct 7, 23

LOCATION: Ontario
NORTH & SOUTH: Eastern DWY
EAST & WEST: East Riverside Dr

PROJECT #: SC4225
LOCATION #: 16
CONTROL: NO CONTROL

NOTES:

AM
PM
MD
OTHER
OTHER

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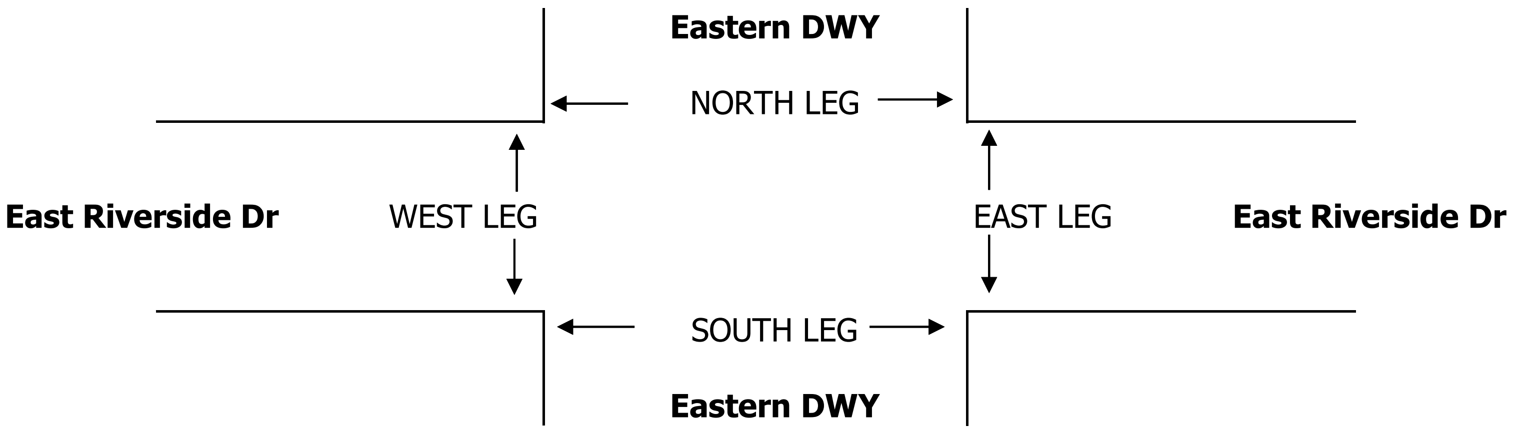
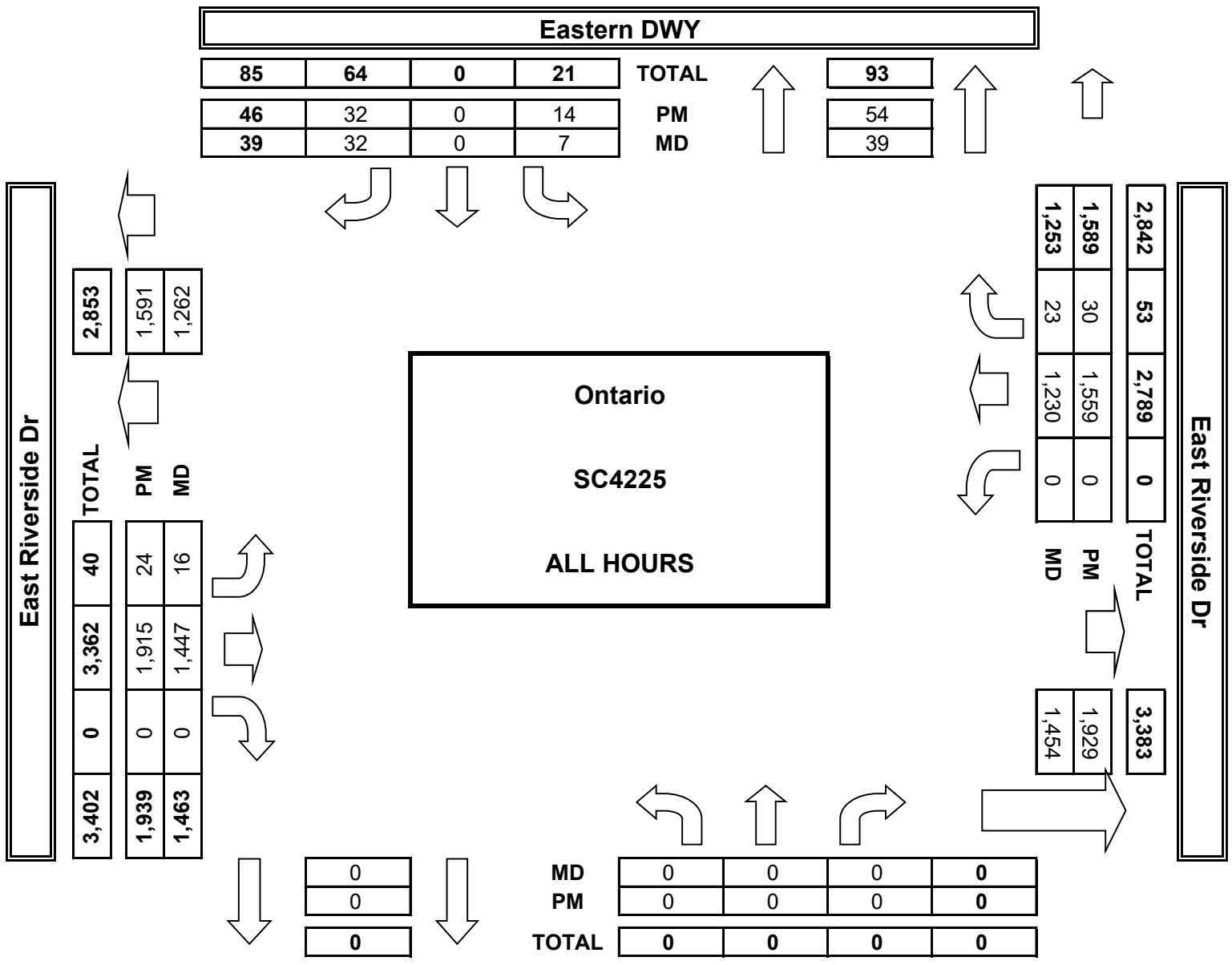
N
◄ W
E ►
S
▼

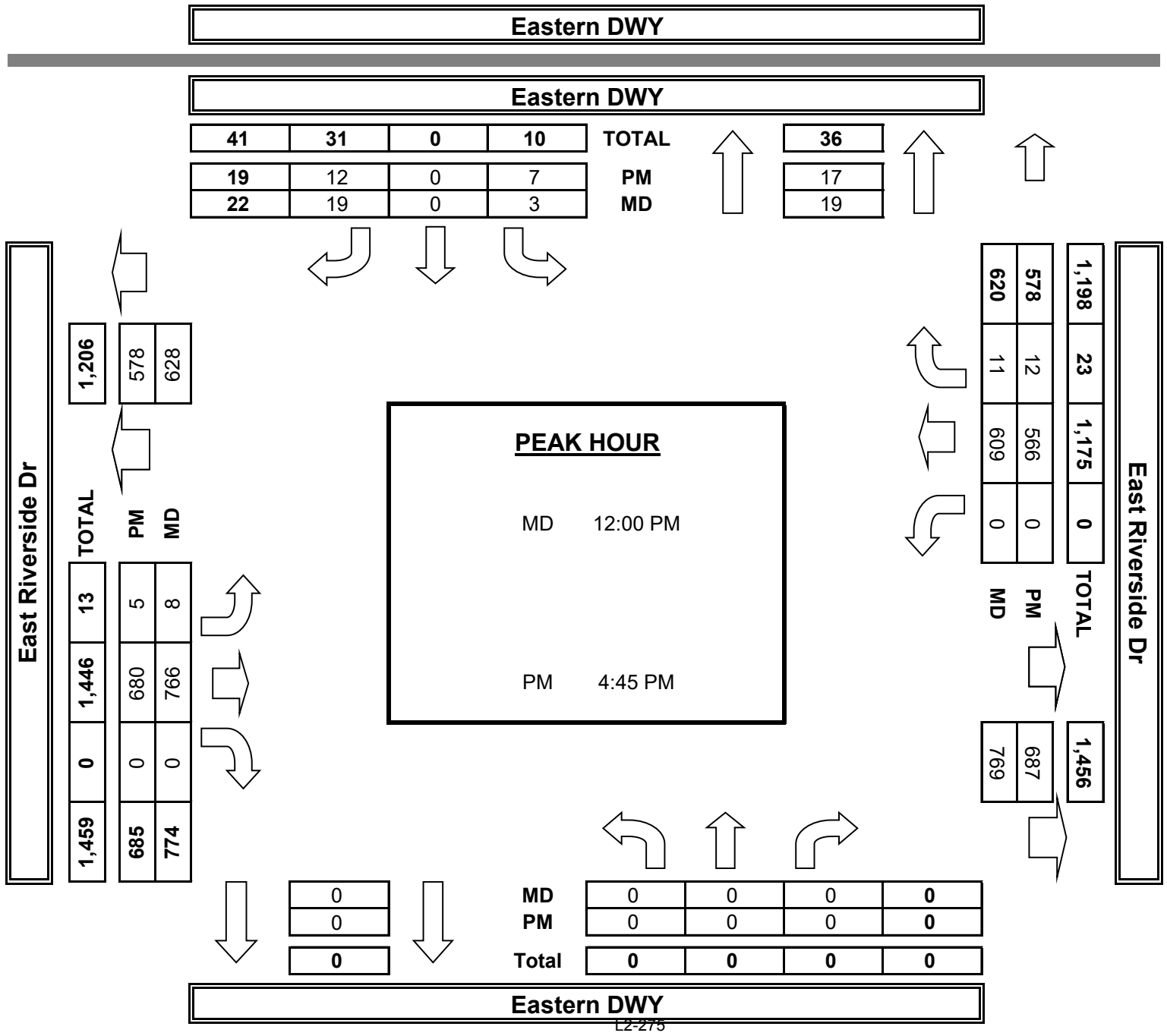
		NORTHBOUND Eastern DWY			SOUTHBOUND Eastern DWY			EASTBOUND East Riverside Dr			WESTBOUND East Riverside Dr				U-TURNS				
		NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB	TTL
	LANES:	X	X	X	0	X	0	0	1	X	X	2	0		0	0	0	0	
MD	11:00 AM	0	0	0	1	0	1	4	168	0	0	152	3	329	0	0	0	0	0
	11:15 AM	0	0	0	2	0	4	2	173	0	0	160	6	347	0	0	0	0	0
	11:30 AM	0	0	0	0	0	0	0	165	0	0	162	0	327	0	0	0	0	0
	11:45 AM	0	0	0	1	0	8	2	175	0	0	147	3	336	0	0	0	0	0
	12:00 PM	0	0	0	0	0	4	2	196	0	0	150	1	353	0	0	0	0	0
	12:15 PM	0	0	0	1	0	5	3	198	0	0	136	2	345	0	0	0	0	0
	12:30 PM	0	0	0	1	0	4	2	195	0	0	169	5	376	0	0	0	0	0
	12:45 PM	0	0	0	1	0	6	1	177	0	0	154	3	342	0	0	0	0	0
	VOLUMES	0	0	0	7	0	32	16	1,447	0	0	1,230	23	2,755	0	0	0	0	0
	APPROACH %	0%	0%	0%	18%	0%	82%	1%	99%	0%	0%	98%	2%						
	APP/DEPART	0	/	39	39	/	0	1,463	/	1,454	1,253	/	1,262	0					
	BEGIN PEAK HR		12:00 PM																
	VOLUMES	0	0	0	3	0	19	8	766	0	0	609	11	1,416					
	APPROACH %	0%	0%	0%	14%	0%	86%	1%	99%	0%	0%	98%	2%						
	PEAK HR FACTOR		0.000			0.786			0.963			0.891		0.941					
	APP/DEPART	0	/	19	22	/	0	774	/	769	620	/	628	0					
PM	4:00 PM	0	0	0	2	0	5	3	184	0	0	155	1	350	0	0	0	0	0
	4:15 PM	0	0	0	1	0	4	2	161	0	0	134	1	303	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	1	144	0	0	148	4	297	0	0	0	0	0
	4:45 PM	0	0	0	2	0	5	4	154	0	0	131	3	299	0	0	0	0	0
	5:00 PM	0	0	0	2	0	6	1	181	0	0	146	5	341	0	0	0	0	0
	5:15 PM	0	0	0	1	0	0	0	183	0	0	149	3	336	0	0	0	0	0
	5:30 PM	0	0	0	2	0	1	0	162	0	0	140	1	306	0	0	0	0	0
	5:45 PM	0	0	0	1	0	2	5	155	0	0	125	3	291	0	0	0	0	0
	6:00 PM	0	0	0	1	0	3	1	180	0	0	116	1	302	0	0	0	0	0
	6:15 PM	0	0	0	1	0	4	3	141	0	0	117	1	267	0	0	0	0	0
	6:30 PM	0	0	0	1	0	2	3	139	0	0	110	5	260	0	0	0	0	0
	6:45 PM	0	0	0	0	0	0	1	131	0	0	88	2	222	0	0	0	0	0
	VOLUMES	0	0	0	14	0	32	24	1,915	0	0	1,559	30	3,574	0	0	0	0	0
	APPROACH %	0%	0%	0%	30%	0%	70%	1%	99%	0%	0%	98%	2%						
	APP/DEPART	0	/	54	46	/	0	1,939	/	1,929	1,589	/	1,591	0					
	BEGIN PEAK HR		4:45 PM																
	VOLUMES	0	0	0	7	0	12	5	680	0	0	566	12	1,282					
	APPROACH %	0%	0%	0%	37%	0%	63%	1%	99%	0%	0%	98%	2%						
	PEAK HR FACTOR		0.000			0.594			0.936			0.951		0.940					
	APP/DEPART	0	/	17	19	/	0	685	/	687	578	/	578	0					



AimTD LLC

TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Sat, Oct 7, 23

LOCATION: Ontario
NORTH & SOUTH: Western DWY
EAST & WEST: East Riverside Dr

PROJECT #: SC4225
LOCATION #: 17
CONTROL: NO CONTROL

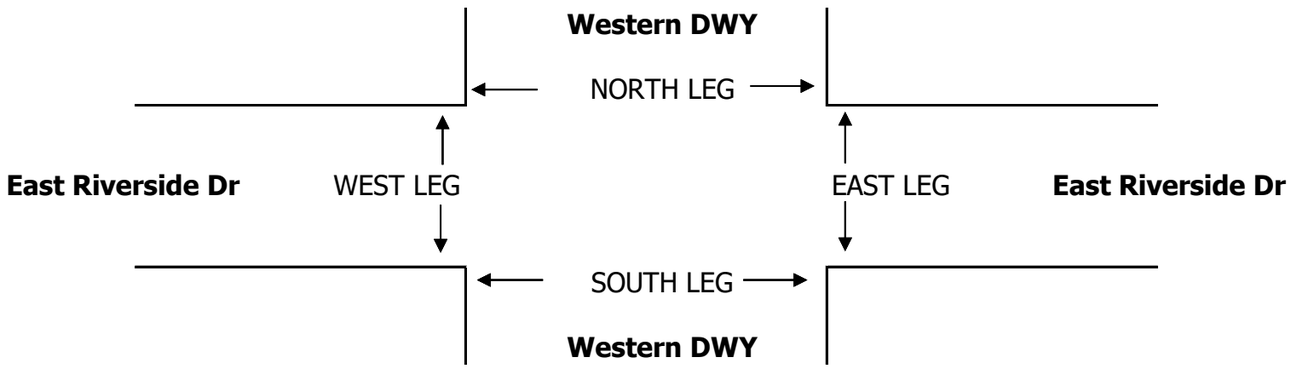
NOTES:

AM / PM / MD / OTHER / OTHER

N ▲ | ◄ W | E ► | S ▼

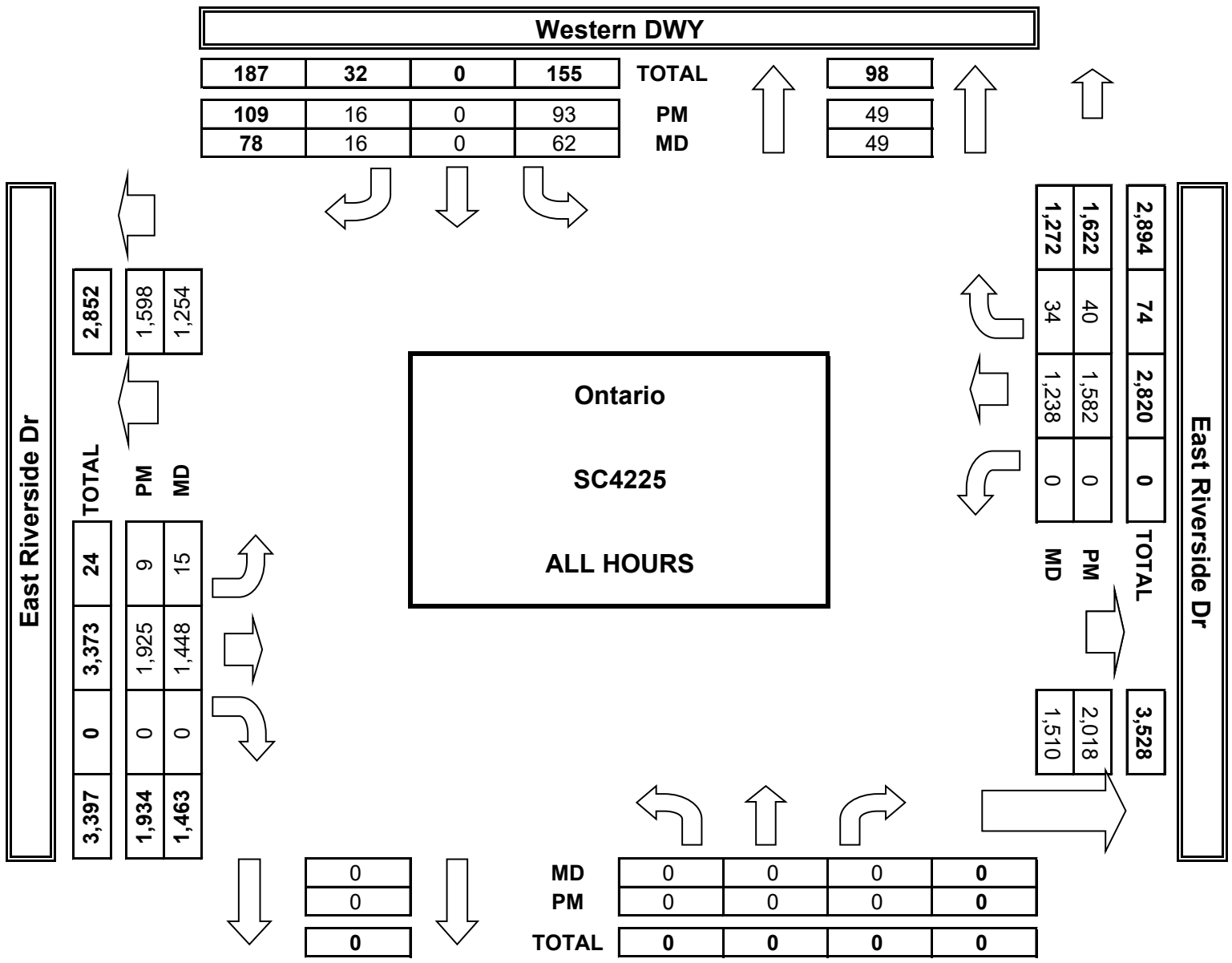
	NORTHBOUND Western DWY			SOUTHBOUND Western DWY			EASTBOUND East Riverside Dr			WESTBOUND East Riverside Dr				U-TURNS				
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB	TTL
	X	X	X	0	X	0	0	1	X	X	2	0		0	0	0	0	

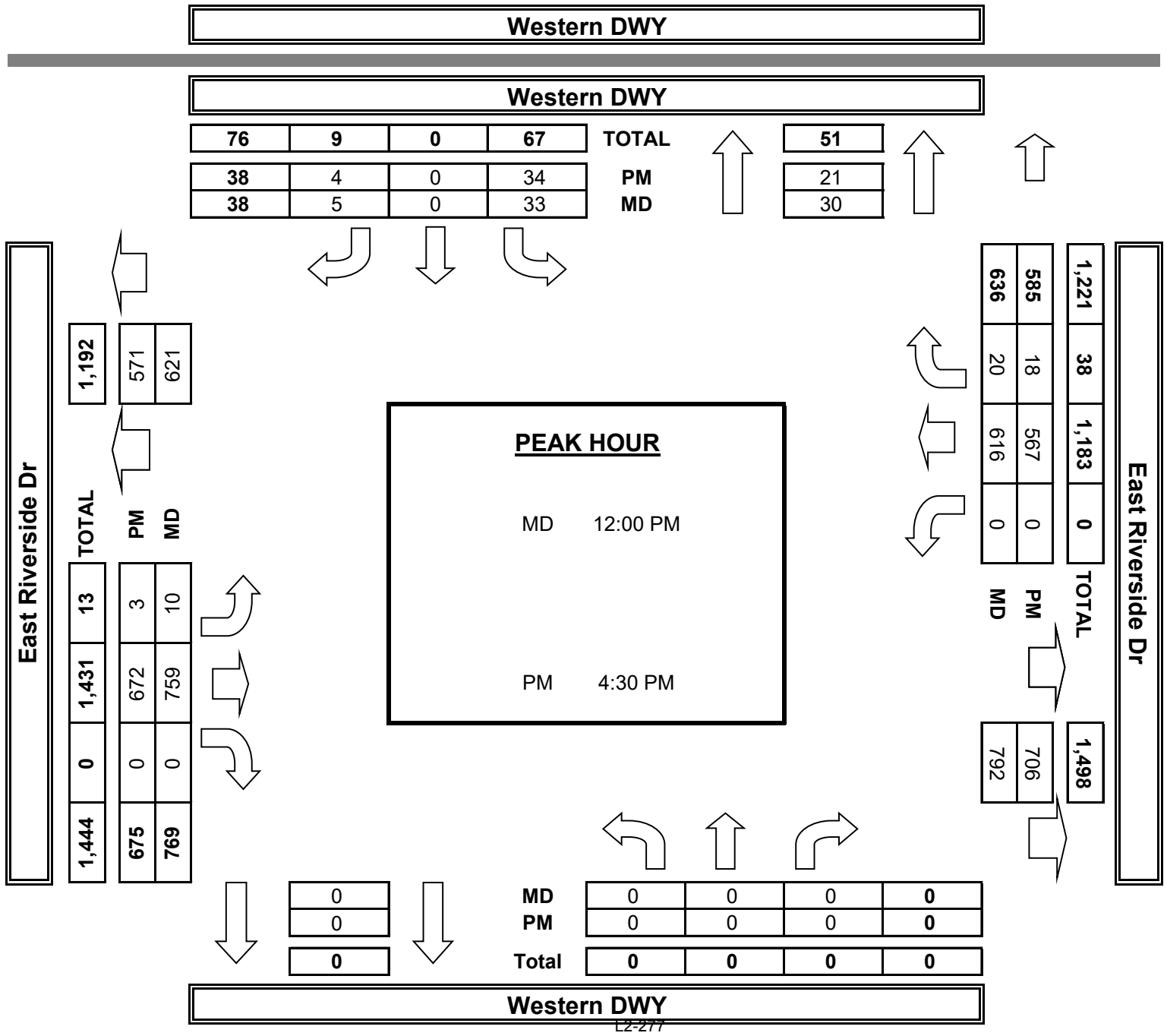
MD	11:00 AM	0	0	0	9	0	2	1	166	0	0	158	1	337	0	0	0	0	0
	11:15 AM	0	0	0	11	0	3	1	172	0	0	159	4	350	0	0	0	0	0
	11:30 AM	0	0	0	3	0	6	1	169	0	0	165	3	347	0	0	0	0	0
	11:45 AM	0	0	0	6	0	0	2	182	0	0	140	6	336	0	0	0	0	0
	12:00 PM	0	0	0	9	0	0	2	180	0	0	152	3	346	0	0	0	0	0
	12:15 PM	0	0	0	11	0	1	3	194	0	0	137	5	351	0	0	0	0	0
	12:30 PM	0	0	0	5	0	2	4	193	0	0	163	7	374	0	0	0	0	0
	12:45 PM	0	0	0	8	0	2	1	192	0	0	164	5	372	0	0	0	0	0
	VOLUMES	0	0	0	62	0	16	15	1,448	0	0	1,238	34	2,813	0	0	0	0	0
	APPROACH %	0%	0%	0%	79%	0%	21%	1%	99%	0%	0%	97%	3%						
	APP/DEPART	0	/	49	78	/	0	1,463	/	1,510	1,272	/	1,254	0					
	BEGIN PEAK HR		12:00 PM																
	VOLUMES	0	0	0	33	0	5	10	759	0	0	616	20	1,443					
	APPROACH %	0%	0%	0%	87%	0%	13%	1%	99%	0%	0%	97%	3%						
	PEAK HR FACTOR		0.000			0.792			0.976			0.935		0.965					
	APP/DEPART	0	/	30	38	/	0	769	/	792	636	/	621	0					
PM	4:00 PM	0	0	0	7	0	2	1	168	0	0	161	2	341	0	0	0	0	0
	4:15 PM	0	0	0	8	0	0	1	162	0	0	143	3	317	0	0	0	0	0
	4:30 PM	0	0	0	5	0	1	2	146	0	0	143	7	304	0	0	0	0	0
	4:45 PM	0	0	0	12	0	2	0	158	0	0	135	3	310	0	0	0	0	0
	5:00 PM	0	0	0	11	0	0	1	172	0	0	145	4	333	0	0	0	0	0
	5:15 PM	0	0	0	6	0	1	0	196	0	0	144	4	351	0	0	0	0	0
	5:30 PM	0	0	0	7	0	1	0	155	0	0	137	3	303	0	0	0	0	0
	5:45 PM	0	0	0	5	0	2	1	161	0	0	134	1	304	0	0	0	0	0
	6:00 PM	0	0	0	6	0	2	0	181	0	0	119	5	313	0	0	0	0	0
	6:15 PM	0	0	0	10	0	2	0	147	0	0	115	1	275	0	0	0	0	0
	6:30 PM	0	0	0	7	0	0	2	141	0	0	119	4	273	0	0	0	0	0
	6:45 PM	0	0	0	9	0	3	1	138	0	0	87	3	241	0	0	0	0	0
	VOLUMES	0	0	0	93	0	16	9	1,925	0	0	1,582	40	3,665	0	0	0	0	0
	APPROACH %	0%	0%	0%	85%	0%	15%	0%	100%	0%	0%	98%	2%						
	APP/DEPART	0	/	49	109	/	0	1,934	/	2,018	1,622	/	1,598	0					
	BEGIN PEAK HR		4:30 PM																
	VOLUMES	0	0	0	34	0	4	3	672	0	0	567	18	1,298					
	APPROACH %	0%	0%	0%	89%	0%	11%	0%	100%	0%	0%	97%	3%						
	PEAK HR FACTOR		0.000			0.679			0.861			0.975		0.925					
	APP/DEPART	0	/	21	38	/	0	675	/	706	585	/	571	0					



AimTD LLC

TURNING MOVEMENT COUNTS





T1018

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:	LOCATION:	Ontario	PROJECT #:	SC4225
Sat, Oct 7, 23	NORTH & SOUTH:	S Whispering Lakes Ln	LOCATION #:	18
	EAST & WEST:	East Riverside Dr	CONTROL:	STOP S

NOTES:

AM
PM
MD
OTHER
OTHER

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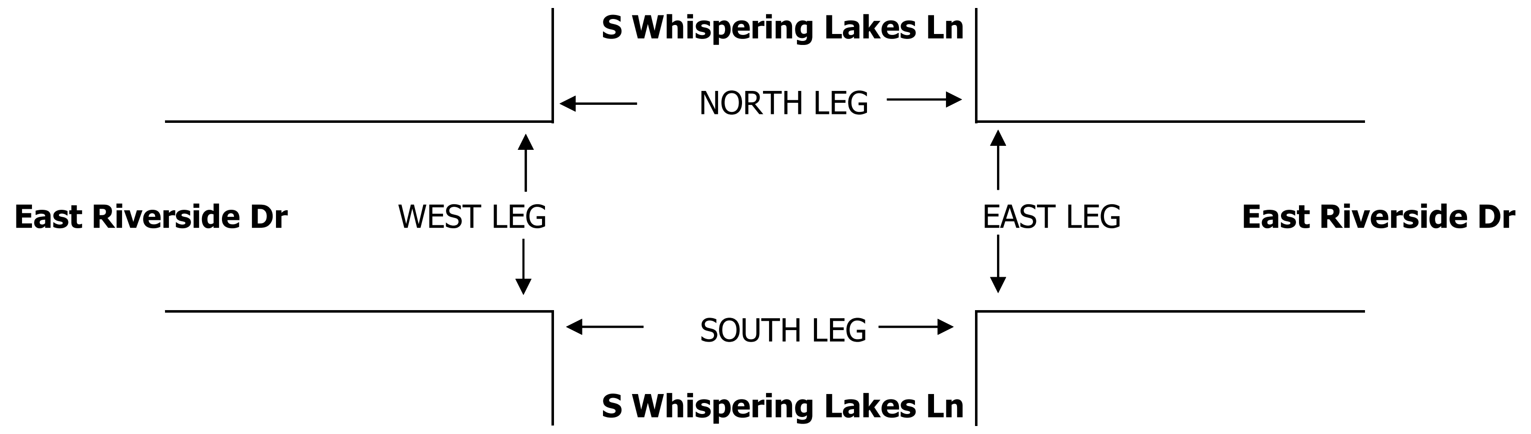
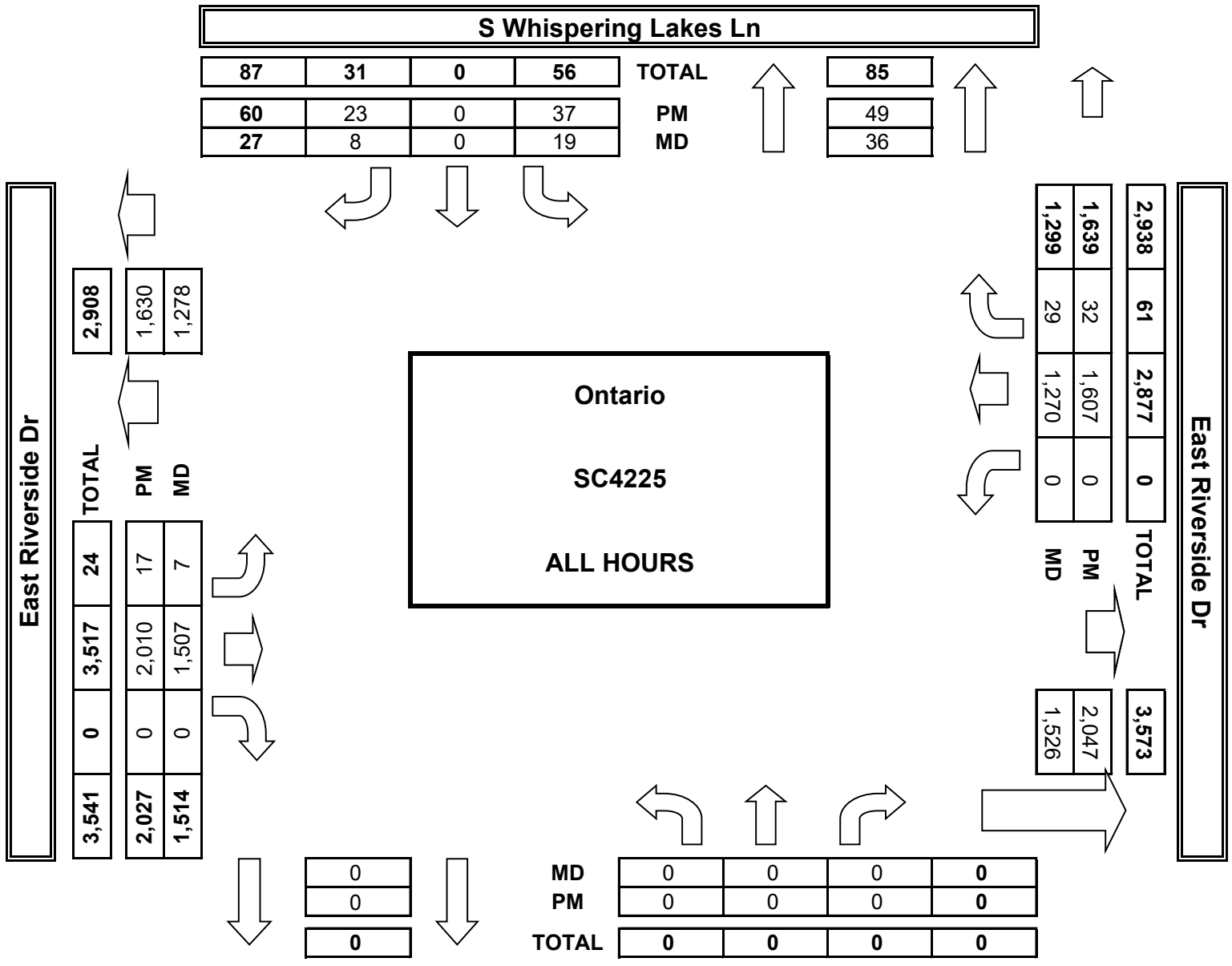
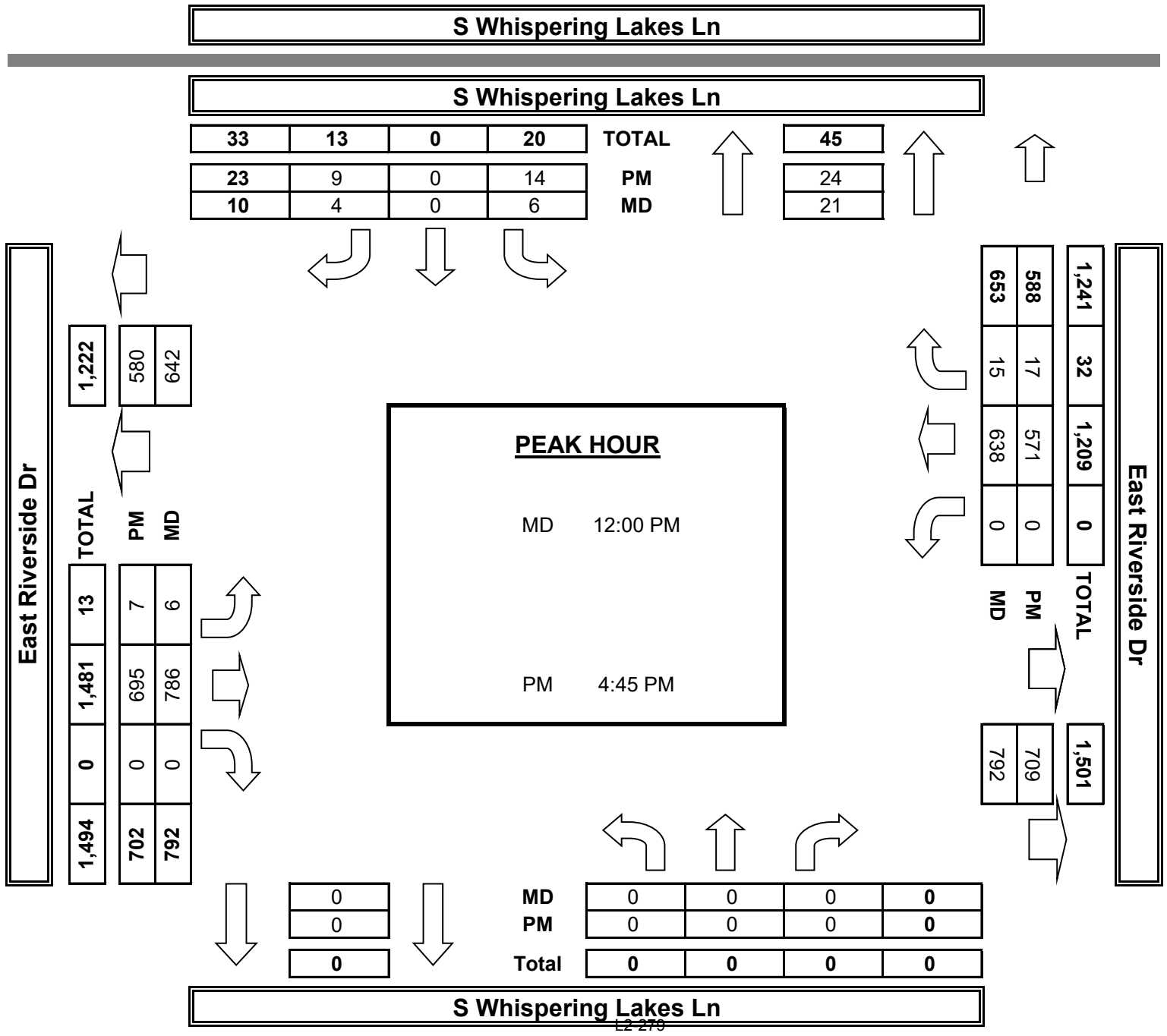
		NORTHBOUND S Whispering Lakes Ln			SOUTHBOUND S Whispering Lakes Ln			EASTBOUND East Riverside Dr			WESTBOUND East Riverside Dr				U-TURNS				
		NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB	TTL
	LANES:	X	X	X	0	X	0	0	1	X	X	2	0		0	0	0	0	
MD	11:00 AM	0	0	0	3	0	1	0	175	0	0	156	4	339	0	0	0	0	0
	11:15 AM	0	0	0	4	0	1	1	182	0	0	164	2	354	0	0	0	0	0
	11:30 AM	0	0	0	3	0	2	0	174	0	0	166	6	351	0	0	0	0	0
	11:45 AM	0	0	0	3	0	0	0	190	0	0	146	2	341	0	0	0	0	0
	12:00 PM	0	0	0	1	0	0	1	184	0	0	163	7	356	0	0	0	0	0
	12:15 PM	0	0	0	2	0	2	3	204	0	0	140	4	355	0	0	0	0	0
	12:30 PM	0	0	0	2	0	0	1	197	0	0	168	3	371	0	0	0	0	0
	12:45 PM	0	0	0	1	0	2	1	201	0	0	167	1	373	0	0	0	0	0
	VOLUMES	0	0	0	19	0	8	7	1,507	0	0	1,270	29	2,840	0	0	0	0	0
	APPROACH %	0%	0%	0%	70%	0%	30%	0%	100%	0%	0%	98%	2%						
	APP/DEPART	0	/	36	27	/	0	1,514	/	1,526	1,299	/	1,278	0					
	BEGIN PEAK HR		12:00 PM																
	VOLUMES	0	0	0	6	0	4	6	786	0	0	638	15	1,455					
	APPROACH %	0%	0%	0%	60%	0%	40%	1%	99%	0%	0%	98%	2%						
	PEAK HR FACTOR		0.000			0.625			0.957			0.955		0.975					
	APP/DEPART	0	/	21	10	/	0	792	/	792	653	/	642	0					
PM	4:00 PM	0	0	0	3	0	4	0	190	0	0	162	1	360	0	0	0	0	0
	4:15 PM	0	0	0	4	0	1	1	184	0	0	145	5	340	0	0	0	0	0
	4:30 PM	0	0	0	2	0	0	2	143	0	0	150	1	298	0	0	0	0	0
	4:45 PM	0	0	0	2	0	0	2	168	0	0	138	2	312	0	0	0	0	0
	5:00 PM	0	0	0	4	0	2	2	181	0	0	147	4	340	0	0	0	0	0
	5:15 PM	0	0	0	4	0	6	1	186	0	0	147	8	352	0	0	0	0	0
	5:30 PM	0	0	0	4	0	1	2	160	0	0	139	3	309	0	0	0	0	0
	5:45 PM	0	0	0	2	0	3	2	164	0	0	132	0	303	0	0	0	0	0
	6:00 PM	0	0	0	2	0	1	1	186	0	0	123	1	314	0	0	0	0	0
	6:15 PM	0	0	0	4	0	1	2	155	0	0	115	3	280	0	0	0	0	0
	6:30 PM	0	0	0	4	0	4	0	148	0	0	119	1	276	0	0	0	0	0
	6:45 PM	0	0	0	2	0	0	2	145	0	0	90	3	242	0	0	0	0	0
	VOLUMES	0	0	0	37	0	23	17	2,010	0	0	1,607	32	3,726	0	0	0	0	0
	APPROACH %	0%	0%	0%	62%	0%	38%	1%	99%	0%	0%	98%	2%						
	APP/DEPART	0	/	49	60	/	0	2,027	/	2,047	1,639	/	1,630	0					
	BEGIN PEAK HR		4:45 PM																
	VOLUMES	0	0	0	14	0	9	7	695	0	0	571	17	1,313					
	APPROACH %	0%	0%	0%	61%	0%	39%	1%	99%	0%	0%	97%	3%						
	PEAK HR FACTOR		0.000			0.575			0.939			0.948		0.933					
	APP/DEPART	0	/	24	23	/	0	702	/	709	588	/	580	0					



AimTD LLC

TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

T10182

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:				
Sat, Oct 7, 23	LOCATION:	Ontario	PROJECT #:	SC4225
	NORTH & SOUTH:	Driveway	LOCATION #:	19
	EAST & WEST:	East Riverside Dr	CONTROL:	STOP S

NOTES:

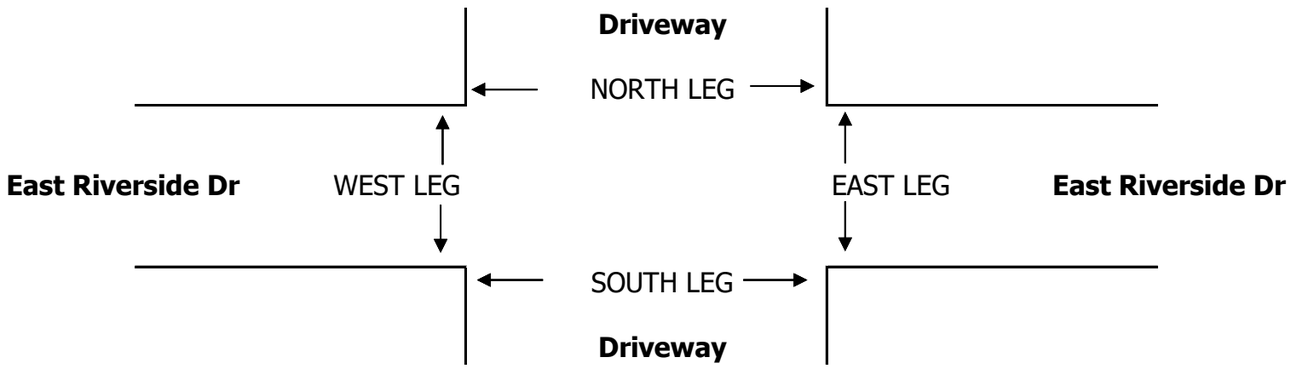
AM / PM / MD / OTHER / OTHER

▲ N ◄ W E ► S ▼

	NORTHBOUND Driveway			SOUTHBOUND Driveway			EASTBOUND East Riverside Dr			WESTBOUND East Riverside Dr			
LANES:	NL X	NT X	NR X	SL 1	ST X	SR 1	EL 1	ET 1	ER X	WL X	WT 2	WR 0	TOTAL

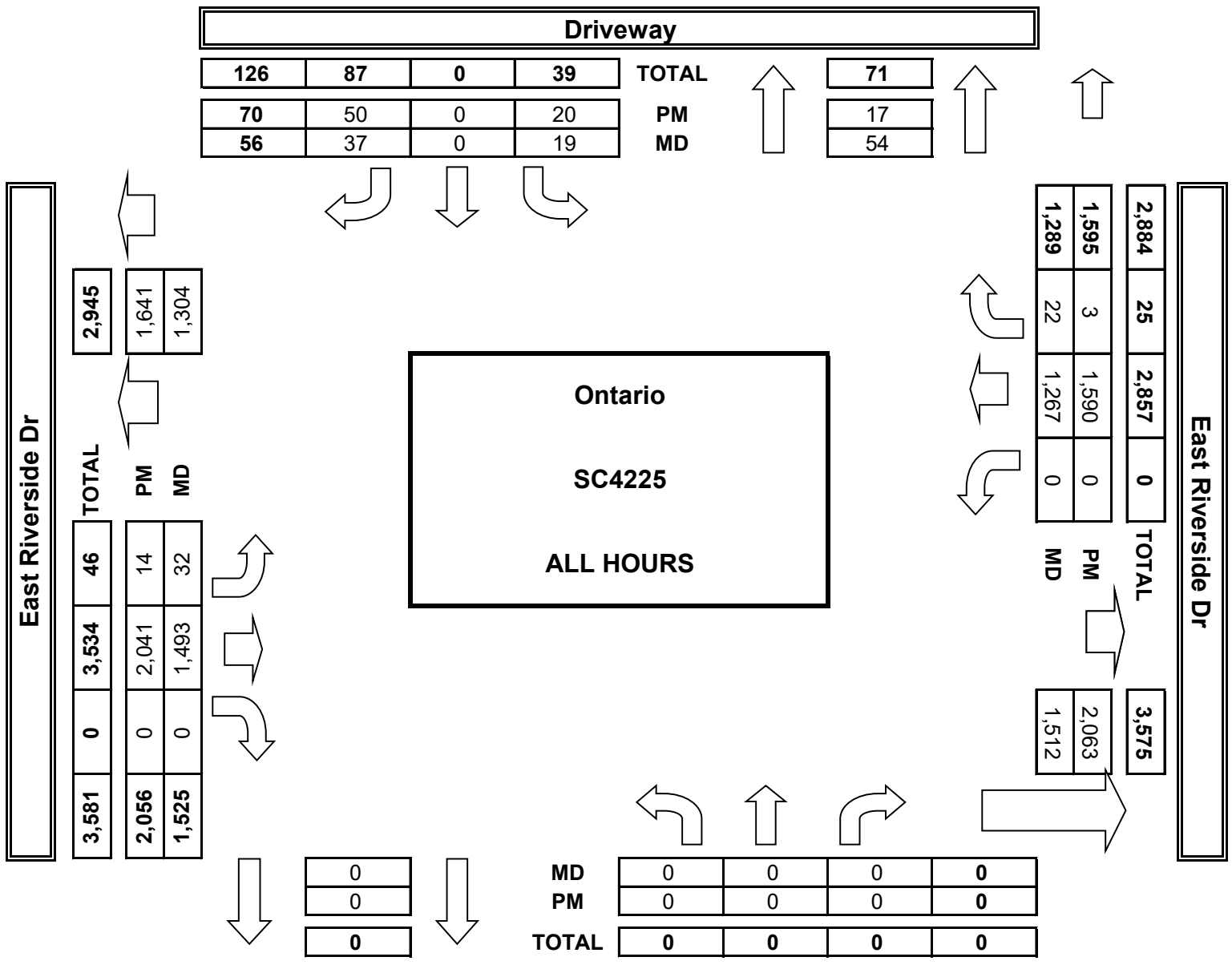
U-TURNS				
NB 0	SB 0	EB 0	WB 0	TTL

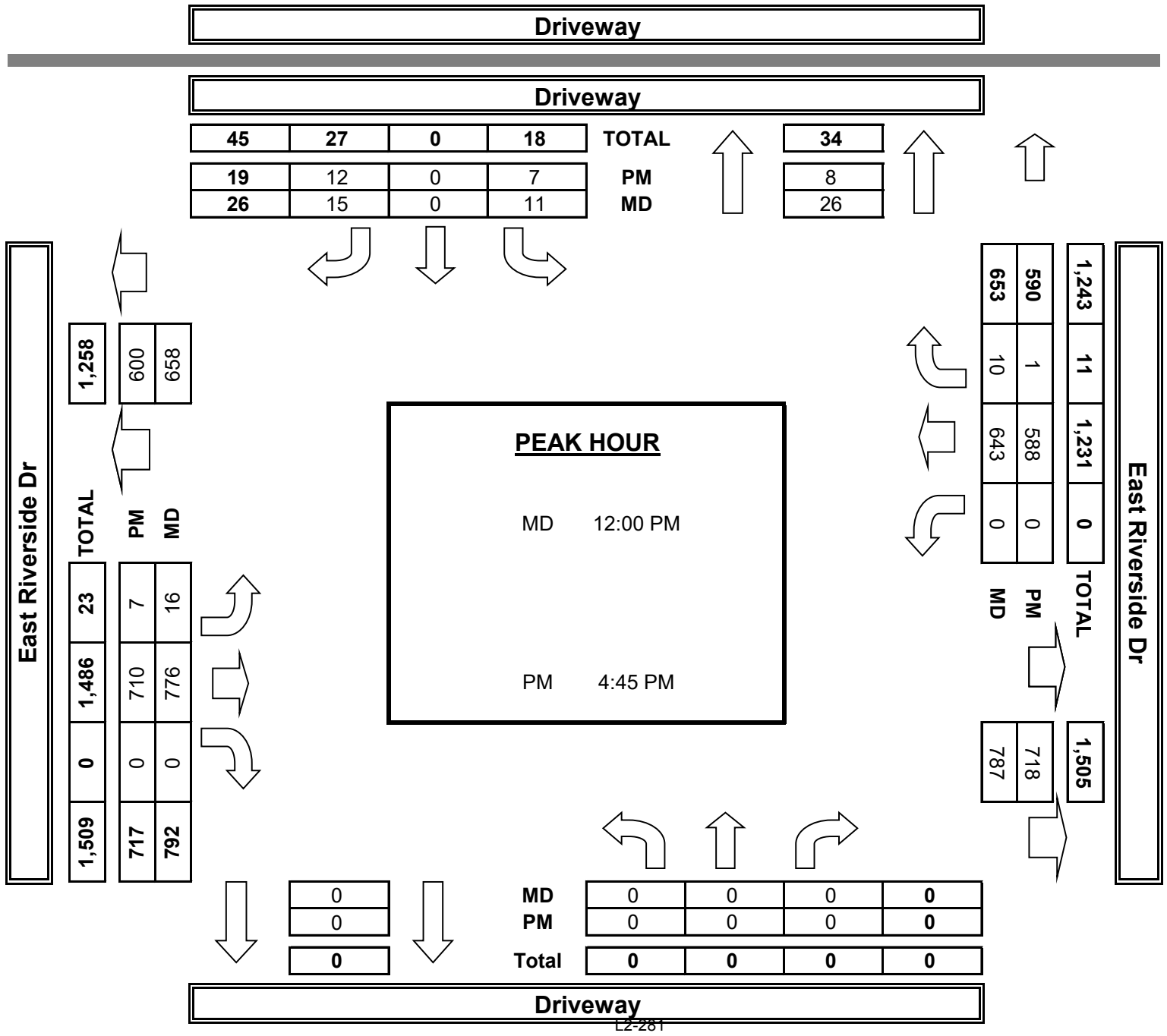
		NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND				U-TURNS				
		NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB	TTL
MD	11:00 AM	0	0	0	4	0	5	4	170	0	0	158	8	349	0	0	0	0	0
	11:15 AM	0	0	0	1	0	11	5	188	0	0	153	2	360	0	0	0	0	0
	11:30 AM	0	0	0	2	0	2	4	173	0	0	163	2	346	0	0	0	0	0
	11:45 AM	0	0	0	1	0	4	3	186	0	0	150	0	344	0	0	0	0	0
	12:00 PM	0	0	0	0	0	7	3	189	0	0	168	2	369	0	0	0	0	0
	12:15 PM	0	0	0	6	0	4	4	202	0	0	139	2	357	0	0	0	0	0
	12:30 PM	0	0	0	4	0	3	3	197	0	0	175	2	384	0	0	0	0	0
	12:45 PM	0	0	0	1	0	1	6	188	0	0	161	4	361	0	0	0	0	0
	VOLUMES	0	0	0	19	0	37	32	1,493	0	0	1,267	22	2,870	0	0	0	0	0
	APPROACH %	0%	0%	0%	34%	0%	66%	2%	98%	0%	0%	98%	2%						
	APP/DEPART	0	/	54	56	/	0	1,525	/	1,512	1,289	/	1,304	0					
	BEGIN PEAK HR		12:00 PM																
	VOLUMES	0	0	0	11	0	15	16	776	0	0	643	10	1,471					
	APPROACH %	0%	0%	0%	42%	0%	58%	2%	98%	0%	0%	98%	2%						
	PEAK HR FACTOR		0.000			0.650			0.961			0.922		0.958					
	APP/DEPART	0	/	26	26	/	0	792	/	787	653	/	658	0					
PM	4:00 PM	0	0	0	2	0	7	0	197	0	0	157	0	363	0	0	0	0	0
	4:15 PM	0	0	0	1	0	7	0	181	0	0	142	0	331	0	0	0	0	0
	4:30 PM	0	0	0	1	0	7	0	154	0	0	150	1	313	0	0	0	0	0
	4:45 PM	0	0	0	2	0	3	3	155	0	0	130	0	293	0	0	0	0	0
	5:00 PM	0	0	0	1	0	1	1	192	0	0	155	1	351	0	0	0	1	1
	5:15 PM	0	0	0	2	0	4	3	195	0	0	161	0	365	0	0	0	0	0
	5:30 PM	0	0	0	2	0	4	0	168	0	0	142	0	316	0	0	0	0	0
	5:45 PM	0	0	0	2	0	3	1	161	0	0	118	0	285	0	0	0	0	0
	6:00 PM	0	0	0	1	0	2	2	191	0	0	118	0	314	0	0	0	1	1
	6:15 PM	0	0	0	2	0	6	2	158	0	0	117	0	285	0	0	0	0	0
	6:30 PM	0	0	0	3	0	3	1	146	0	0	110	1	264	0	0	0	0	0
	6:45 PM	0	0	0	1	0	3	1	143	0	0	90	0	238	0	0	1	0	1
	VOLUMES	0	0	0	20	0	50	14	2,041	0	0	1,590	3	3,721	0	0	1	2	3
	APPROACH %	0%	0%	0%	29%	0%	71%	1%	99%	0%	0%	100%	0%						
	APP/DEPART	0	/	17	70	/	0	2,056	/	2,063	1,595	/	1,641	0					
	BEGIN PEAK HR		4:45 PM																
	VOLUMES	0	0	0	7	0	12	7	710	0	0	588	1	1,326					
	APPROACH %	0%	0%	0%	37%	0%	63%	1%	99%	0%	0%	100%	0%						
	PEAK HR FACTOR		0.000			0.792			0.905			0.916		0.908					
	APP/DEPART	0	/	8	19	/	0	717	/	718	590	/	600	0					



AimTD LLC

TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

T1018

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:				
Sat, Oct 7, 23	LOCATION:	Ontario	PROJECT #:	SC4225
	NORTH & SOUTH:	Ontario Ave	LOCATION #:	20
	EAST & WEST:	East Riverside Dr	CONTROL:	STOP N

NOTES:

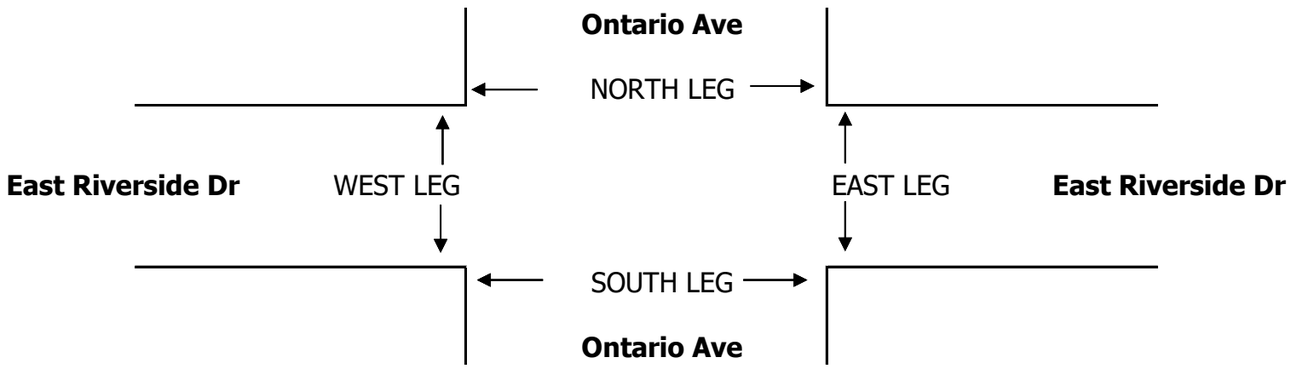
AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

	NORTHBOUND Ontario Ave			SOUTHBOUND Ontario Ave			EASTBOUND East Riverside Dr			WESTBOUND East Riverside Dr			
LANES:	NL 0	NT X	NR 0	SL X	ST X	SR X	EL X	ET 1	ER 0	WL 0	WT 2	WR X	TOTAL

U-TURNS

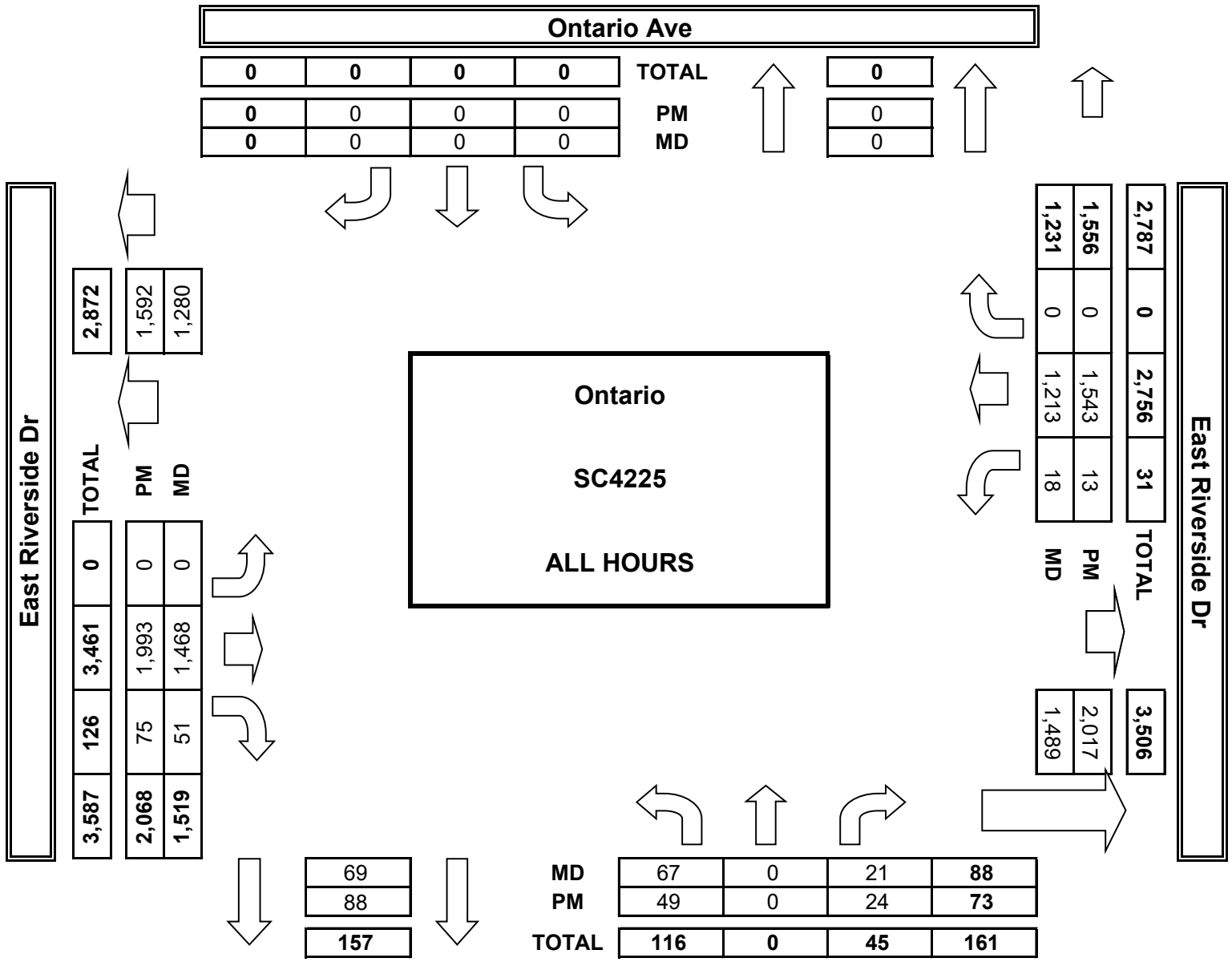
NB	SB	EB	WB	TTL
0	0	0	0	

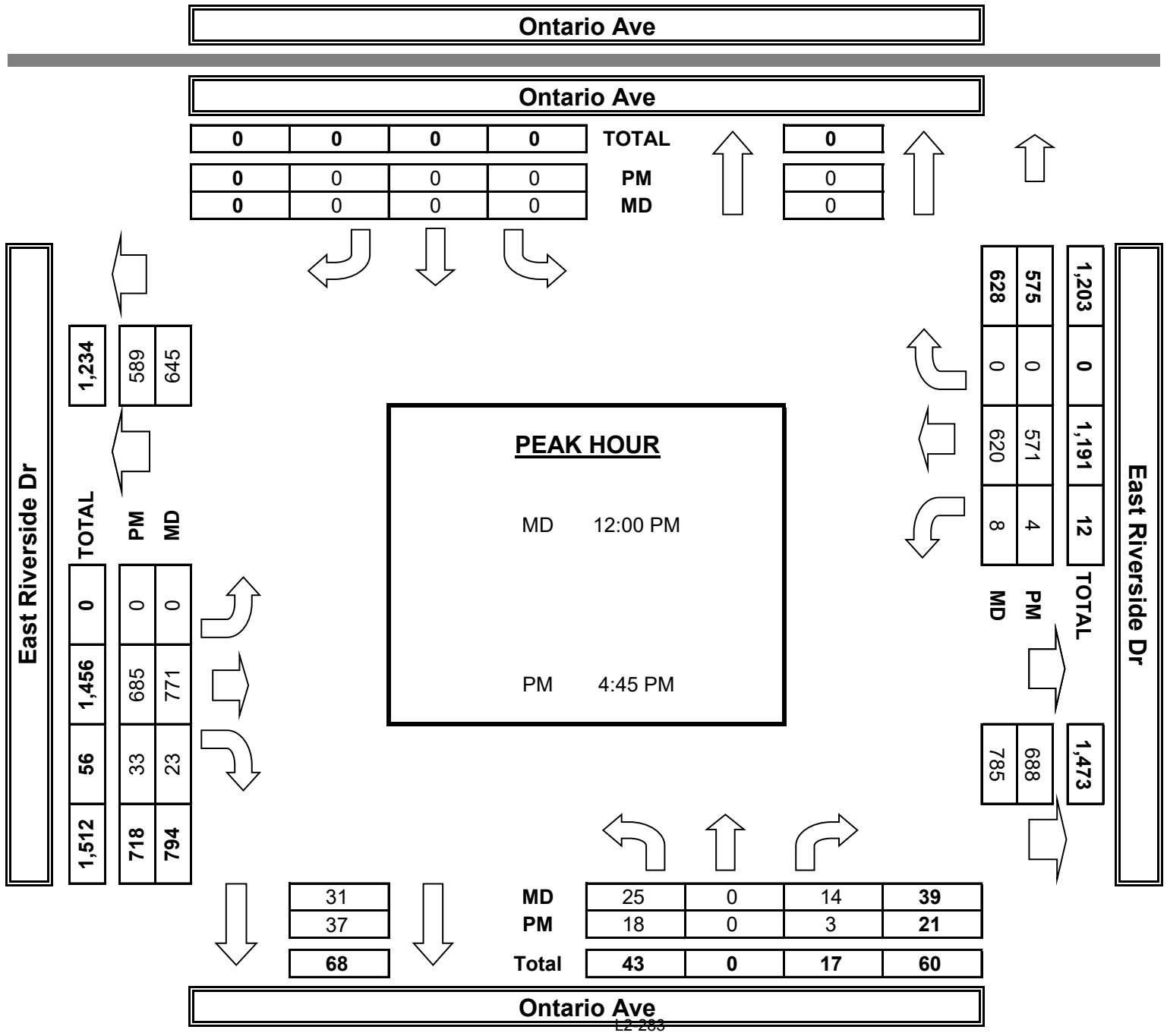
		NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND				U-TURNS				
		NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB	TTL
MD	11:00 AM	12	0	0	0	0	0	0	178	7	2	144	0	343	0	0	0	0	0
	11:15 AM	9	0	3	0	0	0	0	184	8	2	154	0	360	0	0	0	0	0
	11:30 AM	10	0	2	0	0	0	0	147	5	4	161	0	329	0	0	0	0	0
	11:45 AM	11	0	2	0	0	0	0	188	8	2	134	0	345	0	0	0	0	0
	12:00 PM	10	0	2	0	0	0	0	173	11	2	147	0	345	0	0	0	0	0
	12:15 PM	7	0	5	0	0	0	0	198	5	1	146	0	362	0	0	0	0	0
	12:30 PM	2	0	4	0	0	0	0	199	4	2	169	0	380	0	0	0	0	0
	12:45 PM	6	0	3	0	0	0	0	201	3	3	158	0	374	0	0	0	0	0
	VOLUMES	67	0	21	0	0	0	0	1,468	51	18	1,213	0	2,838	0	0	0	0	0
	APPROACH %	76%	0%	24%	0%	0%	0%	0%	97%	3%	1%	99%	0%						
	APP/DEPART	88	/	0	0	/	69	1,519	/	1,489	1,231	/	1,280	0					
	BEGIN PEAK HR		12:00 PM																
	VOLUMES	25	0	14	0	0	0	0	771	23	8	620	0	1,461					
	APPROACH %	64%	0%	36%	0%	0%	0%	0%	97%	3%	1%	99%	0%						
	PEAK HR FACTOR		0.813			0.000			0.973			0.918		0.961					
	APP/DEPART	39	/	0	0	/	31	794	/	785	628	/	645	0					
PM	4:00 PM	3	0	7	0	0	0	0	185	4	1	150	0	350	0	0	0	0	0
	4:15 PM	8	0	2	0	0	0	0	180	8	1	123	0	322	0	0	0	0	0
	4:30 PM	6	0	2	0	0	0	0	153	2	2	145	0	310	0	0	0	0	0
	4:45 PM	4	0	1	0	0	0	0	148	8	0	136	0	297	0	0	0	0	0
	5:00 PM	3	0	0	0	0	0	0	172	8	0	152	0	335	0	0	0	0	0
	5:15 PM	4	0	1	0	0	0	0	197	9	3	145	0	359	0	0	0	0	0
	5:30 PM	7	0	1	0	0	0	0	168	8	1	138	0	323	0	0	0	0	0
	5:45 PM	3	0	2	0	0	0	0	157	4	3	123	0	292	0	0	0	0	0
	6:00 PM	1	0	3	0	0	0	0	183	7	1	129	0	324	0	0	0	0	0
	6:15 PM	2	0	2	0	0	0	0	163	7	0	101	0	275	0	0	0	0	0
	6:30 PM	5	0	0	0	0	0	0	155	6	1	120	0	287	0	0	0	0	0
	6:45 PM	3	0	3	0	0	0	0	132	4	0	81	0	223	0	0	0	0	0
	VOLUMES	49	0	24	0	0	0	0	1,993	75	13	1,543	0	3,697	0	0	0	0	0
	APPROACH %	67%	0%	33%	0%	0%	0%	0%	96%	4%	1%	99%	0%						
	APP/DEPART	73	/	0	0	/	88	2,068	/	2,017	1,556	/	1,592	0					
	BEGIN PEAK HR		4:45 PM																
	VOLUMES	18	0	3	0	0	0	0	685	33	4	571	0	1,314					
	APPROACH %	86%	0%	14%	0%	0%	0%	0%	95%	5%	1%	99%	0%						
	PEAK HR FACTOR		0.656			0.000			0.871			0.946		0.915					
	APP/DEPART	21	/	0	0	/	37	718	/	688	575	/	589	0					



AimTD LLC

TURNING MOVEMENT COUNTS





T1018

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:				
Sat, Oct 7, 23	LOCATION:	Ontario	PROJECT #:	SC4225
	NORTH & SOUTH:	S Colonial Ave	LOCATION #:	21
	EAST & WEST:	East Riverside Dr	CONTROL:	SIGNAL

NOTES:

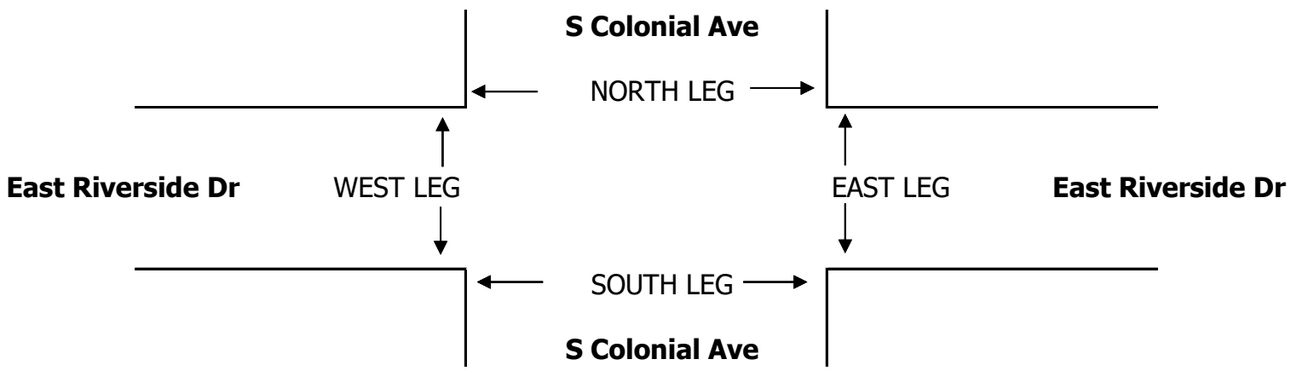
AM PM MD OTHER OTHER

▲ N ◄ W E ► S ▼

	NORTHBOUND S Colonial Ave			SOUTHBOUND S Colonial Ave			EASTBOUND East Riverside Dr			WESTBOUND East Riverside Dr			
LANES:	NL 0	NT 1	NR 0	SL 0	ST 1	SR 0	EL 1	ET 2	ER 0	WL 1	WT 2	WR 0	TOTAL

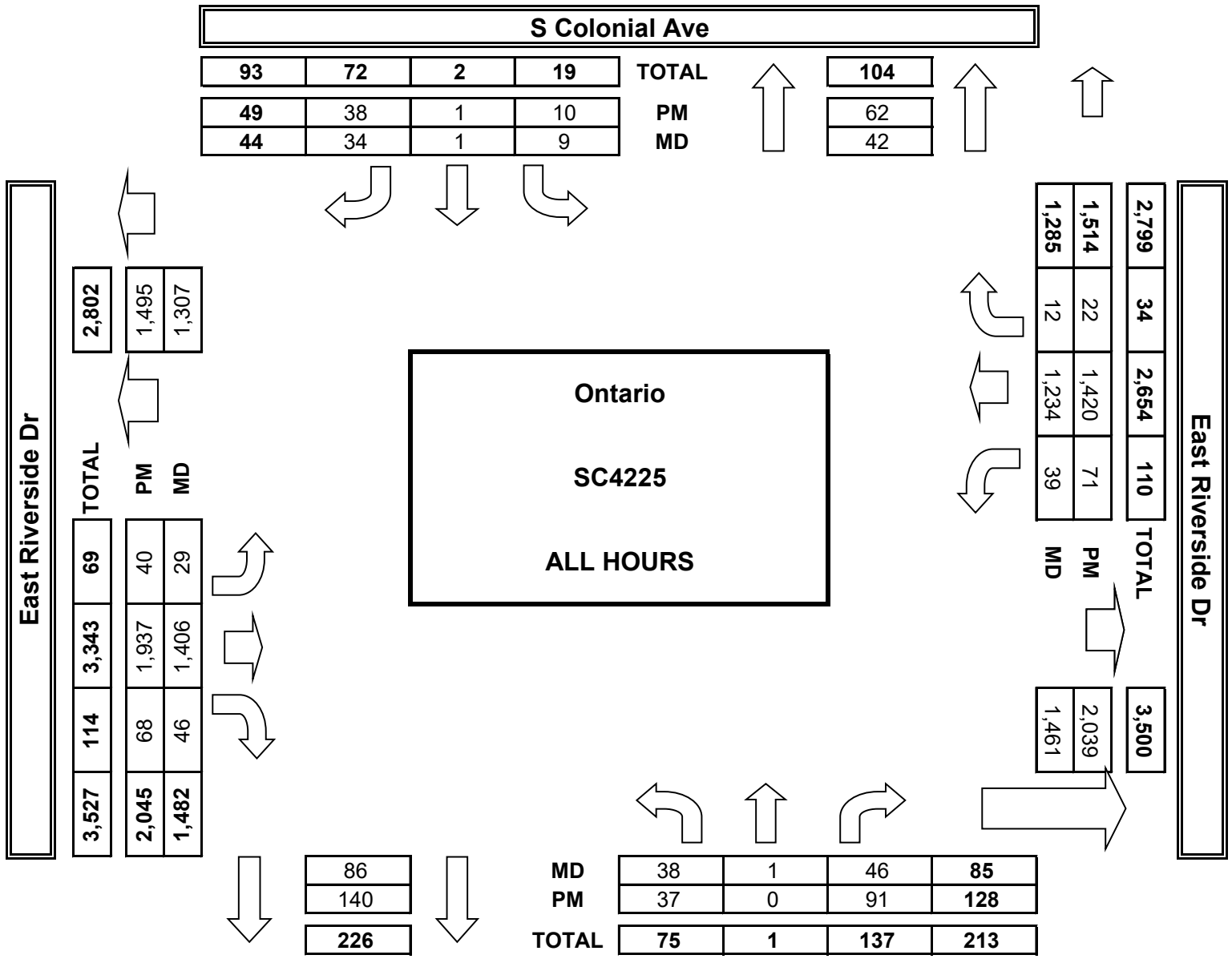
U-TURNS				
NB 0	SB 0	EB 0	WB 0	TTL

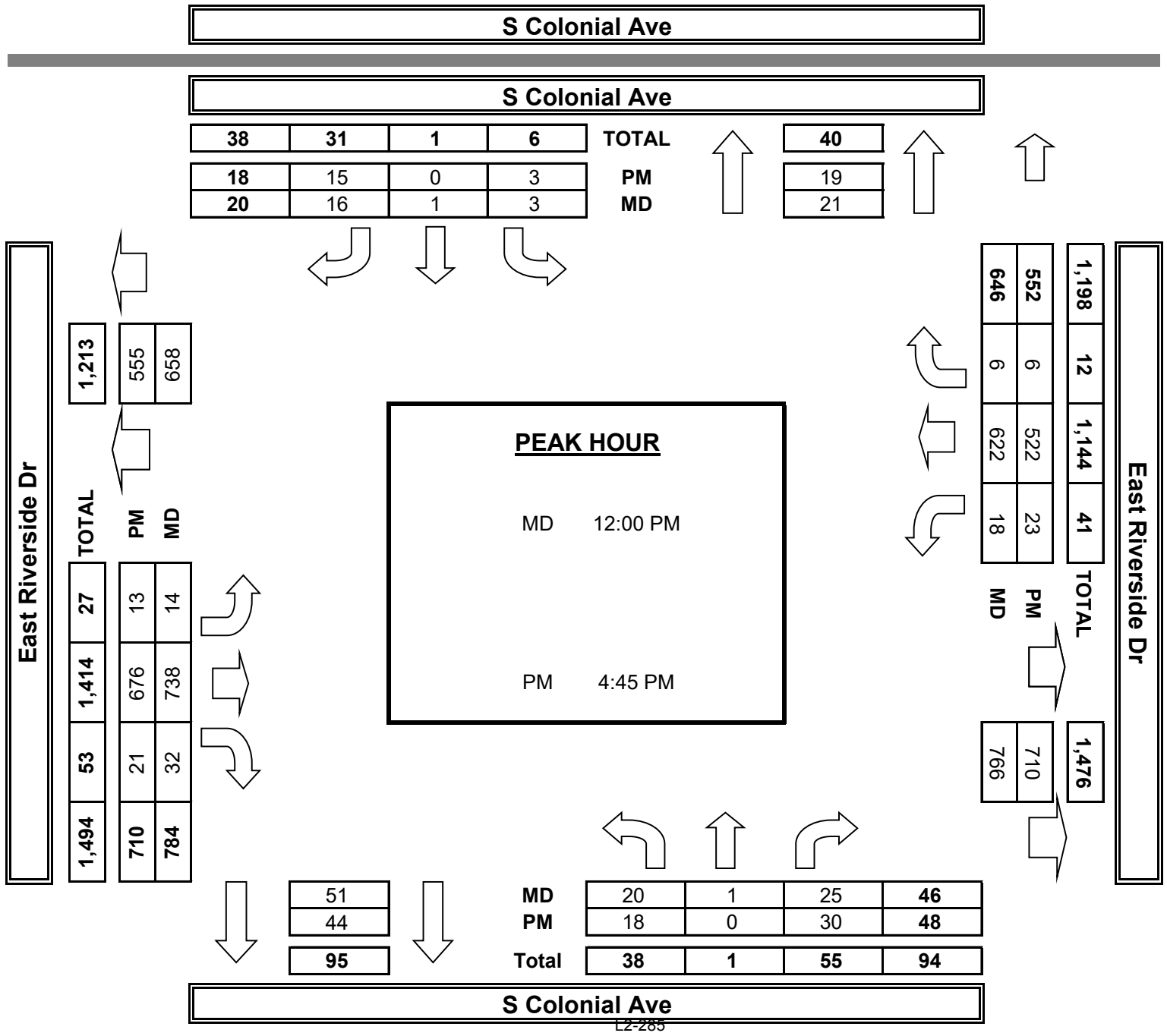
MD	11:00 AM	3	0	7	1	0	5	4	159	2	5	155	0	341	0	0	1	0	1
	11:15 AM	6	0	4	1	0	4	7	171	5	8	154	4	364	0	0	0	0	0
	11:30 AM	3	0	2	0	0	5	2	156	3	5	156	1	333	0	0	0	0	0
	11:45 AM	6	0	8	4	0	4	2	182	4	3	147	1	361	0	0	0	0	0
	12:00 PM	7	0	6	0	0	4	4	154	6	5	153	2	341	0	0	0	0	0
	12:15 PM	6	0	5	1	0	1	5	188	8	6	149	2	371	0	0	0	0	0
	12:30 PM	2	1	5	2	0	4	3	214	9	4	176	1	421	0	0	0	0	0
	12:45 PM	5	0	9	0	1	7	2	182	9	3	144	1	363	0	0	0	0	0
	VOLUMES	38	1	46	9	1	34	29	1,406	46	39	1,234	12	2,896	0	0	1	0	1
	APPROACH %	45%	1%	54%	20%	2%	77%	2%	95%	3%	3%	96%	1%						
	APP/DEPART	85	/	42	44	/	86	1,482	/	1,461	1,285	/	1,307	0					
	BEGIN PEAK HR		12:00 PM																
	VOLUMES	20	1	25	3	1	16	14	738	32	18	622	6	1,496					
	APPROACH %	43%	2%	54%	15%	5%	80%	2%	94%	4%	3%	96%	1%						
	PEAK HR FACTOR		0.821			0.625			0.867			0.892		0.888					
	APP/DEPART	46	/	21	20	/	51	784	/	766	646	/	658	0					
PM	4:00 PM	3	0	8	0	0	4	5	188	4	11	129	0	352	0	0	0	0	0
	4:15 PM	1	0	5	1	0	2	4	181	6	6	123	0	329	0	0	0	0	0
	4:30 PM	3	0	5	0	0	2	3	149	1	7	136	3	309	0	0	0	0	0
	4:45 PM	6	0	10	1	0	4	5	145	7	8	127	0	313	0	0	0	0	0
	5:00 PM	5	0	5	1	0	5	4	173	6	1	128	1	329	0	0	0	1	1
	5:15 PM	5	0	3	0	0	4	1	192	3	5	141	4	358	0	0	0	0	0
	5:30 PM	2	0	12	1	0	2	3	166	5	9	126	1	327	0	0	0	0	0
	5:45 PM	3	0	9	2	1	6	6	147	8	3	105	3	293	0	0	0	0	0
	6:00 PM	1	0	7	0	0	2	4	184	5	3	107	4	317	0	0	0	0	0
	6:15 PM	5	0	10	2	0	3	1	145	6	9	105	5	291	0	0	0	0	0
	6:30 PM	3	0	8	2	0	1	2	136	6	3	111	0	272	0	0	0	0	0
	6:45 PM	0	0	9	0	0	3	2	131	11	6	82	1	245	0	0	0	0	0
	VOLUMES	37	0	91	10	1	38	40	1,937	68	71	1,420	22	3,736	0	0	0	1	1
	APPROACH %	29%	0%	71%	20%	2%	78%	2%	95%	3%	5%	94%	1%						
	APP/DEPART	128	/	62	49	/	140	2,045	/	2,039	1,514	/	1,495	0					
	BEGIN PEAK HR		4:45 PM																
	VOLUMES	18	0	30	3	0	15	13	676	21	23	522	6	1,328					
	APPROACH %	38%	0%	63%	17%	0%	83%	2%	95%	3%	4%	95%	1%						
	PEAK HR FACTOR		0.750			0.750			0.906			0.920		0.927					
	APP/DEPART	48	/	19	18	/	44	710	/	710	552	/	555	0					



AimTD LLC

TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

T1018

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Sat, Oct 7, 23

LOCATION: Ontario
NORTH & SOUTH: S Archibald Ave
EAST & WEST: East Riverside Dr

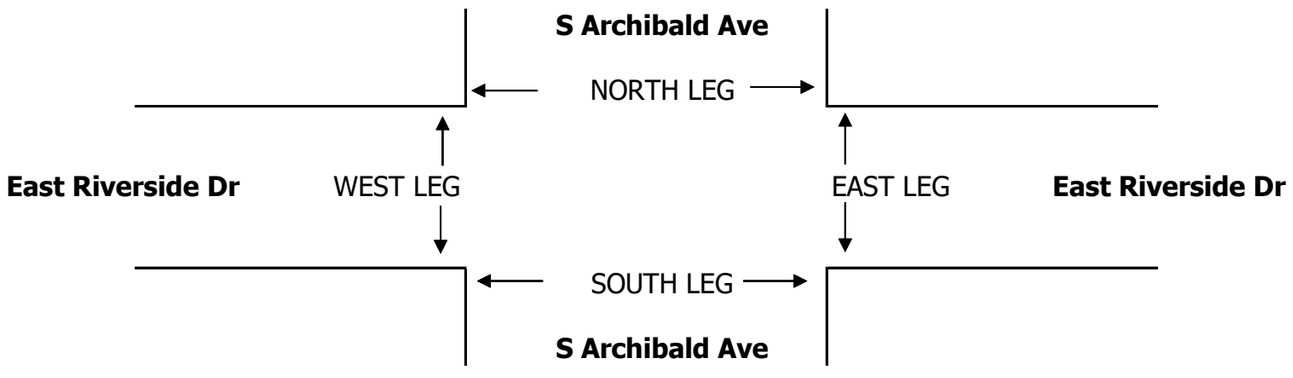
PROJECT #: SC4225
LOCATION #: 22
CONTROL: SIGNAL

NOTES:

AM
PM
MD
OTHER
OTHER

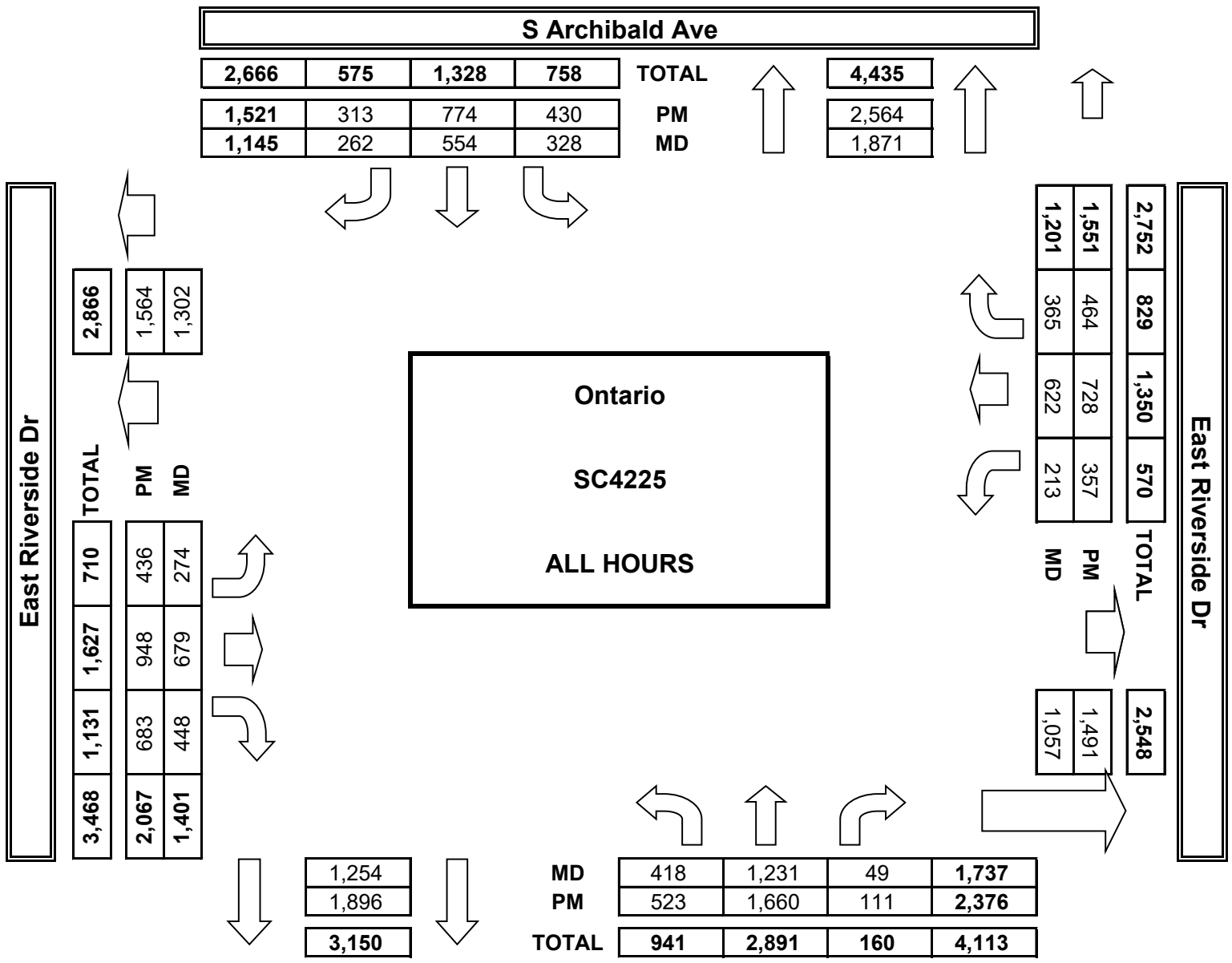
◄ W
N ▲
E ►
S ▼

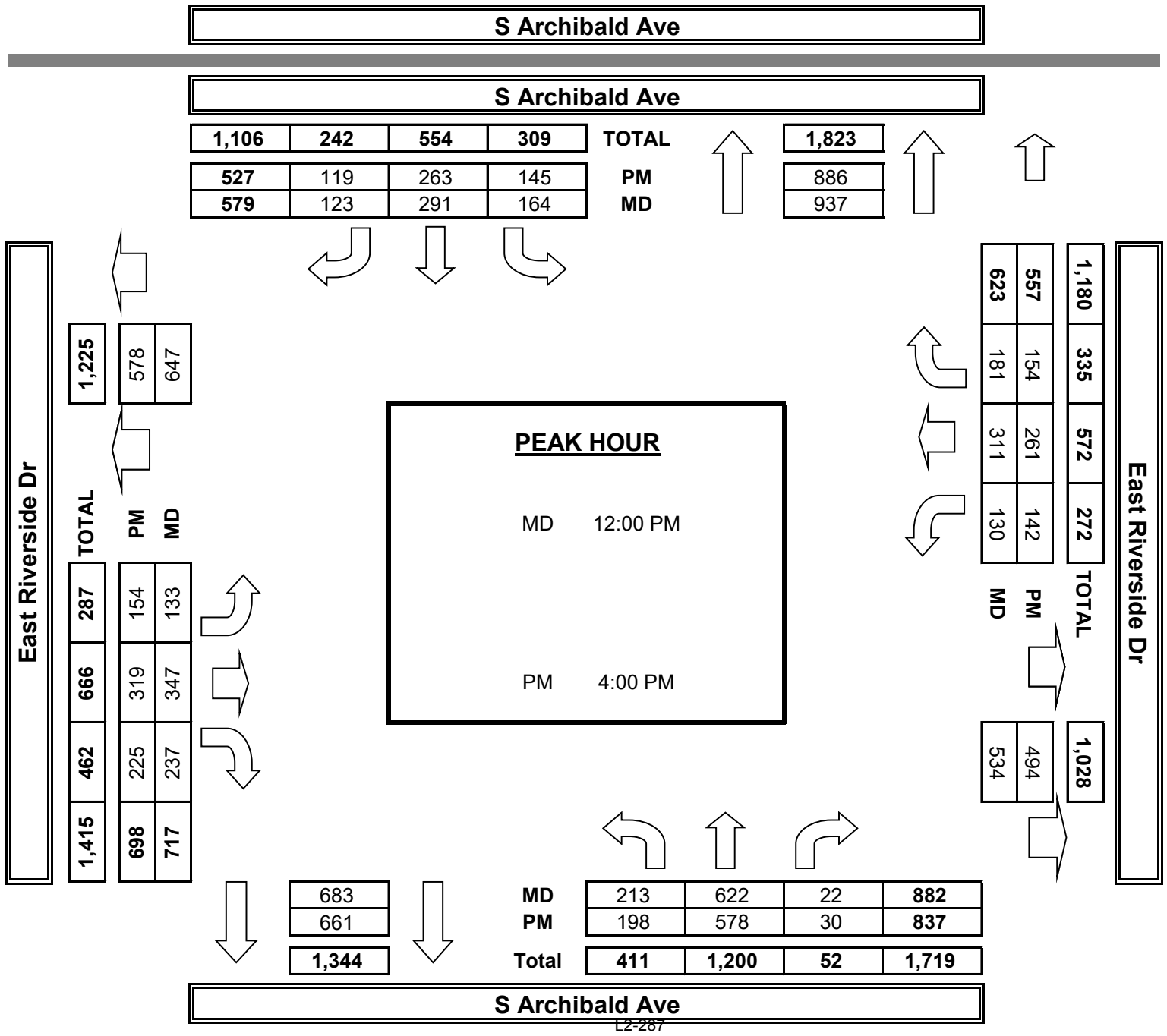
		NORTHBOUND S Archibald Ave			SOUTHBOUND S Archibald Ave			EASTBOUND East Riverside Dr			WESTBOUND East Riverside Dr				U-TURNS				
	LANES:	NL 1	NT 3	NR 0	SL 1	ST 3	SR 0	EL 1	ET 2	ER 0	WL 1	WT 2	WR 0	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
MD	11:00 AM	49	162	7	42	75	31	36	82	47	20	83	44	678	4	0	0	0	4
	11:15 AM	53	168	5	36	79	50	35	78	57	17	79	46	703	4	0	0	0	4
	11:30 AM	57	154	6	39	54	28	27	83	40	20	76	43	627	3	0	0	0	3
	11:45 AM	46	125	9	47	55	30	43	89	67	26	73	51	661	3	0	0	0	3
	12:00 PM	53	168	7	39	74	24	25	67	63	30	79	49	678	3	0	0	0	3
	12:15 PM	47	151	9	49	75	31	38	84	56	24	91	38	693	6	0	0	0	6
	12:30 PM	65	155	0	39	72	39	40	91	51	35	66	43	696	9	0	0	1	10
	12:45 PM	48	148	6	37	70	29	30	105	67	41	75	51	707	7	1	0	0	8
	VOLUMES	418	1,231	49	328	554	262	274	679	448	213	622	365	5,484	39	1	0	1	41
	APPROACH %	24%	71%	3%	29%	48%	23%	20%	48%	32%	18%	52%	30%						
	APP/DEPART	1,737	/	1,871	1,145	/	1,254	1,401	/	1,057	1,201	/	1,302	0					
	BEGIN PEAK HR		12:00 PM																
	VOLUMES	213	622	22	164	291	123	133	347	237	130	311	181	2,801					
	APPROACH %	24%	71%	2%	28%	50%	21%	19%	48%	33%	21%	50%	29%						
	PEAK HR FACTOR		0.955			0.934			0.887			0.933		0.979					
	APP/DEPART	882	/	937	579	/	683	717	/	534	623	/	647	0					
PM	4:00 PM	51	162	6	38	74	28	45	93	60	41	52	35	685	4	0	0	0	4
	4:15 PM	51	143	9	32	62	22	45	78	54	35	75	32	638	10	0	0	0	10
	4:30 PM	61	143	8	42	53	37	31	72	66	37	65	42	657	11	0	0	0	11
	4:45 PM	35	130	7	33	74	32	33	76	45	29	69	45	608	6	0	0	0	6
	5:00 PM	46	148	8	38	69	19	32	83	55	27	66	40	631	4	1	0	1	6
	5:15 PM	38	128	11	31	70	44	38	86	76	28	74	40	664	9	1	0	0	10
	5:30 PM	49	130	7	31	67	24	40	88	62	28	58	36	620	7	0	0	0	7
	5:45 PM	41	154	7	43	66	21	31	72	60	22	63	36	616	8	1	0	0	9
	6:00 PM	39	122	6	42	62	17	33	82	59	23	52	40	577	6	0	0	0	6
	6:15 PM	39	144	9	40	62	29	38	72	40	25	50	40	588	3	1	0	1	5
	6:30 PM	34	124	17	33	61	21	30	78	62	24	55	40	579	9	0	0	0	9
	6:45 PM	39	132	16	27	54	19	40	68	44	38	49	38	564	5	0	0	0	5
	VOLUMES	523	1,660	111	430	774	313	436	948	683	357	728	464	7,515	82	4	0	2	88
	APPROACH %	22%	70%	5%	28%	51%	21%	21%	46%	33%	23%	47%	30%						
	APP/DEPART	2,376	/	2,564	1,521	/	1,896	2,067	/	1,491	1,551	/	1,564	0					
	BEGIN PEAK HR		4:00 PM																
	VOLUMES	198	578	30	145	263	119	154	319	225	142	261	154	2,619					
	APPROACH %	24%	69%	4%	28%	50%	23%	22%	46%	32%	25%	47%	28%						
	PEAK HR FACTOR		0.938			0.941			0.881			0.967		0.950					
	APP/DEPART	837	/	886	527	/	661	698	/	494	557	/	578	0					



AimTD LLC

TURNING MOVEMENT COUNTS





T1018

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:				
Sat, Oct 7, 23	LOCATION:	Ontario	PROJECT #:	SC4225
	NORTH & SOUTH:	S Haven Ave	LOCATION #:	23
	EAST & WEST:	East Riverside Dr	CONTROL:	SIGNAL

NOTES:

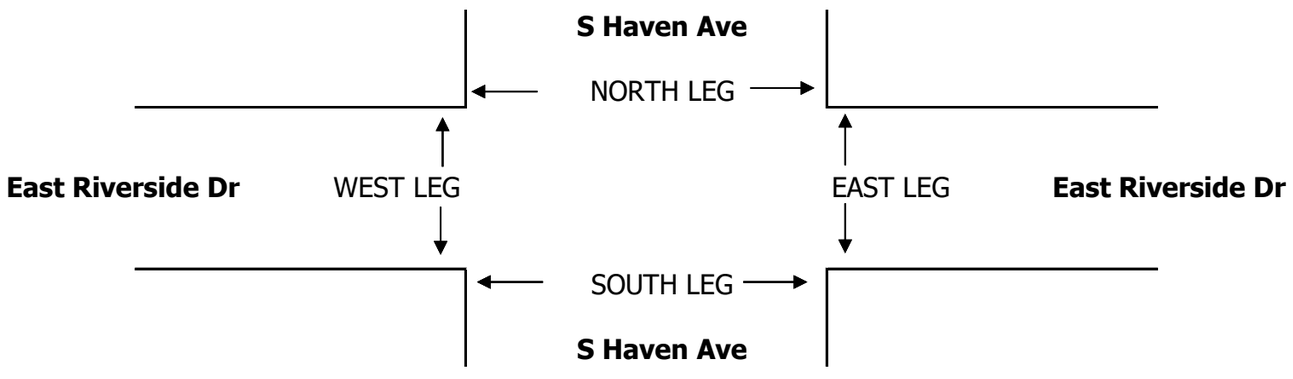
AM PM MD OTHER OTHER

◄ W ▲ N S ▼ E ►

	NORTHBOUND S Haven Ave			SOUTHBOUND S Haven Ave			EASTBOUND East Riverside Dr			WESTBOUND East Riverside Dr			
LANES:	NL 0	NT 1	NR 0	SL 1	ST 1	SR 1	EL 1	ET 1	ER 0	WL 1	WT 2	WR 0	TOTAL

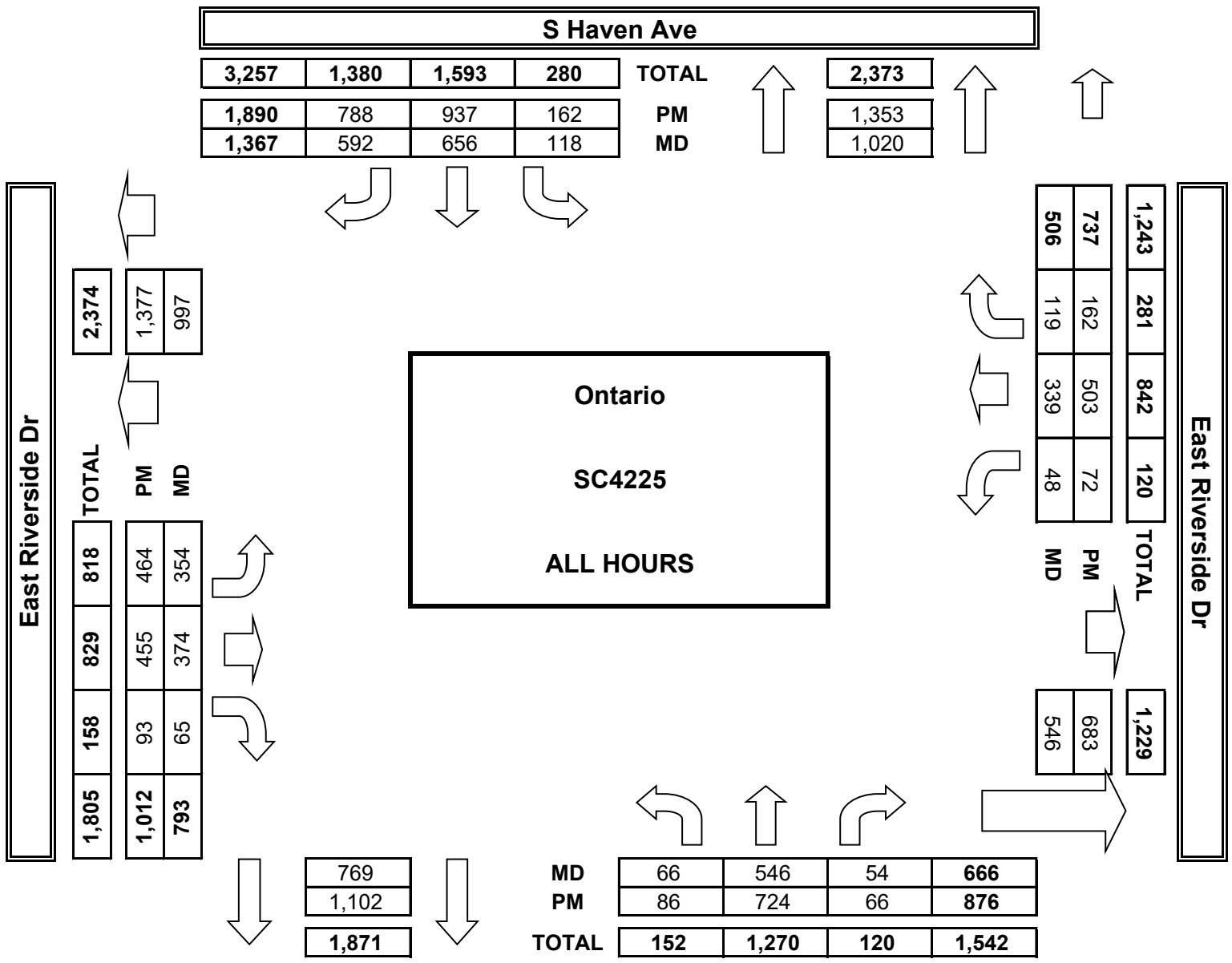
U-TURNS				
NB 0	SB 0	EB 0	WB 0	TTL

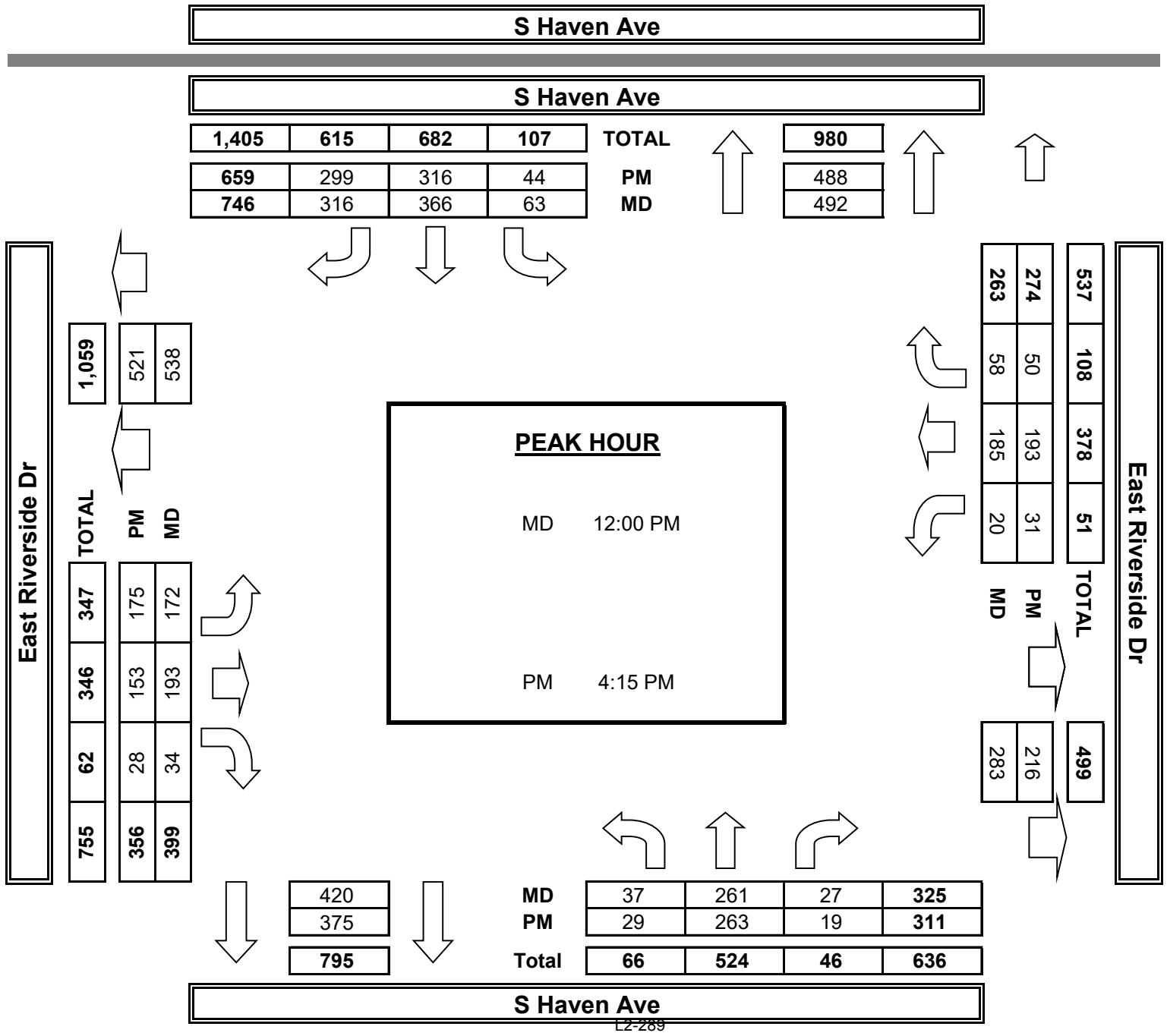
		NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND				U-TURNS				
		NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB	TTL
MD	11:00 AM	7	73	5	13	68	73	35	37	8	9	33	16	377	0	0	0	0	0
	11:15 AM	5	76	7	14	66	71	53	58	9	6	40	12	417	0	0	0	0	0
	11:30 AM	8	64	8	10	85	59	47	34	4	8	40	16	383	0	0	0	0	0
	11:45 AM	9	72	7	18	71	73	47	52	10	5	41	17	422	0	0	0	0	0
	12:00 PM	7	73	7	17	89	74	29	43	13	5	53	16	426	0	0	0	0	0
	12:15 PM	12	71	8	18	73	84	46	51	10	7	48	17	445	0	0	0	0	0
	12:30 PM	7	55	4	14	87	65	48	56	6	4	49	12	407	0	0	0	0	0
	12:45 PM	11	62	8	14	117	93	49	43	5	4	35	13	454	0	1	0	0	1
	VOLUMES	66	546	54	118	656	592	354	374	65	48	339	119	3,332	0	1	0	0	1
	APPROACH %	10%	82%	8%	9%	48%	43%	45%	47%	8%	9%	67%	24%						
	APP/DEPART	666	/	1,020	1,367	/	769	793	/	546	506	/	997	0					
	BEGIN PEAK HR		12:00 PM																
	VOLUMES	37	261	27	63	366	316	172	193	34	20	185	58	1,733					
	APPROACH %	11%	80%	8%	8%	49%	42%	43%	48%	9%	8%	70%	22%						
	PEAK HR FACTOR		0.893			0.829			0.907			0.889		0.952					
	APP/DEPART	325	/	492	746	/	420	399	/	283	263	/	538	0					
PM	4:00 PM	8	64	8	9	72	57	39	35	11	3	28	20	354	0	1	0	0	1
	4:15 PM	8	72	5	10	84	75	40	38	9	5	52	19	417	0	0	0	0	0
	4:30 PM	6	67	4	7	86	80	42	34	6	11	57	10	410	0	0	0	0	0
	4:45 PM	9	69	4	18	79	77	44	36	10	11	36	10	403	0	0	0	0	0
	5:00 PM	6	55	6	9	67	67	49	45	3	4	48	11	370	0	0	0	0	0
	5:15 PM	10	61	6	8	73	66	27	30	7	3	55	10	356	0	0	0	0	0
	5:30 PM	8	56	5	18	69	62	39	54	8	5	41	18	383	0	0	0	0	0
	5:45 PM	7	55	7	12	76	52	38	43	9	5	37	9	350	0	0	0	0	0
	6:00 PM	6	53	7	19	74	65	40	43	11	6	36	15	375	0	0	0	0	0
	6:15 PM	8	66	5	15	86	65	34	33	4	6	36	19	377	0	0	0	0	0
	6:30 PM	7	51	5	16	81	60	46	33	10	7	43	11	370	0	2	0	0	2
	6:45 PM	3	55	4	21	90	62	26	31	5	6	34	10	347	0	0	0	0	0
	VOLUMES	86	724	66	162	937	788	464	455	93	72	503	162	4,515	0	3	0	0	3
	APPROACH %	10%	83%	8%	9%	50%	42%	46%	45%	9%	10%	68%	22%						
	APP/DEPART	876	/	1,353	1,890	/	1,102	1,012	/	683	737	/	1,377	0					
	BEGIN PEAK HR		4:15 PM																
	VOLUMES	29	263	19	44	316	299	175	153	28	31	193	50	1,600					
	APPROACH %	9%	85%	6%	7%	48%	45%	49%	43%	8%	11%	70%	18%						
	PEAK HR FACTOR		0.915			0.947			0.918			0.878		0.959					
	APP/DEPART	311	/	488	659	/	375	356	/	216	274	/	521	0					



AimTD LLC

TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

T1018

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:				
Sat, Oct 7, 23	LOCATION:	Ontario	PROJECT #:	SC4225
	NORTH & SOUTH:	Euclid Ave	LOCATION #:	24
	EAST & WEST:	Chino Ave	CONTROL:	SIGNAL

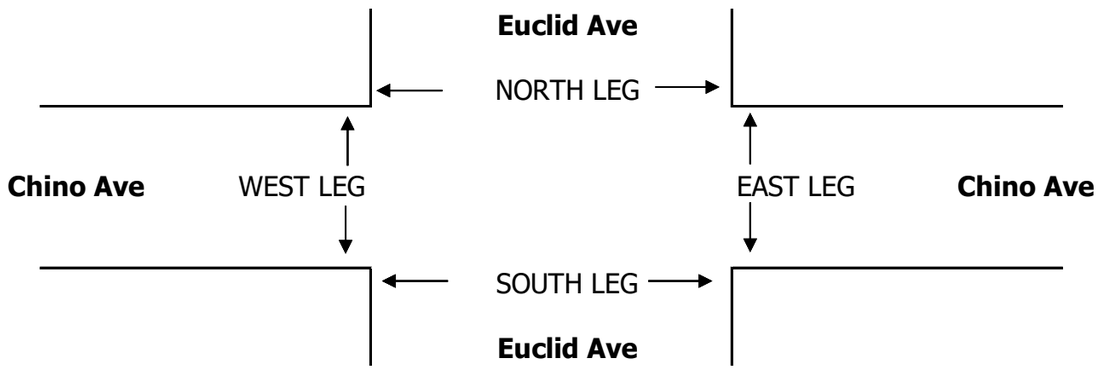
NOTES:

AM / PM / MD / OTHER / OTHER

▲ N ◄ W E ► S ▼

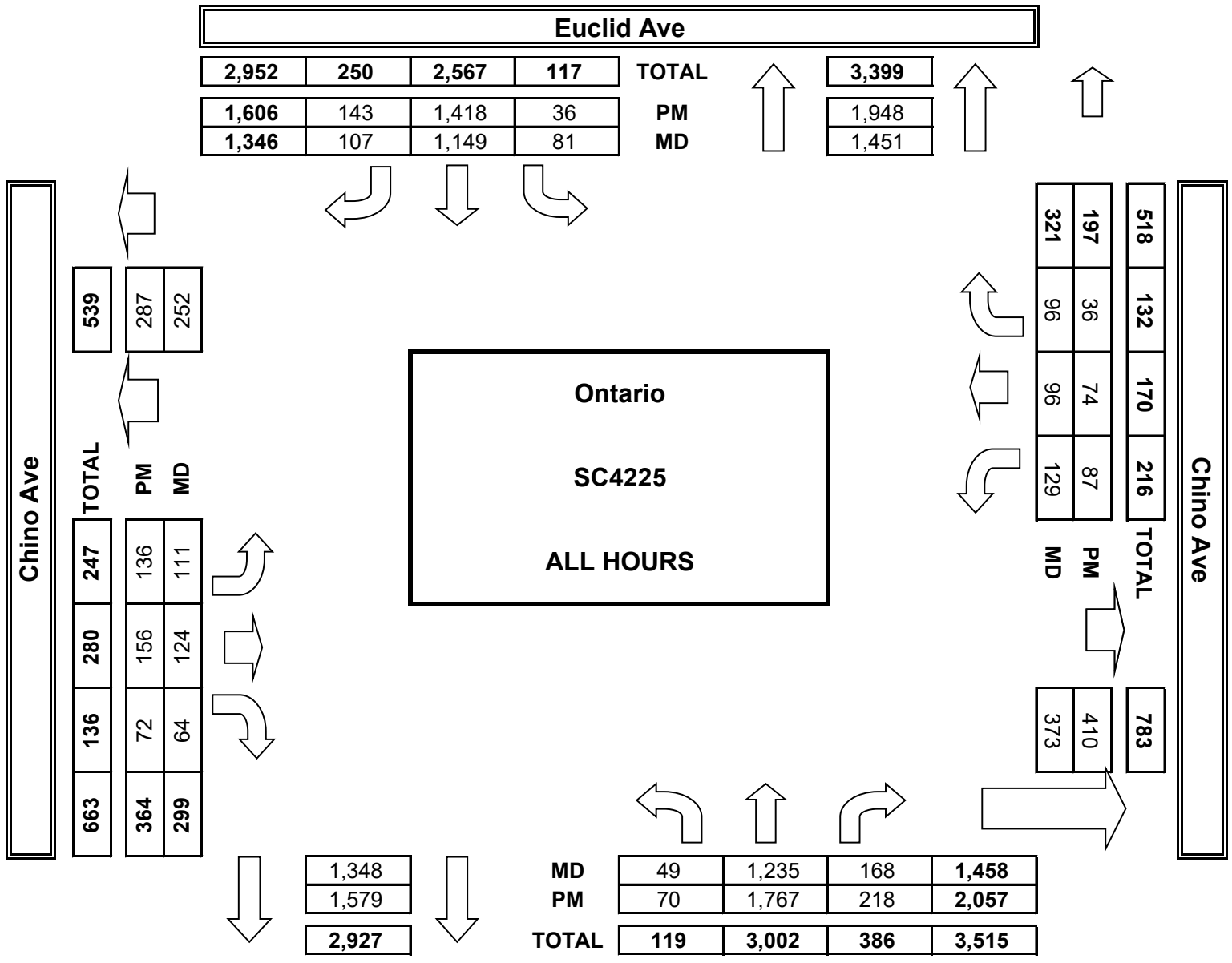
		NORTHBOUND Euclid Ave			SOUTHBOUND Euclid Ave			EASTBOUND Chino Ave			WESTBOUND Chino Ave			
		NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	LANES:	1	2	1	1	2	1	1	1	1	0	1	0	
MD	11:00 AM	10	173	15	11	123	16	13	7	10	15	11	18	422
	11:15 AM	5	147	14	18	147	13	13	25	6	19	10	9	426
	11:30 AM	4	147	32	5	144	10	19	18	7	14	17	11	428
	11:45 AM	5	141	18	13	122	12	15	16	9	14	15	17	397
	12:00 PM	5	144	27	12	163	10	11	18	8	19	10	8	435
	12:15 PM	6	161	20	8	162	14	20	14	7	16	13	12	453
	12:30 PM	5	156	20	8	115	12	13	13	9	16	16	10	393
	12:45 PM	9	166	22	6	173	20	7	13	8	16	4	11	455
	VOLUMES	49	1,235	168	81	1,149	107	111	124	64	129	96	96	3,424
	APPROACH %	3%	85%	12%	6%	85%	8%	37%	41%	21%	40%	30%	30%	
	APP/DEPART	1,458	/	1,451	1,346	/	1,348	299	/	373	321	/	252	0
	BEGIN PEAK HR		12:00 PM											
	VOLUMES	25	627	89	34	613	56	51	58	32	67	43	41	1,746
	APPROACH %	3%	84%	12%	5%	86%	8%	36%	41%	23%	44%	28%	27%	
	PEAK HR FACTOR		0.945			0.886			0.860			0.899		0.957
	APP/DEPART	745	/	725	709	/	716	141	/	181	151	/	124	0
PM	4:00 PM	5	144	18	3	126	9	13	7	11	13	4	1	354
	4:15 PM	4	148	25	2	119	13	11	21	8	8	6	3	368
	4:30 PM	4	141	25	4	117	13	13	19	4	9	3	6	358
	4:45 PM	5	143	16	5	121	18	7	10	5	7	9	1	347
	5:00 PM	3	155	17	3	118	11	8	11	8	9	6	4	353
	5:15 PM	4	140	12	2	118	5	13	16	7	6	8	1	332
	5:30 PM	7	202	22	2	132	7	13	18	2	5	6	1	417
	5:45 PM	6	150	22	1	128	17	17	12	3	6	8	4	374
	6:00 PM	8	151	16	3	128	15	5	13	5	4	6	7	361
	6:15 PM	9	148	17	2	104	14	10	12	8	5	6	1	336
	6:30 PM	7	122	17	4	104	12	21	10	4	5	6	3	315
	6:45 PM	8	123	11	5	103	9	5	7	7	10	6	4	298
	VOLUMES	70	1,767	218	36	1,418	143	136	156	72	87	74	36	4,224
	APPROACH %	3%	86%	11%	2%	88%	9%	37%	43%	20%	44%	38%	18%	
	APP/DEPART	2,057	/	1,948	1,606	/	1,579	364	/	410	197	/	287	0
	BEGIN PEAK HR		5:30 PM											
	VOLUMES	30	651	77	8	492	53	45	55	18	20	26	13	1,493
	APPROACH %	4%	86%	10%	1%	88%	10%	38%	47%	15%	34%	44%	22%	
	PEAK HR FACTOR		0.819			0.946			0.894			0.819		0.891
	APP/DEPART	760	/	712	556	/	532	118	/	140	59	/	109	0

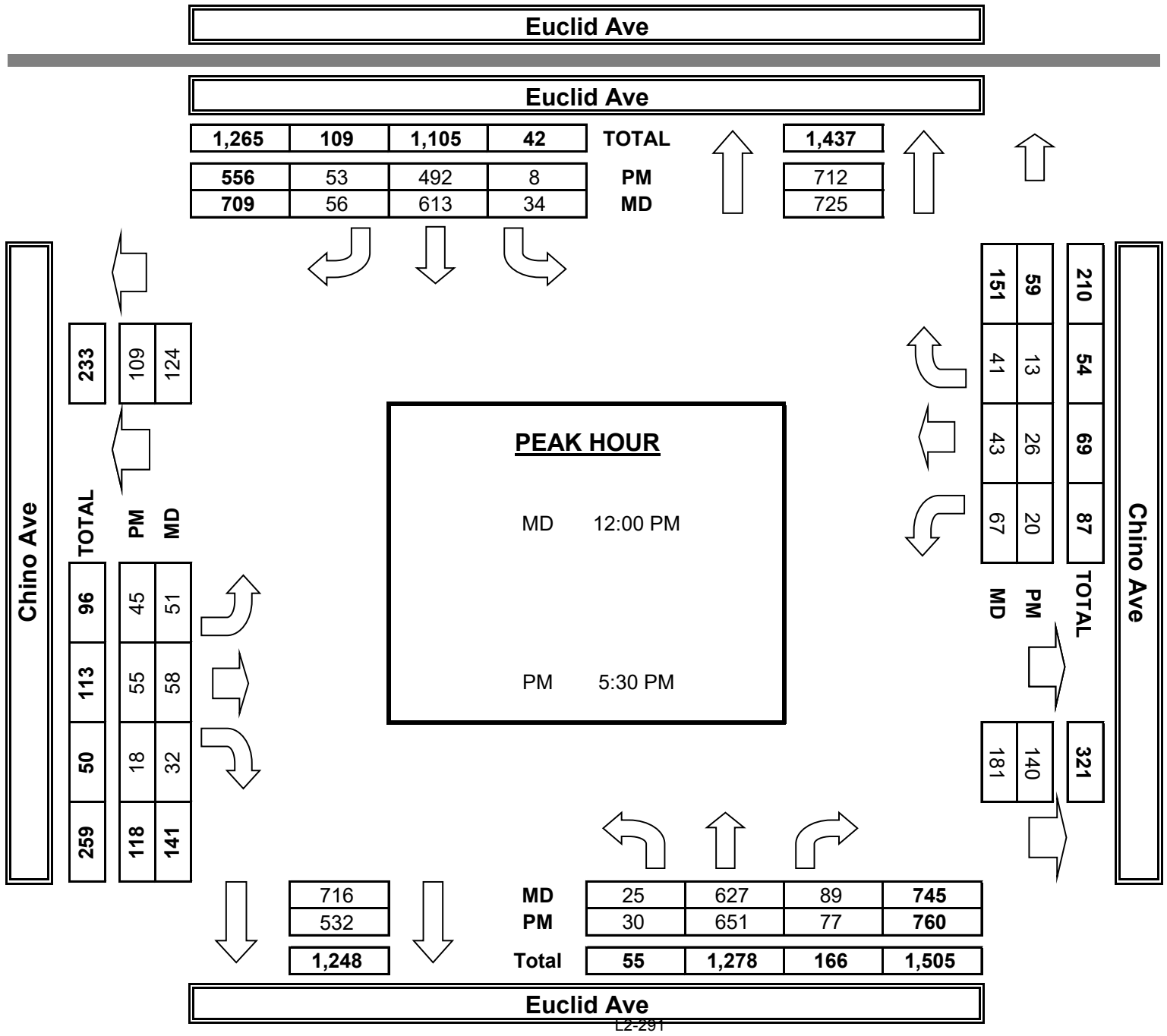
U-TURNS					
	NB	SB	EB	WB	TTL
11:00 AM	1	1	0	0	2
11:15 AM	1	0	0	0	1
11:30 AM	0	2	0	0	2
11:45 AM	0	0	0	0	0
12:00 PM	1	1	0	0	2
12:15 PM	1	1	0	0	2
12:30 PM	2	3	0	0	5
12:45 PM	0	1	0	0	1
	6	9	0	0	15
4:00 PM	0	0	0	0	0
4:15 PM	0	2	0	0	2
4:30 PM	0	1	0	0	1
4:45 PM	0	0	0	0	0
5:00 PM	0	1	0	0	1
5:15 PM	0	1	0	0	1
5:30 PM	1	1	0	0	2
5:45 PM	0	1	0	0	1
6:00 PM	1	1	0	0	2
6:15 PM	0	0	0	0	0
6:30 PM	0	0	0	0	0
6:45 PM	0	1	0	0	1
	2	9	0	0	11



AimTD LLC

TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

T10182

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:				
Sat, Oct 7, 23	LOCATION:	Ontario	PROJECT #:	SC4225
	NORTH & SOUTH:	S Walker Ave	LOCATION #:	26
	EAST & WEST:	Chino Ave	CONTROL:	STOP ALL

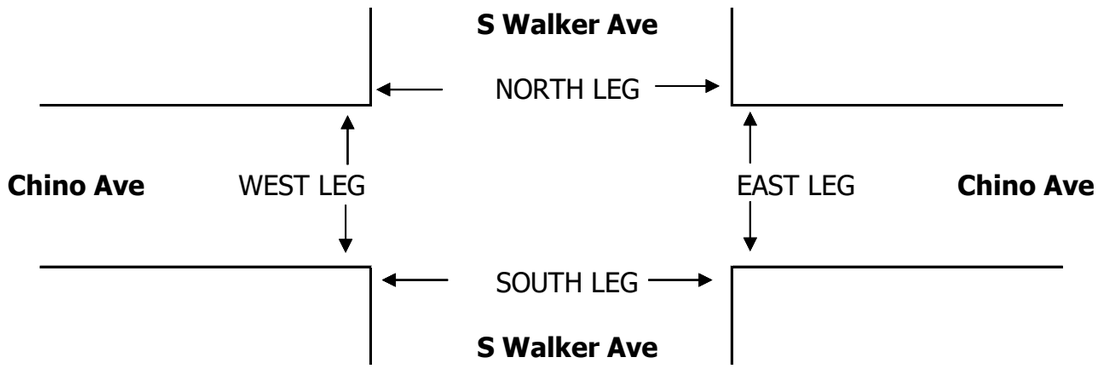
NOTES:

AM / PM / MD / OTHER / OTHER

▲ N ◄ W E ► S ▼

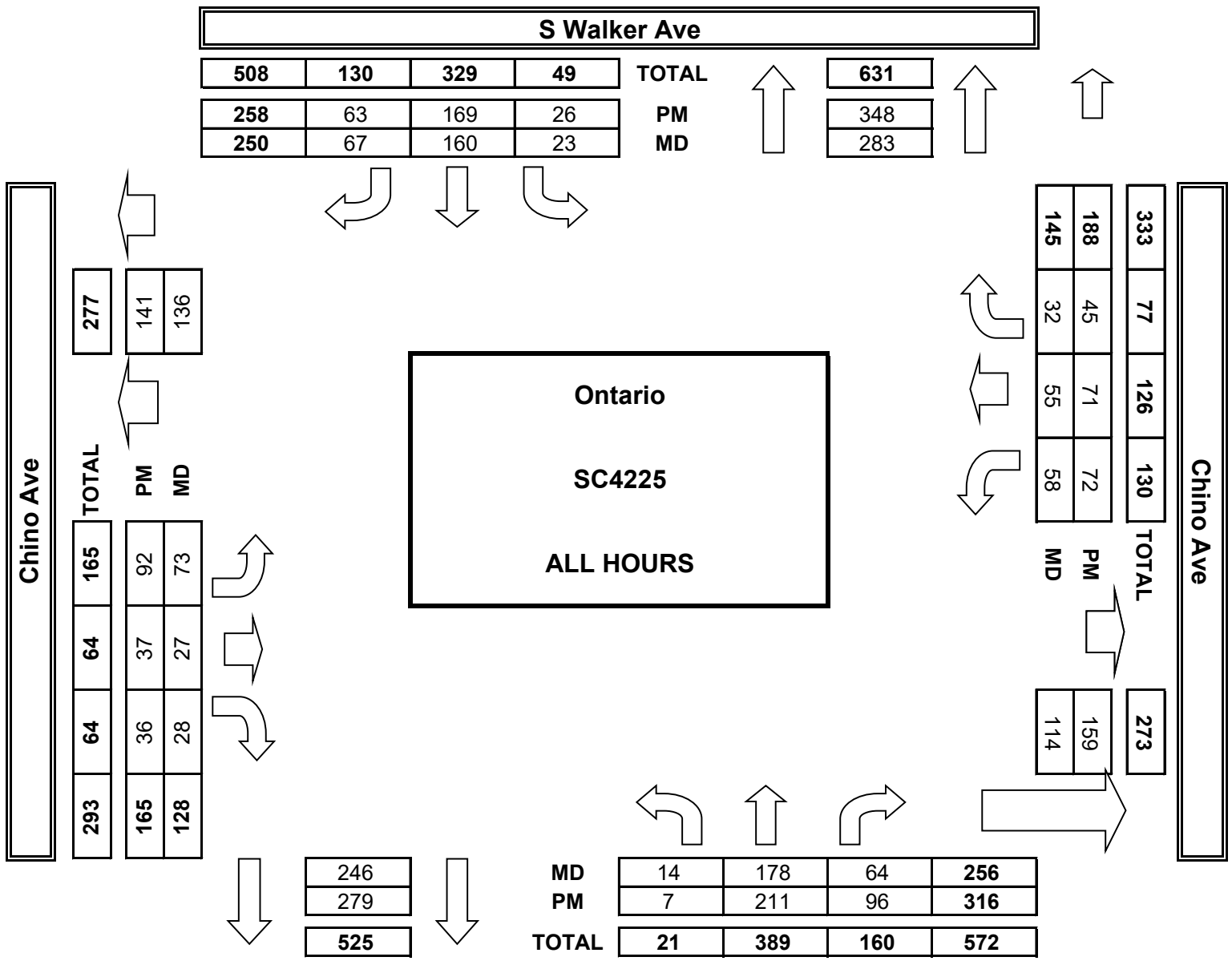
		NORTHBOUND S Walker Ave			SOUTHBOUND S Walker Ave			EASTBOUND Chino Ave			WESTBOUND Chino Ave			
	LANES:	NL 0	NT 1	NR 0	SL 0	ST 1	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL
MD	11:00 AM	0	16	8	1	21	9	10	3	3	9	10	4	94
	11:15 AM	1	22	5	3	19	7	15	3	3	9	9	3	99
	11:30 AM	4	19	10	2	24	8	8	2	2	6	6	1	92
	11:45 AM	1	17	8	3	19	5	9	1	4	5	6	6	84
	12:00 PM	1	29	10	4	20	11	9	6	5	6	4	5	110
	12:15 PM	4	16	11	3	17	13	5	4	3	8	5	4	93
	12:30 PM	1	29	7	1	21	6	9	1	6	8	7	4	100
	12:45 PM	2	30	5	6	19	8	8	7	2	7	8	5	107
	VOLUMES	14	178	64	23	160	67	73	27	28	58	55	32	779
	APPROACH %	5%	70%	25%	9%	64%	27%	57%	21%	22%	40%	38%	22%	
	APP/DEPART	256	/	283	250	/	246	128	/	114	145	/	136	0
	BEGIN PEAK HR		12:00 PM											
	VOLUMES	8	104	33	14	77	38	31	18	16	29	24	18	410
	APPROACH %	6%	72%	23%	11%	60%	29%	48%	28%	25%	41%	34%	25%	
	PEAK HR FACTOR		0.906			0.921			0.813			0.888		0.932
	APP/DEPART	145	/	153	129	/	122	65	/	65	71	/	70	0
PM	4:00 PM	0	18	7	2	17	9	12	6	5	4	9	3	92
	4:15 PM	1	22	13	2	13	15	13	3	4	7	8	3	104
	4:30 PM	1	19	13	0	20	6	10	3	2	9	6	5	94
	4:45 PM	2	12	10	1	21	8	8	3	1	2	5	6	79
	5:00 PM	0	20	9	3	12	3	6	6	7	5	12	6	89
	5:15 PM	0	14	8	0	14	1	3	1	5	6	6	7	65
	5:30 PM	2	18	5	6	16	5	6	2	1	5	6	6	78
	5:45 PM	0	21	6	4	9	4	8	2	3	9	4	0	70
	6:00 PM	1	18	6	2	15	2	10	4	2	7	8	2	77
	6:15 PM	0	12	8	1	14	3	6	3	5	7	4	1	64
	6:30 PM	0	23	0	1	11	3	6	3	1	4	2	1	55
	6:45 PM	0	14	11	4	7	4	4	1	0	7	1	5	58
	VOLUMES	7	211	96	26	169	63	92	37	36	72	71	45	927
	APPROACH %	2%	67%	30%	10%	66%	24%	56%	22%	22%	38%	38%	24%	
	APP/DEPART	316	/	348	258	/	279	165	/	159	188	/	141	0
	BEGIN PEAK HR		4:00 PM											
	VOLUMES	4	71	43	5	71	38	43	15	12	22	28	17	369
	APPROACH %	3%	60%	36%	4%	62%	33%	61%	21%	17%	33%	42%	25%	
	PEAK HR FACTOR		0.819			0.950			0.761			0.838		0.887
	APP/DEPART	118	/	131	114	/	105	70	/	63	67	/	70	0

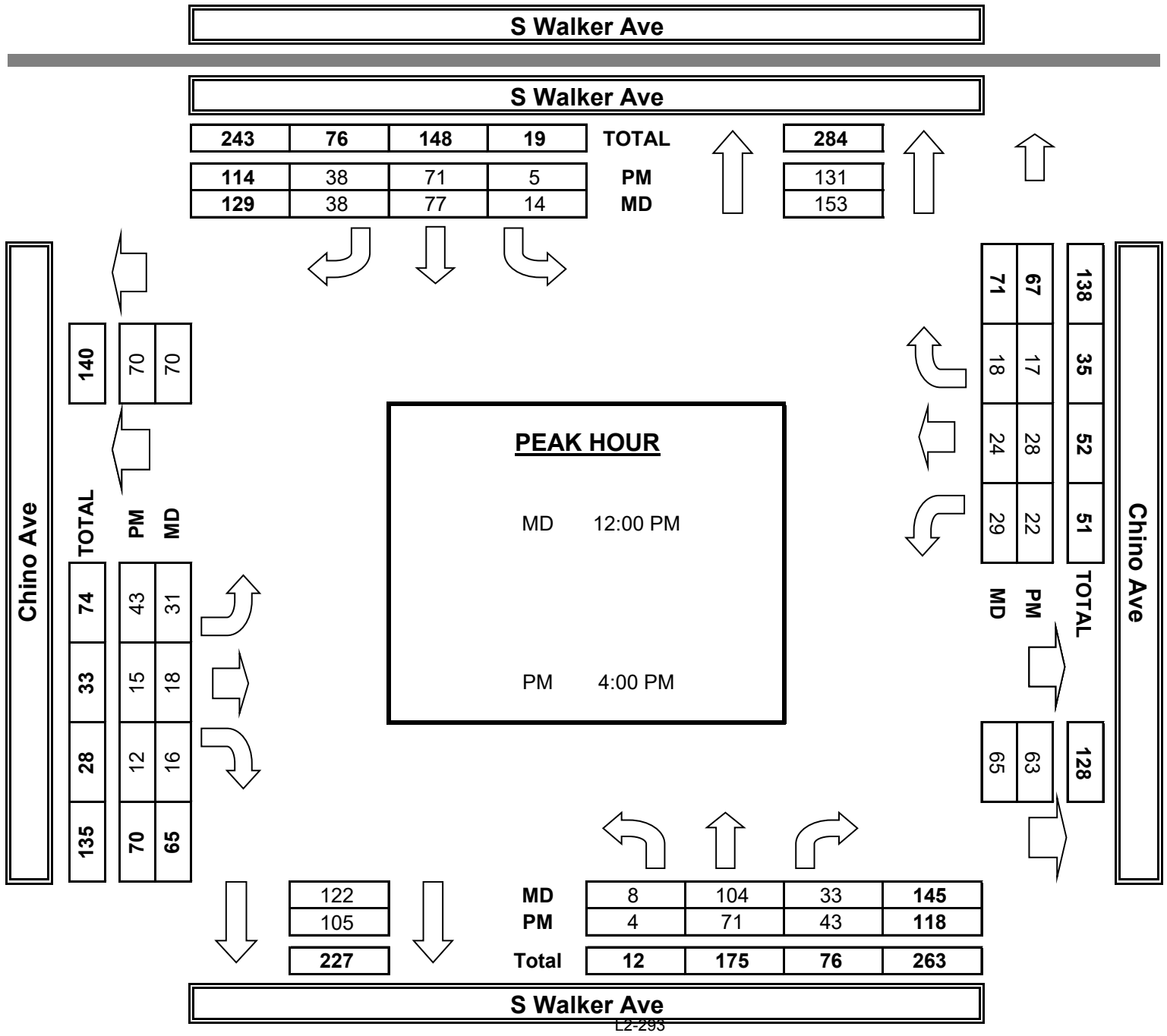
U-TURNS				
NB	SB	EB	WB	TTL
0	0	0	0	
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
1	0	0	0	1
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
1	0	0	0	1
2	0	0	0	2



AimTD LLC

TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

T1018

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:				
Sat, Oct 7, 23	LOCATION:	Ontario	PROJECT #:	SC4225
	NORTH & SOUTH:	Vineyard Ave	LOCATION #:	27
	EAST & WEST:	Chino Ave	CONTROL:	STOP N

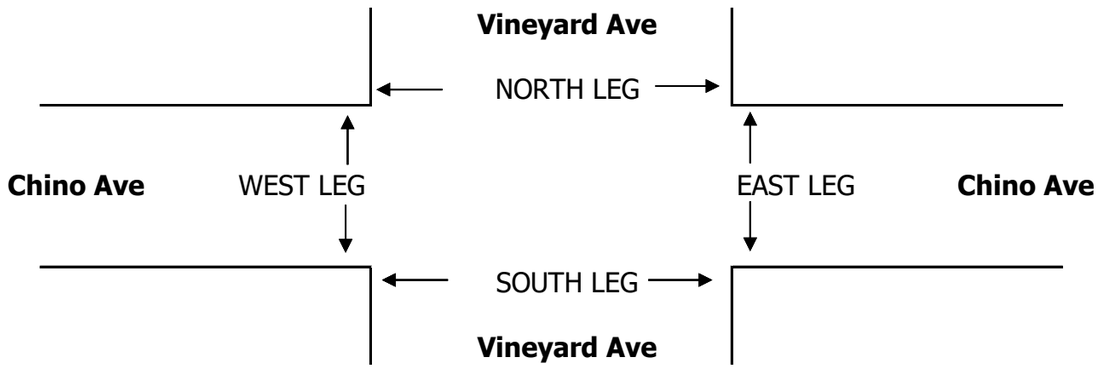
NOTES:

AM / PM / MD / OTHER / OTHER

◄ W E ► ▲ N S ▼

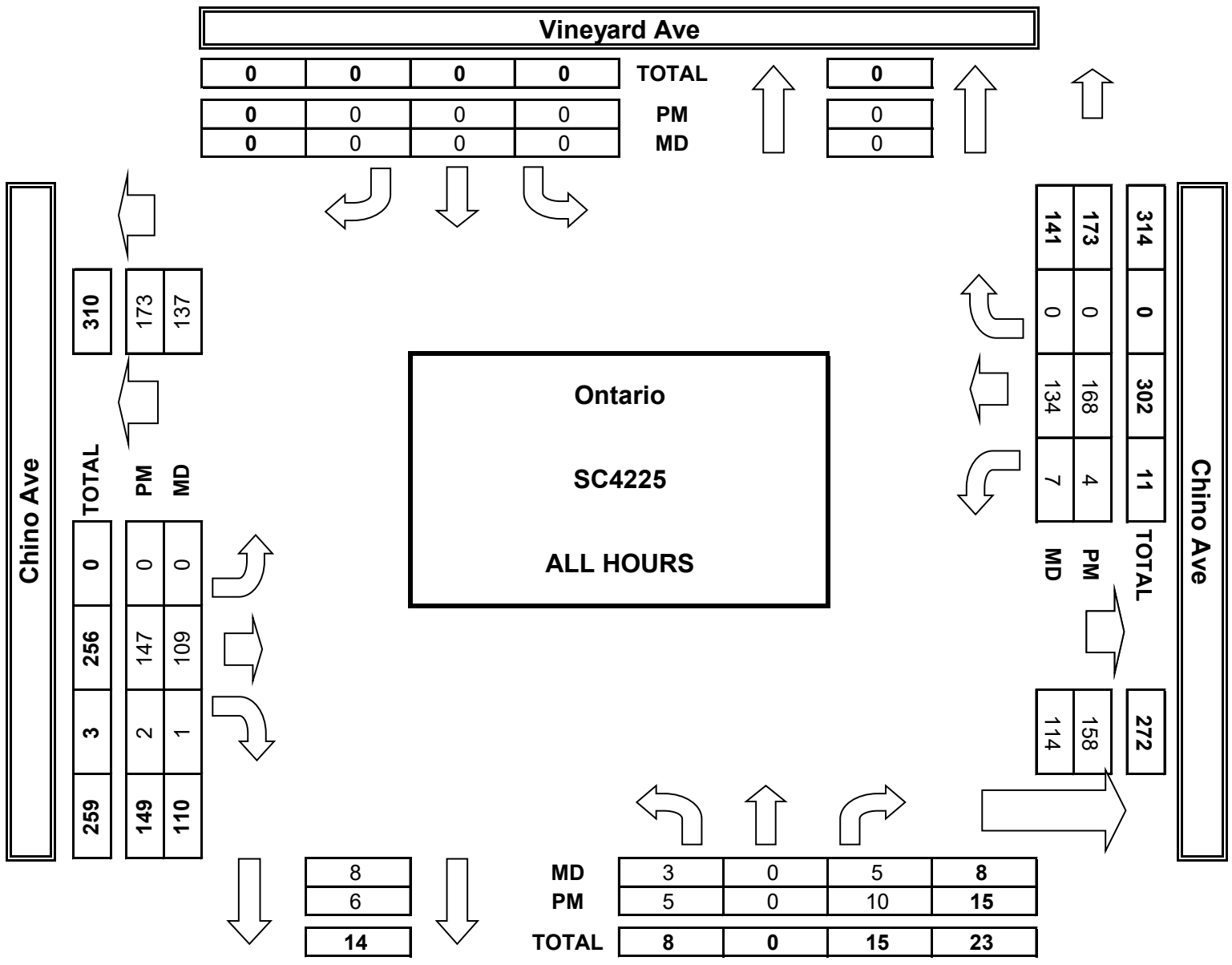
	NORTHBOUND Vineyard Ave			SOUTHBOUND Vineyard Ave			EASTBOUND Chino Ave			WESTBOUND Chino Ave				U-TURNS				
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB	TTL
LANES:	0	X	0	X	X	X	X	1	0	0	1	X		0	0	0	0	

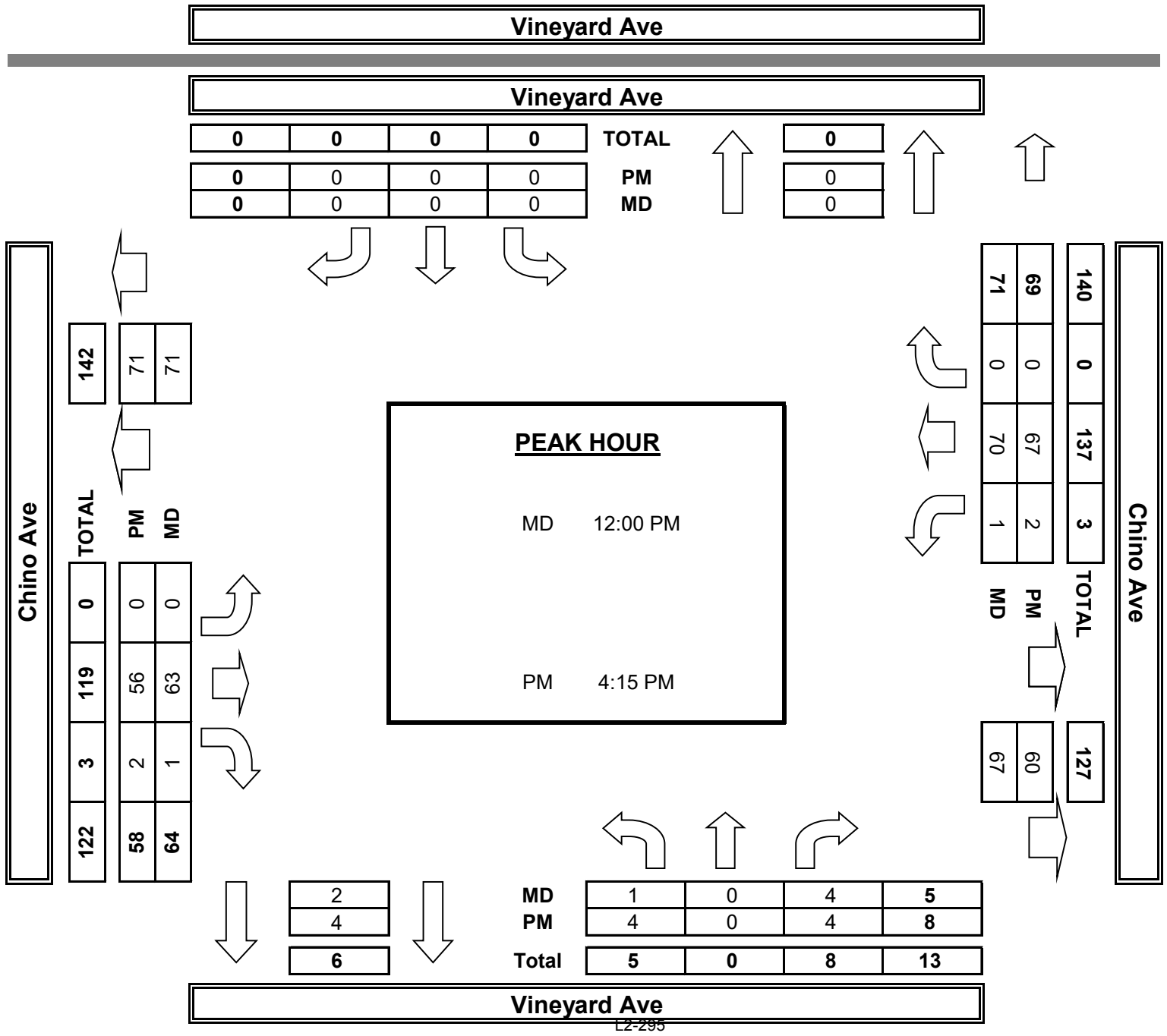
MD	11:00 AM	0	0	1	0	0	0	0	8	0	1	20	0	30	0	0	0	0	0
	11:15 AM	0	0	0	0	0	0	0	11	0	2	17	0	30	0	0	0	0	0
	11:30 AM	0	0	0	0	0	0	0	10	0	2	14	0	26	0	0	0	0	0
	11:45 AM	2	0	0	0	0	0	0	17	0	1	13	0	33	0	0	0	0	0
	12:00 PM	1	0	1	0	0	0	0	19	0	0	14	0	35	0	0	0	0	0
	12:15 PM	0	0	0	0	0	0	0	16	0	0	18	0	34	0	0	0	0	0
	12:30 PM	0	0	1	0	0	0	0	11	0	0	17	0	29	0	0	0	0	0
	12:45 PM	0	0	2	0	0	0	0	17	1	1	21	0	42	0	0	0	0	0
	VOLUMES	3	0	5	0	0	0	0	109	1	7	134	0	259	0	0	0	0	0
	APPROACH %	38%	0%	63%	0%	0%	0%	0%	99%	1%	5%	95%	0%						
	APP/DEPART	8	/	0	0	/	8	110	/	114	141	/	137	0					
	BEGIN PEAK HR		12:00 PM																
	VOLUMES	1	0	4	0	0	0	0	63	1	1	70	0	140					
	APPROACH %	20%	0%	80%	0%	0%	0%	0%	98%	2%	1%	99%	0%						
	PEAK HR FACTOR		0.625			0.000			0.842			0.807		0.833					
	APP/DEPART	5	/	0	0	/	2	64	/	67	71	/	71	0					
PM	4:00 PM	0	0	2	0	0	0	0	18	0	0	15	0	35	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	14	2	0	19	0	35	0	0	0	0	0
	4:30 PM	2	0	0	0	0	0	0	7	0	0	17	0	26	0	0	0	0	0
	4:45 PM	1	0	1	0	0	0	0	15	0	1	13	0	31	0	0	0	0	0
	5:00 PM	1	0	3	0	0	0	0	20	0	1	18	0	43	0	0	0	0	0
	5:15 PM	0	0	1	0	0	0	0	9	0	0	17	0	27	0	0	0	1	1
	5:30 PM	0	0	0	0	0	0	0	11	0	1	15	0	27	0	0	0	0	0
	5:45 PM	1	0	0	0	0	0	0	11	0	0	12	0	24	0	0	0	0	0
	6:00 PM	0	0	1	0	0	0	0	10	0	0	15	0	26	0	0	0	0	0
	6:15 PM	0	0	1	0	0	0	0	13	0	0	9	0	23	0	0	0	0	0
	6:30 PM	0	0	1	0	0	0	0	3	0	1	7	0	12	0	0	0	0	0
	6:45 PM	0	0	0	0	0	0	0	16	0	0	11	0	27	0	0	0	0	0
	VOLUMES	5	0	10	0	0	0	0	147	2	4	168	0	337	0	0	0	1	1
	APPROACH %	33%	0%	67%	0%	0%	0%	0%	99%	1%	2%	97%	0%						
	APP/DEPART	15	/	0	0	/	6	149	/	158	173	/	173	0					
	BEGIN PEAK HR		4:15 PM																
	VOLUMES	4	0	4	0	0	0	0	56	2	2	67	0	135					
	APPROACH %	50%	0%	50%	0%	0%	0%	0%	97%	3%	3%	97%	0%						
	PEAK HR FACTOR		0.500			0.000			0.725			0.908		0.785					
	APP/DEPART	8	/	0	0	/	4	58	/	60	69	/	71	0					



AimTD LLC

TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

T10182

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:				
Sat, Oct 7, 23	LOCATION:	Ontario	PROJECT #:	SC4225
	NORTH & SOUTH:	Schaefer Ave	LOCATION #:	28
	EAST & WEST:	Chino Ave	CONTROL:	NO CONTROL

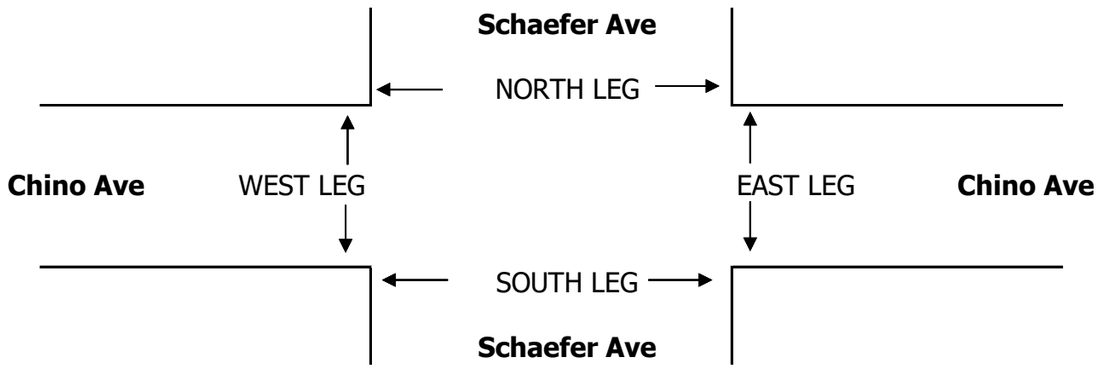
NOTES:

AM / PM / MD / OTHER / OTHER

▲ N ◄ W E ► S ▼

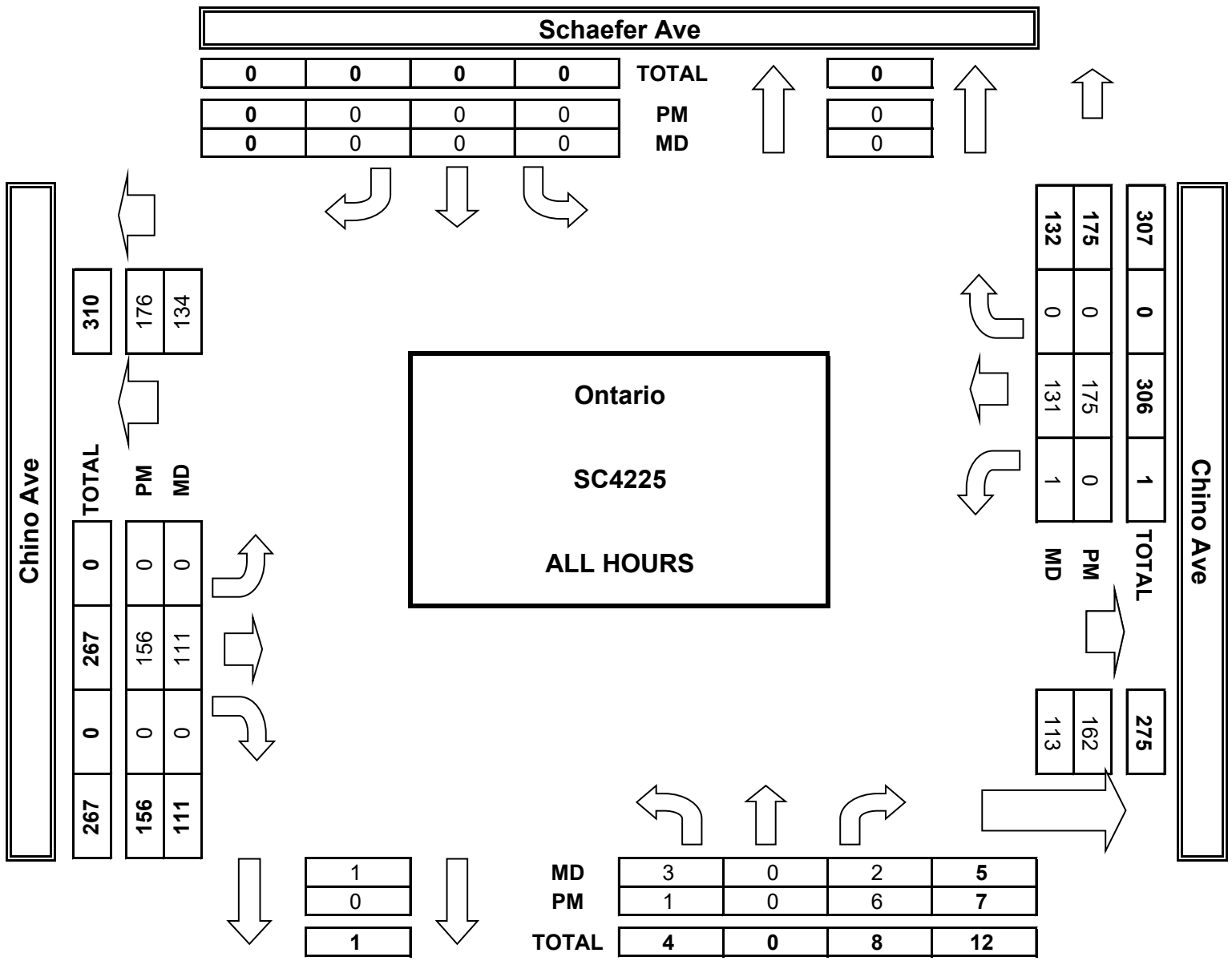
	NORTHBOUND Schaefer Ave			SOUTHBOUND Schaefer Ave			EASTBOUND Chino Ave			WESTBOUND Chino Ave				U-TURNS				
LANES:	NL 0	NT X	NR 0	SL X	ST X	SR X	EL X	ET 1	ER 0	WL 0	WT 1	WR X	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL

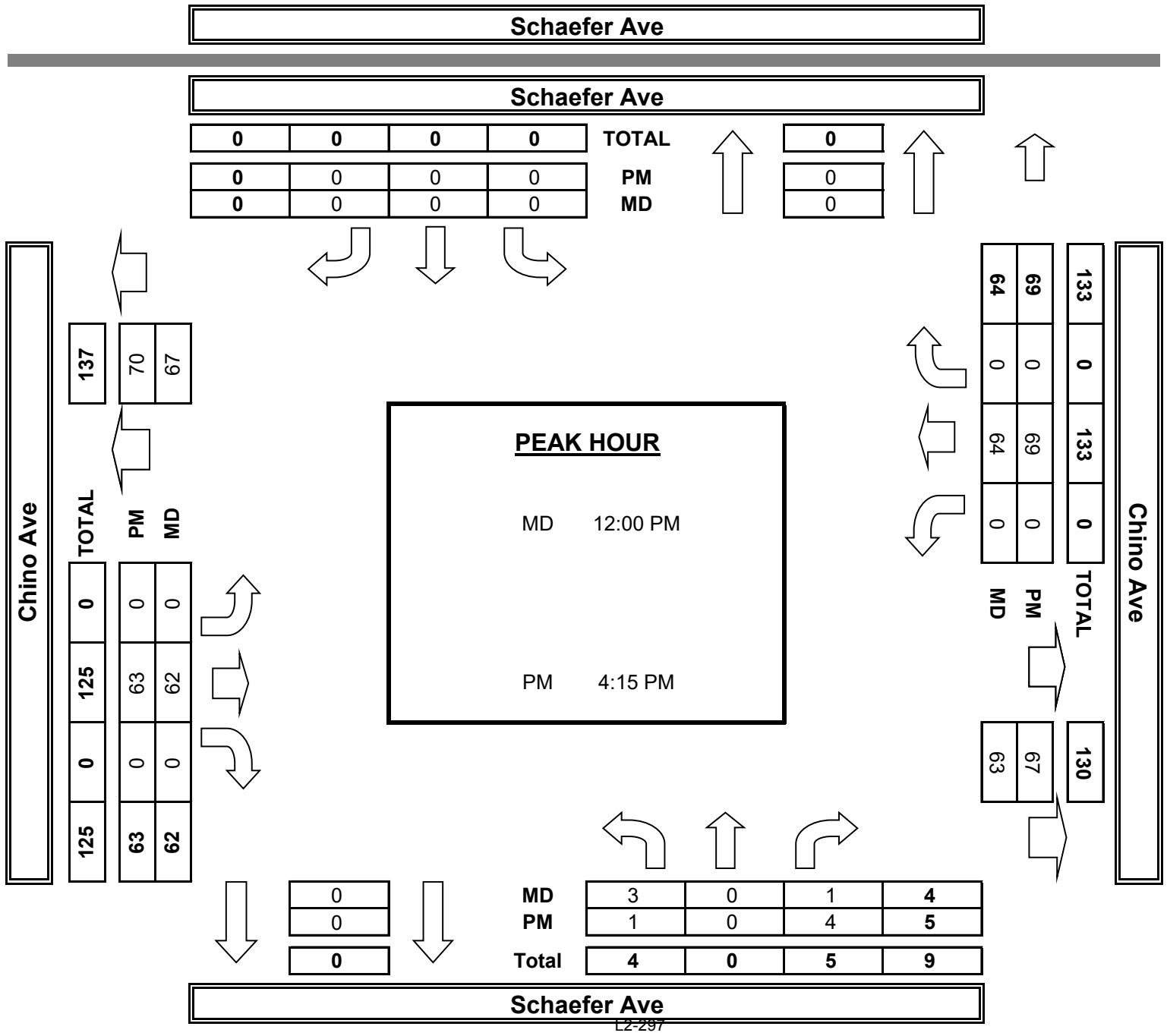
MD	11:00 AM	0	0	0	0	0	0	0	11	0	1	21	0	33	0	0	0	0	0
	11:15 AM	0	0	1	0	0	0	0	13	0	0	18	0	32	0	0	0	0	0
	11:30 AM	0	0	0	0	0	0	0	8	0	0	14	0	22	0	0	0	0	0
	11:45 AM	0	0	0	0	0	0	0	17	0	0	14	0	31	0	0	0	0	0
	12:00 PM	0	0	0	0	0	0	0	18	0	0	14	0	32	0	0	0	0	0
	12:15 PM	2	0	1	0	0	0	0	18	0	0	16	0	37	0	0	0	0	0
	12:30 PM	1	0	0	0	0	0	0	11	0	0	17	0	29	0	0	0	0	0
	12:45 PM	0	0	0	0	0	0	0	15	0	0	17	0	32	0	0	0	0	0
	VOLUMES	3	0	2	0	0	0	0	111	0	1	131	0	248	0	0	0	0	0
	APPROACH %	60%	0%	40%	0%	0%	0%	0%	100%	0%	1%	99%	0%						
	APP/DEPART	5	/	0	0	/	1	111	/	113	132	/	134	0					
	BEGIN PEAK HR		12:00 PM																
	VOLUMES	3	0	1	0	0	0	0	62	0	0	64	0	130					
	APPROACH %	75%	0%	25%	0%	0%	0%	0%	100%	0%	0%	100%	0%						
	PEAK HR FACTOR		0.333			0.000			0.861			0.941		0.878					
	APP/DEPART	4	/	0	0	/	0	62	/	63	64	/	67	0					
PM	4:00 PM	0	0	0	0	0	0	0	20	0	0	15	0	35	0	0	0	0	0
	4:15 PM	0	0	2	0	0	0	0	15	0	0	20	0	37	0	0	0	0	0
	4:30 PM	0	0	1	0	0	0	0	11	0	0	15	0	27	0	0	0	0	0
	4:45 PM	1	0	0	0	0	0	0	10	0	0	17	0	28	0	0	0	0	0
	5:00 PM	0	0	1	0	0	0	0	27	0	0	17	0	45	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	8	0	0	18	0	26	0	0	0	0	0
	5:30 PM	0	0	1	0	0	0	0	12	0	0	17	0	30	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	9	0	0	14	0	23	0	0	0	0	0
	6:00 PM	0	0	1	0	0	0	0	14	0	0	14	0	29	0	0	0	0	0
	6:15 PM	0	0	0	0	0	0	0	16	0	0	10	0	26	0	0	0	0	0
	6:30 PM	0	0	0	0	0	0	0	3	0	0	8	0	11	0	0	0	0	0
	6:45 PM	0	0	0	0	0	0	0	11	0	0	10	0	21	0	0	0	0	0
	VOLUMES	1	0	6	0	0	0	0	156	0	0	175	0	338	0	0	0	0	0
	APPROACH %	14%	0%	86%	0%	0%	0%	0%	100%	0%	0%	100%	0%						
	APP/DEPART	7	/	0	0	/	0	156	/	162	175	/	176	0					
	BEGIN PEAK HR		4:15 PM																
	VOLUMES	1	0	4	0	0	0	0	63	0	0	69	0	137					
	APPROACH %	20%	0%	80%	0%	0%	0%	0%	100%	0%	0%	100%	0%						
	PEAK HR FACTOR		0.625			0.000			0.583			0.863		0.761					
	APP/DEPART	5	/	0	0	/	0	63	/	67	69	/	70	0					



AimTD LLC

TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

T10182

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:				
Sat, Oct 7, 23	LOCATION:	Ontario	PROJECT #:	SC4225
	NORTH & SOUTH:	Ontario Ave	LOCATION #:	29
	EAST & WEST:	Chino Ave	CONTROL:	STOP N/S

NOTES:

AM / PM / MD / OTHER / OTHER

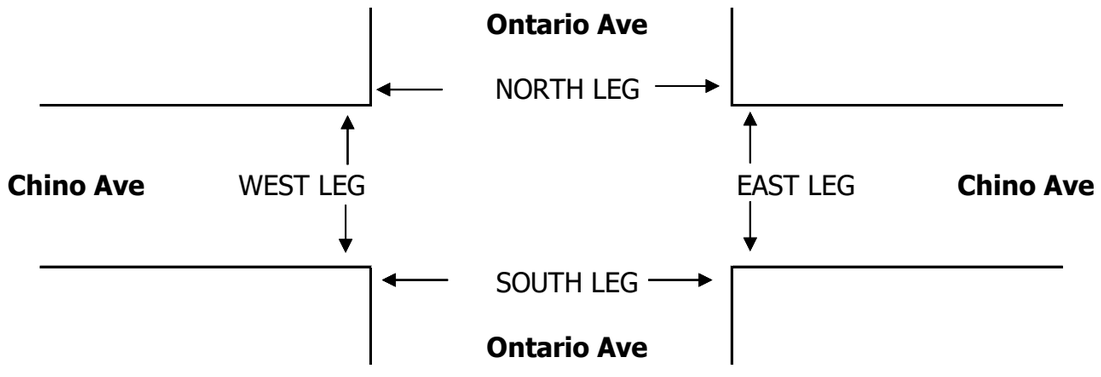
▲ N ◄ W E ► S ▼

		NORTHBOUND Ontario Ave			SOUTHBOUND Ontario Ave			EASTBOUND Chino Ave			WESTBOUND Chino Ave			
	LANES:	NL 0	NT 1	NR 0	SL 0	ST 1	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL

U-TURNS

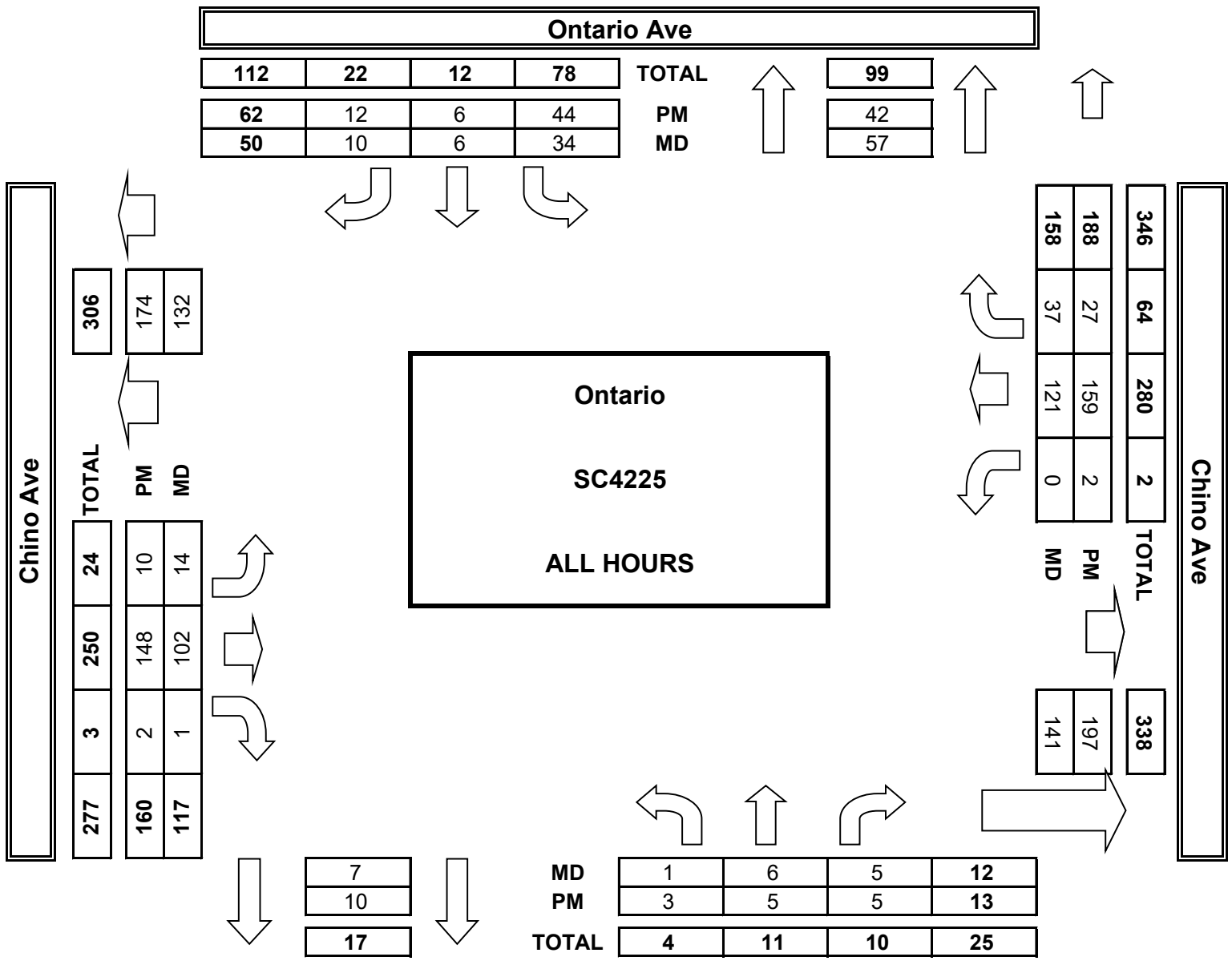
NB	SB	EB	WB	TTL
0	0	0	0	

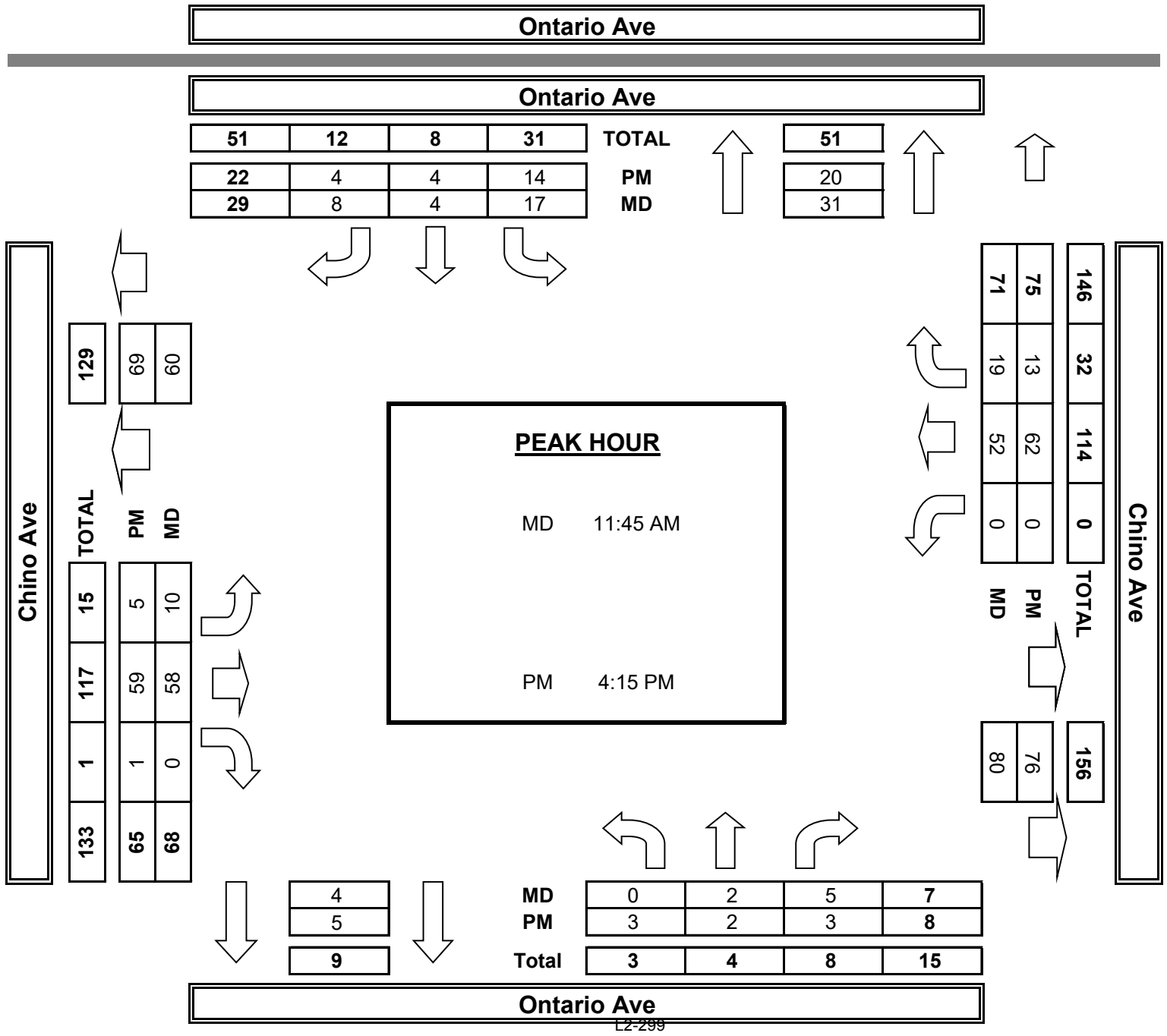
		NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND				U-TURNS				
		NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB	TTL
MD	11:00 AM	1	2	0	5	0	1	0	10	1	0	18	3	41	0	0	0	0	0
	11:15 AM	0	1	0	4	0	1	0	14	0	0	18	5	43	0	0	0	0	0
	11:30 AM	0	0	0	4	2	0	0	8	0	0	14	5	33	0	0	0	0	0
	11:45 AM	0	2	1	7	2	1	0	19	0	0	12	4	48	0	0	0	0	0
	12:00 PM	0	0	1	7	0	2	5	15	0	0	12	5	47	0	0	0	0	0
	12:15 PM	0	0	2	0	1	3	5	11	0	0	13	4	39	0	0	0	0	0
	12:30 PM	0	0	1	3	1	2	0	13	0	0	15	6	41	0	0	0	0	0
	12:45 PM	0	1	0	4	0	0	4	12	0	0	19	5	45	0	0	0	0	0
	VOLUMES	1	6	5	34	6	10	14	102	1	0	121	37	337	0	0	0	0	0
	APPROACH %	8%	50%	42%	68%	12%	20%	12%	87%	1%	0%	77%	23%						
	APP/DEPART	12	/	57	50	/	7	117	/	141	158	/	132	0					
	BEGIN PEAK HR		11:45 AM																
	VOLUMES	0	2	5	17	4	8	10	58	0	0	52	19	175					
	APPROACH %	0%	29%	71%	59%	14%	28%	15%	85%	0%	0%	73%	27%						
	PEAK HR FACTOR		0.583			0.725			0.850			0.845		0.911					
	APP/DEPART	7	/	31	29	/	4	68	/	80	71	/	60	0					
PM	4:00 PM	0	1	0	2	0	0	1	20	0	2	19	2	47	0	0	0	0	0
	4:15 PM	0	1	2	2	3	2	2	16	0	0	15	4	47	0	0	0	0	0
	4:30 PM	2	1	0	4	0	1	0	10	0	0	14	3	35	0	0	0	0	0
	4:45 PM	1	0	0	3	1	1	1	11	1	0	14	4	37	0	0	0	0	0
	5:00 PM	0	0	1	5	0	0	2	22	0	0	19	2	51	0	0	0	0	0
	5:15 PM	0	0	0	3	1	3	0	9	1	0	15	0	32	0	0	0	0	0
	5:30 PM	0	1	0	4	0	2	0	10	0	0	13	2	32	0	0	0	0	0
	5:45 PM	0	0	1	5	0	1	0	9	0	0	12	3	31	0	0	0	0	0
	6:00 PM	0	1	1	2	0	0	1	11	0	0	14	0	30	0	0	0	0	0
	6:15 PM	0	0	0	7	1	2	2	15	0	0	6	2	35	0	0	0	0	0
	6:30 PM	0	0	0	4	0	0	0	4	0	0	7	3	18	0	0	0	0	0
	6:45 PM	0	0	0	3	0	0	1	11	0	0	11	2	28	0	0	0	0	0
	VOLUMES	3	5	5	44	6	12	10	148	2	2	159	27	423	0	0	0	0	0
	APPROACH %	23%	38%	38%	71%	10%	19%	6%	93%	1%	1%	85%	14%						
	APP/DEPART	13	/	42	62	/	10	160	/	197	188	/	174	0					
	BEGIN PEAK HR		4:15 PM																
	VOLUMES	3	2	3	14	4	4	5	59	1	0	62	13	170					
	APPROACH %	38%	25%	38%	64%	18%	18%	8%	91%	2%	0%	83%	17%						
	PEAK HR FACTOR		0.667			0.786			0.677			0.893		0.833					
	APP/DEPART	8	/	20	22	/	5	65	/	76	75	/	69	0					



AimTD LLC

TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

T1018

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Sat, Oct 7, 23

LOCATION: Ontario
NORTH & SOUTH: S Archibald Ave
EAST & WEST: E Chino Ave

PROJECT #: SC4225
LOCATION #: 30
CONTROL: SIGNAL

NOTES:

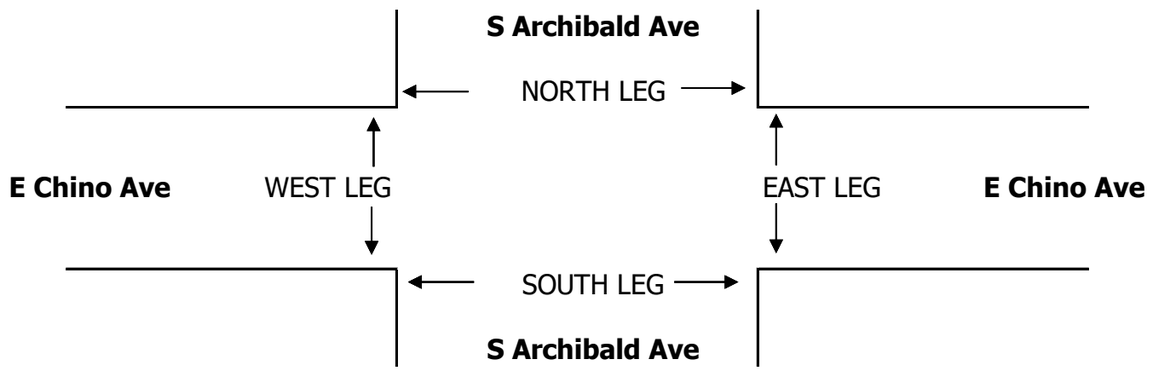
AM
PM
MD
OTHER
OTHER

N
W
E
S

		NORTHBOUND S Archibald Ave			SOUTHBOUND S Archibald Ave			EASTBOUND E Chino Ave			WESTBOUND E Chino Ave			
	LANES:	NL 1	NT 3	NR 0	SL 1	ST 2	SR 0	EL 1	ET 1	ER 0	WL 1	WT 1	WR 1	TOTAL
MD	11:00 AM	12	141	1	15	87	5	8	7	5	2	5	20	308
	11:15 AM	13	183	1	12	133	13	6	5	13	2	7	24	412
	11:30 AM	9	160	1	18	86	11	11	2	8	2	3	23	334
	11:45 AM	9	168	2	13	117	9	12	8	8	2	7	12	367
	12:00 PM	1	179	1	8	140	5	11	7	9	2	9	17	389
	12:15 PM	10	155	1	10	123	5	13	4	7	7	9	13	357
	12:30 PM	7	167	1	14	131	9	15	4	5	0	3	23	379
	12:45 PM	7	169	0	13	142	7	7	5	3	3	4	14	374
	VOLUMES	68	1,322	8	103	959	64	83	42	58	20	47	146	2,926
	APPROACH %	5%	94%	1%	9%	85%	6%	45%	23%	32%	9%	22%	69%	
	APP/DEPART	1,403	/	1,551	1,126	/	1,042	184	/	153	213	/	180	0
	BEGIN PEAK HR		11:15 AM											
	VOLUMES	32	690	5	51	476	38	40	22	38	8	26	76	1,506
	APPROACH %	4%	95%	1%	9%	84%	7%	40%	22%	38%	7%	24%	69%	
	PEAK HR FACTOR		0.926			0.894			0.902			0.833		0.912
	APP/DEPART	730	/	806	565	/	525	101	/	78	110	/	97	0
PM	4:00 PM	6	116	5	11	116	9	9	2	10	1	7	20	312
	4:15 PM	9	181	5	15	117	4	11	9	5	2	8	18	384
	4:30 PM	10	147	1	14	126	4	8	7	6	2	8	20	353
	4:45 PM	5	146	6	10	114	9	9	4	7	1	9	19	339
	5:00 PM	14	159	3	16	109	8	21	10	6	1	8	16	371
	5:15 PM	4	155	2	10	144	7	3	2	2	4	11	19	363
	5:30 PM	5	153	1	17	128	9	5	5	5	4	5	21	358
	5:45 PM	11	150	4	12	114	3	3	6	5	1	6	15	330
	6:00 PM	2	144	5	12	122	7	6	8	4	2	11	14	337
	6:15 PM	7	165	1	16	104	4	11	4	3	3	6	11	335
	6:30 PM	6	135	2	18	107	6	11	7	7	4	5	14	322
	6:45 PM	4	148	2	12	110	5	10	1	6	2	2	12	314
	VOLUMES	83	1,799	37	163	1,411	75	107	65	66	27	86	199	4,130
	APPROACH %	4%	93%	2%	10%	85%	5%	45%	27%	28%	9%	28%	64%	
	APP/DEPART	1,927	/	2,109	1,653	/	1,512	238	/	265	312	/	244	0
	BEGIN PEAK HR		4:15 PM											
	VOLUMES	38	633	15	55	466	25	49	30	24	6	33	73	1,448
	APPROACH %	6%	92%	2%	10%	85%	5%	48%	29%	23%	5%	29%	65%	
	PEAK HR FACTOR		0.881			0.948			0.696			0.933		0.943
	APP/DEPART	687	/	755	546	/	497	103	/	100	112	/	96	0

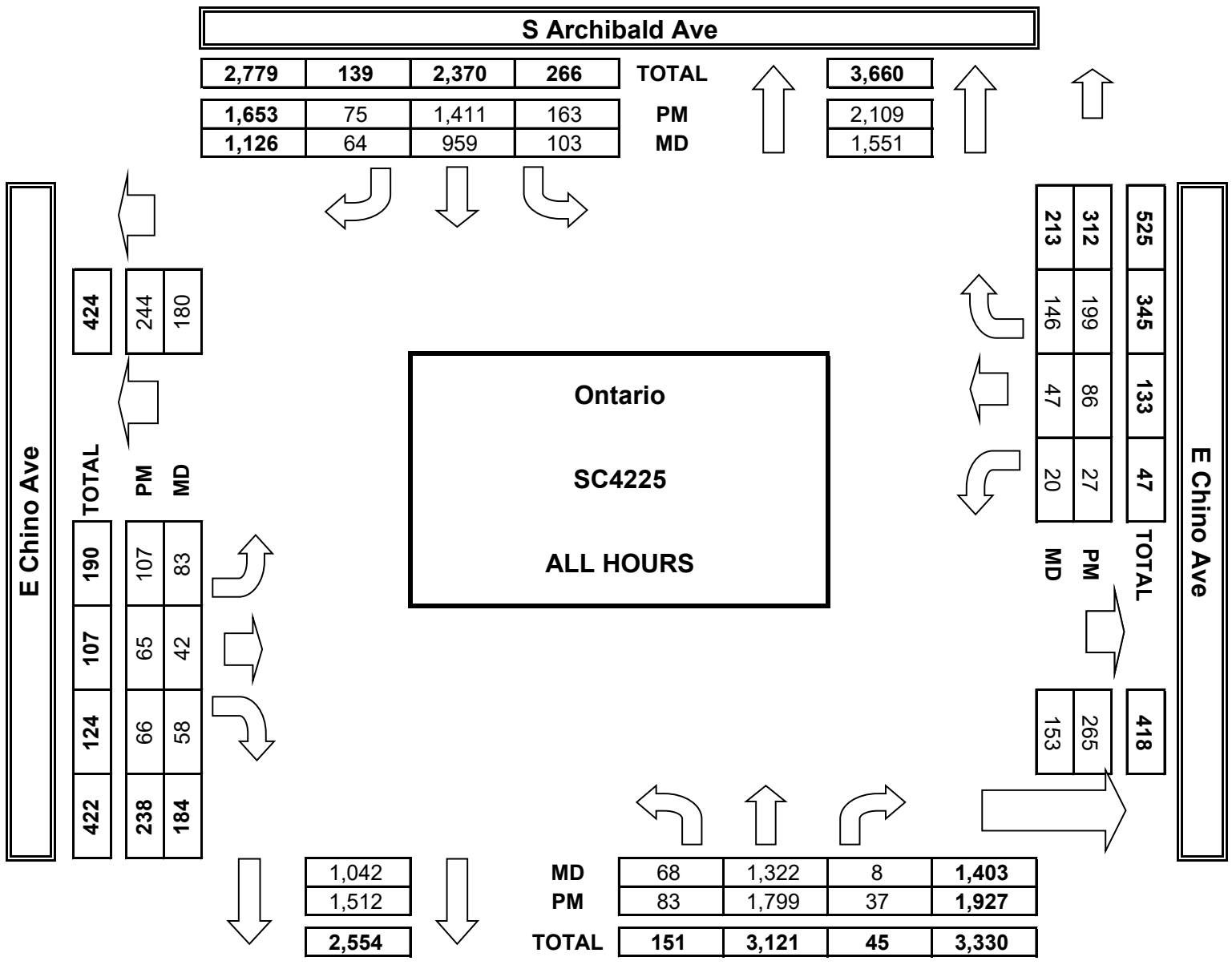
U-TURNS

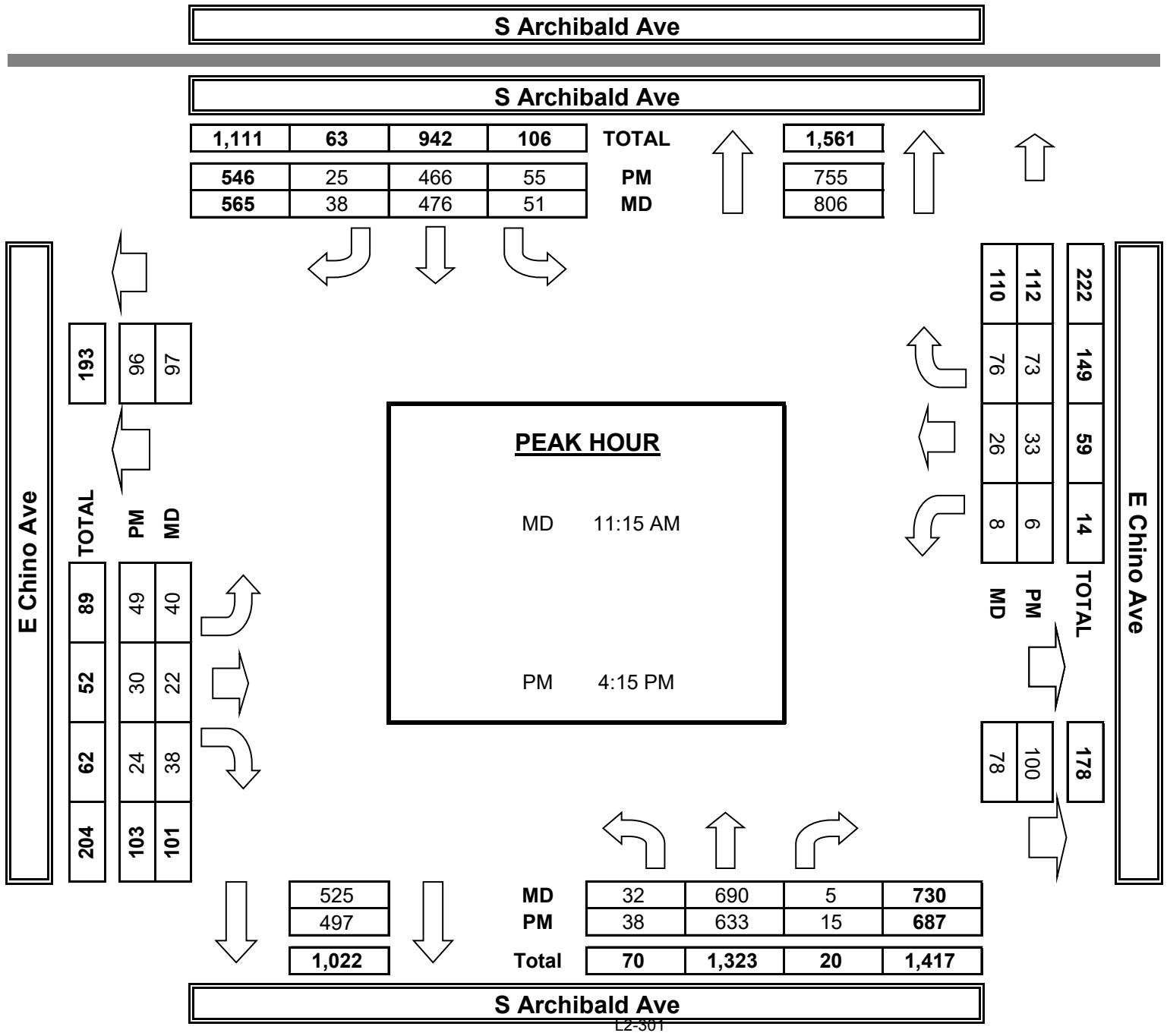
NB	SB	EB	WB	TTL
0	0	0	0	
0	0	0	0	0
0	0	1	0	1
0	0	0	0	0
2	0	0	0	2
1	0	0	0	1
2	0	0	0	2
0	0	0	0	0
0	0	0	0	0
5	0	1	0	6
1	0	0	0	1
0	0	0	0	0
1	0	0	0	1
0	0	0	0	0
0	0	0	0	0
2	1	0	0	3
1	2	0	0	3
0	0	0	0	0
0	1	0	0	1
1	0	0	0	1
2	0	0	0	2
0	0	0	0	0
8	4	0	0	12



AimTD LLC

TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

T1018

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

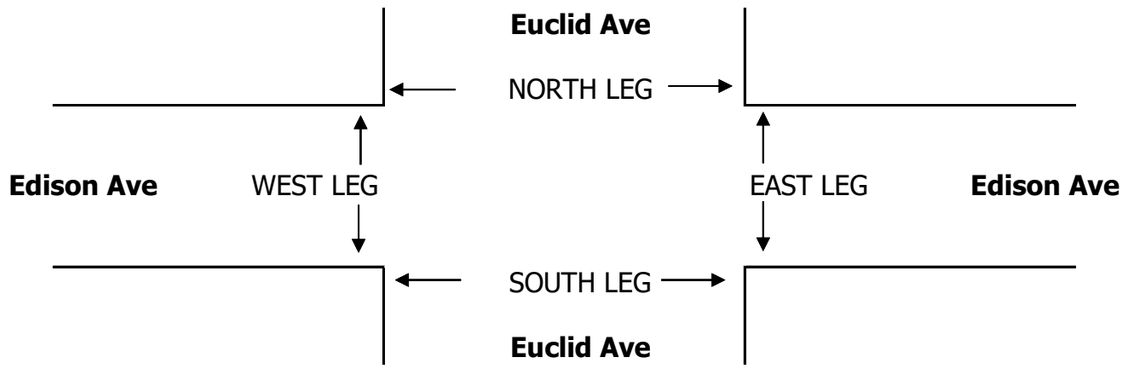
DATE:				
Sat, Oct 7, 23	LOCATION:	Ontario	PROJECT #:	SC4225
	NORTH & SOUTH:	Euclid Ave	LOCATION #:	31
	EAST & WEST:	Edison Ave	CONTROL:	SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER

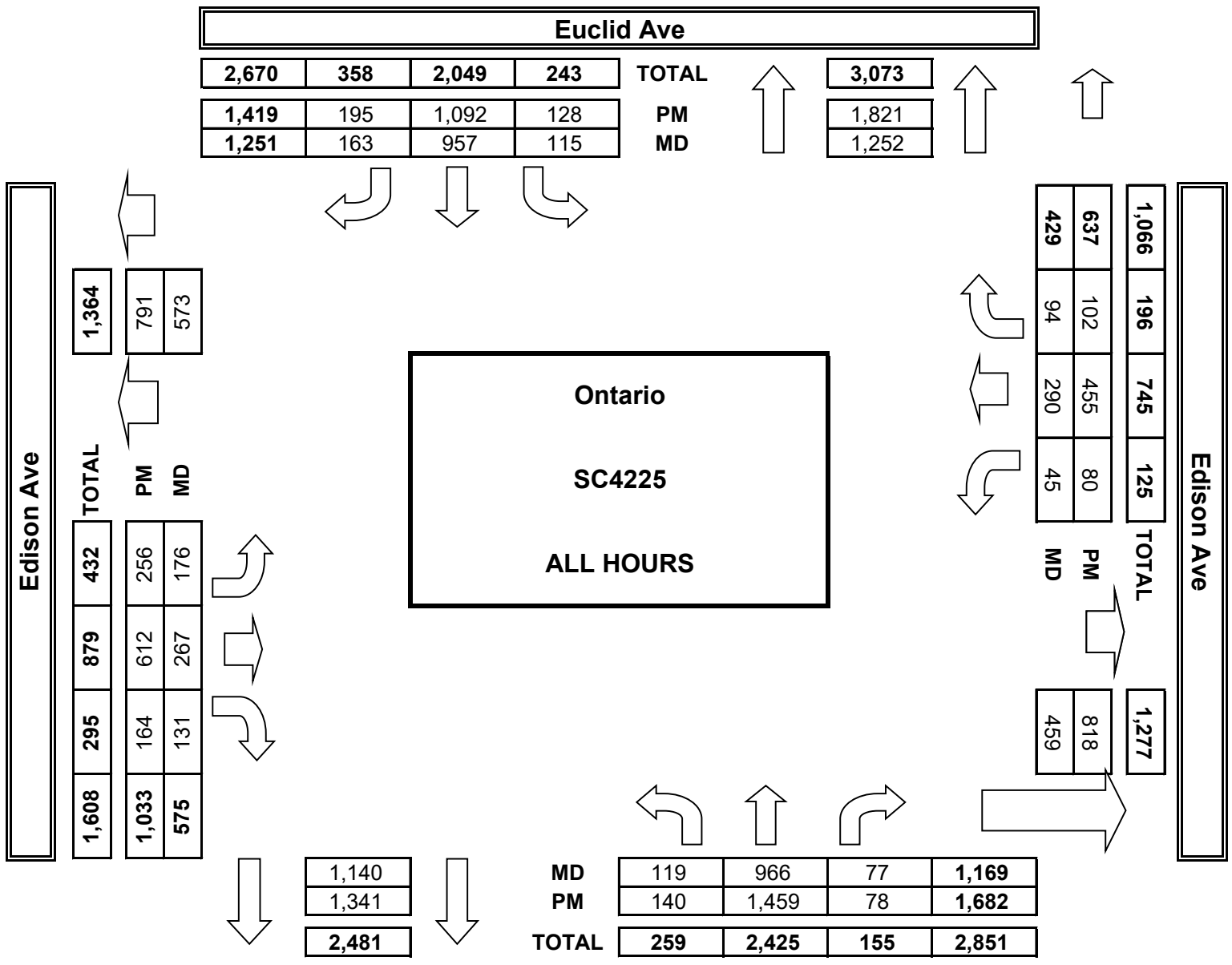
▲ N ◄ W E ► S ▼

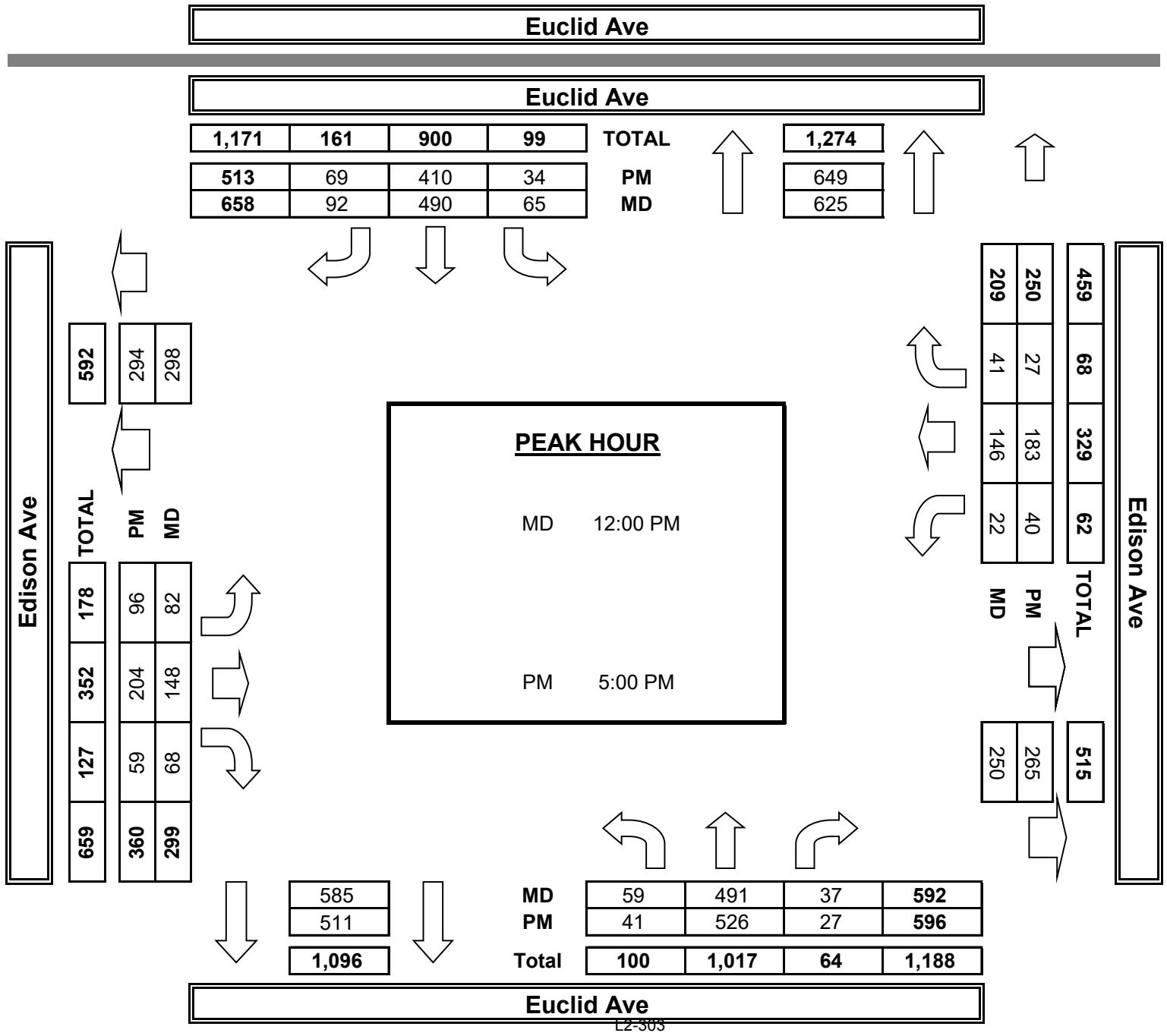
	NORTHBOUND Euclid Ave			SOUTHBOUND Euclid Ave			EASTBOUND Edison Ave			WESTBOUND Edison Ave				U-TURNS				
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB	TTL
LANES:	2	2	1	1	2	1	1	1	1	1	1	0		0	0	0	0	
MD																		
11:00 AM	13	120	9	14	104	24	39	33	7	6	45	18	432	0	2	0	0	2
11:15 AM	16	118	9	16	136	20	15	22	18	4	29	17	420	2	0	0	0	2
11:30 AM	12	130	12	8	113	10	25	28	17	8	36	9	408	0	0	0	0	0
11:45 AM	19	107	10	12	114	17	15	36	21	5	34	9	399	0	3	0	0	3
12:00 PM	15	107	13	11	121	21	13	50	19	4	43	10	427	0	5	0	0	5
12:15 PM	9	116	11	21	108	25	23	32	20	7	38	8	418	1	4	1	0	6
12:30 PM	18	137	8	12	132	19	28	36	16	6	31	15	458	3	2	0	0	5
12:45 PM	17	131	5	21	129	27	18	30	13	5	34	8	438	1	0	0	0	1
VOLUMES	119	966	77	115	957	163	176	267	131	45	290	94	3,424	7	16	1	0	24
APPROACH %	10%	83%	7%	9%	76%	13%	31%	46%	23%	10%	68%	22%						
APP/DEPART	1,169	/	1,252	1,251	/	1,140	575	/	459	429	/	573	0					
BEGIN PEAK HR		12:00 PM																
VOLUMES	59	491	37	65	490	92	82	148	68	22	146	41	1,758					
APPROACH %	10%	83%	6%	10%	74%	14%	27%	49%	23%	11%	70%	20%						
PEAK HR FACTOR		0.892			0.929			0.912			0.917		0.949					
APP/DEPART	592	/	625	658	/	585	299	/	250	209	/	298	0					
PM																		
4:00 PM	14	123	10	14	112	16	20	63	17	4	30	15	438	1	1	0	0	2
4:15 PM	9	111	5	12	98	19	21	56	14	6	42	7	400	0	0	0	0	0
4:30 PM	18	126	9	17	80	14	13	66	15	8	41	10	417	0	0	0	0	0
4:45 PM	12	120	3	13	78	24	32	46	15	10	49	9	411	0	0	0	0	0
5:00 PM	18	114	9	6	104	20	23	54	15	6	48	5	422	1	0	1	0	2
5:15 PM	8	116	4	11	107	23	24	34	13	9	46	8	403	0	0	0	0	0
5:30 PM	9	187	8	11	98	12	21	52	17	13	45	5	478	1	0	0	0	1
5:45 PM	6	109	6	6	101	14	28	64	14	12	44	9	413	0	0	0	0	0
6:00 PM	12	138	7	12	70	13	21	54	12	3	30	5	377	1	1	0	0	2
6:15 PM	6	116	7	7	87	16	23	36	7	3	23	14	345	0	1	0	0	1
6:30 PM	19	89	5	11	74	12	11	42	15	2	30	6	316	1	0	0	0	1
6:45 PM	9	110	5	8	83	12	19	45	10	4	27	9	341	0	1	0	0	1
VOLUMES	140	1,459	78	128	1,092	195	256	612	164	80	455	102	4,771	5	4	1	0	10
APPROACH %	8%	87%	5%	9%	77%	14%	25%	59%	16%	13%	71%	16%						
APP/DEPART	1,682	/	1,821	1,419	/	1,341	1,033	/	818	637	/	791	0					
BEGIN PEAK HR		5:00 PM																
VOLUMES	41	526	27	34	410	69	96	204	59	40	183	27	1,719					
APPROACH %	7%	88%	5%	7%	80%	13%	27%	57%	16%	16%	73%	11%						
PEAK HR FACTOR		0.727			0.910			0.849			0.962		0.897					
APP/DEPART	596	/	649	513	/	511	360	/	265	250	/	294	0					



AimTD LLC

TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

T1018

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:				
Sat, Oct 7, 23	LOCATION:	Ontario	PROJECT #:	SC4225
	NORTH & SOUTH:	S Grove Ave	LOCATION #:	32
	EAST & WEST:	Edison Ave	CONTROL:	STOP ALL

NOTES:

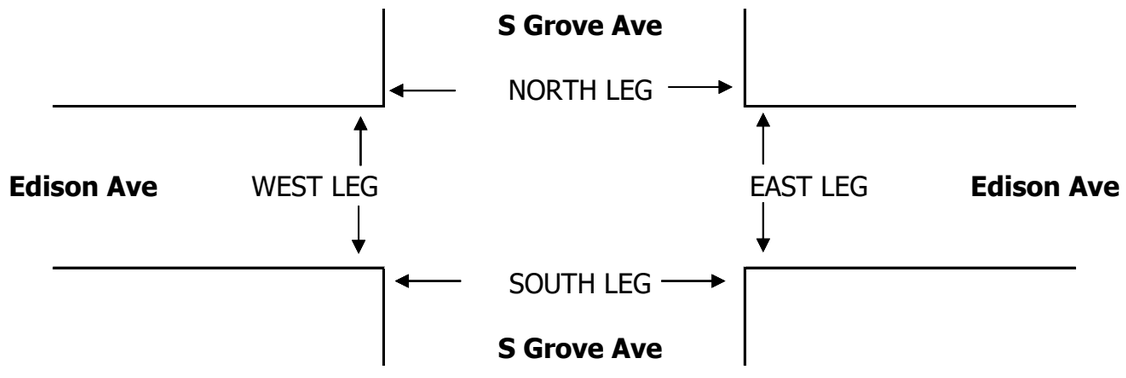
AM / PM / MD / OTHER / OTHER

▲ N ◄ W E ► S ▼

	NORTHBOUND S Grove Ave			SOUTHBOUND S Grove Ave			EASTBOUND Edison Ave			WESTBOUND Ontario Ranch Rd			
LANES:	NL 0	NT 1	NR 0	SL 0	ST 1	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL

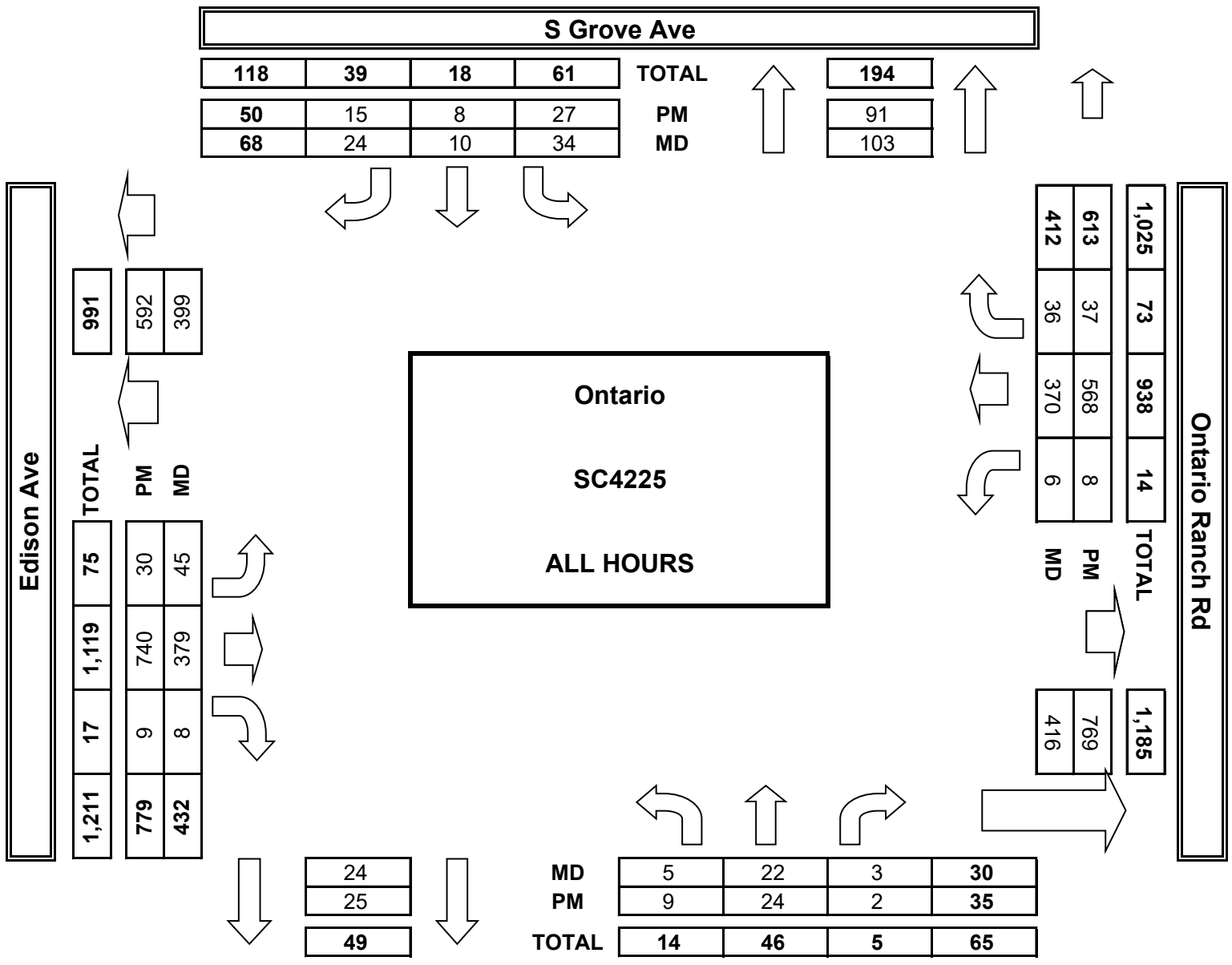
U-TURNS				
NB	SB	EB	WB	TTL
0	0	0	0	

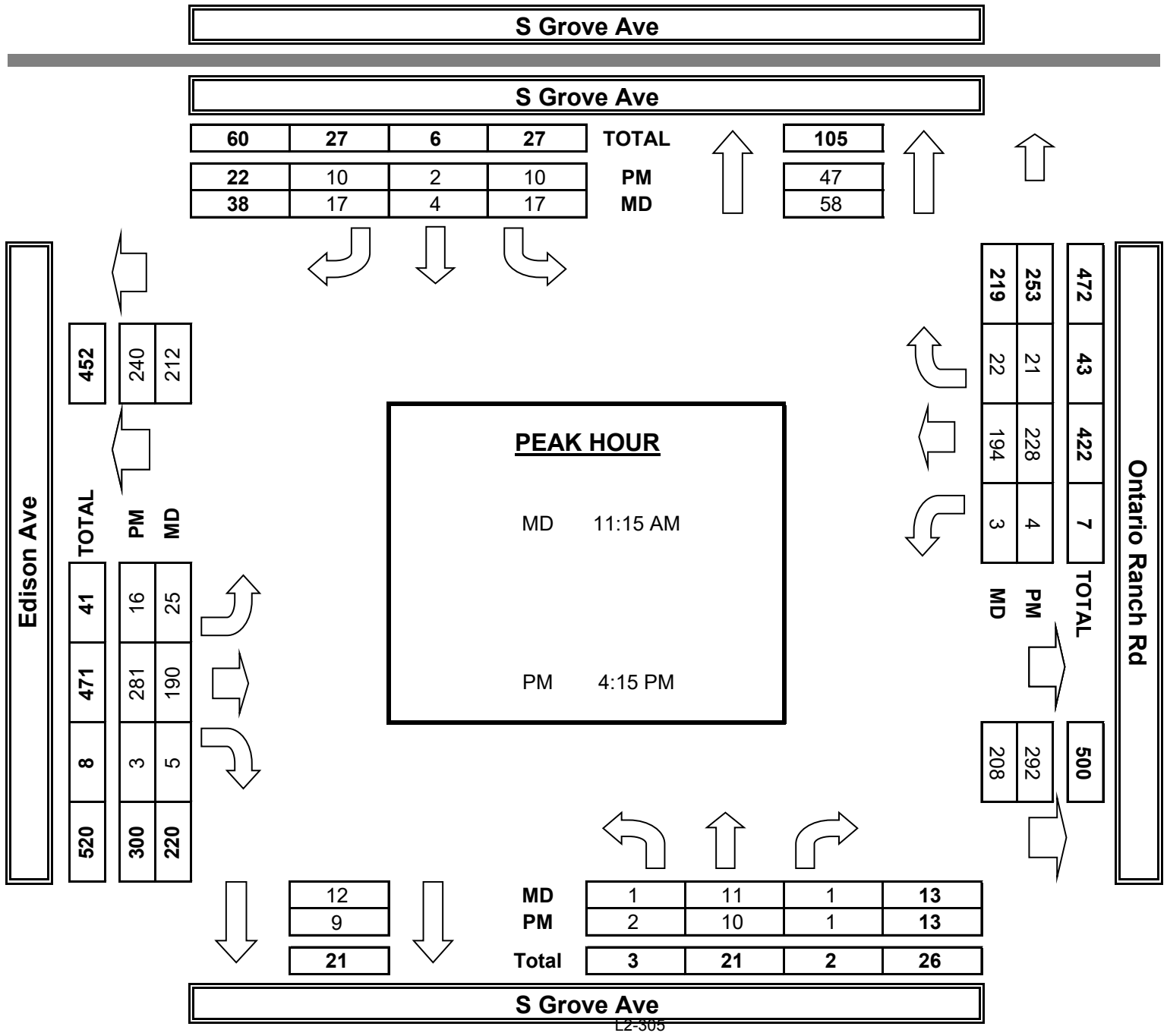
		NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND				U-TURNS				
		NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB	TTL
MD	11:00 AM	3	0	2	4	1	1	5	52	0	1	50	6	125	0	0	0	0	0
	11:15 AM	1	4	0	7	1	5	6	40	2	1	53	6	126	0	0	0	0	0
	11:30 AM	0	4	0	1	1	2	5	42	0	2	44	6	107	0	0	0	0	0
	11:45 AM	0	1	1	6	2	7	5	37	1	0	47	4	111	0	0	0	0	0
	12:00 PM	0	2	0	3	0	3	9	71	2	0	50	6	146	0	0	0	0	0
	12:15 PM	1	5	0	5	3	2	6	47	2	1	45	1	118	0	0	0	0	0
	12:30 PM	0	2	0	3	0	2	4	48	0	1	40	5	105	0	0	0	0	0
	12:45 PM	0	4	0	5	2	2	5	42	1	0	41	2	104	0	0	0	0	0
	VOLUMES	5	22	3	34	10	24	45	379	8	6	370	36	942	0	0	0	0	0
	APPROACH %	17%	73%	10%	50%	15%	35%	10%	88%	2%	1%	90%	9%						
	APP/DEPART	30	/	103	68	/	24	432	/	416	412	/	399	0					
	BEGIN PEAK HR		11:15 AM																
	VOLUMES	1	11	1	17	4	17	25	190	5	3	194	22	490					
	APPROACH %	8%	85%	8%	45%	11%	45%	11%	86%	2%	1%	89%	10%						
	PEAK HR FACTOR		0.650			0.633			0.671			0.913		0.839					
	APP/DEPART	13	/	58	38	/	12	220	/	208	219	/	212	0					
PM	4:00 PM	0	1	0	2	0	3	1	80	1	2	36	3	129	0	0	0	0	0
	4:15 PM	0	3	0	6	0	2	3	75	0	3	59	8	159	0	0	0	0	0
	4:30 PM	0	2	0	2	1	5	8	84	1	0	48	8	159	0	0	0	0	0
	4:45 PM	2	4	0	1	1	1	2	63	1	0	64	2	141	0	0	0	0	0
	5:00 PM	0	1	1	1	0	2	3	59	1	1	57	3	129	0	0	0	0	0
	5:15 PM	1	4	1	2	2	1	3	53	1	0	62	2	132	0	0	0	0	0
	5:30 PM	0	2	0	3	1	1	1	54	0	1	54	1	118	0	0	0	0	0
	5:45 PM	0	0	0	1	1	0	3	66	1	0	62	1	135	0	0	0	0	0
	6:00 PM	1	1	0	4	1	0	3	64	1	0	28	4	107	0	0	0	0	0
	6:15 PM	2	2	0	0	0	0	0	45	0	0	34	0	83	0	0	0	0	0
	6:30 PM	1	2	0	4	1	0	1	48	0	1	32	2	92	0	0	0	0	0
	6:45 PM	2	2	0	1	0	0	2	49	2	0	32	3	93	0	0	0	0	0
	VOLUMES	9	24	2	27	8	15	30	740	9	8	568	37	1,477	0	0	0	0	0
	APPROACH %	26%	69%	6%	54%	16%	30%	4%	95%	1%	1%	93%	6%						
	APP/DEPART	35	/	91	50	/	25	779	/	769	613	/	592	0					
	BEGIN PEAK HR		4:15 PM																
	VOLUMES	2	10	1	10	2	10	16	281	3	4	228	21	588					
	APPROACH %	15%	77%	8%	45%	9%	45%	5%	94%	1%	2%	90%	8%						
	PEAK HR FACTOR		0.542			0.688			0.806			0.904		0.925					
	APP/DEPART	13	/	47	22	/	9	300	/	292	253	/	240	0					



AimTD LLC

TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Sat, Oct 7, 23

LOCATION: Ontario
NORTH & SOUTH: S Archibald Ave
EAST & WEST: Ontario Ranch Rd

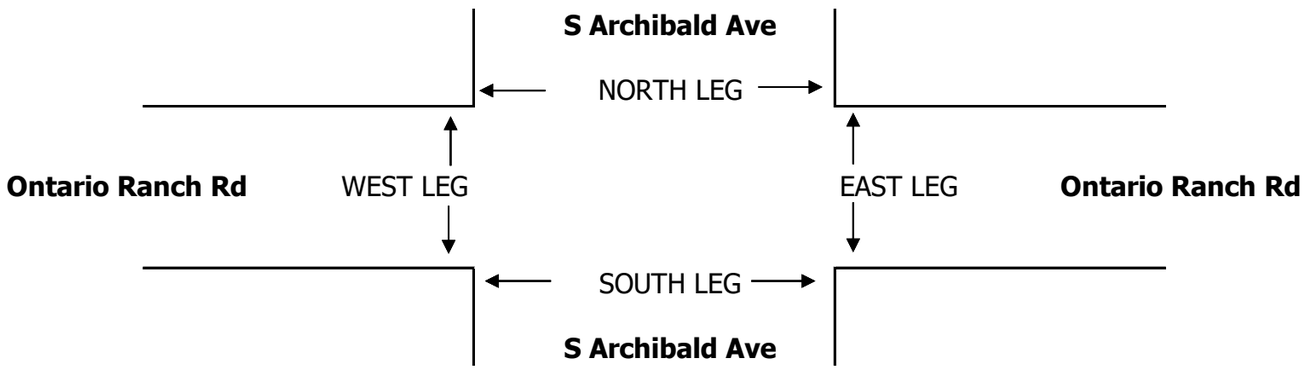
PROJECT #: SC4225
LOCATION #: 33
CONTROL: SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER

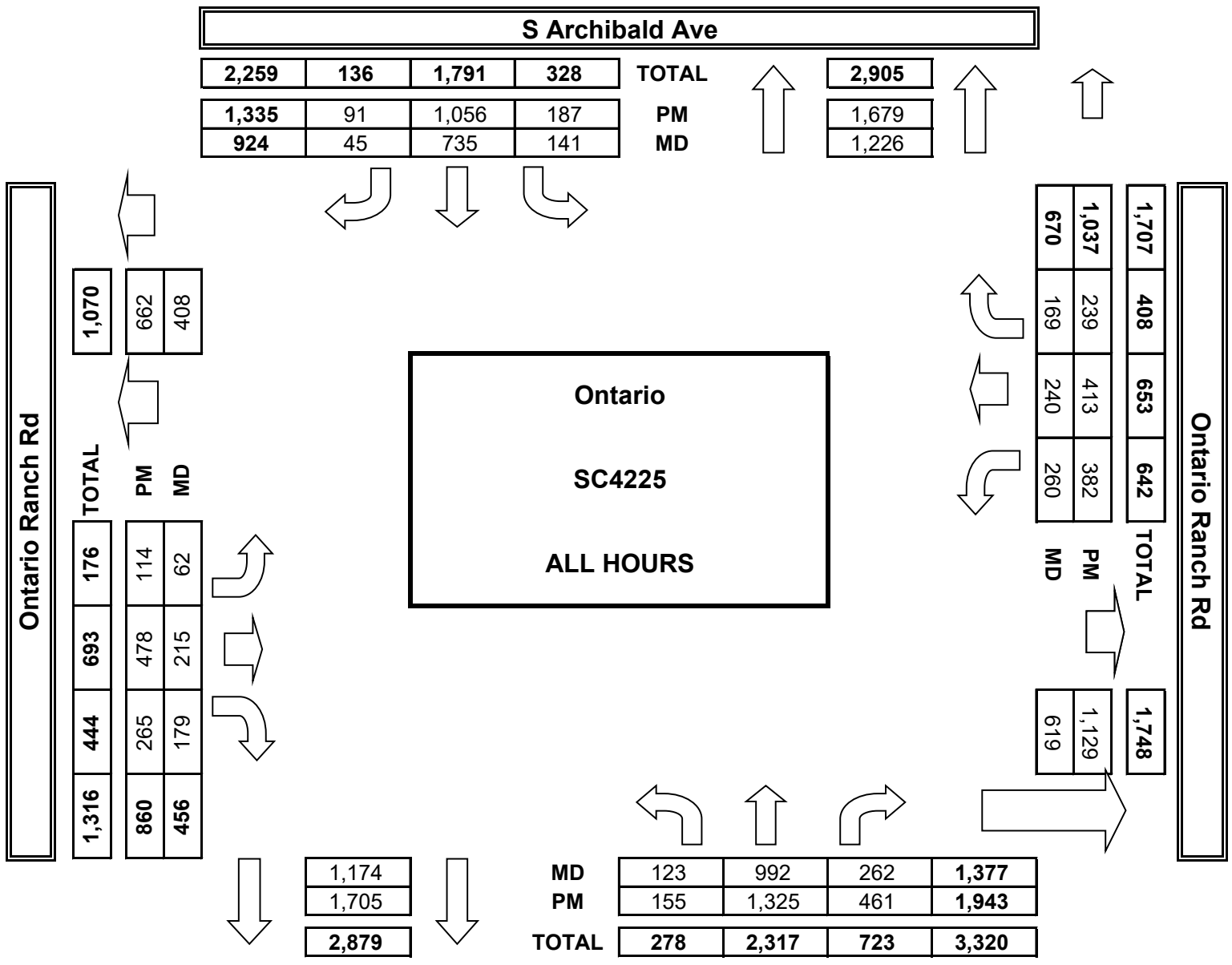
▲ N
◄ W E ►
S ▼

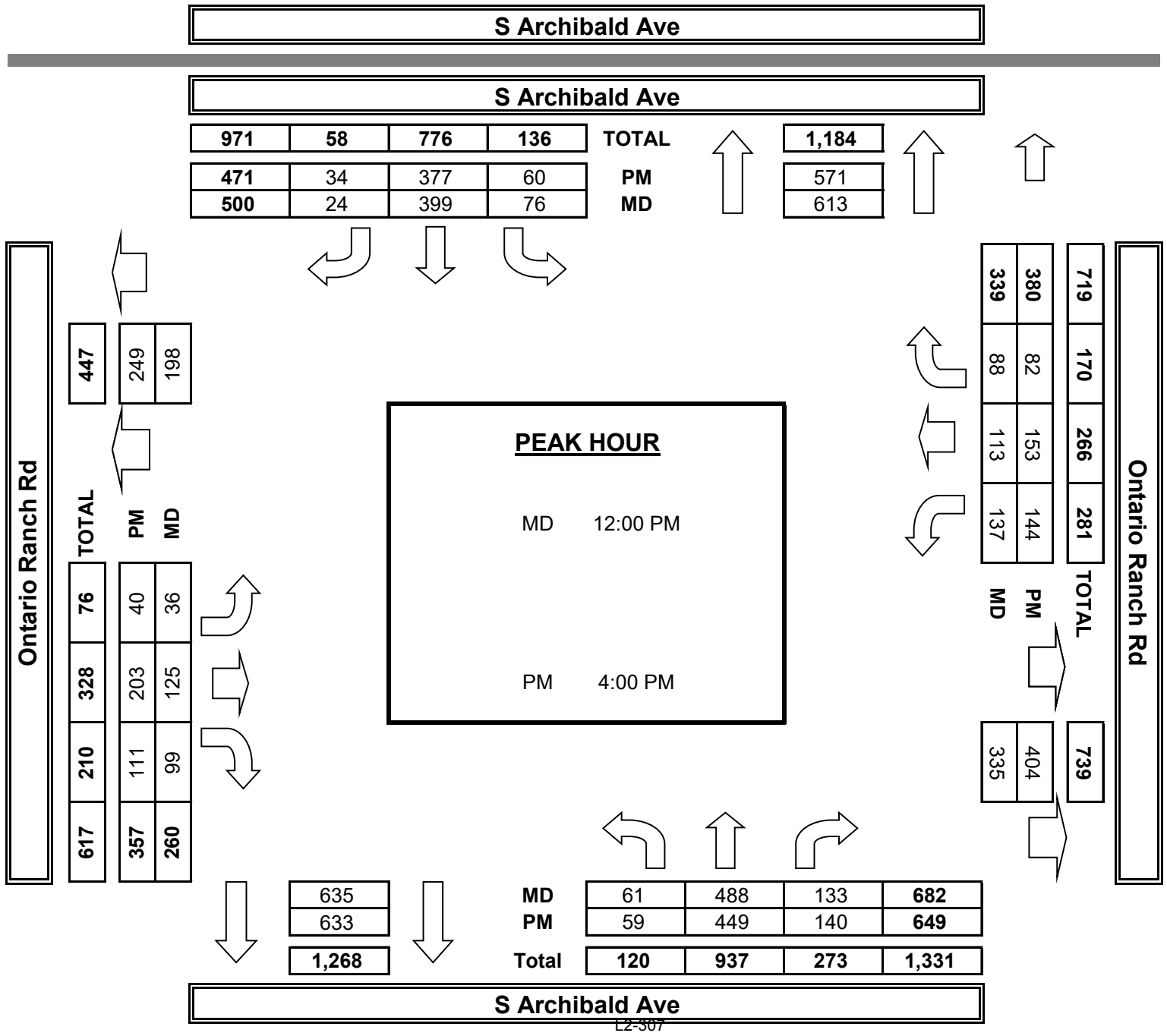
		NORTHBOUND S Archibald Ave			SOUTHBOUND S Archibald Ave			EASTBOUND Ontario Ranch Rd			WESTBOUND Ontario Ranch Rd				U-TURNS				
	LANES:	NL 1	NT 2	NR 1	SL 1	ST 2	SR 1	EL 2	ET 2	ER 1	WL 2	WT 1	WR 1	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
MD	11:00 AM	18	138	30	11	81	5	6	20	19	27	24	15	394	0	2	0	0	2
	11:15 AM	17	121	33	18	103	4	10	25	23	28	34	23	439	0	0	0	0	0
	11:30 AM	11	114	28	18	61	6	5	24	17	34	42	21	381	0	0	0	0	0
	11:45 AM	16	131	38	18	91	6	5	21	21	34	27	22	430	0	0	0	0	0
	12:00 PM	14	116	33	17	96	10	12	41	32	32	38	19	460	0	1	0	1	2
	12:15 PM	18	131	37	22	96	6	4	28	25	30	17	23	437	0	0	0	0	0
	12:30 PM	13	122	35	21	98	4	8	26	20	30	24	23	424	0	0	0	0	0
	12:45 PM	16	119	28	16	109	4	12	30	22	45	34	23	458	0	0	0	0	0
	VOLUMES	123	992	262	141	735	45	62	215	179	260	240	169	3,427	0	3	0	1	4
	APPROACH %	9%	72%	19%	15%	80%	5%	14%	47%	39%	39%	36%	25%						
	APP/DEPART	1,377	/	1,226	924	/	1,174	456	/	619	670	/	408	0					
	BEGIN PEAK HR		12:00 PM																
	VOLUMES	61	488	133	76	399	24	36	125	99	137	113	88	1,781					
	APPROACH %	9%	72%	20%	15%	80%	5%	14%	48%	38%	40%	33%	26%						
	PEAK HR FACTOR		0.917			0.969			0.765			0.831		0.964					
	APP/DEPART	682	/	613	500	/	635	260	/	335	339	/	198	0					
PM	4:00 PM	13	121	37	18	98	8	9	56	28	47	29	16	480	0	0	0	1	1
	4:15 PM	19	96	37	12	80	7	13	56	24	31	41	30	446	0	0	2	0	2
	4:30 PM	13	122	34	12	114	8	12	55	30	40	32	16	488	0	0	0	0	0
	4:45 PM	14	110	32	18	85	11	6	36	29	26	51	20	438	1	0	1	0	2
	5:00 PM	17	122	37	12	84	11	11	43	15	34	45	17	448	0	0	0	0	0
	5:15 PM	12	104	40	15	100	11	11	40	19	36	43	24	455	0	0	0	1	1
	5:30 PM	11	104	38	19	99	11	10	29	15	24	43	19	422	0	0	0	0	0
	5:45 PM	12	120	41	21	77	6	7	44	30	35	34	12	439	1	0	0	0	1
	6:00 PM	7	108	41	23	76	7	15	32	17	28	25	25	404	0	1	0	0	1
	6:15 PM	14	116	36	12	83	6	9	24	21	30	19	24	394	0	0	0	1	1
	6:30 PM	13	92	46	8	84	4	5	31	16	22	23	21	365	0	0	0	0	0
	6:45 PM	10	110	42	17	76	1	6	32	21	29	28	15	387	0	0	0	0	0
	VOLUMES	155	1,325	461	187	1,056	91	114	478	265	382	413	239	5,175	2	1	3	3	9
	APPROACH %	8%	68%	24%	14%	79%	7%	13%	56%	31%	37%	40%	23%						
	APP/DEPART	1,943	/	1,679	1,335	/	1,705	860	/	1,129	1,037	/	662	0					
	BEGIN PEAK HR		4:00 PM																
	VOLUMES	59	449	140	60	377	34	40	203	111	144	153	82	1,857					
	APPROACH %	9%	69%	22%	13%	80%	7%	11%	57%	31%	38%	40%	22%						
	PEAK HR FACTOR		0.949			0.879			0.920			0.931		0.951					
	APP/DEPART	649	/	571	471	/	633	357	/	404	380	/	249	0					



AimTD LLC

TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

T1018

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

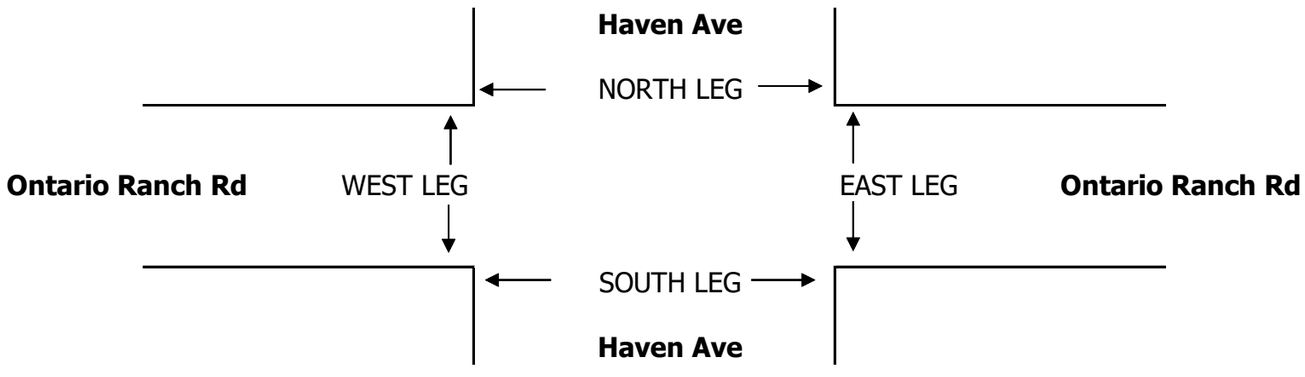
DATE:				
Sat, Oct 7, 23	LOCATION:	Ontario	PROJECT #:	SC4225
	NORTH & SOUTH:	Haven Ave	LOCATION #:	34
	EAST & WEST:	Ontario Ranch Rd	CONTROL:	SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER

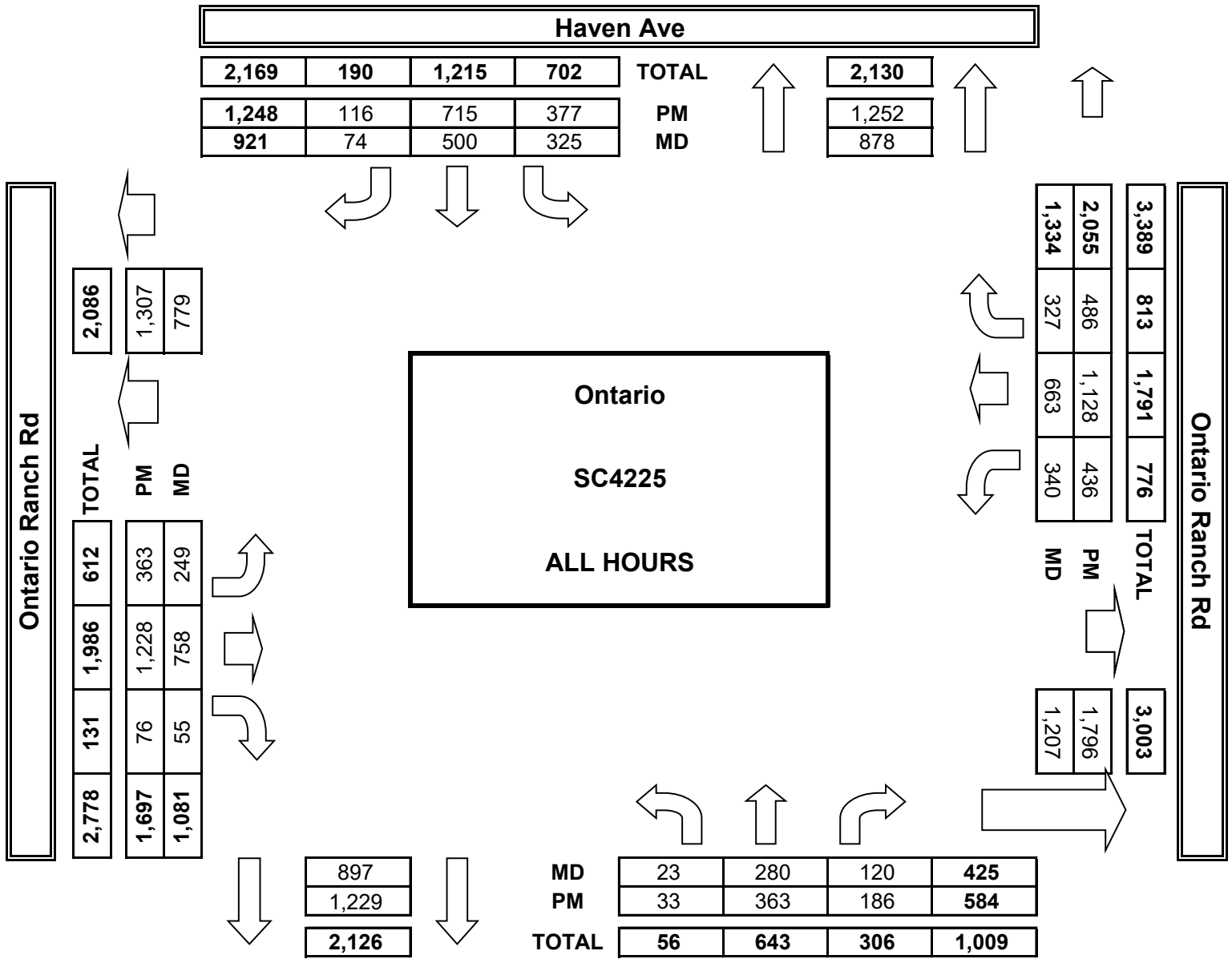
▲ N ◄ W E ► S ▼

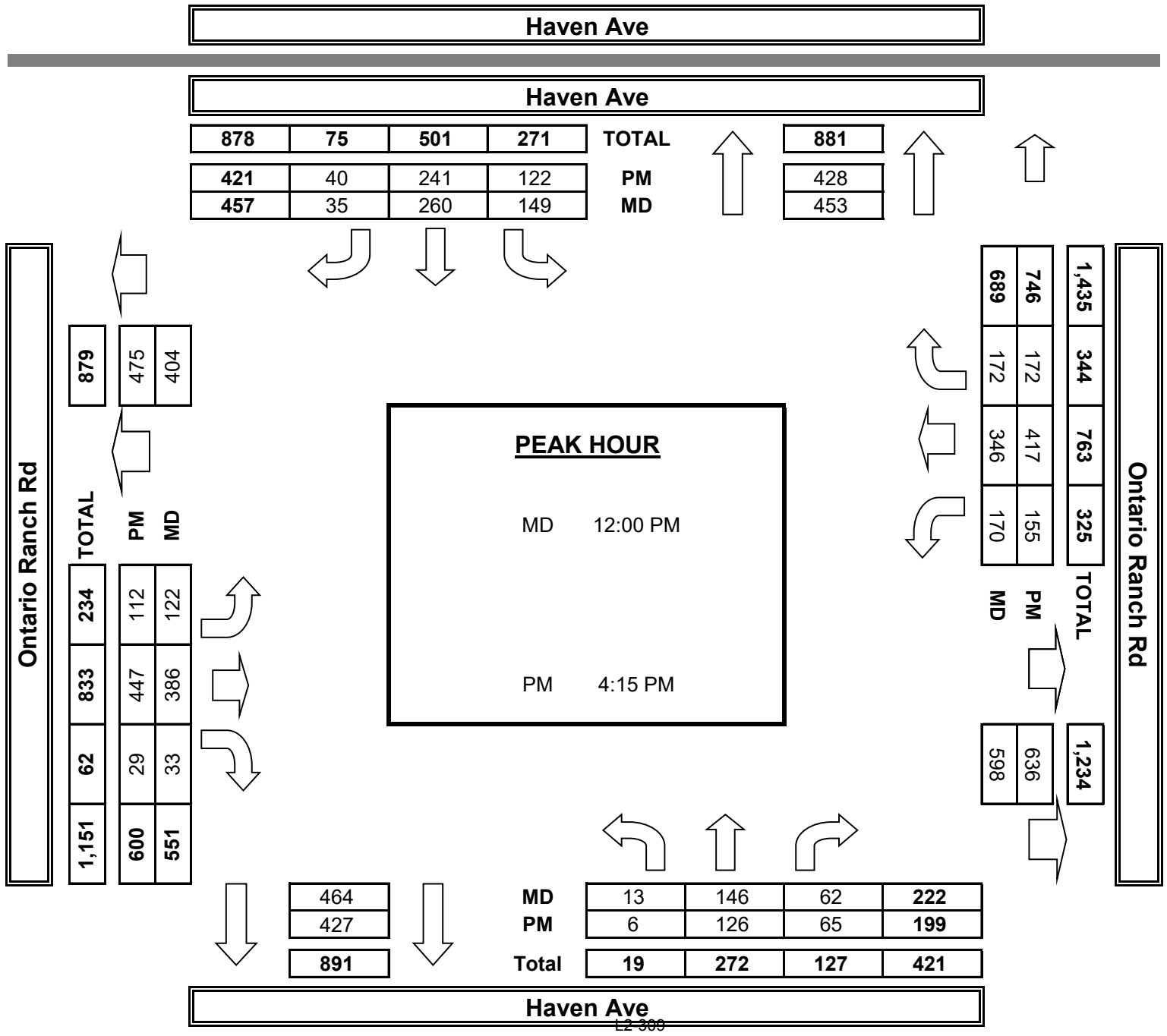
		NORTHBOUND Haven Ave			SOUTHBOUND Haven Ave			EASTBOUND Ontario Ranch Rd			WESTBOUND Ontario Ranch Rd				U-TURNS				
	LANES:	NL 1	NT 1	NR 1	SL 1	ST 1	SR 1	EL 1	ET 3	ER 1	WL 2	WT 4	WR 1	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
MD	11:00 AM	4	31	18	40	46	10	25	87	11	46	70	40	428	1	2	2	1	6
	11:15 AM	2	34	12	47	66	9	26	81	3	38	81	32	431	0	2	3	1	6
	11:30 AM	1	40	17	43	66	10	44	100	6	50	88	34	499	0	4	2	1	7
	11:45 AM	3	29	11	46	62	10	32	104	2	36	78	49	462	0	1	2	0	3
	12:00 PM	6	37	15	36	60	6	29	103	7	36	82	50	467	0	5	2	0	7
	12:15 PM	3	37	16	36	57	7	41	104	7	44	78	36	466	0	0	2	0	2
	12:30 PM	3	24	20	45	68	7	29	90	10	49	92	47	484	1	6	4	1	12
	12:45 PM	1	48	11	32	75	15	23	89	9	41	94	39	477	0	2	2	0	4
	VOLUMES	23	280	120	325	500	74	249	758	55	340	663	327	3,761	2	22	19	4	47
	APPROACH %	5%	66%	28%	35%	54%	8%	23%	70%	5%	25%	50%	25%						
	APP/DEPART	425	/	878	921	/	897	1,081	/	1,207	1,334	/	779	0					
	BEGIN PEAK HR		12:00 PM																
	VOLUMES	13	146	62	149	260	35	122	386	33	170	346	172	1,919					
	APPROACH %	6%	66%	28%	33%	57%	8%	22%	70%	6%	25%	50%	25%						
	PEAK HR FACTOR		0.925			0.907			0.894			0.911		0.967					
	APP/DEPART	222	/	453	457	/	464	551	/	598	689	/	404	0					
PM	4:00 PM	5	38	15	30	61	11	36	116	5	35	91	46	489	0	5	0	0	5
	4:15 PM	1	26	12	30	51	9	26	121	3	45	107	43	474	1	6	3	0	10
	4:30 PM	0	35	20	32	74	13	27	116	6	36	85	41	485	1	2	3	1	7
	4:45 PM	2	42	11	24	61	12	28	107	11	31	103	47	479	0	1	4	0	5
	5:00 PM	3	23	22	36	55	6	31	103	9	43	122	41	494	0	9	2	1	12
	5:15 PM	5	31	11	53	47	7	30	112	6	24	101	38	465	0	3	2	1	6
	5:30 PM	0	32	19	31	59	16	35	98	4	33	102	37	466	0	3	3	0	6
	5:45 PM	4	22	15	23	72	4	29	105	10	45	93	46	468	0	1	1	1	3
	6:00 PM	2	23	20	26	59	6	46	86	6	36	83	36	429	0	0	3	0	3
	6:15 PM	4	29	10	24	50	10	22	88	7	36	82	40	402	0	3	3	0	6
	6:30 PM	0	28	21	31	62	9	32	99	5	28	85	40	440	0	5	2	1	8
	6:45 PM	7	34	10	37	64	13	21	77	4	44	74	31	416	0	2	4	0	6
	VOLUMES	33	363	186	377	715	116	363	1,228	76	436	1,128	486	5,584	2	40	30	5	77
	APPROACH %	6%	62%	32%	30%	57%	9%	21%	72%	4%	21%	55%	24%						
	APP/DEPART	584	/	1,252	1,248	/	1,229	1,697	/	1,796	2,055	/	1,307	0					
	BEGIN PEAK HR		4:15 PM																
	VOLUMES	6	126	65	122	241	40	112	447	29	155	417	172	1,966					
	APPROACH %	3%	63%	33%	29%	57%	10%	19%	75%	5%	21%	56%	23%						
	PEAK HR FACTOR		0.888			0.870			0.980			0.901		0.971					
	APP/DEPART	199	/	428	421	/	427	600	/	636	746	/	475	0					



AimTD LLC

TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

T1018

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Sat, Oct 7, 23

LOCATION: Ontario
NORTH & SOUTH: Hamner Ave
EAST & WEST: Ontario Ranch Rd

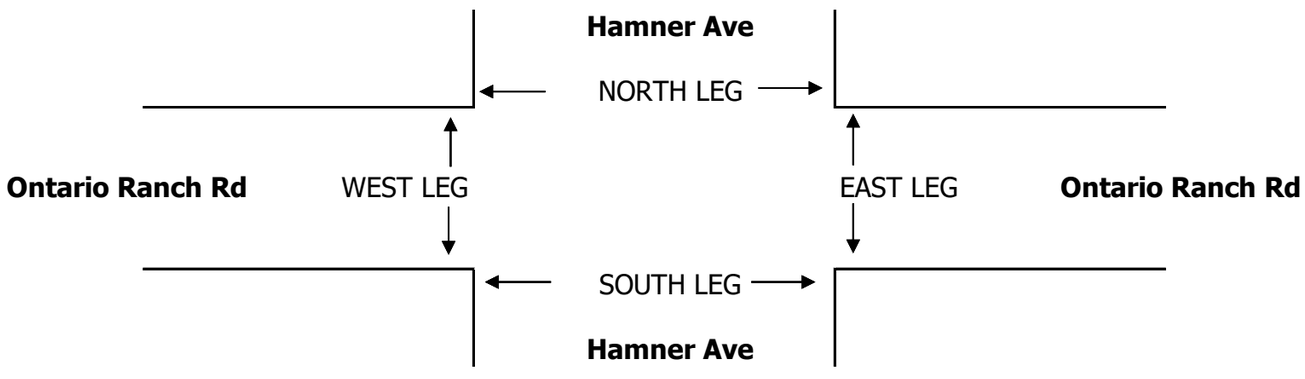
PROJECT #: SC4225
LOCATION #: 35
CONTROL: SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER

▲ N ◄ W E ► S ▼

		NORTHBOUND Hamner Ave			SOUTHBOUND Hamner Ave			EASTBOUND Ontario Ranch Rd			WESTBOUND Cantu-Galleano Ranch Rd				U-TURNS				
	LANES:	NL 2	NT 3	NR 1	SL 2	ST 2	SR 1	EL 2	ET 3	ER 1	WL 2	WT 2	WR 1	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
MD	11:00 AM	54	97	83	16	71	7	8	101	47	56	71	8	619	15	0	0	0	15
	11:15 AM	56	93	93	19	70	8	10	109	57	74	81	10	680	18	0	0	0	18
	11:30 AM	95	111	88	22	77	11	9	108	53	62	74	12	722	11	0	0	2	13
	11:45 AM	76	136	110	12	72	5	10	98	69	79	71	13	751	8	0	0	0	8
	12:00 PM	99	122	107	31	68	12	6	75	62	45	70	9	706	13	0	0	2	15
	12:15 PM	97	119	90	33	74	6	7	91	71	57	76	12	733	11	0	0	0	11
	12:30 PM	94	109	106	39	102	15	12	78	59	63	76	18	771	17	0	0	1	18
	12:45 PM	101	142	100	25	84	11	9	79	67	48	82	17	765	19	0	0	0	19
	VOLUMES	672	929	777	197	618	75	71	739	485	484	601	99	5,864	112	0	0	5	117
	APPROACH %	27%	37%	31%	22%	69%	8%	5%	57%	37%	41%	51%	8%						
	APP/DEPART	2,490	/	1,099	890	/	1,699	1,295	/	1,718	1,189	/	1,348	0					
	BEGIN PEAK HR		12:00 PM																
	VOLUMES	391	492	403	128	328	44	34	323	259	213	304	56	3,038					
	APPROACH %	29%	37%	30%	26%	66%	9%	6%	52%	42%	37%	53%	10%						
	PEAK HR FACTOR		0.930			0.801			0.911			0.911		0.963					
	APP/DEPART	1,346	/	582	500	/	860	616	/	857	576	/	739	0					
PM	4:00 PM	79	74	77	25	86	16	2	126	62	52	107	14	720	6	0	0	0	6
	4:15 PM	84	70	76	20	81	12	4	104	43	62	90	17	663	7	0	0	1	8
	4:30 PM	65	99	71	20	80	12	8	117	49	78	90	15	704	7	0	1	0	8
	4:45 PM	64	106	72	22	86	14	11	98	45	65	108	19	710	7	0	0	0	7
	5:00 PM	78	100	84	24	85	12	7	96	61	54	126	12	739	9	0	0	0	9
	5:15 PM	65	95	77	29	77	9	15	88	64	58	86	10	673	8	0	0	2	10
	5:30 PM	85	99	91	32	60	8	9	114	58	49	99	9	713	11	0	0	1	12
	5:45 PM	105	120	106	25	86	18	17	124	62	69	99	12	843	8	0	0	1	9
	6:00 PM	91	92	82	17	83	17	10	77	39	48	97	16	669	3	0	0	0	3
	6:15 PM	77	88	86	22	59	5	6	107	45	53	90	17	655	12	1	0	2	15
	6:30 PM	52	75	101	29	67	7	3	94	40	54	82	13	617	7	0	1	1	9
	6:45 PM	60	68	97	26	69	5	5	114	42	54	84	10	634	7	0	1	1	9
	VOLUMES	905	1,086	1,020	291	919	135	97	1,259	610	696	1,158	164	8,445	92	1	3	9	105
	APPROACH %	29%	35%	33%	22%	68%	10%	5%	64%	31%	34%	57%	8%						
	APP/DEPART	3,103	/	1,348	1,346	/	2,317	1,969	/	2,579	2,027	/	2,201	0					
	BEGIN PEAK HR		5:00 PM																
	VOLUMES	333	414	358	110	308	47	48	422	245	230	410	43	3,008					
	APPROACH %	29%	36%	31%	24%	66%	10%	7%	59%	34%	33%	60%	6%						
	PEAK HR FACTOR		0.841			0.901			0.881			0.895		0.883					
	APP/DEPART	1,141	/	505	465	/	819	715	/	894	687	/	790	0					



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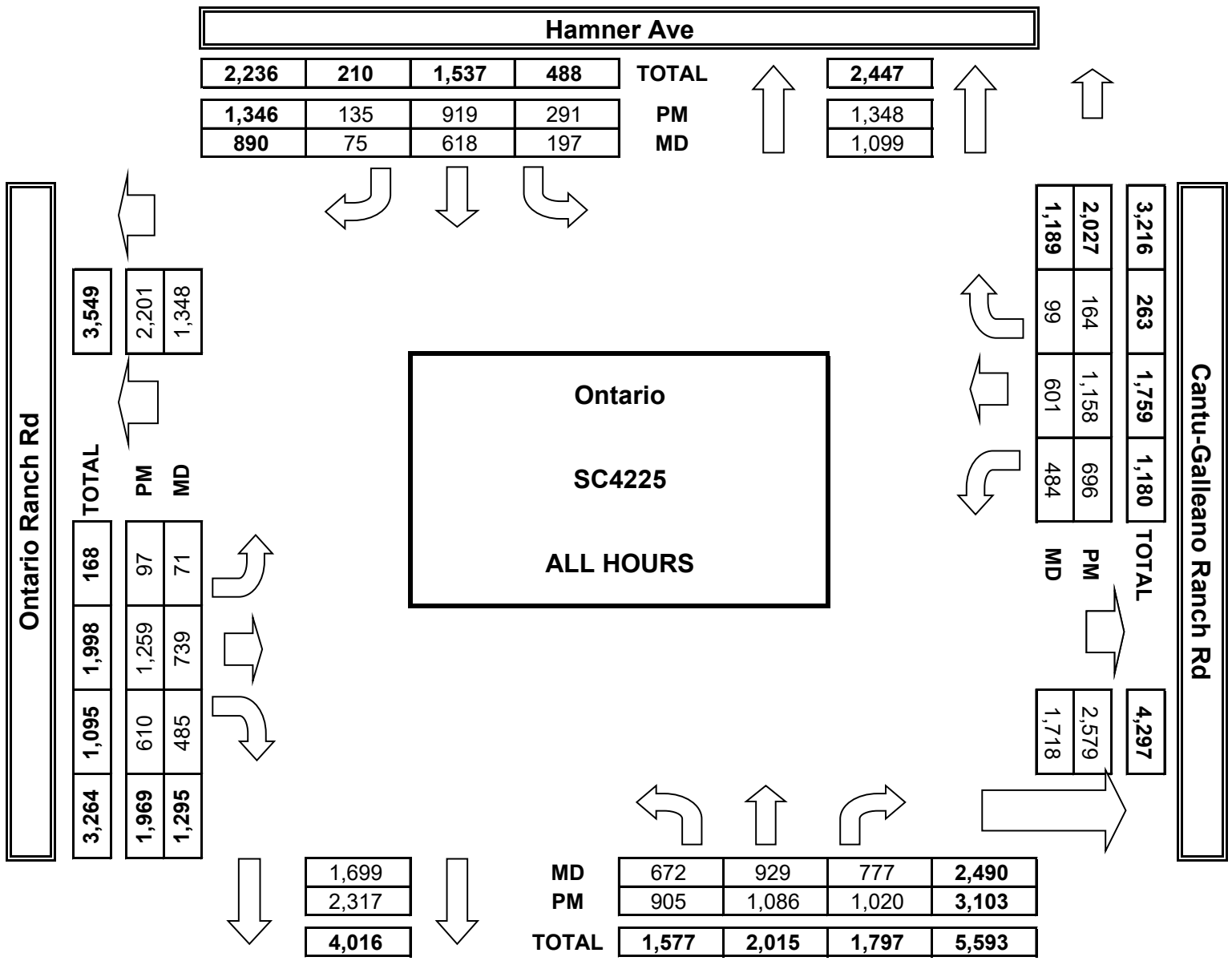
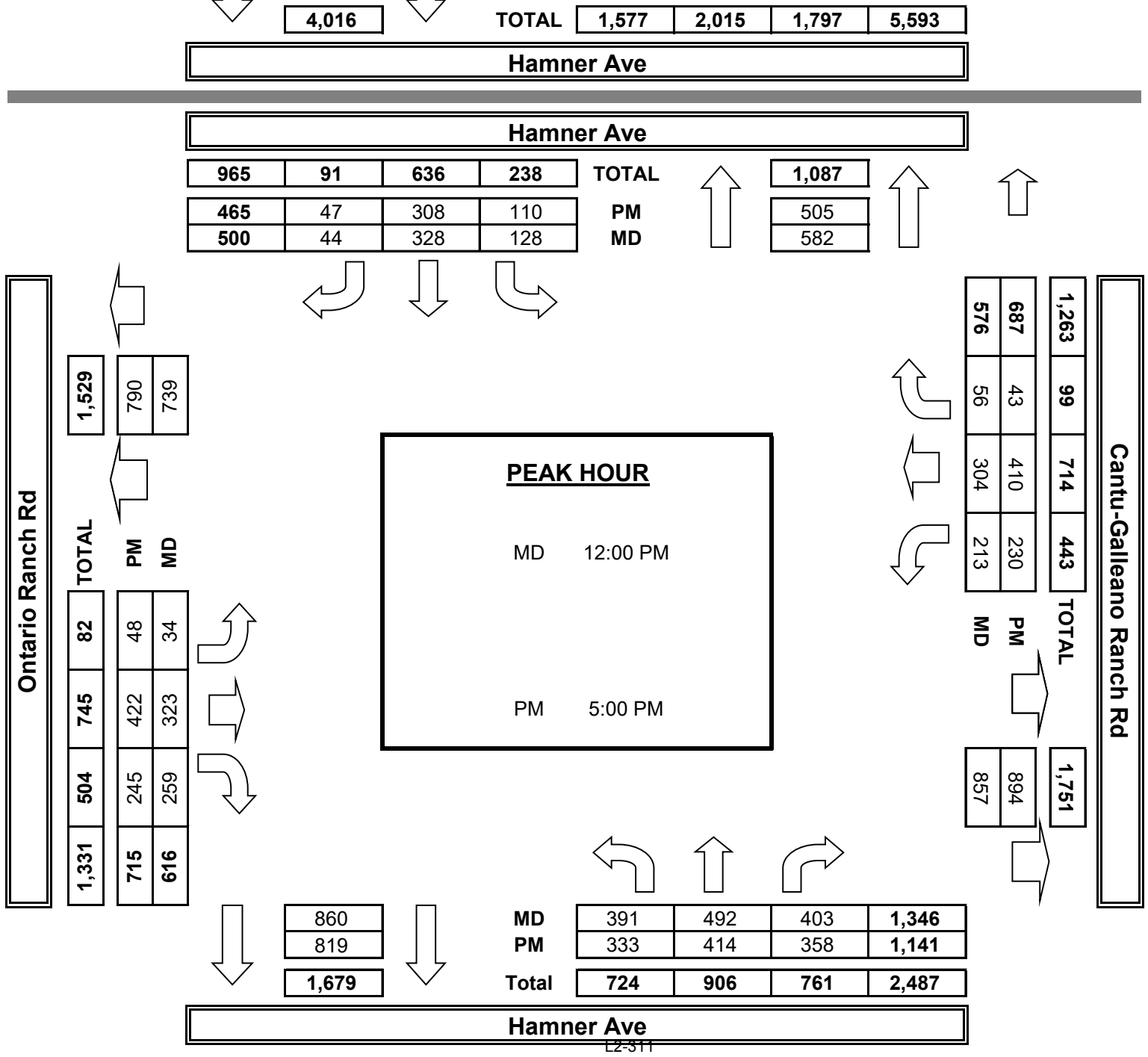
TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Sat, Oct 7, 23	LOCATION:	Ontario		PROJECT #:	SC4225
	NORTH & SOUTH:	I-15 SB Ramps		LOCATION #:	36
	EAST & WEST:	Cantu-Galleano Ranch Rd		CONTROL:	SIGNAL

NOTES:

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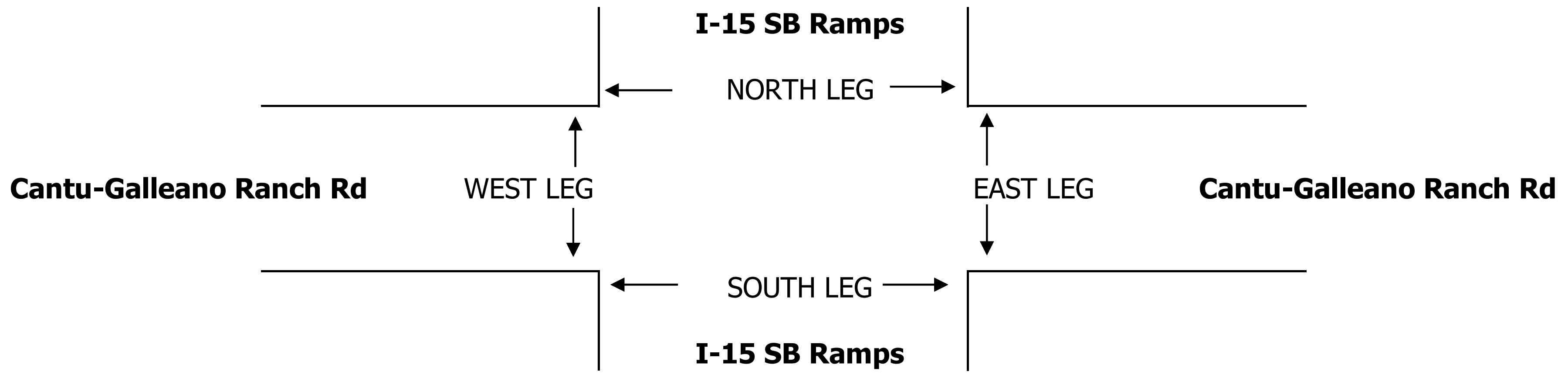
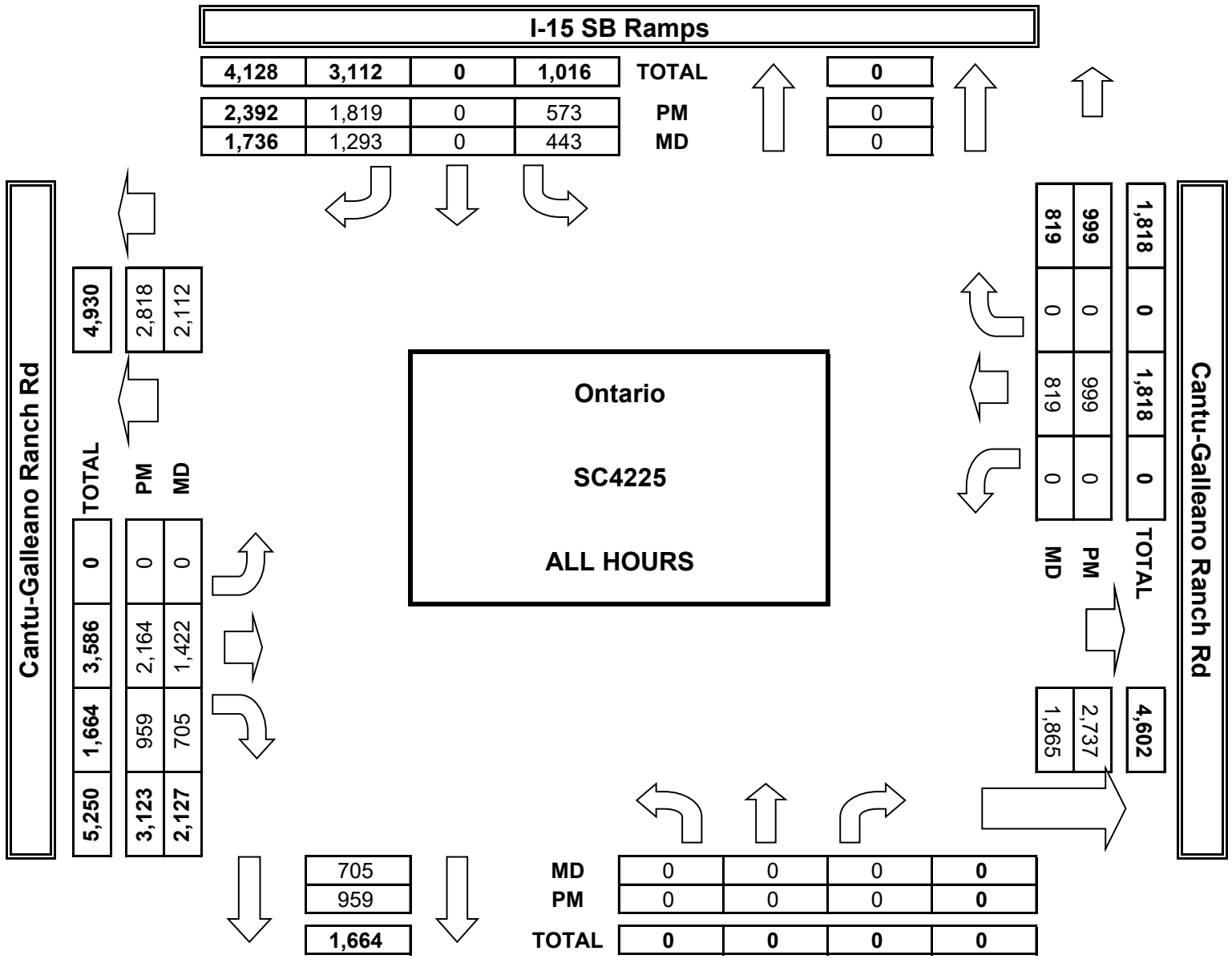
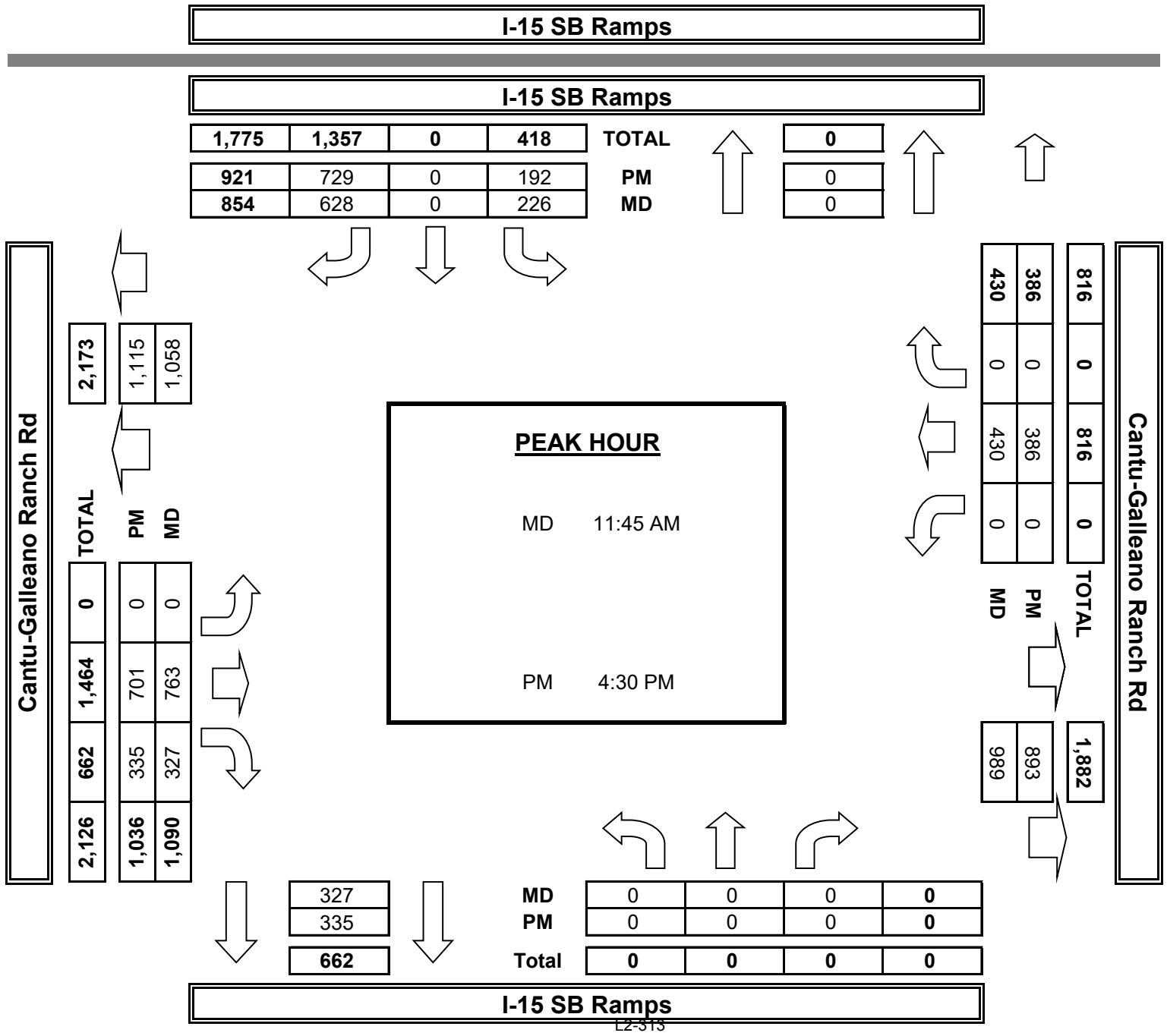
		NORTHBOUND I-15 SB Ramps			SOUTHBOUND I-15 SB Ramps			EASTBOUND Cantu-Galleano Ranch Rd			WESTBOUND Cantu-Galleano Ranch Rd				U-TURNS				
		NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB	TTL
	LANES:	X	X	X	1.5	X	1.5	X	3	1	X	2	X		0	0	0	0	
MD	11:00 AM	0	0	0	59	0	156	0	154	92	0	101	0	562	0	0	0	0	0
	11:15 AM	0	0	0	51	0	174	0	141	98	0	91	0	555	0	0	0	0	0
	11:30 AM	0	0	0	49	0	172	0	200	96	0	107	0	624	0	0	0	0	0
	11:45 AM	0	0	0	55	0	148	0	206	72	0	111	0	592	0	0	0	0	0
	12:00 PM	0	0	0	51	0	136	0	172	77	0	84	0	520	0	0	0	0	0
	12:15 PM	0	0	0	54	0	167	0	195	89	0	120	0	625	0	0	0	0	0
	12:30 PM	0	0	0	66	0	177	0	190	89	0	115	0	637	0	0	0	0	0
	12:45 PM	0	0	0	58	0	163	0	164	92	0	90	0	567	0	0	0	0	0
	VOLUMES	0	0	0	443	0	1,293	0	1,422	705	0	819	0	4,682	0	0	0	0	0
	APPROACH %	0%	0%	0%	26%	0%	74%	0%	67%	33%	0%	100%	0%						
	APP/DEPART	0	/	0	1,736	/	705	2,127	/	1,865	819	/	2,112	0					
	BEGIN PEAK HR		11:45 AM																
	VOLUMES	0	0	0	226	0	628	0	763	327	0	430	0	2,374					
	APPROACH %	0%	0%	0%	26%	0%	74%	0%	70%	30%	0%	100%	0%						
	PEAK HR FACTOR		0.000			0.879			0.960			0.896		0.932					
	APP/DEPART	0	/	0	854	/	327	1,090	/	989	430	/	1,058	0					
PM	4:00 PM	0	0	0	52	0	152	0	189	87	0	78	0	558	0	0	0	0	0
	4:15 PM	0	0	0	57	0	157	0	176	84	0	96	0	570	0	0	0	0	0
	4:30 PM	0	0	0	51	0	194	0	175	103	0	101	0	624	0	0	0	0	0
	4:45 PM	0	0	0	45	0	196	0	144	66	0	99	0	550	0	0	0	0	0
	5:00 PM	0	0	0	63	0	169	0	181	70	0	100	0	583	0	0	0	0	0
	5:15 PM	0	0	0	33	0	170	0	201	96	0	86	0	586	0	0	0	0	0
	5:30 PM	0	0	0	36	0	160	0	180	68	0	96	0	540	0	0	0	0	0
	5:45 PM	0	0	0	46	0	132	0	197	97	0	61	0	533	0	0	0	0	0
	6:00 PM	0	0	0	45	0	116	0	181	77	0	78	0	497	0	0	0	0	0
	6:15 PM	0	0	0	38	0	128	0	178	83	0	70	0	497	0	0	0	0	0
	6:30 PM	0	0	0	47	0	116	0	193	69	0	71	0	496	0	0	0	0	0
	6:45 PM	0	0	0	60	0	129	0	169	59	0	63	0	480	0	0	0	0	0
	VOLUMES	0	0	0	573	0	1,819	0	2,164	959	0	999	0	6,514	0	0	0	0	0
	APPROACH %	0%	0%	0%	24%	0%	76%	0%	69%	31%	0%	100%	0%						
	APP/DEPART	0	/	0	2,392	/	959	3,123	/	2,737	999	/	2,818	0					
	BEGIN PEAK HR		4:30 PM																
	VOLUMES	0	0	0	192	0	729	0	701	335	0	386	0	2,343					
	APPROACH %	0%	0%	0%	21%	0%	79%	0%	68%	32%	0%	100%	0%						
	PEAK HR FACTOR		0.000			0.940			0.872			0.955		0.939					
	APP/DEPART	0	/	0	921	/	335	1,036	/	893	386	/	1,115	0					



AimTD LLC

TURNING MOVEMENT COUNTS





T1018

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:				
Sat, Oct 7, 23	LOCATION:	Ontario	PROJECT #:	SC4225
	NORTH & SOUTH:	I-15 NB Ramps	LOCATION #:	37
	EAST & WEST:	Cantu-Galleano Ranch Rd	CONTROL:	SIGNAL

NOTES:

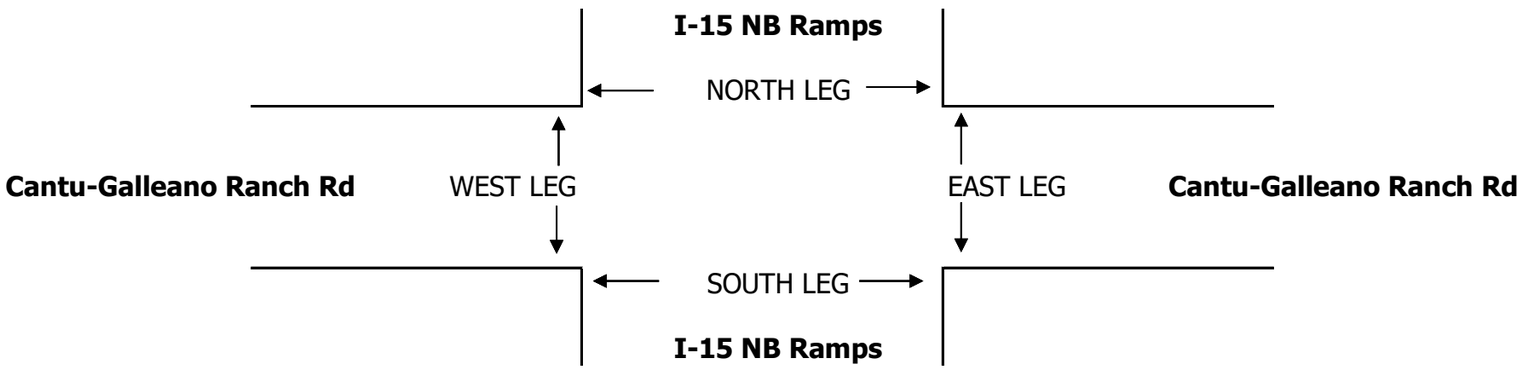
AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

	NORTHBOUND I-15 NB Ramps			SOUTHBOUND I-15 NB Ramps			EASTBOUND Cantu-Galleano Ranch Rd			WESTBOUND Cantu-Galleano Ranch Rd			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1.5	X	1.5	X	X	X	X	3	1	2	3	X	

U-TURNS

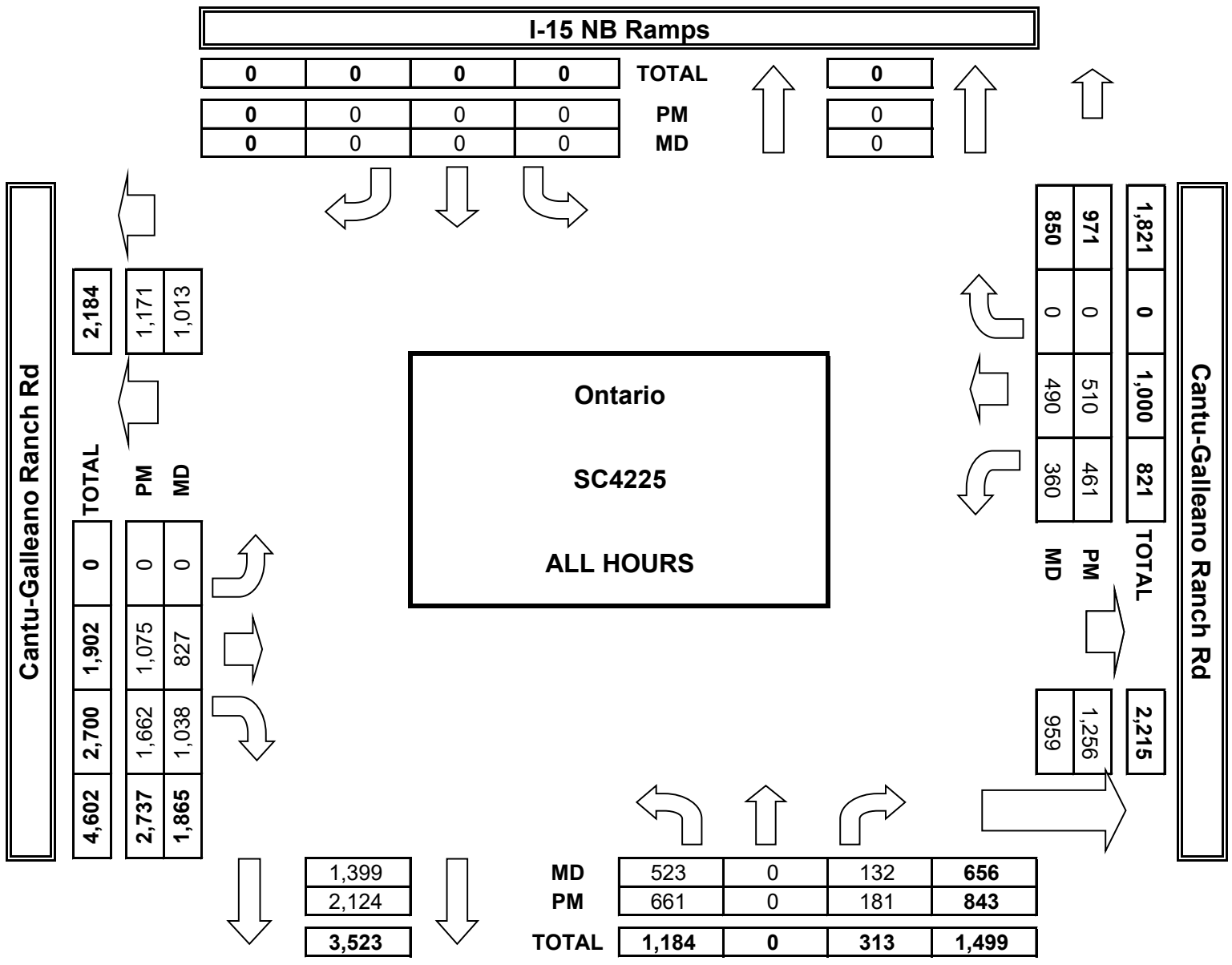
NB	SB	EB	WB	TTL
0	0	0	0	

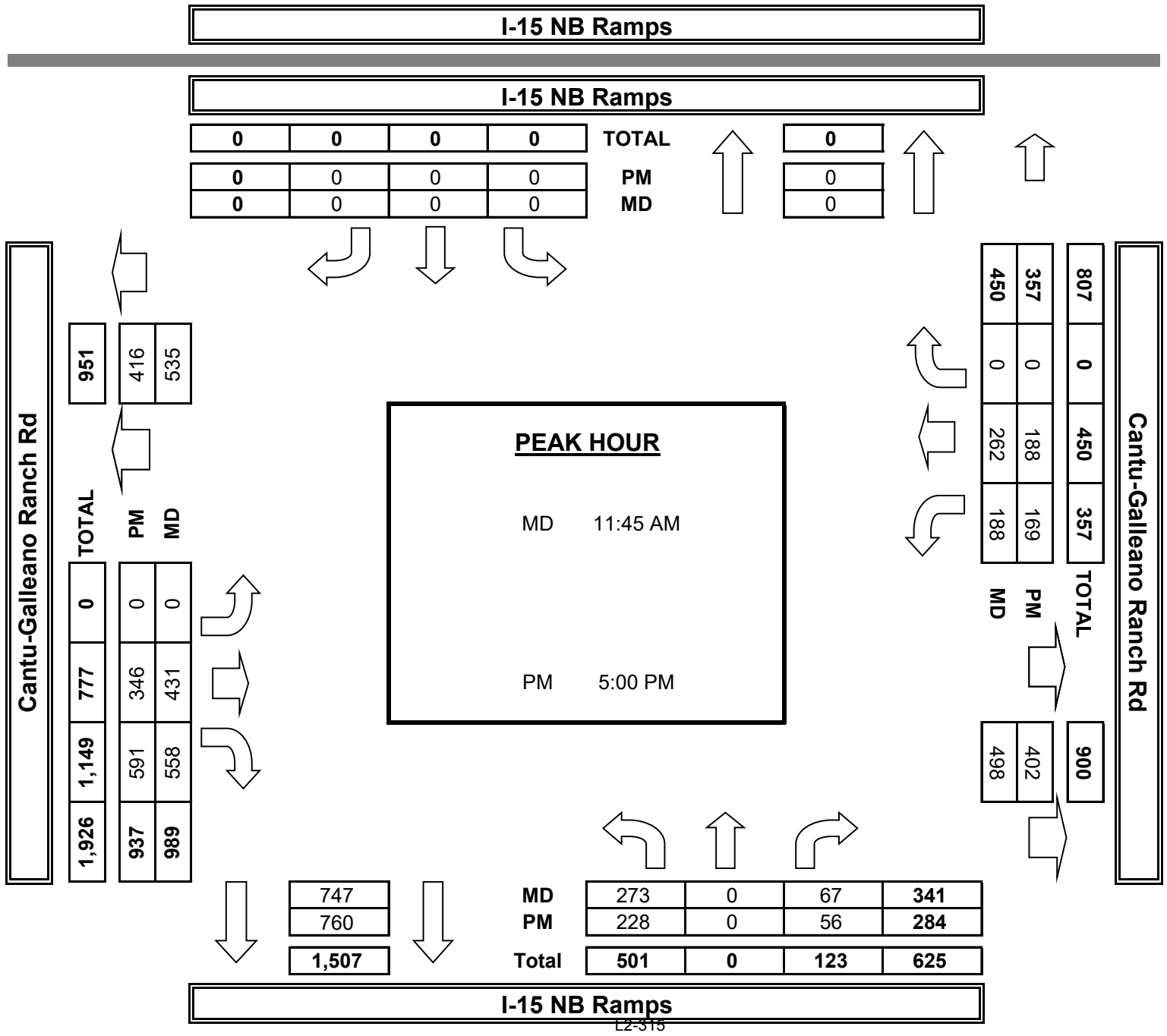
		NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND				U-TURNS				
		NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB	TTL
MD	11:00 AM	59	0	16	0	0	0	0	98	115	45	61	0	394	0	0	0	0	0
	11:15 AM	61	0	9	0	0	0	0	92	100	40	60	0	362	0	0	0	0	0
	11:30 AM	66	0	11	0	0	0	0	106	143	42	49	0	417	0	0	0	0	0
	11:45 AM	68	0	21	0	0	0	0	111	150	55	63	0	468	0	0	0	0	0
	12:00 PM	50	0	14	0	0	0	0	83	140	44	58	0	389	1	0	0	0	1
	12:15 PM	76	0	20	0	0	0	0	121	128	42	68	0	455	0	0	0	0	0
	12:30 PM	79	0	12	0	0	0	0	116	140	47	73	0	467	0	0	0	0	0
	12:45 PM	64	0	29	0	0	0	0	100	122	45	58	0	418	0	0	0	0	0
	VOLUMES	523	0	132	0	0	0	0	827	1,038	360	490	0	3,371	1	0	0	0	1
	APPROACH %	80%	0%	20%	0%	0%	0%	0%	44%	56%	42%	58%	0%						
	APP/DEPART	656	/	0	0	/	1,399	1,865	/	959	850	/	1,013	0					
	BEGIN PEAK HR	11:45 AM																	
	VOLUMES	273	0	67	0	0	0	0	431	558	188	262	0	1,780					
	APPROACH %	80%	0%	20%	0%	0%	0%	0%	44%	56%	42%	58%	0%						
	PEAK HR FACTOR	0.888			0.000			0.947			0.938			0.951					
	APP/DEPART	341	/	0	0	/	747	989	/	498	450	/	535	0					
PM	4:00 PM	40	0	16	0	0	0	0	115	126	43	34	0	374	0	0	0	0	0
	4:15 PM	60	0	21	0	0	0	0	99	134	34	46	0	394	0	0	0	0	0
	4:30 PM	66	0	17	0	0	0	0	90	136	34	53	0	396	0	0	0	0	0
	4:45 PM	68	0	16	0	0	0	0	87	102	29	54	0	356	1	0	0	0	1
	5:00 PM	59	0	9	0	0	0	0	101	143	39	49	0	400	0	0	0	0	0
	5:15 PM	62	0	15	0	0	0	0	88	146	48	45	0	404	0	0	0	0	0
	5:30 PM	65	0	13	0	0	0	0	69	147	35	59	0	388	0	0	0	0	0
	5:45 PM	42	0	19	0	0	0	0	88	155	47	35	0	386	0	0	0	0	0
	6:00 PM	53	0	10	0	0	0	0	69	157	38	33	0	360	0	0	0	0	0
	6:15 PM	53	0	12	0	0	0	0	68	148	47	37	0	365	0	0	0	0	0
	6:30 PM	52	0	17	0	0	0	0	99	141	35	28	0	372	0	0	0	0	0
	6:45 PM	41	0	16	0	0	0	0	102	127	32	37	0	355	0	0	0	0	0
	VOLUMES	661	0	181	0	0	0	0	1,075	1,662	461	510	0	4,551	1	0	0	0	1
	APPROACH %	78%	0%	21%	0%	0%	0%	0%	39%	61%	47%	53%	0%						
	APP/DEPART	843	/	0	0	/	2,124	2,737	/	1,256	971	/	1,171	0					
	BEGIN PEAK HR	5:00 PM																	
	VOLUMES	228	0	56	0	0	0	0	346	591	169	188	0	1,578					
	APPROACH %	80%	0%	20%	0%	0%	0%	0%	37%	63%	47%	53%	0%						
	PEAK HR FACTOR	0.910			0.000			0.960			0.949			0.976					
	APP/DEPART	284	/	0	0	/	760	937	/	402	357	/	416	0					



AimTD LLC

TURNING MOVEMENT COUNTS





Appendix C
Roadway Classification Counts

\42621

24-HOUR ROADWAY SEGMENT COUNTS (WITH FHWA CLASSIFICATION)

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Wednesday, October 27, 2021 **CITY#** Ontario

JOB #: SC3147 CLASS8 Grove north of Mission

AM	NORTHBOUND													
TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
0:00	0	62	7	0	0	0	0	1	1	0	0	0	0	71
0:15	0	48	6	0	1	0	0	0	0	0	0	0	0	55
0:30	0	39	9	0	0	0	0	0	2	0	0	0	0	50
0:45	0	33	3	0	1	0	0	0	2	0	0	0	0	39
1:00	0	31	5	0	0	0	0	2	1	0	0	0	0	39
1:15	1	30	0	0	1	0	0	0	1	0	0	0	0	33
1:30	0	32	2	0	2	0	0	0	1	0	0	1	0	38
1:45	0	28	6	0	0	0	0	0	1	0	0	0	0	35
2:00	0	27	8	0	1	0	0	1	3	0	0	0	0	40
2:15	0	27	3	0	0	0	0	0	0	0	0	0	0	30
2:30	0	31	2	0	0	0	0	0	1	0	0	0	0	34
2:45	0	30	3	0	0	0	0	1	1	0	0	0	0	35
3:00	1	37	4	0	1	0	0	0	0	0	0	0	0	43
3:15	0	31	3	0	1	0	0	1	1	0	0	0	0	37
3:30	0	33	8	0	0	2	0	1	0	0	0	0	0	44
3:45	0	27	7	0	2	1	0	0	1	0	0	0	0	38
4:00	0	41	10	0	3	0	0	1	1	0	0	0	0	56
4:15	0	37	12	0	3	0	0	0	1	0	0	0	0	53
4:30	0	74	22	0	2	0	0	0	0	0	0	0	0	98
4:45	0	64	8	0	1	1	0	0	0	0	0	0	0	74
5:00	0	59	13	0	0	0	0	0	4	0	0	0	0	76
5:15	1	64	24	0	6	1	0	3	4	0	2	0	0	105
5:30	0	85	25	0	6	4	0	2	6	0	0	0	0	128
5:45	0	111	22	0	5	2	0	3	3	0	0	0	0	146
6:00	0	94	21	0	7	1	0	0	6	0	1	0	0	130
6:15	1	83	23	4	10	5	0	0	2	0	2	0	0	130
6:30	0	138	35	1	12	5	0	1	1	0	0	0	0	193
6:45	0	157	35	3	7	2	0	0	4	0	0	0	0	208
7:00	0	186	38	0	7	1	0	1	5	0	2	0	0	240
7:15	1	195	46	1	21	1	0	0	3	0	0	0	0	268
7:30	0	214	71	4	13	4	0	0	3	0	0	0	0	309
7:45	0	235	54	1	15	2	0	0	4	0	0	0	0	311
8:00	0	214	55	0	7	3	0	0	7	1	1	0	0	288
8:15	0	187	42	1	9	2	0	0	6	0	1	0	0	248
8:30	0	211	52	3	16	3	0	0	6	0	0	0	0	291
8:45	0	161	46	1	14	4	0	0	9	0	0	0	0	235
9:00	0	149	36	2	11	2	0	0	7	0	0	0	0	207
9:15	0	136	42	0	12	4	1	0	10	0	2	0	0	207
9:30	0	155	28	0	15	3	0	0	7	0	0	0	0	208
9:45	1	167	34	1	13	6	0	1	6	0	0	0	0	229
10:00	0	159	38	1	17	3	0	0	2	0	0	0	0	220
10:15	0	145	35	1	19	4	0	0	5	0	1	0	0	210
10:30	0	138	40	2	10	5	0	0	8	0	1	0	0	204
10:45	0	156	27	0	18	7	0	2	4	0	1	0	0	215
11:00	0	158	41	0	18	4	0	1	4	0	1	0	0	227
11:15	0	171	53	2	10	1	0	0	8	0	0	0	0	245
11:30	0	157	38	1	17	3	0	2	9	0	0	0	0	227
11:45	0	172	50	3	14	3	0	0	11	0	1	0	0	254
TOTAL	6	5,019	1,192	32	348	89	1	24	172	1	16	1	0	6,901

AM PEAK HOUR	7:15 AM
AM PEAK VOLUME	1,176

PM	NORTHBOUND													
Time	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
12:00	0	150	45	0	10	3	0	1	1	0	1	0	0	211
12:15	0	145	50	1	14	1	0	0	5	0	0	0	0	216
12:30	0	158	52	1	18	4	0	2	6	0	0	0	0	241
12:45	0	143	49	0	13	4	1	0	10	0	1	0	0	221
13:00	2	159	32	2	12	6	0	1	3	0	0	0	0	217
13:15	0	177	45	0	13	2	0	0	4	0	0	0	0	241
13:30	0	221	47	1	18	2	0	0	3	0	0	0	0	292
13:45	0	192	44	0	7	6	0	0	2	0	0	0	0	251
14:00	0	200	49	2	9	9	0	3	12	0	0	0	0	284
14:15	0	192	54	1	10	3	0	0	4	0	0	0	0	264
14:30	0	313	66	1	12	1	0	2	5	0	0	0	0	400
14:45	1	263	61	2	13	2	0	0	4	0	0	0	0	346
15:00	2	219	73	1	12	1	0	2	2	0	3	0	0	315
15:15	1	250	58	1	12	7	0	0	4	0	1	0	0	334
15:30	1	324	71	0	12	5	0	2	3	0	0	0	0	418
15:45	2	241	68	0	6	3	0	0	4	0	0	0	0	324
16:00	0	268	46	0	5	1	0	0	3	0	0	0	0	323
16:15	0	326	68	0	16	1	0	1	4	0	0	0	0	416
16:30	0	332	66	0	8	0	0	0	3	0	0	0	0	409
16:45	2	291	70	0	12	2	0	1	3	0	0	0	0	381
17:00	0	310	54	1	6	2	0	1	3	0	0	0	0	377
17:15	1	262	45	1	9	2	0	0	3	0	0	0	0	323
17:30	1	272	49	0	4	2	0	0	0	0	0	0	0	328
17:45	0	290	41	0	4	0	0	2	3	0	0	0	0	340
18:00	0	257	36	0	9	1	0	1	5	0	0	0	0	309
18:15	0	243	28	0	6	2	0	0	4	0	0	0	0	283
18:30	2	222	33	0	8	3	0	1	4	0	0	0	0	273
18:45	0	194	44	0	11	2	0	1	4	0	0	0	0	256
19:00	0	156	23	0	3	0	0	2	1	0	0	0	0	185
19:15	2	171	28	0	5	1	0	0	1	0	0	0	0	208
19:30	0	178	27	0	2	0	0	2	3	0	0	0	0	212
19:45	0	136	19	0	9	0	0	0	2	0	0	0	0	166
20:00	0	146	23	0	3	1	0	1	0	0	0	0	0	174
20:15	0	133	22	0	5	0	0	3	3	0	0	0	0	166
20:30	1	156	19	0	2	0	0	1	3	0	0	0	0	182
20:45	0	136	15	0	0	1	0	3	1	0	0	1	0	157
21:00	2	108	9	0	1	2	0	2	0	0	0	0	0	124
21:15	0	135	10	0	1	0	0	0	1	0	0	0	0	147
21:30	1	124	24	0	1	1	0	2	4	0	0	0	0	157
21:45	0	98	14	0	2	2	0	1	0	0	0	0	0	117
22:00	1	107	14	0	1	0	0	0	0	0	0	0	0	123
22:15	1	90	10	0	1	0	0	0	0	0	0	0	0	102
22:30	1	95	11	0	1	0	0	0	0	0	0	0	0	108
22:45	0	63	5	0	1	1	0	0	1	0	0	0	0	71
23:00	0	48	2	0	1	4	0	0	0	0	0	0	0	55
23:15	0	59	5	0	1	4	0	1	0	0	0	0	0	70
23:30	0	62	8	0	0	1	0	2	0	0	0	1	0	74
23:45	0	50	4	0	0	1	0	0	2	0	0	0	0	57
TOTAL	24	8,865	1,736	15	329	96	1	41	133	0	6	2	0	11,248

PM PEAK HOUR	4:15 PM
PM PEAK VOLUME	1,583

CLASS 1	Class 1 — Motorcycles	**CLASS 8**	3 to 4 Axles, Single Trailer
CLASS 2	Passenger Cars	**CLASS 9**	5 Axles, Single Trailer
CLASS 3	2 Axles, 4-Tire Single Units	**CLASS 10**	6 or More Axles, Single Trailer
CLASS 4	Buses	**CLASS 11**	5 or Less Axles, Multi-Trailers
CLASS 5	2 Axles, 6-Tire Single Units	**CLASS 12**	6 Axles, Multi-Trailers
CLASS 6	3 Axles, Single Unit	**CLASS 13**	7 or More Axles, Multi-Trailers
CLASS 7	4 or More Axles, Single Unit		

TOTAL: AM+PM	30	13,884	2,928	47	677	185	2	65	305	1	22	3	0	18,149
% OF TOTAL	0.2%	76.5%	16.1%	0.3%	3.7%	1.0%	0.0%	0.4%	1.7%	0.0%	0.1%	0.0%	0.0%	100.0%

Class	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	
TOTAL: ALL	55	28,165	5,633	104	1,312	349	5	125	697	4	45	3	0	36,497
% OF TOTAL	0.2%	77.2%	15.4%	0.3%	3.6%	1.0%	0.0%	0.3%	1.9%	0.0%	0.1%	0.0%	0.0%	100.0%

24-HOUR ROADWAY SEGMENT COUNTS (WITH FHWA CLASSIFICATION)

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Wednesday, October 27, 2021
JOB #: SC3147

CITY# Ontario
CLASS8 Grove north of Mission

AM	SOUTHBOUND														PM	SOUTHBOUND													
TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL	Time	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
0:00	0	36	4	0	3	0	0	0	1	0	0	0	0	44	12:00	0	141	40	2	15	0	0	1	11	0	1	0	0	211
0:15	0	35	1	0	1	0	0	0	1	0	0	0	0	38	12:15	0	132	29	2	6	2	1	0	9	0	0	0	0	181
0:30	0	33	2	0	0	0	0	2	2	0	0	0	0	39	12:30	0	193	31	0	13	1	0	0	4	0	1	0	0	243
0:45	0	24	0	0	0	0	0	0	1	0	0	0	0	25	12:45	0	171	42	2	16	2	0	1	10	0	1	0	0	245
1:00	0	33	1	0	0	0	0	0	1	0	0	0	0	35	13:00	1	207	30	1	11	1	0	0	11	0	1	0	0	263
1:15	0	22	1	0	0	0	0	0	1	0	0	0	0	24	13:15	1	164	51	0	11	3	0	1	12	0	0	0	0	243
1:30	0	14	4	0	2	0	0	0	1	0	0	0	0	21	13:30	0	182	38	3	20	5	0	3	10	0	0	0	0	261
1:45	0	22	1	0	1	1	0	0	1	0	0	0	0	26	13:45	1	230	54	0	14	6	0	1	6	0	0	0	0	312
2:00	0	17	5	0	0	1	0	0	1	0	0	0	0	24	14:00	0	139	33	2	13	6	0	0	5	0	0	0	0	198
2:15	0	18	0	0	0	0	0	1	1	0	0	0	0	20	14:15	0	208	41	2	13	5	0	1	7	0	0	0	0	277
2:30	0	23	4	0	0	0	0	0	1	0	0	0	0	28	14:30	0	169	40	0	9	5	0	1	5	0	0	0	0	229
2:45	0	29	10	0	1	0	0	1	1	0	0	0	0	42	14:45	1	245	56	0	15	2	0	2	3	0	0	0	0	324
3:00	0	26	5	0	0	0	0	1	3	0	0	0	0	35	15:00	0	214	52	2	24	2	0	0	7	0	0	0	0	301
3:15	0	35	7	0	1	0	0	0	0	0	0	0	0	43	15:15	0	247	63	3	9	7	0	1	4	0	0	0	0	334
3:30	0	59	8	0	2	0	0	0	1	0	0	0	0	70	15:30	0	267	37	2	14	3	0	2	4	0	0	0	0	329
3:45	0	92	15	0	0	0	0	1	0	0	0	0	0	108	15:45	1	217	50	2	9	5	0	2	3	0	0	0	0	289
4:00	0	48	17	0	3	0	0	0	1	0	0	0	0	69	16:00	1	291	47	3	9	1	1	4	7	0	0	0	0	364
4:15	0	73	17	0	3	1	0	0	3	0	0	0	0	97	16:15	1	245	61	0	16	7	0	0	7	0	0	0	0	337
4:30	0	130	29	0	0	1	0	1	4	0	0	0	0	165	16:30	0	254	49	0	12	3	0	1	4	0	0	0	0	323
4:45	1	175	34	0	1	0	0	1	1	0	0	0	0	213	16:45	0	284	61	2	6	3	0	1	5	0	1	0	0	363
5:00	0	120	35	0	3	0	0	1	6	0	3	0	0	168	17:00	0	261	47	0	3	4	0	0	5	0	0	0	0	320
5:15	0	127	37	0	5	1	0	1	2	0	1	0	0	174	17:15	1	254	36	1	11	3	0	1	3	0	0	0	0	310
5:30	0	245	50	1	2	0	0	1	4	0	0	0	0	303	17:30	0	280	38	1	7	2	0	0	10	0	0	0	0	338
5:45	0	312	64	0	9	0	0	0	0	0	1	0	0	386	17:45	0	274	32	0	5	2	0	3	4	0	0	0	0	320
6:00	0	139	26	0	4	1	0	0	2	0	1	0	0	173	18:00	1	232	37	1	10	2	0	4	4	0	0	0	0	291
6:15	0	153	48	0	9	2	0	0	3	0	0	0	0	215	18:15	1	221	41	0	10	1	0	1	4	0	0	0	0	279
6:30	0	205	51	0	11	1	0	0	3	0	0	0	0	271	18:30	2	198	21	0	4	2	0	0	3	0	0	0	0	230
6:45	1	296	64	2	6	1	0	0	8	0	0	0	0	378	18:45	0	167	22	0	7	2	0	5	4	0	0	0	0	207
7:00	0	219	54	3	13	2	0	0	3	0	2	0	0	296	19:00	0	131	25	0	9	1	0	0	2	0	0	0	0	168
7:15	3	258	40	1	14	2	0	1	5	0	0	0	0	324	19:15	0	135	19	0	2	3	0	1	3	0	0	0	0	163
7:30	0	302	57	4	18	1	0	0	7	0	0	0	0	389	19:30	1	121	12	0	1	0	0	2	3	0	0	0	0	140
7:45	2	330	45	2	11	3	0	0	3	0	0	0	0	396	19:45	0	134	15	0	4	0	0	1	1	0	0	0	0	155
8:00	1	289	33	3	16	3	0	0	5	1	2	0	0	353	20:00	0	111	13	0	0	0	0	1	6	0	0	0	0	131
8:15	0	258	44	1	12	3	0	0	3	0	0	0	0	321	20:15	0	137	22	0	0	0	0	1	3	0	0	0	0	163
8:30	0	207	54	0	8	2	0	0	7	0	0	0	0	278	20:30	0	129	16	0	3	2	0	0	2	0	0	0	0	152
8:45	0	186	32	1	9	7	1	0	3	0	0	0	0	239	20:45	1	99	6	0	1	0	0	2	3	0	0	0	0	112
9:00	0	141	29	0	11	1	0	0	6	0	2	0	0	190	21:00	0	119	7	0	0	1	0	0	4	0	0	0	0	131
9:15	0	159	31	3	8	2	0	0	7	0	1	0	0	211	21:15	0	93	11	0	2	0	0	0	5	0	0	0	0	111
9:30	0	165	30	1	12	4	0	0	11	0	0	0	0	223	21:30	0	108	9	0	1	1	0	0	1	0	0	0	0	120
9:45	0	159	30	0	12	6	0	0	6	0	0	0	0	213	21:45	0	78	6	0	0	0	0	0	3	0	0	0	0	87
10:00	0	135	35	0	7	1	0	0	6	0	2	0	0	186	22:00	0	74	4	0	0	0	0	1	1	0	0	0	0	80
10:15	0	151	45	1	10	1	0	0	10	1	0	0	0	219	22:15	0	85	7	0	0	3	0	0	0	0	0	0	0	95
10:30	0	154	41	0	16	0	0	0	4	0	1	0	0	216	22:30	0	61	4	0	0	0	0	0	1	0	0	0	0	66
10:45	1	162	51	0	16	5	0	0	10	0	0	0	0	245	22:45	0	53	4	0	2	0	0	0	1	0	0	0	0	60
11:00	1	148	37	1	8	2	0	0	4	0	1	0	0	202	23:00	0	53	3	1	0	0	0	1	2	0	0	0	0	60
11:15	0	107	29	0	4	2	0	0	10	0	0	0	0	152	23:15	0	43	4	0	2	0	0	1	2	0	0	0	0	52
11:30	1	140	36	0	11	5	0	0	4	0	1	0	0	198	23:30	0	51	6	0	0	0	0	1	3	0	0	0	0	61
11:45	0	123	37	1	12	4	0	0	5	1	0	0	0	183	23:45	0	45	3	0	1	0	0	0	2	0	0	0	0	51
TOTAL	11	6,334	1,330	25	295	66	1	12	173	3	18	0	0	8,268	TOTAL	14	7,947	1,375	32	340	98	2	48	219	0	5	0	0	10,080

AM PEAK HOUR	7:15 AM
AM PEAK VOLUME	1,462

PM PEAK HOUR	4:00 PM
PM PEAK VOLUME	1,387

CLASS 1	Class 1 — Motorcycles	**CLASS 8**	3 to 4 Axles, Single Trailer
CLASS 2	Passenger Cars	**CLASS 9**	5 Axles, Single Trailer
CLASS 3	2 Axles, 4-Tire Single Units	**CLASS 10**	6 or More Axles, Single Trailer
CLASS 4	Buses	**CLASS 11**	5 or Less Axles, Multi-Trailers
CLASS 5	2 Axles, 6-Tire Single Units	**CLASS 12**	6 Axles, Multi-Trailers
CLASS 6	3 Axles, Single Unit	**CLASS 13**	7 or More Axles, Multi-Trailers
CLASS 7	4 or More Axles, Single Unit		

TOTAL: AM+PM	25	####	2,705	57	635	164	3	60	392	3	23	0	0	18,348
% OF TOTAL	0.1%	77.8%	14.7%	0.3%	3.5%	0.9%	0.0%	0.3%	2.1%	0.0%	0.1%	0.0%	0.0%	100.0%

Class	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**

	NB	
Daily All Volumes	Sum of All Trucks	Daily Truck %

	NB	
Peak All Volumes	Sum of All Peak T	Peak Truck %
2,759	40	1.45%
	AM	
2,638	49	1.86%
	23	
2,638	26	0.99%

	SB	
Daily All Volumes	Sum of All Trucks	Daily Truck %

	SB	
Peak All Volumes	Sum of All Peak T	Peak Truck %
2,849	49	1.72%
	PM	
2,970	31	1.04%
	12	
2,970	19	0.64%

A102423

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, October 10, 2023 **CITY:** Ontario

JOB #: SC4225 **LOCATION:** CLASS7 East Riverside Dr west of S Archibald Ave

AM TIME	EB 1	2	3	4	5	6	TOTAL	PM Time	EB 1	2	3	4	5	6	TOTAL
0:00	27	1	0	3	0	0	31	**12:00**	143	9	3	7	0	1	163
0:15	38	1	0	0	0	0	39	**12:15**	189	7	1	1	0	0	198
0:30	21	0	0	0	0	0	21	**12:30**	176	7	2	4	0	0	189
0:45	20	0	0	0	0	0	20	**12:45**	185	8	3	2	0	0	198
1:00	19	0	0	1	0	0	20	**13:00**	183	8	2	3	0	2	198
1:15	14	0	0	1	0	0	15	**13:15**	166	9	3	6	0	0	184
1:30	9	0	1	0	0	0	10	**13:30**	192	13	1	3	0	0	209
1:45	14	0	0	0	0	0	14	**13:45**	223	11	1	0	0	2	237
2:00	8	1	0	1	0	0	10	**14:00**	229	14	2	5	0	2	252
2:15	9	0	0	0	0	0	9	**14:15**	228	12	0	3	0	3	246
2:30	16	0	0	0	0	0	16	**14:30**	212	13	2	2	0	2	231
2:45	10	0	0	0	0	0	10	**14:45**	239	11	3	3	0	2	258
3:00	17	1	0	0	0	0	18	**15:00**	261	7	2	1	0	4	275
3:15	15	0	0	1	0	0	16	**15:15**	277	9	2	3	0	1	292
3:30	31	0	0	0	0	0	31	**15:30**	275	10	1	4	0	0	290
3:45	19	4	0	1	0	0	24	**15:45**	290	9	1	2	0	0	302
4:00	26	1	0	3	0	0	30	**16:00**	274	9	2	2	0	0	287
4:15	20	0	0	4	0	0	24	**16:15**	278	16	3	3	0	1	301
4:30	40	3	0	2	0	0	45	**16:30**	259	9	0	2	0	0	270
4:45	52	2	0	1	0	0	55	**16:45**	296	4	2	7	0	1	310
5:00	36	1	1	1	0	0	39	**17:00**	295	9	2	1	0	0	307
5:15	37	1	0	4	0	0	42	**17:15**	282	8	2	1	1	1	295
5:30	46	1	0	1	0	0	48	**17:30**	298	9	0	1	0	0	308
5:45	63	3	3	2	0	0	71	**17:45**	259	9	0	2	0	0	270
6:00	47	5	3	2	0	1	58	**18:00**	305	10	2	1	0	1	319
6:15	59	5	2	4	0	0	70	**18:15**	277	4	0	2	0	0	283
6:30	76	5	2	1	0	0	84	**18:30**	277	8	2	1	0	0	288
6:45	95	11	2	0	0	0	108	**18:45**	244	3	0	1	0	0	248
7:00	113	5	3	3	0	1	125	**19:00**	242	7	0	2	0	1	252
7:15	121	9	4	3	0	2	139	**19:15**	199	4	0	0	0	0	203
7:30	157	15	3	1	0	1	177	**19:30**	197	2	0	1	0	0	200
7:45	209	4	1	2	0	0	216	**19:45**	179	0	1	1	0	0	181
8:00	212	5	2	4	0	7	230	**20:00**	161	1	0	0	0	1	163
8:15	172	6	2	2	0	1	183	**20:15**	168	3	0	1	0	0	172
8:30	125	5	3	1	0	0	134	**20:30**	167	1	1	0	0	0	169
8:45	137	8	1	6	0	0	152	**20:45**	153	1	1	2	0	0	157
9:00	132	6	2	2	0	4	146	**21:00**	189	4	0	3	0	1	197
9:15	126	9	2	3	0	0	140	**21:15**	180	3	0	1	0	0	184
9:30	125	9	2	3	0	0	139	**21:30**	208	2	0	1	0	0	211
9:45	98	12	2	6	0	0	118	**21:45**	105	0	0	1	0	0	106
10:00	115	10	2	2	0	0	129	**22:00**	127	3	0	1	0	0	131
10:15	147	10	5	7	0	0	169	**22:15**	97	0	2	0	0	0	99
10:30	113	15	1	2	0	1	132	**22:30**	111	3	1	2	0	0	117
10:45	124	9	1	2	0	0	136	**22:45**	93	1	0	2	0	0	96
11:00	164	12	6	5	0	3	190	**23:00**	90	0	0	2	0	0	92
11:15	162	5	5	4	0	0	176	**23:15**	67	2	0	0	0	0	69
11:30	153	8	2	2	0	0	165	**23:30**	57	2	0	1	0	0	60
11:45	173	12	0	1	0	0	186	**23:45**	51	0	1	0	0	0	52
TOTAL	3,762	220	63	94	0	21	4,160	**TOTAL**	9,653	294	51	94	1	26	10,119

AM PEAK HOUR	7:30 AM
AM PEAK VOLUME	806

AM PEAK HOUR	4:45 PM
AM PEAK VOLUME	1,220

PM Peak Hour - Eastbound

Start Time	Total Volume	Passenger Cars	Trucks	MedTrk
4:45 PM	1,220	1,171	49	30

CLASS 1	PASSENGER VEHICLES	**TOTAL: AM+PM**	13,415	514	114	188	1	47	14,279
CLASS 2	2-AXLE TRUCKS	**% OF TOTAL**	93.9%	3.6%	0.8%	1.3%	0.0%	0.3%	100.0%
CLASS 3	3-AXLE TRUCKS								
CLASS 4	4 OR MORE AXLE TRUCKS								
CLASS 5	RV	**TOTAL: ALL**	23,700	899	216	298	2	88	25,203
CLASS 6	Buses	**% OF TOTAL**	94.0%	3.6%	0.9%	1.2%	0.0%	0.3%	100.0%

A102423

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, October 10, 2023
JOB #: SC4225
CITY: Ontario
LOCATION: CLASS7 East Riverside Dr west of S Archibald Ave

AM TIME	WB 1	2	3	4	5	6	TOTAL	PM Time	WB 1	2	3	4	5	6	TOTAL
0:00	20	1	2	2	0	0	25	**12:00**	125	3	3	0	0	0	131
0:15	11	0	1	0	0	0	12	**12:15**	126	10	4	3	0	1	144
0:30	8	1	1	0	0	0	10	**12:30**	117	6	0	0	0	0	123
0:45	18	0	0	0	0	0	18	**12:45**	133	5	4	2	0	1	145
1:00	9	1	0	0	0	0	10	**13:00**	124	4	3	1	0	1	133
1:15	6	0	0	1	0	0	7	**13:15**	114	6	2	3	0	0	125
1:30	9	0	0	0	0	0	9	**13:30**	121	4	2	4	0	0	131
1:45	4	0	0	0	0	0	4	**13:45**	145	7	0	1	0	2	155
2:00	3	0	0	0	0	0	3	**14:00**	107	3	3	2	0	1	116
2:15	14	0	0	0	0	0	14	**14:15**	133	10	3	3	0	1	150
2:30	10	1	0	0	0	0	11	**14:30**	136	9	1	4	0	2	152
2:45	10	0	0	0	0	0	10	**14:45**	217	4	3	4	0	2	230
3:00	4	0	0	0	0	0	4	**15:00**	168	3	1	1	0	0	173
3:15	8	0	0	0	0	0	8	**15:15**	132	5	0	4	0	2	143
3:30	9	0	0	0	0	0	9	**15:30**	175	4	0	3	0	0	182
3:45	19	2	0	0	0	0	21	**15:45**	189	3	0	1	0	1	194
4:00	10	2	0	0	0	0	12	**16:00**	171	7	0	0	0	1	179
4:15	8	1	0	0	0	0	9	**16:15**	172	5	1	2	0	0	180
4:30	16	1	1	0	0	0	18	**16:30**	149	4	1	0	0	0	154
4:45	39	1	2	0	0	1	43	**16:45**	183	3	0	4	0	1	191
5:00	49	2	0	0	0	0	51	**17:00**	181	3	0	0	0	0	184
5:15	54	0	1	2	0	0	57	**17:15**	185	3	2	2	0	0	192
5:30	84	7	1	0	0	0	92	**17:30**	184	2	1	2	0	0	189
5:45	92	4	0	0	0	1	97	**17:45**	175	4	2	2	0	1	184
6:00	104	8	1	1	0	0	114	**18:00**	173	1	0	2	0	0	176
6:15	116	11	0	0	0	0	127	**18:15**	140	2	2	0	0	0	144
6:30	174	8	2	3	0	1	188	**18:30**	146	7	0	0	0	0	153
6:45	222	7	1	1	1	1	233	**18:45**	179	1	1	2	0	1	184
7:00	199	10	3	0	0	1	213	**19:00**	124	3	1	0	0	0	128
7:15	260	12	0	1	0	0	273	**19:15**	127	2	0	0	0	0	129
7:30	259	9	2	1	0	2	273	**19:30**	115	1	0	1	0	0	117
7:45	280	10	6	0	0	3	299	**19:45**	85	0	1	0	0	1	87
8:00	258	10	1	6	0	3	278	**20:00**	87	0	0	0	0	0	87
8:15	230	5	2	1	0	2	240	**20:15**	97	0	1	3	0	0	101
8:30	246	11	0	3	0	0	260	**20:30**	74	1	0	0	0	0	75
8:45	199	14	0	5	0	1	219	**20:45**	84	2	2	1	0	1	90
9:00	168	14	4	0	0	0	186	**21:00**	74	0	1	1	0	0	76
9:15	154	12	3	1	0	0	170	**21:15**	62	0	0	0	0	0	62
9:30	150	13	2	0	0	0	165	**21:30**	62	1	0	0	0	0	63
9:45	124	10	1	3	0	1	139	**21:45**	52	0	2	0	0	0	54
10:00	124	5	2	4	0	0	135	**22:00**	46	0	1	0	0	0	47
10:15	117	8	4	1	0	0	130	**22:15**	40	1	0	1	0	0	42
10:30	141	10	2	4	0	0	157	**22:30**	38	0	0	2	0	0	40
10:45	149	8	5	1	0	2	165	**22:45**	40	2	0	0	0	0	42
11:00	145	5	0	2	0	1	153	**23:00**	26	0	0	2	0	0	28
11:15	112	8	2	0	0	0	122	**23:15**	16	2	0	0	0	0	18
11:30	120	3	1	2	0	0	126	**23:30**	28	1	0	1	0	0	30
11:45	129	6	1	1	0	1	138	**23:45**	14	0	0	0	0	0	14
TOTAL	4,694	241	54	46	1	21	5,057	**TOTAL**	5,591	144	48	64	0	20	5,867
				AM PEAK HOUR			7:15 AM					**AM PEAK HOUR**			4:45 PM
				AM PEAK VOLUME			1,123					**AM PEAK VOLUME**			756

PM Peak Hour - Westbound

Start Time	Total Volume	Passenger C	Trucks	MedTrk
4:45 PM	756	733	23	11

CLASS 1	PASSENGER VEHICLES	**TOTAL: AM+PM**	10,285	385	102	110	1	41	10,924
CLASS 2	2-AXLE TRUCKS	**% OF TOTAL**	94.2%	3.5%	0.9%	1.0%	0.0%	0.4%	100.0%
CLASS 3	3-AXLE TRUCKS								
CLASS 4	4 OR MORE AXLE TRUCKS								
CLASS 5	RV								
CLASS 6	BUS								

A102423

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, October 10, 2023 **CITY:** Ontario

JOB #: SC4225 **LOCATION:** CLASS7 East Riverside Dr west of S Archibald Ave

AM TIME	COMBINED 1	2	3	4	5	6	TOTAL	PM Time	COMBINED 1	2	3	4	5	6	TOTAL
0:00	47	2	2	5	0	0	56	12:00	268	12	6	7	0	1	294
0:15	49	1	1	0	0	0	51	12:15	315	17	5	4	0	1	342
0:30	29	1	1	0	0	0	31	12:30	293	13	2	4	0	0	312
0:45	38	0	0	0	0	0	38	12:45	318	13	7	4	0	1	343
1:00	28	1	0	1	0	0	30	13:00	307	12	5	4	0	3	331
1:15	20	0	0	2	0	0	22	13:15	280	15	5	9	0	0	309
1:30	18	0	1	0	0	0	19	13:30	313	17	3	7	0	0	340
1:45	18	0	0	0	0	0	18	13:45	368	18	1	1	0	4	392
2:00	11	1	0	1	0	0	13	14:00	336	17	5	7	0	3	368
2:15	23	0	0	0	0	0	23	14:15	361	22	3	6	0	4	396
2:30	26	1	0	0	0	0	27	14:30	348	22	3	6	0	4	383
2:45	20	0	0	0	0	0	20	14:45	456	15	6	7	0	4	488
3:00	21	1	0	0	0	0	22	15:00	429	10	3	2	0	4	448
3:15	23	0	0	1	0	0	24	15:15	409	14	2	7	0	3	435
3:30	40	0	0	0	0	0	40	15:30	450	14	1	7	0	0	472
3:45	38	6	0	1	0	0	45	15:45	479	12	1	3	0	1	496
4:00	36	3	0	3	0	0	42	16:00	445	16	2	2	0	1	466
4:15	28	1	0	4	0	0	33	16:15	450	21	4	5	0	1	481
4:30	56	4	1	2	0	0	63	16:30	408	13	1	2	0	0	424
4:45	91	3	2	1	0	1	98	16:45	479	7	2	11	0	2	501
5:00	85	3	1	1	0	0	90	17:00	476	12	2	1	0	0	491
5:15	91	1	1	6	0	0	99	17:15	467	11	4	3	1	1	487
5:30	130	8	1	1	0	0	140	17:30	482	11	1	3	0	0	497
5:45	155	7	3	2	0	1	168	17:45	434	13	2	4	0	1	454
6:00	151	13	4	3	0	1	172	18:00	478	11	2	3	0	1	495
6:15	175	16	2	4	0	0	197	18:15	417	6	2	2	0	0	427
6:30	250	13	4	4	0	1	272	18:30	423	15	2	1	0	0	441
6:45	317	18	3	1	1	1	341	18:45	423	4	1	3	0	1	432
7:00	312	15	6	3	0	2	338	19:00	366	10	1	2	0	1	380
7:15	381	21	4	4	0	2	412	19:15	326	6	0	0	0	0	332
7:30	416	24	5	2	0	3	450	19:30	312	3	0	2	0	0	317
7:45	489	14	7	2	0	3	515	19:45	264	0	2	1	0	1	268
8:00	470	15	3	10	0	10	508	20:00	248	1	0	0	0	1	250
8:15	402	11	4	3	0	3	423	20:15	265	3	1	4	0	0	273
8:30	371	16	3	4	0	0	394	20:30	241	2	1	0	0	0	244
8:45	336	22	1	11	0	1	371	20:45	237	3	3	3	0	1	247
9:00	300	20	6	2	0	4	332	21:00	263	4	1	4	0	1	273
9:15	280	21	5	4	0	0	310	21:15	242	3	0	1	0	0	246
9:30	275	22	4	3	0	0	304	21:30	270	3	0	1	0	0	274
9:45	222	22	3	9	0	1	257	21:45	157	0	2	1	0	0	160
10:00	239	15	4	6	0	0	264	22:00	173	3	1	1	0	0	178
10:15	264	18	9	8	0	0	299	22:15	137	1	2	1	0	0	141
10:30	254	25	3	6	0	1	289	22:30	149	3	1	4	0	0	157
10:45	273	17	6	3	0	2	301	22:45	133	3	0	2	0	0	138
11:00	309	17	6	7	0	4	343	23:00	116	0	0	4	0	0	120
11:15	274	13	7	4	0	0	298	23:15	83	4	0	0	0	0	87
11:30	273	11	3	4	0	0	291	23:30	85	3	0	2	0	0	90
11:45	302	18	1	2	0	1	324	23:45	65	0	1	0	0	0	66
TOTAL	8,456	461	117	140	1	42	9,217	TOTAL	15,244	438	99	158	1	46	15,986

AM PEAK HOUR	7:30 AM
AM PEAK VOLUME	1,896

AM PEAK HOUR	4:45 PM
AM PEAK VOLUME	1,976

PH Start Time	
15:00	1,851
15:15	1,869
15:30	1,915
15:45	1,867
16:00	1,872
16:15	1,897
16:30	1,903
16:45	1,976
17:00	1,929
17:15	1,933
17:30	1,873
17:45	1,817
18:00	1,795
4:45 PM	1,976

		1	2	3	4	5	6	TOTAL
TOTAL: AM+PM		23,700	899	216	298	2	88	25,203
% OF TOTAL		94.0%	3.6%	0.9%	1.2%	0.0%	0.3%	100.0%

CLASS 1	PASSENGER VEHICLES
CLASS 2	2-AXLE TRUCKS
CLASS 3	3-AXLE TRUCKS
CLASS 4	4 OR MORE AXLE TRUCKS
CLASS 5	RV
CLASS 6	Buses

A102423

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, October 10, 2023 **CITY:** Ontario

JOB #: SC4225 **LOCATION:** CLASS2 East Riverside Dr east of S Walker Ave

AM TIME	EB 1	2	3	4	5	6	TOTAL	PM Time	EB 1	2	3	4	5	6	TOTAL
0:00	15	1	1	2	0	0	19	12:00	117	14	2	1	0	0	134
0:15	7	1	1	0	0	0	9	12:15	125	12	1	2	0	0	140
0:30	6	0	0	0	0	0	6	12:30	127	5	1	4	0	0	137
0:45	10	0	0	0	0	0	10	12:45	148	16	3	6	0	0	173
1:00	7	1	0	2	0	0	10	13:00	131	4	1	11	0	0	147
1:15	2	0	1	1	0	0	4	13:15	131	6	4	5	0	0	146
1:30	7	1	0	0	0	0	8	13:30	139	14	1	2	0	4	160
1:45	7	0	0	2	0	0	9	13:45	177	15	2	6	0	0	200
2:00	2	1	0	1	0	0	4	14:00	168	9	2	5	0	1	185
2:15	5	0	1	0	0	0	6	14:15	172	14	3	6	0	3	198
2:30	9	0	0	0	0	0	9	14:30	202	19	3	5	0	2	231
2:45	9	0	0	0	0	0	9	14:45	197	11	3	4	0	3	218
3:00	11	0	0	0	0	0	11	15:00	177	11	4	3	0	4	199
3:15	4	0	0	3	0	0	7	15:15	237	8	0	2	0	0	247
3:30	13	0	0	2	0	0	15	15:30	208	13	4	4	0	1	230
3:45	14	4	0	1	0	0	19	15:45	240	10	1	3	1	0	255
4:00	10	3	0	4	0	0	17	16:00	229	19	4	5	0	1	258
4:15	5	1	2	2	0	0	10	16:15	219	19	0	0	0	0	238
4:30	20	0	0	5	0	0	25	16:30	236	11	3	4	0	1	255
4:45	24	0	1	4	0	0	29	16:45	222	11	1	6	0	0	240
5:00	17	0	2	8	0	0	27	17:00	205	9	3	2	0	0	219
5:15	26	0	0	5	0	0	31	17:15	253	7	1	2	1	0	264
5:30	33	1	0	1	0	0	35	17:30	209	9	1	2	0	0	221
5:45	27	1	5	3	0	0	36	17:45	228	12	0	4	0	0	244
6:00	34	2	0	4	0	0	40	18:00	201	7	1	4	0	0	213
6:15	40	5	1	4	0	0	50	18:15	195	9	1	1	0	0	206
6:30	39	5	5	2	0	1	52	18:30	155	6	1	3	0	0	165
6:45	63	7	8	3	0	0	81	18:45	140	6	0	3	0	0	149
7:00	79	11	2	6	0	1	99	19:00	118	6	1	3	0	0	128
7:15	135	12	4	3	0	3	157	19:15	112	3	0	2	0	0	117
7:30	172	16	1	1	0	0	190	19:30	82	2	0	0	0	0	84
7:45	188	12	2	0	0	4	206	19:45	89	3	0	1	0	0	93
8:00	169	7	5	3	0	3	187	20:00	69	1	1	1	0	0	72
8:15	134	8	3	2	0	1	148	20:15	68	2	1	0	0	0	71
8:30	125	7	4	5	0	0	141	20:30	93	2	0	3	0	0	98
8:45	114	5	0	6	0	0	125	20:45	61	2	0	1	0	0	64
9:00	127	9	0	4	0	0	140	21:00	73	2	3	1	0	0	79
9:15	93	8	2	2	0	0	105	21:15	85	1	0	1	0	0	87
9:30	87	7	3	4	0	1	102	21:30	68	1	0	1	0	0	70
9:45	94	6	3	4	0	0	107	21:45	55	2	0	1	0	0	58
10:00	103	6	2	4	0	1	116	22:00	42	2	0	0	0	0	44
10:15	85	9	1	2	0	1	98	22:15	48	1	0	1	0	0	50
10:30	82	12	3	6	0	3	106	22:30	37	1	1	1	0	0	40
10:45	117	7	1	1	0	0	126	22:45	30	0	0	0	0	0	30
11:00	129	9	4	2	0	0	144	23:00	14	0	0	1	0	0	15
11:15	119	9	1	4	0	1	134	23:15	15	0	1	1	0	0	17
11:30	133	12	1	1	0	1	148	23:30	16	1	1	0	0	0	18
11:45	128	10	4	8	1	0	151	23:45	15	1	1	1	0	0	18
TOTAL	2,879	216	74	127	1	21	3,318	TOTAL	6,378	339	61	125	2	20	6,925

AM PEAK HOUR	7:15 AM	AM PEAK HOUR	3:45 PM
AM PEAK VOLUME	740	AM PEAK VOLUME	1,006

CLASS 1	PASSENGER VEHICLES	TOTAL: AM+PM	9,257	555	135	252	3	41	10,243
CLASS 2	2-AXLE TRUCKS	% OF TOTAL	90.4%	5.4%	1.3%	2.5%	0.0%	0.4%	100.0%
CLASS 3	3-AXLE TRUCKS								
CLASS 4	4 OR MORE AXLE TRUCKS								
CLASS 5	RV	TOTAL: ALL	17,744	983	258	440	4	91	19,520
CLASS 6	Buses	% OF TOTAL	90.9%	5.0%	1.3%	2.3%	0.0%	0.5%	100.0%

A102423

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, October 10, 2023
JOB #: SC4225

CITY: Ontario
LOCATION: CLASS2 East Riverside Dr east of S Walker Ave

AM TIME	WB 1	2	3	4	5	6	TOTAL	PM Time	WB 1	2	3	4	5	6	TOTAL
0:00	9	1	0	2	0	0	12	**12:00**	120	5	1	1	0	0	127
0:15	6	0	1	0	0	0	7	**12:15**	92	3	6	4	0	0	105
0:30	8	1	1	1	0	0	11	**12:30**	106	8	2	5	0	1	122
0:45	13	0	0	0	0	0	13	**12:45**	91	2	2	6	0	0	101
1:00	3	1	0	0	0	0	4	**13:00**	106	9	1	5	0	3	124
1:15	6	0	0	1	0	0	7	**13:15**	94	7	1	1	0	0	103
1:30	5	0	1	0	0	0	6	**13:30**	106	3	4	4	0	0	117
1:45	6	0	0	1	0	0	7	**13:45**	115	12	4	3	0	0	134
2:00	2	0	0	0	0	0	2	**14:00**	99	5	2	3	0	5	114
2:15	16	0	1	0	0	0	17	**14:15**	114	6	1	2	0	1	124
2:30	10	0	0	0	0	0	10	**14:30**	124	15	2	2	0	0	143
2:45	11	0	0	0	0	0	11	**14:45**	135	6	2	4	0	2	149
3:00	6	1	0	0	0	0	7	**15:00**	143	6	5	2	0	2	158
3:15	8	0	0	2	0	0	10	**15:15**	118	3	1	4	0	2	128
3:30	8	0	1	0	0	0	9	**15:30**	117	5	0	6	0	0	128
3:45	20	2	0	0	0	0	22	**15:45**	139	4	0	2	0	2	147
4:00	17	0	0	1	0	0	18	**16:00**	132	7	1	2	0	3	145
4:15	14	1	0	0	0	0	15	**16:15**	125	11	1	2	0	2	141
4:30	35	1	1	0	0	0	37	**16:30**	111	5	3	1	0	0	120
4:45	36	1	0	1	0	0	38	**16:45**	121	4	3	2	0	0	130
5:00	50	1	0	0	0	0	51	**17:00**	143	7	1	2	0	0	153
5:15	51	0	0	3	0	0	54	**17:15**	138	4	2	3	0	0	147
5:30	94	4	1	1	0	0	100	**17:30**	131	6	0	5	0	0	142
5:45	112	8	0	3	0	0	123	**17:45**	139	4	2	2	0	0	147
6:00	93	6	0	1	0	0	100	**18:00**	126	2	2	3	0	0	133
6:15	108	10	1	0	0	0	119	**18:15**	100	2	0	3	0	0	105
6:30	160	12	2	6	0	1	181	**18:30**	108	2	0	0	0	0	110
6:45	198	14	3	4	0	1	220	**18:45**	127	2	1	2	0	0	132
7:00	188	9	4	2	1	0	204	**19:00**	91	3	1	2	0	0	97
7:15	241	10	3	2	0	1	257	**19:15**	77	1	2	2	0	0	82
7:30	303	15	2	1	0	1	322	**19:30**	57	1	0	3	0	0	61
7:45	289	12	3	1	0	3	308	**19:45**	59	1	0	0	0	0	60
8:00	230	12	4	4	0	5	255	**20:00**	58	1	0	0	0	0	59
8:15	198	6	0	2	0	4	210	**20:15**	48	0	1	3	0	0	52
8:30	210	9	1	1	0	2	223	**20:30**	56	0	1	2	0	0	59
8:45	180	15	2	5	0	0	202	**20:45**	53	2	1	3	0	0	59
9:00	142	7	1	0	0	0	150	**21:00**	47	1	2	3	0	0	53
9:15	129	7	1	4	0	0	141	**21:15**	41	0	1	1	0	0	43
9:30	129	13	2	2	0	0	146	**21:30**	43	2	0	1	0	0	46
9:45	105	7	1	2	0	0	115	**21:45**	34	1	2	0	0	0	37
10:00	110	8	2	5	0	0	125	**22:00**	35	0	2	3	0	0	40
10:15	108	15	1	3	0	0	127	**22:15**	27	0	1	2	0	0	30
10:30	108	11	3	2	0	1	125	**22:30**	21	2	0	1	0	0	24
10:45	147	10	4	2	0	0	163	**22:45**	22	0	0	0	0	0	22
11:00	116	9	0	1	0	6	132	**23:00**	14	1	1	0	0	0	16
11:15	122	9	2	2	0	0	135	**23:15**	14	1	0	0	0	0	15
11:30	101	2	3	3	0	2	111	**23:30**	18	2	1	1	0	0	22
11:45	79	4	5	7	0	0	95	**23:45**	12	0	0	2	0	0	14
TOTAL	4,340	254	57	78	1	27	4,757	**TOTAL**	4,147	174	66	110	0	23	4,520

AM PEAK HOUR	7:15 AM
AM PEAK VOLUME	1,142

AM PEAK HOUR	5:00 PM
AM PEAK VOLUME	589

TOTAL: AM+PM	8,487	428	123	188	1	50	9,277
% OF TOTAL	91.5%	4.6%	1.3%	2.0%	0.0%	0.5%	100.0%

CLASS 1	PASSENGER VEHICLES
CLASS 2	2-AXLE TRUCKS
CLASS 3	3-AXLE TRUCKS
CLASS 4	4 OR MORE AXLE TRUCKS
CLASS 5	RV
CLASS 6	BUS

A102423

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, October 10, 2023 **CITY:** Ontario

JOB #: SC4225 **LOCATION:** CLASS2 East Riverside Dr east of S Walker Ave

AM TIME	COMBINED							PM Time	COMBINED						
	1	2	3	4	5	6	TOTAL		1	2	3	4	5	6	TOTAL
0:00	24	2	1	4	0	0	31	12:00	237	19	3	2	0	0	261
0:15	13	1	2	0	0	0	16	12:15	217	15	7	6	0	0	245
0:30	14	1	1	1	0	0	17	12:30	233	13	3	9	0	1	259
0:45	23	0	0	0	0	0	23	12:45	239	18	5	12	0	0	274
1:00	10	2	0	2	0	0	14	13:00	237	13	2	16	0	3	271
1:15	8	0	1	2	0	0	11	13:15	225	13	5	6	0	0	249
1:30	12	1	1	0	0	0	14	13:30	245	17	5	6	0	4	277
1:45	13	0	0	3	0	0	16	13:45	292	27	6	9	0	0	334
2:00	4	1	0	1	0	0	6	14:00	267	14	4	8	0	6	299
2:15	21	0	2	0	0	0	23	14:15	286	20	4	8	0	4	322
2:30	19	0	0	0	0	0	19	14:30	326	34	5	7	0	2	374
2:45	20	0	0	0	0	0	20	14:45	332	17	5	8	0	5	367
3:00	17	1	0	0	0	0	18	15:00	320	17	9	5	0	6	357
3:15	12	0	0	5	0	0	17	15:15	355	11	1	6	0	2	375
3:30	21	0	1	2	0	0	24	15:30	325	18	4	10	0	1	358
3:45	34	6	0	1	0	0	41	15:45	379	14	1	5	1	2	402
4:00	27	3	0	5	0	0	35	16:00	361	26	5	7	0	4	403
4:15	19	2	2	2	0	0	25	16:15	344	30	1	2	0	2	379
4:30	55	1	1	5	0	0	62	16:30	347	16	6	5	0	1	375
4:45	60	1	1	5	0	0	67	16:45	343	15	4	8	0	0	370
5:00	67	1	2	8	0	0	78	17:00	348	16	4	4	0	0	372
5:15	77	0	0	8	0	0	85	17:15	391	11	3	5	1	0	411
5:30	127	5	1	2	0	0	135	17:30	340	15	1	7	0	0	363
5:45	139	9	5	6	0	0	159	17:45	367	16	2	6	0	0	391
6:00	127	8	0	5	0	0	140	18:00	327	9	3	7	0	0	346
6:15	148	15	2	4	0	0	169	18:15	295	11	1	4	0	0	311
6:30	199	17	7	8	0	2	233	18:30	263	8	1	3	0	0	275
6:45	261	21	11	7	0	1	301	18:45	267	8	1	5	0	0	281
7:00	267	20	6	8	1	1	303	19:00	209	9	2	5	0	0	225
7:15	376	22	7	5	0	4	414	19:15	189	4	2	4	0	0	199
7:30	475	31	3	2	0	1	512	19:30	139	3	0	3	0	0	145
7:45	477	24	5	1	0	7	514	19:45	148	4	0	1	0	0	153
8:00	399	19	9	7	0	8	442	20:00	127	2	1	1	0	0	131
8:15	332	14	3	4	0	5	358	20:15	116	2	2	3	0	0	123
8:30	335	16	5	6	0	2	364	20:30	149	2	1	5	0	0	157
8:45	294	20	2	11	0	0	327	20:45	114	4	1	4	0	0	123
9:00	269	16	1	4	0	0	290	21:00	120	3	5	4	0	0	132
9:15	222	15	3	6	0	0	246	21:15	126	1	1	2	0	0	130
9:30	216	20	5	6	0	1	248	21:30	111	3	0	2	0	0	116
9:45	199	13	4	6	0	0	222	21:45	89	3	2	1	0	0	95
10:00	213	14	4	9	0	1	241	22:00	77	2	2	3	0	0	84
10:15	193	24	2	5	0	1	225	22:15	75	1	1	3	0	0	80
10:30	190	23	6	8	0	4	231	22:30	58	3	1	2	0	0	64
10:45	264	17	5	3	0	0	289	22:45	52	0	0	0	0	0	52
11:00	245	18	4	3	0	6	276	23:00	28	1	1	1	0	0	31
11:15	241	18	3	6	0	1	269	23:15	29	1	1	1	0	0	32
11:30	234	14	4	4	0	3	259	23:30	34	3	2	1	0	0	40
11:45	207	14	9	15	1	0	246	23:45	27	1	1	3	0	0	32
TOTAL	7,219	470	131	205	2	48	8,075	TOTAL	10,525	513	127	235	2	43	11,445

AM PEAK HOUR	7:15 AM
AM PEAK VOLUME	1,882

AM PEAK HOUR	3:45 PM
AM PEAK VOLUME	1,559

		TOTAL: AM+PM	17,744	983	258	440	4	91	19,520
CLASS 1	PASSENGER VEHICLES	% OF TOTAL	90.9%	5.0%	1.3%	2.3%	0.0%	0.5%	100.0%
CLASS 2	2-AXLE TRUCKS								
CLASS 3	3-AXLE TRUCKS								
CLASS 4	4 OR MORE AXLE TRUCKS								
CLASS 5	RV								
CLASS 6	Buses								

A102423

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, October 10, 2023 **CITY:** Ontario

JOB #: SC4225 **LOCATION:** CLASS3 East Riverside Dr west of S Vineyard Ave

AM TIME	EB 1	2	3	4	5	6	TOTAL	PM Time	EB 1	2	3	4	5	6	TOTAL
0:00	16	1	1	2	0	0	20	12:00	119	11	2	1	0	0	133
0:15	9	0	1	0	0	0	10	12:15	141	11	2	2	0	0	156
0:30	8	0	0	0	0	0	8	12:30	123	7	1	2	0	0	133
0:45	7	0	0	0	0	0	7	12:45	144	17	5	4	0	0	170
1:00	9	1	0	2	0	0	12	13:00	125	4	2	9	0	0	140
1:15	3	0	1	1	0	0	5	13:15	130	4	4	7	0	0	145
1:30	6	1	0	0	0	0	7	13:30	147	11	1	2	0	4	165
1:45	5	0	1	1	0	0	7	13:45	185	11	3	4	0	0	203
2:00	2	0	0	2	0	0	4	14:00	163	11	1	6	1	1	183
2:15	5	0	1	0	0	0	6	14:15	173	12	3	5	0	3	196
2:30	10	0	0	0	0	0	10	14:30	198	13	6	4	0	2	223
2:45	7	0	0	0	0	0	7	14:45	211	13	2	1	0	2	229
3:00	8	0	1	0	0	0	9	15:00	195	10	1	3	0	4	213
3:15	3	0	0	3	0	0	6	15:15	238	7	3	2	0	1	251
3:30	14	0	0	2	0	0	16	15:30	208	14	5	3	0	1	231
3:45	15	1	2	1	0	0	19	15:45	234	10	2	3	0	0	249
4:00	12	3	0	4	0	0	19	16:00	225	16	4	4	0	0	249
4:15	8	2	2	2	0	0	14	16:15	227	17	0	1	0	0	245
4:30	19	0	0	5	0	0	24	16:30	210	13	0	6	0	1	230
4:45	24	0	1	5	0	0	30	16:45	228	10	4	6	0	0	248
5:00	19	0	2	8	0	0	29	17:00	216	10	4	3	0	0	233
5:15	27	1	0	5	0	0	33	17:15	232	5	1	1	1	0	240
5:30	31	4	0	0	0	0	35	17:30	227	7	2	2	0	0	238
5:45	30	3	4	4	0	0	41	17:45	220	12	0	4	0	0	236
6:00	28	4	2	3	0	0	37	18:00	224	7	4	3	0	0	238
6:15	34	7	1	4	0	0	46	18:15	190	5	2	0	0	0	197
6:30	47	5	5	4	0	1	62	18:30	167	9	1	2	0	0	179
6:45	68	9	7	3	0	0	87	18:45	146	4	0	3	0	0	153
7:00	75	14	3	7	0	1	100	19:00	123	6	1	3	0	0	133
7:15	130	18	4	4	0	3	159	19:15	114	3	0	2	0	0	119
7:30	161	16	1	2	0	0	180	19:30	72	1	0	0	0	0	73
7:45	189	15	2	1	0	4	211	19:45	98	1	0	0	0	0	99
8:00	157	8	5	3	0	1	174	20:00	66	2	1	3	0	0	72
8:15	133	7	3	3	0	1	147	20:15	77	0	0	0	0	0	77
8:30	137	7	4	4	0	0	152	20:30	85	3	1	3	0	0	92
8:45	110	7	0	7	0	0	124	20:45	59	0	1	1	0	0	61
9:00	123	5	0	4	0	0	132	21:00	79	1	0	2	0	0	82
9:15	97	10	1	5	0	0	113	21:15	89	1	1	0	0	0	91
9:30	91	7	2	5	0	1	106	21:30	68	1	0	2	0	0	71
9:45	98	7	2	5	0	0	112	21:45	57	3	0	2	0	0	62
10:00	104	7	2	3	0	1	117	22:00	45	2	0	0	0	0	47
10:15	90	8	1	4	0	1	104	22:15	50	1	0	0	0	0	51
10:30	80	11	3	5	0	3	102	22:30	34	1	1	1	0	0	37
10:45	112	6	1	2	0	0	121	22:45	34	0	0	1	0	0	35
11:00	139	5	5	4	0	0	153	23:00	16	0	0	1	0	0	17
11:15	114	11	1	5	0	0	131	23:15	16	0	1	1	0	0	18
11:30	134	13	1	1	0	2	151	23:30	16	0	1	0	0	0	17
11:45	125	8	4	8	1	0	146	23:45	16	0	1	1	0	0	18
TOTAL	2,873	232	77	143	1	19	3,345	TOTAL	6,460	307	74	116	2	19	6,978

AM PEAK HOUR	7:15 AM
AM PEAK VOLUME	724

AM PEAK HOUR	3:15 PM
AM PEAK VOLUME	980

PM Peak Hour - Eastbound

Start Time	Total Volume	Passenger Car	Trucks	Med Truck
5:00 PM	947	895	52	34

CLASS 1	PASSENGER VEHICLES	TOTAL: AM+PM	9,333	539	151	259	3	38	10,323
CLASS 2	2-AXLE TRUCKS	% OF TOTAL	90.4%	5.2%	1.5%	2.5%	0.0%	0.4%	100.0%
CLASS 3	3-AXLE TRUCKS								
CLASS 4	4 OR MORE AXLE TRUCKS								
CLASS 5	RV	TOTAL: ALL	17,879	993	283	441	4	83	19,683
CLASS 6	Buses	% OF TOTAL	90.8%	5.0%	1.4%	2.2%	0.0%	0.4%	100.0%

A102423

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, October 10, 2023
JOB #: SC4225
CITY: Ontario
LOCATION: CLASS3 East Riverside Dr west of S Vineyard Ave

AM TIME	WB 1	2	3	4	5	6	TOTAL	PM Time	WB 1	2	3	4	5	6	TOTAL
0:00	11	0	0	3	0	0	14	**12:00**	108	9	1	2	0	0	120
0:15	7	0	1	0	0	0	8	**12:15**	103	5	5	3	0	1	117
0:30	8	2	0	1	0	0	11	**12:30**	96	8	2	5	0	0	111
0:45	12	0	0	0	0	0	12	**12:45**	96	2	3	6	0	0	107
1:00	3	1	0	0	0	0	4	**13:00**	100	10	1	5	0	3	119
1:15	8	0	0	2	0	0	10	**13:15**	97	7	1	1	0	0	106
1:30	6	0	1	0	0	0	7	**13:30**	110	5	6	4	0	0	125
1:45	5	0	0	0	0	0	5	**13:45**	104	11	3	3	0	1	122
2:00	3	0	0	0	0	0	3	**14:00**	98	6	2	2	0	3	111
2:15	16	0	1	0	0	0	17	**14:15**	109	7	2	1	0	1	120
2:30	12	0	0	0	0	0	12	**14:30**	124	13	3	4	0	1	145
2:45	10	0	0	0	0	0	10	**14:45**	138	4	4	3	0	1	150
3:00	7	1	0	0	0	0	8	**15:00**	142	11	4	4	0	2	163
3:15	7	0	0	1	0	0	8	**15:15**	108	4	1	4	0	3	120
3:30	8	0	1	0	0	0	9	**15:30**	117	6	1	6	0	0	130
3:45	24	2	0	0	0	0	26	**15:45**	130	6	0	3	0	1	140
4:00	16	0	0	1	0	0	17	**16:00**	150	7	1	2	0	2	162
4:15	14	1	0	0	0	0	15	**16:15**	114	9	1	2	0	2	128
4:30	35	1	1	0	0	0	37	**16:30**	118	4	4	1	0	0	127
4:45	39	1	0	0	0	0	40	**16:45**	118	3	2	4	0	0	127
5:00	52	2	0	0	0	0	54	**17:00**	152	7	1	1	0	0	161
5:15	51	2	2	1	0	0	56	**17:15**	146	5	2	3	0	0	156
5:30	102	8	1	1	0	0	112	**17:30**	129	4	0	6	0	0	139
5:45	112	7	0	1	0	0	120	**17:45**	139	7	2	3	0	0	151
6:00	94	10	0	0	0	0	104	**18:00**	133	2	1	2	0	0	138
6:15	131	7	1	0	0	0	139	**18:15**	94	3	0	3	0	0	100
6:30	160	8	1	3	0	1	173	**18:30**	119	1	1	0	0	0	121
6:45	206	12	3	3	1	1	226	**18:45**	129	3	1	2	0	0	135
7:00	178	11	4	1	0	0	194	**19:00**	109	3	1	2	0	0	115
7:15	236	11	4	1	0	1	253	**19:15**	85	1	2	2	0	0	90
7:30	292	15	2	1	0	2	312	**19:30**	61	1	1	4	0	0	67
7:45	251	8	3	1	0	2	265	**19:45**	60	1	0	1	0	0	62
8:00	207	15	4	5	0	4	235	**20:00**	62	1	0	0	0	0	63
8:15	197	7	0	2	0	2	208	**20:15**	59	0	1	4	0	0	64
8:30	211	14	1	1	0	2	229	**20:30**	58	0	0	2	0	0	60
8:45	179	13	2	6	0	0	200	**20:45**	61	2	2	3	0	0	68
9:00	127	11	1	0	0	0	139	**21:00**	52	2	1	3	0	0	58
9:15	138	9	1	3	0	0	151	**21:15**	46	0	1	1	0	0	48
9:30	121	12	2	3	0	0	138	**21:30**	44	1	0	1	0	0	46
9:45	110	8	2	3	0	0	123	**21:45**	40	1	3	1	0	0	45
10:00	115	9	3	4	0	0	131	**22:00**	33	0	1	3	0	0	37
10:15	106	13	3	3	0	0	125	**22:15**	32	1	1	1	0	0	35
10:30	117	9	3	2	0	1	132	**22:30**	29	0	0	1	0	0	30
10:45	138	11	3	2	0	0	154	**22:45**	24	0	0	0	0	0	24
11:00	123	8	1	0	0	6	138	**23:00**	15	2	1	0	0	0	18
11:15	115	11	2	1	0	0	129	**23:15**	17	0	0	0	0	0	17
11:30	105	1	2	5	0	2	115	**23:30**	15	1	1	1	0	0	18
11:45	84	7	5	5	0	0	101	**23:45**	14	0	0	1	0	0	15
TOTAL	4,309	268	61	66	1	24	4,729	**TOTAL**	4,237	186	71	116	0	21	4,631

AM PEAK HOUR	7:15 AM
AM PEAK VOLUME	1,065

AM PEAK HOUR	5:00 PM
AM PEAK VOLUME	607

PM Peak Hour - Westbound

Start Time	Total Volume	Passenger C	Trucks	Med Trucks	Heavy trucks
5:00 PM	607	566	41	23	18

CLASS 1	PASSENGER VEHICLES	**TOTAL: AM+PM**	8,546	454	132	182	1	45	9,360
CLASS 2	2-AXLE TRUCKS	**% OF TOTAL**	91.3%	4.9%	1.4%	1.9%	0.0%	0.5%	100.0%
CLASS 3	3-AXLE TRUCKS								
CLASS 4	4 OR MORE AXLE TRUCKS								
CLASS 5	RV								
CLASS 6	BUS								

A102423

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, October 10, 2023 **CITY:** Ontario

JOB #: SC4225 **LOCATION:** CLASS3 East Riverside Dr west of S Vineyard Ave

AM TIME	COMBINED 1	2	3	4	5	6	TOTAL	PM Time	COMBINED 1	2	3	4	5	6	TOTAL
0:00	27	1	1	5	0	0	34	12:00	227	20	3	3	0	0	253
0:15	16	0	2	0	0	0	18	12:15	244	16	7	5	0	1	273
0:30	16	2	0	1	0	0	19	12:30	219	15	3	7	0	0	244
0:45	19	0	0	0	0	0	19	12:45	240	19	8	10	0	0	277
1:00	12	2	0	2	0	0	16	13:00	225	14	3	14	0	3	259
1:15	11	0	1	3	0	0	15	13:15	227	11	5	8	0	0	251
1:30	12	1	1	0	0	0	14	13:30	257	16	7	6	0	4	290
1:45	10	0	1	1	0	0	12	13:45	289	22	6	7	0	1	325
2:00	5	0	0	2	0	0	7	14:00	261	17	3	8	1	4	294
2:15	21	0	2	0	0	0	23	14:15	282	19	5	6	0	4	316
2:30	22	0	0	0	0	0	22	14:30	322	26	9	8	0	3	368
2:45	17	0	0	0	0	0	17	14:45	349	17	6	4	0	3	379
3:00	15	1	1	0	0	0	17	15:00	337	21	5	7	0	6	376
3:15	10	0	0	4	0	0	14	15:15	346	11	4	6	0	4	371
3:30	22	0	1	2	0	0	25	15:30	325	20	6	9	0	1	361
3:45	39	3	2	1	0	0	45	15:45	364	16	2	6	0	1	389
4:00	28	3	0	5	0	0	36	16:00	375	23	5	6	0	2	411
4:15	22	3	2	2	0	0	29	16:15	341	26	1	3	0	2	373
4:30	54	1	1	5	0	0	61	16:30	328	17	4	7	0	1	357
4:45	63	1	1	5	0	0	70	16:45	346	13	6	10	0	0	375
5:00	71	2	2	8	0	0	83	17:00	368	17	5	4	0	0	394
5:15	78	3	2	6	0	0	89	17:15	378	10	3	4	1	0	396
5:30	133	12	1	1	0	0	147	17:30	356	11	2	8	0	0	377
5:45	142	10	4	5	0	0	161	17:45	359	19	2	7	0	0	387
6:00	122	14	2	3	0	0	141	18:00	357	9	5	5	0	0	376
6:15	165	14	2	4	0	0	185	18:15	284	8	2	3	0	0	297
6:30	207	13	6	7	0	2	235	18:30	286	10	2	2	0	0	300
6:45	274	21	10	6	1	1	313	18:45	275	7	1	5	0	0	288
7:00	253	25	7	8	0	1	294	19:00	232	9	2	5	0	0	248
7:15	366	29	8	5	0	4	412	19:15	199	4	2	4	0	0	209
7:30	453	31	3	3	0	2	492	19:30	133	2	1	4	0	0	140
7:45	440	23	5	2	0	6	476	19:45	158	2	0	1	0	0	161
8:00	364	23	9	8	0	5	409	20:00	128	3	1	3	0	0	135
8:15	330	14	3	5	0	3	355	20:15	136	0	1	4	0	0	141
8:30	348	21	5	5	0	2	381	20:30	143	3	1	5	0	0	152
8:45	289	20	2	13	0	0	324	20:45	120	2	3	4	0	0	129
9:00	250	16	1	4	0	0	271	21:00	131	3	1	5	0	0	140
9:15	235	19	2	8	0	0	264	21:15	135	1	2	1	0	0	139
9:30	212	19	4	8	0	1	244	21:30	112	2	0	3	0	0	117
9:45	208	15	4	8	0	0	235	21:45	97	4	3	3	0	0	107
10:00	219	16	5	7	0	1	248	22:00	78	2	1	3	0	0	84
10:15	196	21	4	7	0	1	229	22:15	82	2	1	1	0	0	86
10:30	197	20	6	7	0	4	234	22:30	63	1	1	2	0	0	67
10:45	250	17	4	4	0	0	275	22:45	58	0	0	1	0	0	59
11:00	262	13	6	4	0	6	291	23:00	31	2	1	1	0	0	35
11:15	229	22	3	6	0	0	260	23:15	33	0	1	1	0	0	35
11:30	239	14	3	6	0	4	266	23:30	31	1	2	1	0	0	35
11:45	209	15	9	13	1	0	247	23:45	30	0	1	2	0	0	33
TOTAL	7,182	500	138	209	2	43	8,074	TOTAL	10,697	493	145	232	2	40	11,609

AM PEAK HOUR	7:15 AM
AM PEAK VOLUME	1,789

AM PEAK HOUR	5:00 PM
AM PEAK VOLUME	1,554

PH Start Time	
15:00	1,497
15:15	1,532
15:30	1,534
15:45	1,530
16:00	1,516
16:15	1,499
16:30	1,522
16:45	1,542
17:00	1,554
17:15	1,536
17:30	1,437
17:45	1,360
18:00	1,261
5:00 PM	1,554

TOTAL: AM+PM	17,879	993	283	441	4	83	19,683
% OF TOTAL	90.8%	5.0%	1.4%	2.2%	0.0%	0.4%	100.0%

CLASS 1	PASSENGER VEHICLES
CLASS 2	2-AXLE TRUCKS
CLASS 3	3-AXLE TRUCKS
CLASS 4	4 OR MORE AXLE TRUCKS
CLASS 5	RV
CLASS 6	Buses

A102423

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, October 10, 2023 **CITY:** Ontario

JOB #: SC4225 **LOCATION:** CLASS6 East Riverside Dr west of Ontario Ave

AM TIME	EB 1	2	3	4	5	6	TOTAL	PM Time	EB 1	2	3	4	5	6	TOTAL
0:00	33	1	0	1	0	0	35	**12:00**	141	9	6	5	0	1	162
0:15	37	0	0	1	0	0	38	**12:15**	219	10	2	1	0	2	234
0:30	19	0	0	0	0	0	19	**12:30**	184	12	4	2	0	0	202
0:45	19	0	0	0	0	0	19	**12:45**	205	9	3	3	0	2	222
1:00	27	0	0	1	0	0	28	**13:00**	197	8	6	0	0	1	212
1:15	16	0	0	1	0	0	17	**13:15**	170	8	5	3	0	0	186
1:30	15	0	1	0	0	0	16	**13:30**	194	13	1	1	0	3	212
1:45	12	0	0	0	0	0	12	**13:45**	216	15	3	0	0	2	236
2:00	9	0	0	0	0	0	9	**14:00**	223	15	5	2	0	1	246
2:15	12	0	0	1	0	0	13	**14:15**	213	12	3	1	0	3	232
2:30	16	0	0	0	0	0	16	**14:30**	225	14	5	2	0	2	248
2:45	11	0	0	0	0	0	11	**14:45**	241	10	5	1	0	1	258
3:00	14	1	0	0	0	0	15	**15:00**	251	10	3	1	0	4	269
3:15	12	0	0	1	0	0	13	**15:15**	284	12	4	2	0	1	303
3:30	27	0	0	0	0	0	27	**15:30**	275	10	2	2	0	0	289
3:45	21	1	1	1	0	0	24	**15:45**	288	10	2	2	0	0	302
4:00	24	1	0	1	0	0	26	**16:00**	295	11	1	3	0	1	311
4:15	20	0	0	1	0	0	21	**16:15**	293	14	4	0	0	0	311
4:30	35	1	0	2	0	0	38	**16:30**	278	12	1	1	0	0	292
4:45	52	1	0	1	0	0	54	**16:45**	302	6	6	5	0	1	320
5:00	35	0	1	1	0	0	37	**17:00**	321	13	3	1	0	0	338
5:15	35	2	1	3	0	0	41	**17:15**	312	10	1	1	1	1	326
5:30	45	1	0	1	0	0	47	**17:30**	317	6	1	1	0	0	325
5:45	57	1	1	1	0	0	60	**17:45**	287	11	1	3	0	0	302
6:00	57	2	3	1	0	1	64	**18:00**	329	9	4	1	0	1	344
6:15	58	4	2	2	0	0	66	**18:15**	287	7	2	2	0	0	298
6:30	69	3	5	1	0	0	78	**18:30**	279	9	1	0	0	0	289
6:45	90	7	2	0	0	0	99	**18:45**	246	3	2	1	0	0	252
7:00	111	6	7	0	0	1	125	**19:00**	240	6	1	1	0	1	249
7:15	112	10	3	2	0	2	129	**19:15**	198	8	0	0	0	0	206
7:30	138	17	3	1	0	1	160	**19:30**	180	2	0	0	0	0	182
7:45	188	6	1	2	0	3	200	**19:45**	175	1	1	1	0	1	179
8:00	195	7	1	2	0	4	209	**20:00**	169	2	1	0	0	0	172
8:15	167	9	5	1	0	1	183	**20:15**	164	2	0	1	0	0	167
8:30	135	6	4	1	0	0	146	**20:30**	158	0	2	0	0	0	160
8:45	147	8	2	6	0	0	163	**20:45**	142	3	1	3	0	0	149
9:00	141	5	0	0	0	4	150	**21:00**	171	4	0	3	0	1	179
9:15	129	5	6	3	0	0	143	**21:15**	186	2	0	2	0	0	190
9:30	113	4	2	0	0	1	120	**21:30**	199	3	0	2	0	0	204
9:45	112	9	5	3	0	0	129	**21:45**	104	0	0	2	0	0	106
10:00	118	13	5	1	0	0	137	**22:00**	128	2	2	1	0	0	133
10:15	133	12	8	4	0	1	158	**22:15**	108	2	1	0	0	0	111
10:30	132	13	3	4	0	4	156	**22:30**	114	3	1	2	0	0	120
10:45	124	7	0	2	0	3	136	**22:45**	94	1	0	2	0	0	97
11:00	153	9	8	3	0	3	176	**23:00**	97	1	0	2	0	0	100
11:15	165	10	4	4	0	0	183	**23:15**	76	1	0	0	0	0	77
11:30	154	12	0	1	0	0	167	**23:30**	59	0	0	1	0	0	60
11:45	175	14	1	2	1	0	193	**23:45**	51	0	1	0	0	0	52
TOTAL	3,719	208	85	64	1	29	4,106	**TOTAL**	9,885	331	97	70	1	30	10,414

AM PEAK HOUR	7:30 AM
AM PEAK VOLUME	752

AM PEAK HOUR	4:45 PM
AM PEAK VOLUME	1,309

PM Peak Hour - Eastbound

Start Time	Total Volume	Passenger Cars	Trucks	MedTrk
4:45 PM	1,309	1,252	57	35

CLASS 1	PASSENGER VEHICLES	**TOTAL: AM+PM**	13,604	539	182	134	2	59	14,520
CLASS 2	2-AXLE TRUCKS	**% OF TOTAL**	93.7%	3.7%	1.3%	0.9%	0.0%	0.4%	100.0%
CLASS 3	3-AXLE TRUCKS								
CLASS 4	4 OR MORE AXLE TRUCKS								
CLASS 5	RV	**TOTAL: ALL**	24,019	877	308	200	5	106	25,515
CLASS 6	Buses	**% OF TOTAL**	94.1%	3.4%	1.2%	0.8%	0.0%	0.4%	100.0%

A102423

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, October 10, 2023
JOB #: SC4225
CITY: Ontario
LOCATION: CLASS6 East Riverside Dr west of Ontario Ave

AM TIME	WB 1	2	3	4	5	6	TOTAL
0:00	15	0	0	1	0	0	16
0:15	17	0	1	0	0	0	18
0:30	6	0	1	0	0	0	7
0:45	12	0	0	0	0	0	12
1:00	6	0	0	0	0	0	6
1:15	7	0	0	1	0	0	8
1:30	9	0	0	0	0	0	9
1:45	4	0	0	0	0	0	4
2:00	2	0	0	0	0	0	2
2:15	15	0	0	0	0	0	15
2:30	10	0	0	0	0	0	10
2:45	11	0	0	0	0	0	11
3:00	5	0	0	0	0	0	5
3:15	6	0	0	0	0	0	6
3:30	6	0	0	0	0	0	6
3:45	17	2	0	2	0	0	21
4:00	13	0	0	0	0	0	13
4:15	14	0	0	0	0	0	14
4:30	21	1	0	0	0	0	22
4:45	42	0	2	3	0	0	47
5:00	51	0	0	0	0	0	51
5:15	51	0	0	1	0	0	52
5:30	93	1	1	0	0	0	95
5:45	101	2	0	1	0	1	105
6:00	103	2	0	0	0	0	105
6:15	124	5	1	0	0	0	130
6:30	168	5	5	1	0	1	180
6:45	268	5	1	1	0	1	276
7:00	200	5	3	0	1	0	209
7:15	254	11	3	0	0	0	268
7:30	305	9	2	0	0	1	317
7:45	257	9	5	0	0	3	274
8:00	279	9	5	1	0	2	296
8:15	230	7	1	1	0	2	241
8:30	265	10	0	2	1	0	278
8:45	234	14	4	3	0	1	256
9:00	156	12	2	1	0	0	171
9:15	160	12	2	1	0	0	175
9:30	157	10	3	1	0	0	171
9:45	126	9	4	0	0	1	140
10:00	145	5	2	2	0	0	154
10:15	119	14	5	2	0	0	140
10:30	145	9	3	2	0	0	159
10:45	140	8	3	0	1	0	152
11:00	141	7	4	0	0	9	161
11:15	134	12	2	0	0	1	149
11:30	122	4	1	2	0	0	129
11:45	120	5	3	0	0	1	129
TOTAL	4,886	204	69	29	3	24	5,215

AM PEAK HOUR	7:15 AM
AM PEAK VOLUME	1,155

PM Time	WB 1	2	3	4	5	6	TOTAL
12:00	145	5	2	0	0	0	152
12:15	133	5	7	1	0	0	146
12:30	125	10	1	0	0	1	137
12:45	121	3	4	1	0	0	129
13:00	156	2	1	1	0	4	164
13:15	125	9	2	1	0	0	137
13:30	125	5	4	1	0	0	135
13:45	139	7	3	1	0	1	151
14:00	133	5	3	0	0	3	144
14:15	134	8	1	0	0	1	144
14:30	130	12	3	2	0	0	147
14:45	182	5	3	2	0	3	195
15:00	187	4	6	1	0	0	198
15:15	141	3	1	1	0	2	148
15:30	179	4	0	4	0	0	187
15:45	176	4	0	1	0	1	182
16:00	174	5	0	0	0	1	180
16:15	173	6	1	1	0	1	182
16:30	162	4	1	0	0	0	167
16:45	149	2	3	2	0	1	157
17:00	207	2	0	0	0	0	209
17:15	156	1	1	2	0	0	160
17:30	183	3	1	2	0	0	189
17:45	163	2	2	1	0	0	168
18:00	165	3	0	2	0	1	171
18:15	125	2	1	0	0	0	128
18:30	138	4	0	0	0	0	142
18:45	162	2	0	1	0	1	166
19:00	136	4	1	0	0	0	141
19:15	111	1	0	0	0	0	112
19:30	101	0	0	1	0	0	102
19:45	101	0	0	0	0	1	102
20:00	68	0	1	0	0	0	69
20:15	86	0	1	2	0	0	89
20:30	74	0	0	0	0	0	74
20:45	79	1	0	1	0	1	82
21:00	78	0	1	1	0	0	80
21:15	61	0	0	0	0	0	61
21:30	65	1	0	0	0	0	66
21:45	46	0	1	0	0	0	47
22:00	47	0	1	0	0	0	48
22:15	45	0	0	1	0	0	46
22:30	37	0	0	1	0	0	38
22:45	31	0	0	0	0	0	31
23:00	22	0	0	1	0	0	23
23:15	15	0	0	0	0	0	15
23:30	26	0	0	1	0	0	27
23:45	12	0	0	0	0	0	12
TOTAL	5,529	134	57	37	0	23	5,780

AM PEAK HOUR	3:30 PM
AM PEAK VOLUME	731

PM Peak Hour - Westbound

Start Time	Total Volume	Passenger C	Trucks	MedTrk
4:45 PM	715	695	20	8

CLASS 1	PASSENGER VEHICLES
CLASS 2	2-AXLE TRUCKS
CLASS 3	3-AXLE TRUCKS
CLASS 4	4 OR MORE AXLE TRUCKS
CLASS 5	RV
CLASS 6	BUS

TOTAL: AM+PM	10,415	338	126	66	3	47	10,995
% OF TOTAL	94.7%	3.1%	1.1%	0.6%	0.0%	0.4%	100.0%

A102423

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, October 10, 2023 **CITY:** Ontario

JOB #: SC4225 **LOCATION:** CLASS6 East Riverside Dr west of Ontario Ave

AM TIME	COMBINED 1	2	3	4	5	6	TOTAL	PM Time	COMBINED 1	2	3	4	5	6	TOTAL
0:00	48	1	0	2	0	0	51	12:00	286	14	8	5	0	1	314
0:15	54	0	1	1	0	0	56	12:15	352	15	9	2	0	2	380
0:30	25	0	1	0	0	0	26	12:30	309	22	5	2	0	1	339
0:45	31	0	0	0	0	0	31	12:45	326	12	7	4	0	2	351
1:00	33	0	0	1	0	0	34	13:00	353	10	7	1	0	5	376
1:15	23	0	0	2	0	0	25	13:15	295	17	7	4	0	0	323
1:30	24	0	1	0	0	0	25	13:30	319	18	5	2	0	3	347
1:45	16	0	0	0	0	0	16	13:45	355	22	6	1	0	3	387
2:00	11	0	0	0	0	0	11	14:00	356	20	8	2	0	4	390
2:15	27	0	0	1	0	0	28	14:15	347	20	4	1	0	4	376
2:30	26	0	0	0	0	0	26	14:30	355	26	8	4	0	2	395
2:45	22	0	0	0	0	0	22	14:45	423	15	8	3	0	4	453
3:00	19	1	0	0	0	0	20	15:00	438	14	9	2	0	4	467
3:15	18	0	0	1	0	0	19	15:15	425	15	5	3	0	3	451
3:30	33	0	0	0	0	0	33	15:30	454	14	2	6	0	0	476
3:45	38	3	1	3	0	0	45	15:45	464	14	2	3	0	1	484
4:00	37	1	0	1	0	0	39	16:00	469	16	1	3	0	2	491
4:15	34	0	0	1	0	0	35	16:15	466	20	5	1	0	1	493
4:30	56	2	0	2	0	0	60	16:30	440	16	2	1	0	0	459
4:45	94	1	2	4	0	0	101	16:45	451	8	9	7	0	2	477
5:00	86	0	1	1	0	0	88	17:00	528	15	3	1	0	0	547
5:15	86	2	1	4	0	0	93	17:15	468	11	2	3	1	1	486
5:30	138	2	1	1	0	0	142	17:30	500	9	2	3	0	0	514
5:45	158	3	1	2	0	1	165	17:45	450	13	3	4	0	0	470
6:00	160	4	3	1	0	1	169	18:00	494	12	4	3	0	2	515
6:15	182	9	3	2	0	0	196	18:15	412	9	3	2	0	0	426
6:30	237	8	10	2	0	1	258	18:30	417	13	1	0	0	0	431
6:45	358	12	3	1	0	1	375	18:45	408	5	2	2	0	1	418
7:00	311	11	10	0	1	1	334	19:00	376	10	2	1	0	1	390
7:15	366	21	6	2	0	2	397	19:15	309	9	0	0	0	0	318
7:30	443	26	5	1	0	2	477	19:30	281	2	0	1	0	0	284
7:45	445	15	6	2	0	6	474	19:45	276	1	1	1	0	2	281
8:00	474	16	6	3	0	6	505	20:00	237	2	2	0	0	0	241
8:15	397	16	6	2	0	3	424	20:15	250	2	1	3	0	0	256
8:30	400	16	4	3	1	0	424	20:30	232	0	2	0	0	0	234
8:45	381	22	6	9	0	1	419	20:45	221	4	1	4	0	1	231
9:00	297	17	2	1	0	4	321	21:00	249	4	1	4	0	1	259
9:15	289	17	8	4	0	0	318	21:15	247	2	0	2	0	0	251
9:30	270	14	5	1	0	1	291	21:30	264	4	0	2	0	0	270
9:45	238	18	9	3	0	1	269	21:45	150	0	1	2	0	0	153
10:00	263	18	7	3	0	0	291	22:00	175	2	3	1	0	0	181
10:15	252	26	13	6	0	1	298	22:15	153	2	1	1	0	0	157
10:30	277	22	6	6	0	4	315	22:30	151	3	1	3	0	0	158
10:45	264	15	3	2	1	3	288	22:45	125	1	0	2	0	0	128
11:00	294	16	12	3	0	12	337	23:00	119	1	0	3	0	0	123
11:15	299	22	6	4	0	1	332	23:15	91	1	0	0	0	0	92
11:30	276	16	1	3	0	0	296	23:30	85	0	0	2	0	0	87
11:45	295	19	4	2	1	1	322	23:45	63	0	1	0	0	0	64
TOTAL	8,605	412	154	93	4	53	9,321	TOTAL	15,414	465	154	107	1	53	16,194

AM PEAK HOUR	7:30 AM
AM PEAK VOLUME	1,880

AM PEAK HOUR	4:45 PM
AM PEAK VOLUME	2,024

PH Start Time	
15:00	1,878
15:15	1,902
15:30	1,944
15:45	1,927
16:00	1,920
16:15	1,976
16:30	1,969
16:45	2,024
17:00	2,017
17:15	1,985
17:30	1,925
17:45	1,842
18:00	1,790
4:45 PM	2,024

TOTAL: AM+PM	24,019	877	308	200	5	106	25,515
% OF TOTAL	94.1%	3.4%	1.2%	0.8%	0.0%	0.4%	100.0%

CLASS 1	PASSENGER VEHICLES
CLASS 2	2-AXLE TRUCKS
CLASS 3	3-AXLE TRUCKS
CLASS 4	4 OR MORE AXLE TRUCKS
CLASS 5	RV
CLASS 6	Buses

A102423

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, October 10, 2023 **CITY:** Ontario

JOB #: SC4225 **LOCATION:** CLASS8 S Archibald Ave north of East Riverside Dr

AM TIME	NB 1	2	3	4	5	6	TOTAL	PM Time	NB 1	2	3	4	5	6	TOTAL
0:00	27	0	0	8	0	0	35	**12:00**	181	9	2	15	0	0	207
0:15	34	1	0	4	0	0	39	**12:15**	182	9	8	21	0	0	220
0:30	32	0	0	5	0	0	37	**12:30**	181	18	6	18	0	0	223
0:45	16	1	0	6	0	0	23	**12:45**	180	12	10	12	0	0	214
1:00	29	0	1	7	0	0	37	**13:00**	215	11	16	26	0	0	268
1:15	17	0	1	2	0	0	20	**13:15**	175	15	11	22	0	0	223
1:30	18	0	1	3	0	0	22	**13:30**	189	16	5	12	0	0	222
1:45	17	0	2	7	0	0	26	**13:45**	205	9	10	17	0	1	242
2:00	15	0	0	2	0	0	17	**14:00**	217	19	11	15	0	0	262
2:15	17	0	2	4	0	0	23	**14:15**	220	14	8	16	0	2	260
2:30	21	0	0	4	0	0	25	**14:30**	276	18	11	14	0	0	319
2:45	23	1	1	5	0	0	30	**14:45**	274	17	8	14	0	0	313
3:00	32	1	2	6	0	0	41	**15:00**	248	22	16	10	0	0	296
3:15	38	3	1	4	0	0	46	**15:15**	252	14	8	18	0	0	292
3:30	41	0	1	5	0	0	47	**15:30**	270	16	7	18	0	0	311
3:45	49	3	2	7	0	0	61	**15:45**	261	16	4	15	0	1	297
4:00	52	1	1	7	0	0	61	**16:00**	234	12	9	13	0	0	268
4:15	69	4	1	11	0	0	85	**16:15**	252	15	2	16	0	0	285
4:30	106	6	3	10	0	0	125	**16:30**	234	12	8	10	0	0	264
4:45	128	3	1	6	0	0	138	**16:45**	257	10	5	12	0	0	284
5:00	140	13	4	6	0	0	163	**17:00**	253	7	4	17	0	0	281
5:15	137	7	3	13	0	0	160	**17:15**	248	15	7	9	0	0	279
5:30	152	5	2	12	0	0	171	**17:30**	258	11	3	10	0	0	282
5:45	165	8	11	9	0	0	193	**17:45**	263	13	3	10	0	0	289
6:00	149	5	4	9	0	0	167	**18:00**	227	9	6	8	0	0	250
6:15	187	7	5	12	0	0	211	**18:15**	207	8	5	7	0	0	227
6:30	207	16	6	15	0	0	244	**18:30**	223	8	3	7	0	0	241
6:45	239	8	6	14	1	0	268	**18:45**	183	7	6	9	0	1	206
7:00	228	5	3	12	0	0	248	**19:00**	177	7	3	13	0	0	200
7:15	286	8	9	20	0	0	323	**19:15**	180	5	6	6	0	0	197
7:30	309	13	8	16	0	1	347	**19:30**	166	11	3	5	0	0	185
7:45	365	10	6	19	0	0	400	**19:45**	118	3	3	9	0	0	133
8:00	312	12	6	26	0	1	357	**20:00**	129	2	3	3	0	0	137
8:15	311	14	8	23	0	1	357	**20:15**	109	4	7	1	0	0	121
8:30	281	6	12	12	0	2	313	**20:30**	123	1	3	11	0	0	138
8:45	242	9	6	12	0	0	269	**20:45**	105	3	3	8	0	0	119
9:00	202	13	4	10	0	2	231	**21:00**	100	2	1	3	0	0	106
9:15	165	9	6	20	0	1	201	**21:15**	100	0	1	9	0	0	110
9:30	176	13	5	20	0	1	215	**21:30**	91	1	1	7	0	0	100
9:45	169	17	7	14	0	0	207	**21:45**	69	0	1	6	0	0	76
10:00	185	13	8	13	0	0	219	**22:00**	64	1	4	9	0	0	78
10:15	156	10	10	21	0	0	197	**22:15**	59	0	3	7	0	0	69
10:30	165	7	6	23	0	0	201	**22:30**	58	0	1	4	0	0	63
10:45	148	15	10	18	0	0	191	**22:45**	59	1	1	10	0	0	71
11:00	159	12	13	23	0	0	207	**23:00**	54	0	2	7	0	0	63
11:15	180	14	11	20	0	0	225	**23:15**	42	2	0	6	0	0	50
11:30	206	10	7	14	0	0	237	**23:30**	36	2	1	8	0	0	47
11:45	180	15	7	9	0	0	211	**23:45**	36	0	1	4	0	0	41
TOTAL	6,582	318	213	548	1	9	7,671	**TOTAL**	8,240	407	250	527	0	5	9,429

AM PEAK HOUR	7:30 AM
AM PEAK VOLUME	1,461

AM PEAK HOUR	2:30 PM
AM PEAK VOLUME	1,220

PM Peak Hour - Northbound

Start Time	Total Volume	Passenger Cars	Trucks	MedTrk
5:00 PM	1,131	1,022	109	46

CLASS 1	PASSENGER VEHICLES	**TOTAL: AM+PM**	14,822	725	463	1,075	1	14	17,100
CLASS 2	2-AXLE TRUCKS	**% OF TOTAL**	86.7%	4.2%	2.7%	6.3%	0.0%	0.1%	100.0%
CLASS 3	3-AXLE TRUCKS								
CLASS 4	4 OR MORE AXLE TRUCKS								
CLASS 5	RV	**TOTAL: ALL**	23,520	1,108	813	1,808	1	27	27,277
CLASS 6	Buses	**% OF TOTAL**	86.2%	4.1%	3.0%	6.6%	0.0%	0.1%	100.0%

A102423

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, October 10, 2023
JOB #: SC4225

CITY: Ontario
LOCATION: CLASS8 S Archibald Ave north of East Riverside Dr

AM TIME	SB 1	2	3	4	5	6	TOTAL	PM Time	SB 1	2	3	4	5	6	TOTAL
0:00	28	0	1	5	0	0	34	**12:00**	116	6	5	13	0	0	140
0:15	19	0	0	2	0	0	21	**12:15**	124	8	10	16	0	1	159
0:30	14	0	3	5	0	0	22	**12:30**	120	4	5	11	0	0	140
0:45	12	0	3	1	0	0	16	**12:45**	122	7	6	13	0	0	148
1:00	16	1	0	4	0	0	21	**13:00**	128	6	6	11	0	1	152
1:15	17	0	2	3	0	0	22	**13:15**	118	9	1	16	0	0	144
1:30	19	1	2	2	0	0	24	**13:30**	113	14	7	10	0	1	145
1:45	13	1	2	1	0	0	17	**13:45**	128	4	10	13	0	1	156
2:00	8	0	1	3	0	0	12	**14:00**	130	7	7	12	0	1	157
2:15	10	0	0	2	0	0	12	**14:15**	128	7	3	11	0	0	149
2:30	9	0	1	6	0	0	16	**14:30**	162	11	8	13	0	3	197
2:45	14	0	2	4	0	0	20	**14:45**	190	7	5	16	0	0	218
3:00	6	0	1	0	0	0	7	**15:00**	158	3	5	14	0	0	180
3:15	10	0	2	2	0	0	14	**15:15**	156	7	3	16	0	0	182
3:30	12	1	1	1	0	0	15	**15:30**	178	9	3	15	0	0	205
3:45	23	0	3	3	0	0	29	**15:45**	161	5	5	10	0	0	181
4:00	16	1	3	1	0	0	21	**16:00**	171	5	5	14	0	0	195
4:15	22	1	3	5	0	0	31	**16:15**	174	8	2	9	0	0	193
4:30	17	1	3	3	0	0	24	**16:30**	191	3	5	12	0	0	211
4:45	26	2	3	3	0	0	34	**16:45**	170	8	5	16	0	0	
5:00	25	1	2	8	0	0	36	**17:00**	219	2	5	16	0	0	242
5:15	25	2	3	3	0	0	33	**17:15**	226	5	1	3	0	0	235
5:30	43	2	1	2	0	0	48	**17:30**	219	4	3	11	0	0	237
5:45	49	3	5	2	0	0	59	**17:45**	191	5	4	5	0	0	205
6:00	49	8	1	5	0	0	63	**18:00**	178	6	2	8	0	0	194
6:15	58	6	5	4	0	0	73	**18:15**	174	4	1	13	0	0	192
6:30	69	7	3	3	0	0	82	**18:30**	160	7	5	14	0	0	186
6:45	85	7	9	3	0	0	104	**18:45**	153	2	2	9	0	0	166
7:00	60	10	2	5	0	0	77	**19:00**	154	0	3	8	0	0	165
7:15	77	7	5	9	0	0	98	**19:15**	175	3	1	6	0	0	185
7:30	101	5	6	14	0	2	128	**19:30**	131	1	1	6	0	0	139
7:45	160	3	5	6	0	0	174	**19:45**	104	1	2	7	0	0	114
8:00	142	15	3	10	0	1	171	**20:00**	87	2	1	10	0	0	100
8:15	110	8	7	6	0	1	132	**20:15**	133	0	1	7	0	0	141
8:30	91	7	3	5	0	0	106	**20:30**	99	1	2	9	0	0	111
8:45	101	14	4	7	0	1	127	**20:45**	102	1	2	4	0	0	109
9:00	73	3	9	7	0	0	92	**21:00**	99	1	1	5	0	0	106
9:15	74	4	8	7	0	0	93	**21:15**	90	0	2	4	0	0	96
9:30	73	11	7	7	0	0	98	**21:30**	80	0	4	5	0	0	89
9:45	97	7	7	14	0	0	125	**21:45**	64	0	4	8	0	0	76
10:00	85	11	6	18	0	0	120	**22:00**	74	1	5	5	0	0	85
10:15	71	9	4	12	0	0	96	**22:15**	44	1	3	4	0	0	52
10:30	86	4	11	13	0	0	114	**22:30**	40	0	1	5	0	0	46
10:45	97	6	7	11	0	0	121	**22:45**	37	2	1	4	0	0	44
11:00	85	10	4	12	0	0	111	**23:00**	35	0	1	4	0	0	40
11:15	101	6	9	10	0	0	126	**23:15**	42	1	1	5	0	0	49
11:30	75	8	6	10	0	0	99	**23:30**	24	0	3	5	0	0	32
11:45	120	2	3	12	0	0	137	**23:45**	33	0	1	1	0	0	35
TOTAL	2,593	195	181	281	0	5	3,255	**TOTAL**	6,105	188	169	452	0	8	6,922

AM PEAK HOUR	7:30 AM
AM PEAK VOLUME	605

AM PEAK HOUR	5:00 PM
AM PEAK VOLUME	919

PM Peak Hour - Southbound

	Start Time	Total Volume	Passenger Cars	Trucks	MedTrk
199	5:00 PM	919	855	64	16

CLASS 1	PASSENGER VEHICLES	**TOTAL: AM+PM**	8,698	383	350	733	0	13	10,177
CLASS 2	2-AXLE TRUCKS	**% OF TOTAL**	85.5%	3.8%	3.4%	7.2%	0.0%	0.1%	100.0%
CLASS 3	3-AXLE TRUCKS								
CLASS 4	4 OR MORE AXLE TRUCKS								
CLASS 5	RV								
CLASS 6	BUS								

A102423

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, October 10, 2023 **CITY:** Ontario

JOB #: SC4225 **LOCATION:** CLASS8 S Archibald Ave north of East Riverside Dr

AM TIME	COMBINED 1	2	3	4	5	6	TOTAL	PM Time	COMBINED 1	2	3	4	5	6	TOTAL
0:00	55	0	1	13	0	0	69	12:00	297	15	7	28	0	0	347
0:15	53	1	0	6	0	0	60	12:15	306	17	18	37	0	1	379
0:30	46	0	3	10	0	0	59	12:30	301	22	11	29	0	0	363
0:45	28	1	3	7	0	0	39	12:45	302	19	16	25	0	0	362
1:00	45	1	1	11	0	0	58	13:00	343	17	22	37	0	1	420
1:15	34	0	3	5	0	0	42	13:15	293	24	12	38	0	0	367
1:30	37	1	3	5	0	0	46	13:30	302	30	12	22	0	1	367
1:45	30	1	4	8	0	0	43	13:45	333	13	20	30	0	2	398
2:00	23	0	1	5	0	0	29	14:00	347	26	18	27	0	1	419
2:15	27	0	2	6	0	0	35	14:15	348	21	11	27	0	2	409
2:30	30	0	1	10	0	0	41	14:30	438	29	19	27	0	3	516
2:45	37	1	3	9	0	0	50	14:45	464	24	13	30	0	0	531
3:00	38	1	3	6	0	0	48	15:00	406	25	21	24	0	0	476
3:15	48	3	3	6	0	0	60	15:15	408	21	11	34	0	0	474
3:30	53	1	2	6	0	0	62	15:30	448	25	10	33	0	0	516
3:45	72	3	5	10	0	0	90	15:45	422	21	9	25	0	1	478
4:00	68	2	4	8	0	0	82	16:00	405	17	14	27	0	0	463
4:15	91	5	4	16	0	0	116	16:15	426	23	4	25	0	0	478
4:30	123	7	6	13	0	0	149	16:30	425	15	13	22	0	0	475
4:45	154	5	4	9	0	0	172	16:45	427	18	10	28	0	0	483
5:00	165	14	6	14	0	0	199	17:00	472	9	9	33	0	0	523
5:15	162	9	6	16	0	0	193	17:15	474	20	8	12	0	0	514
5:30	195	7	3	14	0	0	219	17:30	477	15	6	21	0	0	519
5:45	214	11	16	11	0	0	252	17:45	454	18	7	15	0	0	494
6:00	198	13	5	14	0	0	230	18:00	405	15	8	16	0	0	444
6:15	245	13	10	16	0	0	284	18:15	381	12	6	20	0	0	419
6:30	276	23	9	18	0	0	326	18:30	383	15	8	21	0	0	427
6:45	324	15	15	17	1	0	372	18:45	336	9	8	18	0	1	372
7:00	288	15	5	17	0	0	325	19:00	331	7	6	21	0	0	365
7:15	363	15	14	29	0	0	421	19:15	355	8	7	12	0	0	382
7:30	410	18	14	30	0	3	475	19:30	297	12	4	11	0	0	324
7:45	525	13	11	25	0	0	574	19:45	222	4	5	16	0	0	247
8:00	454	27	9	36	0	2	528	20:00	216	4	4	13	0	0	237
8:15	421	22	15	29	0	2	489	20:15	242	4	8	8	0	0	262
8:30	372	13	15	17	0	2	419	20:30	222	2	5	20	0	0	249
8:45	343	23	10	19	0	1	396	20:45	207	4	5	12	0	0	228
9:00	275	16	13	17	0	2	323	21:00	199	3	2	8	0	0	212
9:15	239	13	14	27	0	1	294	21:15	190	0	3	13	0	0	206
9:30	249	24	12	27	0	1	313	21:30	171	1	5	12	0	0	189
9:45	266	24	14	28	0	0	332	21:45	133	0	5	14	0	0	152
10:00	270	24	14	31	0	0	339	22:00	138	2	9	14	0	0	163
10:15	227	19	14	33	0	0	293	22:15	103	1	6	11	0	0	121
10:30	251	11	17	36	0	0	315	22:30	98	0	2	9	0	0	109
10:45	245	21	17	29	0	0	312	22:45	96	3	2	14	0	0	115
11:00	244	22	17	35	0	0	318	23:00	89	0	3	11	0	0	103
11:15	281	20	20	30	0	0	351	23:15	84	3	1	11	0	0	99
11:30	281	18	13	24	0	0	336	23:30	60	2	4	13	0	0	79
11:45	300	17	10	21	0	0	348	23:45	69	0	2	5	0	0	76
TOTAL	9,175	513	394	829	1	14	10,926	TOTAL	14,345	595	419	979	0	13	16,351

AM PEAK HOUR	7:30 AM
AM PEAK VOLUME	2,066

AM PEAK HOUR	5:00 PM
AM PEAK VOLUME	2,050

PH Start Time	
15:00	1,944
15:15	1,931
15:30	1,935
15:45	1,894
16:00	1,899
16:15	1,959
16:30	1,995
16:45	2,039
17:00	2,050
17:15	1,971
17:30	1,876
17:45	1,784
18:00	1,662
5:00 PM	2,050

CLASS 1	PASSENGER VEHICLES
CLASS 2	2-AXLE TRUCKS
CLASS 3	3-AXLE TRUCKS
CLASS 4	4 OR MORE AXLE TRUCKS
CLASS 5	RV
CLASS 6	Buses

	1	2	3	4	5	6	TOTAL
TOTAL: AM+PM	23,520	1,108	813	1,808	1	27	27,277
% OF TOTAL	86.2%	4.1%	3.0%	6.6%	0.0%	0.1%	100.0%

A816

24-HOUR ROADWAY SEGMENT COUNTS (WITH FHWA CLASSIFICATION)

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Wednesday, October 27, 2021
JOB #: SC3147

CITY: Ontario
LOCATION: CLASS7 Vineyard north of Philadelphia_v2

AM	NORTHBOUND													
TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
0:00	0	5	1	0	0	0	0	0	0	0	0	0	0	6
0:15	0	10	0	0	0	0	0	0	1	0	0	0	0	11
0:30	0	14	3	0	1	0	0	0	2	0	0	0	0	20
0:45	0	3	0	0	0	0	0	0	1	0	0	0	0	4
1:00	0	6	3	0	0	0	0	0	3	0	0	0	0	12
1:15	0	6	2	0	0	0	0	0	1	0	0	0	0	9
1:30	0	5	0	0	0	0	0	1	2	0	0	0	0	8
1:45	0	4	2	0	0	1	0	0	0	0	0	0	0	7
2:00	0	2	1	0	0	0	0	0	0	0	0	0	0	3
2:15	0	12	1	0	0	0	0	0	1	0	0	0	0	14
2:30	0	6	3	0	0	0	0	0	0	0	0	0	0	9
2:45	0	8	3	0	0	1	0	0	2	0	0	0	0	14
3:00	0	5	0	0	1	0	0	0	1	0	0	0	0	7
3:15	0	5	2	0	0	0	0	0	2	0	0	0	0	9
3:30	0	17	4	0	0	0	0	0	1	0	0	0	0	22
3:45	0	19	6	0	0	0	0	0	1	0	0	0	0	26
4:00	0	9	6	0	1	2	0	0	1	0	0	0	0	19
4:15	0	23	5	0	0	0	0	0	1	0	0	0	0	29
4:30	0	37	6	0	3	2	0	0	0	0	1	0	0	49
4:45	0	63	20	1	0	0	0	0	0	0	0	0	0	84
5:00	0	46	14	0	6	0	0	0	1	0	0	0	0	67
5:15	0	38	17	0	4	0	0	0	1	0	0	0	0	60
5:30	0	61	13	0	3	1	0	0	1	0	0	0	0	79
5:45	1	122	26	1	0	3	0	0	2	0	0	0	0	155
6:00	0	65	21	0	8	0	0	0	4	0	0	0	0	98
6:15	0	39	29	0	4	1	0	0	2	0	0	0	0	75
6:30	0	57	24	0	10	0	0	0	3	0	0	0	0	94
6:45	0	84	19	1	5	0	0	0	2	0	0	0	0	111
7:00	0	85	13	0	4	1	0	0	2	0	0	0	0	105
7:15	1	78	23	0	2	0	0	0	4	0	0	0	0	108
7:30	0	82	31	0	5	1	0	1	2	0	0	0	0	122
7:45	0	102	28	1	5	1	0	1	3	0	0	0	0	141
8:00	0	112	23	0	3	0	0	0	4	0	0	0	0	142
8:15	0	105	28	0	5	0	0	0	7	0	0	0	0	145
8:30	0	106	25	0	5	2	0	0	9	0	0	0	0	147
8:45	0	85	22	1	9	1	0	0	2	1	0	0	0	121
9:00	0	90	16	0	2	3	0	0	7	0	0	0	0	118
9:15	0	62	25	0	5	1	0	0	2	0	0	0	0	95
9:30	0	68	26	0	9	0	0	0	7	0	0	0	0	110
9:45	1	63	14	1	8	2	0	0	6	0	0	0	0	95
10:00	0	74	18	0	9	0	0	0	9	0	1	0	0	111
10:15	0	62	19	0	11	2	0	1	3	0	0	0	0	98
10:30	1	56	16	0	7	2	0	1	7	0	0	0	0	90
10:45	0	70	17	0	14	1	0	0	8	0	0	0	0	110
11:00	0	73	27	1	6	2	0	1	4	0	0	0	0	114
11:15	0	68	29	0	10	2	0	0	7	0	0	0	0	116
11:30	0	71	21	0	10	0	0	2	2	0	1	0	0	107
11:45	0	63	31	1	5	5	0	0	4	0	0	0	0	109
TOTAL	4	2,346	683	8	180	37	0	8	135	1	3	0	0	3,405

AM PEAK HOUR	7:45 AM
AM PEAK VOLUME	575

PM	NORTHBOUND													
Time	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
12:00	0	57	22	0	11	0	0	1	4	0	0	0	0	95
12:15	0	80	26	0	6	1	0	1	8	0	0	0	0	122
12:30	0	82	23	0	8	0	0	0	6	0	0	0	0	119
12:45	0	83	17	1	12	3	0	3	5	0	0	0	0	124
13:00	0	56	22	0	8	3	0	1	2	0	0	0	0	92
13:15	0	58	19	0	6	4	0	2	4	0	1	0	0	94
13:30	0	64	26	0	9	2	0	1	2	0	0	0	0	104
13:45	1	64	22	1	8	4	0	0	5	0	0	0	0	105
14:00	0	67	19	0	3	3	0	1	5	0	0	0	0	98
14:15	0	56	23	0	12	0	0	0	3	0	0	0	0	94
14:30	0	64	13	0	7	2	0	1	5	0	0	0	0	92
14:45	0	60	15	1	6	0	0	2	0	0	0	0	0	84
15:00	0	64	22	0	4	1	0	0	2	0	0	0	0	93
15:15	0	50	14	0	14	1	0	0	3	0	1	0	0	83
15:30	0	66	15	0	3	0	0	0	2	0	0	0	0	86
15:45	0	76	18	1	7	2	0	0	3	1	0	0	0	108
16:00	0	74	13	0	4	0	0	0	3	0	0	0	0	94
16:15	0	41	8	0	3	1	0	2	5	0	0	0	0	60
16:30	0	45	11	0	5	0	0	2	2	0	0	0	0	65
16:45	0	36	7	1	7	0	0	1	1	0	0	0	0	53
17:00	0	61	13	0	0	1	0	0	3	0	0	0	0	78
17:15	0	56	7	0	6	0	0	0	6	0	0	0	0	75
17:30	0	34	9	0	5	3	0	0	1	0	0	0	0	52
17:45	0	44	6	1	3	1	0	1	1	0	0	0	0	57
18:00	0	42	4	0	5	1	0	0	2	0	0	0	0	54
18:15	0	36	6	0	1	0	0	1	2	0	0	0	0	46
18:30	1	39	11	0	1	0	0	1	1	0	0	0	0	54
18:45	0	20	8	0	0	1	0	0	0	0	0	0	0	29
19:00	0	30	8	1	2	1	0	0	2	0	0	0	0	44
19:15	0	22	5	0	0	2	0	1	1	0	0	0	0	31
19:30	0	24	6	0	2	0	0	0	1	0	0	0	0	33
19:45	0	33	3	1	2	0	0	0	1	0	0	0	0	40
20:00	0	26	3	0	1	0	0	0	1	0	0	0	0	31
20:15	0	27	0	0	2	0	0	0	1	0	0	0	0	30
20:30	0	27	5	0	0	2	0	0	1	0	0	0	0	35
20:45	0	19	5	1	0	0	0	0	1	0	1	0	0	27
21:00	0	24	1	0	0	1	0	0	1	0	0	0	0	27
21:15	0	17	3	0	1	0	0	0	1	0	0	0	0	22
21:30	0	30	4	0	0	0	0	0	1	0	0	0	0	35
21:45	0	28	3	0	0	1	0	0	1	0	0	0	0	33
22:00	0	24	2	0	0	0	0	0	1	0	0	0	0	27
22:15	0	7	0	0	0	0	0	0	0	0	0	0	0	7
22:30	0	19	3	0	0	0	0	1	0	0	0	0	0	23
22:45	0	11	2	0	0	0	0	0	2	0	0	0	0	15
23:00	0	13	0	0	0	0	0	0	1	0	0	0	0	14
23:15	0	8	2	0	0	1	0	0	2	0	0	0	0	13
23:30	0	11	0	0	1	1	0	0	2	0	0	0	0	15
23:45	0	6	2	0	0	0	0	0	1	0	0	0	0	9
TOTAL	2	1,981	476	9	175	43	0	23	108	1	3	0	0	2,821

PM PEAK HOUR	12:00 PM
PM PEAK VOLUME	460

CLASS 1	Class 1 — Motorcycles	CLASS 8	3 to 4 Axles, Single Trailer
CLASS 2	Passenger Cars	CLASS 9	5 Axles, Single Trailer
CLASS 3	2 Axles, 4-Tire Single Units	CLASS 10	6 or More Axles, Single Trailer
CLASS 4	Buses	CLASS 11	5 or Less Axles, Multi-Trailers
CLASS 5	2 Axles, 6-Tire Single Units	CLASS 12	6 Axles, Multi-Trailers
CLASS 6	3 Axles, Single Unit	CLASS 13	7 or More Axles, Multi-Trailers
CLASS 7	4 or More Axles, Single Unit		

TOTAL: AM+PM	6	4,327	1,159	17	355	80	0	31	243	2	6	0	0	6,226
% OF TOTAL	0.1%	69.5%	18.6%	0.3%	5.7%	1.3%	0.0%	0.5%	3.9%	0.0%	0.1%	0.0%	0.0%	100.0%

Class	1	2	3	4	5	6	7	8	9	10	11	12	13	
TOTAL: ALL	10	8,045	2,088	38	661	149	0	50	438	5	15	0	0	11,499
% OF TOTAL	0.2%	129.2%	33.5%	0.6%	10.6%	2.4%	0.0%	0.8%	7.0%	0.1%	0.2%	0.0%	0.0%	100.0%

24-HOUR ROADWAY SEGMENT COUNTS (WITH FHWA CLASSIFICATION)

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Wednesday, October 27, 2021
JOB #: SC3147

CITY: Ontario
LOCATION: CLASS7 Vineyard north of Philadelphia_v2

AM	SOUTHBOUND													
TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
0:00	0	12	2	0	0	0	0	0	0	0	0	0	0	14
0:15	0	12	0	0	1	1	0	0	0	0	0	0	0	14
0:30	0	7	3	0	0	1	0	0	1	0	0	0	0	12
0:45	0	4	1	0	0	0	0	0	0	0	0	0	0	5
1:00	0	5	0	0	0	0	0	0	3	0	0	0	0	8
1:15	0	8	1	0	0	0	0	0	0	0	0	0	0	9
1:30	0	6	1	0	0	0	0	0	1	0	0	0	0	8
1:45	0	4	1	0	0	0	0	0	0	0	0	0	0	5
2:00	0	5	2	0	0	0	0	0	0	0	1	0	0	8
2:15	0	4	3	0	1	0	0	0	0	0	0	0	0	8
2:30	0	4	0	0	2	0	0	0	1	0	0	0	0	7
2:45	0	10	0	0	0	0	0	0	1	0	1	0	0	12
3:00	0	8	3	0	1	1	0	0	1	0	0	0	0	14
3:15	0	8	1	0	0	0	0	0	0	0	0	0	0	9
3:30	0	4	2	0	0	2	0	0	1	0	0	0	0	9
3:45	0	4	0	0	0	2	0	1	5	0	2	0	0	14
4:00	0	3	0	0	0	0	0	0	1	0	0	0	0	4
4:15	0	5	4	0	0	0	0	0	3	0	1	0	0	13
4:30	0	8	4	0	2	0	0	0	1	0	0	0	0	15
4:45	0	10	2	0	6	0	0	0	1	0	0	0	0	19
5:00	0	9	3	0	10	2	0	0	1	0	0	0	0	25
5:15	0	9	4	0	4	0	0	1	1	0	0	0	0	19
5:30	0	9	3	0	3	0	0	0	3	1	1	0	0	20
5:45	0	12	1	1	4	4	0	0	2	0	0	0	0	24
6:00	0	15	5	0	0	2	0	0	1	0	0	0	0	23
6:15	0	16	9	0	5	1	0	0	1	0	0	0	0	32
6:30	0	19	5	0	5	0	0	0	1	0	0	0	0	30
6:45	0	28	12	1	7	3	0	0	0	0	0	0	0	51
7:00	0	27	8	0	7	2	0	0	6	0	0	0	0	50
7:15	0	31	11	1	5	1	0	0	4	0	0	0	0	53
7:30	0	26	11	0	3	2	0	0	5	0	0	0	0	47
7:45	0	50	9	0	5	1	0	0	2	0	0	0	0	67
8:00	0	59	17	1	5	1	0	0	3	0	0	0	0	86
8:15	0	57	14	0	5	1	0	0	0	0	0	0	0	77
8:30	0	43	9	0	1	3	0	0	1	0	0	0	0	57
8:45	0	35	16	1	4	1	0	0	5	0	0	0	0	62
9:00	0	47	14	0	4	0	0	0	2	0	0	0	0	67
9:15	0	36	11	0	11	0	0	1	0	0	0	0	0	59
9:30	0	51	13	0	12	2	0	0	5	0	0	0	0	83
9:45	0	46	11	2	7	1	0	0	3	1	0	0	0	71
10:00	0	35	9	0	4	4	0	0	3	0	1	0	0	56
10:15	0	32	14	0	9	0	0	1	3	0	0	0	0	59
10:30	0	46	17	0	6	1	0	0	8	0	0	0	0	78
10:45	0	49	16	1	9	0	0	0	2	0	0	0	0	77
11:00	0	54	18	0	7	0	0	1	3	0	0	0	0	83
11:15	0	36	18	0	8	0	0	1	4	0	1	0	0	68
11:30	0	48	13	0	9	3	0	0	4	0	0	0	0	77
11:45	0	53	12	2	4	2	0	0	9	1	0	0	0	83
TOTAL	0	1,109	333	10	176	44	0	6	102	3	8	0	0	1,791

AM PEAK HOUR	11:00 AM
AM PEAK VOLUME	311

PM	SOUTHBOUND													
Time	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
12:00	0	68	12	0	5	3	0	0	3	0	0	0	0	91
12:15	0	46	12	0	9	4	0	0	2	0	0	0	0	73
12:30	0	64	14	0	8	1	0	2	3	0	0	0	0	92
12:45	0	53	19	0	7	0	0	1	5	0	0	0	0	85
13:00	0	64	21	1	5	0	0	0	6	0	0	0	0	97
13:15	0	61	17	0	7	1	0	0	2	0	0	0	0	88
13:30	0	83	29	0	3	2	0	1	3	0	0	0	0	121
13:45	0	67	13	1	3	3	0	0	6	0	0	0	0	93
14:00	1	69	23	0	6	0	0	0	3	0	0	0	0	102
14:15	0	52	17	0	6	0	0	0	4	0	0	0	0	79
14:30	0	106	28	0	3	0	0	0	0	0	0	0	0	137
14:45	0	77	18	1	5	0	0	1	5	0	1	0	0	108
15:00	1	72	28	1	10	2	0	0	3	0	0	0	0	117
15:15	0	78	30	0	5	0	0	2	0	0	0	0	0	115
15:30	0	99	29	1	6	0	0	0	2	0	0	0	0	137
15:45	0	77	11	1	2	1	0	0	5	0	0	0	0	97
16:00	1	83	27	0	7	0	0	0	2	0	0	0	0	120
16:15	0	97	19	0	1	1	0	0	2	0	0	0	0	120
16:30	0	126	25	0	5	1	0	0	3	0	0	0	0	160
16:45	0	100	18	1	2	0	0	2	3	0	0	0	0	126
17:00	0	151	12	0	2	0	0	1	3	0	0	0	0	169
17:15	0	109	23	0	3	0	0	0	3	0	0	0	0	138
17:30	0	92	11	0	1	0	0	0	0	0	0	0	0	104
17:45	0	63	10	0	2	2	0	0	1	0	0	0	0	78
18:00	0	61	15	1	2	1	0	0	0	0	0	0	0	80
18:15	0	76	10	0	2	0	0	1	0	0	0	0	0	89
18:30	0	64	11	0	1	0	0	0	1	0	0	0	0	77
18:45	0	43	7	1	1	0	0	0	3	0	0	0	0	55
19:00	0	31	10	0	5	0	0	1	2	0	0	0	0	49
19:15	0	31	4	0	1	1	0	0	1	0	0	0	0	38
19:30	0	42	10	0	1	0	0	0	0	0	0	0	0	53
19:45	0	32	7	1	1	0	0	0	2	0	0	0	0	43
20:00	0	27	2	0	0	0	0	0	0	0	0	0	0	29
20:15	0	26	6	0	1	0	0	0	1	0	0	0	0	34
20:30	0	20	4	0	0	0	0	0	0	0	0	0	0	24
20:45	1	23	3	1	0	0	0	0	0	0	0	0	0	28
21:00	0	16	4	0	0	0	0	0	0	0	0	0	0	20
21:15	0	20	3	0	0	0	0	1	1	0	0	0	0	25
21:30	0	15	5	0	0	0	0	0	0	0	0	0	0	20
21:45	0	17	3	0	1	0	0	0	2	0	0	0	0	23
22:00	0	21	4	0	0	0	0	0	4	0	0	0	0	29
22:15	0	14	5	0	0	0	0	0	1	0	0	0	0	20
22:30	0	25	1	0	0	0	0	0	2	0	0	0	0	28
22:45	0	9	2	0	0	0	0	0	2	0	0	0	0	13
23:00	0	4	3	0	0	0	0	0	1	0	0	0	0	8
23:15	0	12	7	0	0	1	0	0	0	0	0	0	0	20
23:30	0	19	3	0	0	1	0	0	0	0	0	0	0	23
23:45	0	4	1	0	1	0	0	0	1	0	0	0	0	7
TOTAL	4	2,609	596	11	130	25	0	13	93	0	1	0	0	3,482

PM PEAK HOUR	4:30 PM
PM PEAK VOLUME	593

CLASS 1	Class 1 — Motorcycles	**CLASS 8**	3 to 4 Axles, Single Trailer
CLASS 2	Passenger Cars	**CLASS 9**	5 Axles, Single Trailer
CLASS 3	2 Axles, 4-Tire Single Units	**CLASS 10**	6 or More Axles, Single Trailer
CLASS 4	Buses	**CLASS 11**	5 or Less Axles, Multi-Trailers
CLASS 5	2 Axles, 6-Tire Single Units	**CLASS 12**	6 Axles, Multi-Trailers
CLASS 6	3 Axles, Single Unit	**CLASS 13**	7 or More Axles, Multi-Trailers
CLASS 7	4 or More Axles, Single Unit		

TOTAL: AM+PM	4	3,718	929	21	306	69	0	19	195	3	9	0	0	5,273
% OF TOTAL	0.1%	70.5%	17.6%	0.4%	5.8%	1.3%	0.0%	0.4%	3.7%	0.1%	0.2%	0.0%	0.0%	100.0%

Class	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**

	NB	
Daily All Volumes	Sum of All Trucks	Daily Truck %

	NB	
Peak All Volumes	Sum of All Peak Tru	Peak Truck %
847	20	2.36%

	AM	
862	6	0.70%

	SB	
Daily All Volumes	Sum of All Trucks	Daily Truck %

	SB	
Peak All Volumes	Sum of All Peak Tru	Peak Truck %
880	16	1.82%

	PM	
865	10	1.16%

A102423

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, October 10, 2023 **CITY:** Ontario

JOB #: SC4225 **LOCATION:** CLASS5 Ontario Ave south of East Riverside Dr

AM TIME	NB 1	2	3	4	5	6	TOTAL	PM Time	NB 1	2	3	4	5	6	TOTAL
0:00	0	0	0	0	0	0	0	12:00	8	0	1	0	0	0	9
0:15	2	0	0	0	0	0	2	12:15	9	0	1	1	0	0	11
0:30	0	0	0	0	0	0	0	12:30	6	4	1	0	0	0	11
0:45	0	0	0	0	0	0	0	12:45	4	0	1	0	0	0	5
1:00	0	0	0	0	0	0	0	13:00	7	0	0	1	0	0	8
1:15	1	0	0	0	0	0	1	13:15	6	0	1	1	0	0	8
1:30	0	0	0	0	0	0	0	13:30	8	0	1	2	0	0	11
1:45	1	0	0	0	0	0	1	13:45	4	0	0	0	0	0	4
2:00	0	0	0	0	0	0	0	14:00	10	2	1	0	0	0	13
2:15	0	0	0	0	0	0	0	14:15	4	1	0	0	0	0	5
2:30	0	0	0	0	0	0	0	14:30	9	4	1	0	0	0	14
2:45	0	0	0	0	0	0	0	14:45	12	1	1	0	0	1	15
3:00	0	0	0	0	0	0	0	15:00	9	1	1	0	0	0	11
3:15	0	0	0	0	0	0	0	15:15	5	0	0	1	0	0	6
3:30	0	0	0	0	0	0	0	15:30	17	1	1	1	0	0	20
3:45	0	0	0	2	0	0	2	15:45	8	1	0	0	0	0	9
4:00	1	1	0	2	0	0	4	16:00	10	0	0	1	0	0	11
4:15	1	0	0	3	0	0	4	16:15	6	1	1	0	0	0	8
4:30	1	0	0	0	0	0	1	16:30	7	0	1	0	0	0	8
4:45	1	0	0	3	0	0	4	16:45	10	0	1	0	0	0	11
5:00	1	0	0	0	0	0	1	17:00	11	0	0	0	0	0	11
5:15	1	0	0	0	0	0	1	17:15	6	0	1	0	0	0	7
5:30	3	0	0	0	0	0	3	17:30	7	0	0	1	0	0	8
5:45	2	0	1	2	0	0	5	17:45	8	1	0	0	0	0	9
6:00	3	0	2	0	0	0	5	18:00	7	0	0	1	0	0	8
6:15	7	2	3	0	0	0	12	18:15	6	0	0	0	0	0	6
6:30	8	0	2	0	0	0	10	18:30	4	0	0	0	0	0	4
6:45	9	0	1	1	0	0	11	18:45	12	1	0	0	0	0	13
7:00	4	0	0	0	0	0	4	19:00	4	1	0	0	0	0	5
7:15	11	2	3	0	0	0	16	19:15	7	0	0	0	0	0	7
7:30	8	0	0	0	0	0	8	19:30	2	0	0	0	0	0	2
7:45	15	1	0	1	0	0	17	19:45	6	0	0	0	0	0	6
8:00	8	1	1	1	0	0	11	20:00	1	0	0	0	0	0	1
8:15	10	2	1	2	0	0	15	20:15	5	0	0	0	0	0	5
8:30	5	0	0	0	1	0	6	20:30	6	0	0	0	0	0	6
8:45	9	0	3	0	0	0	12	20:45	7	0	0	0	0	0	7
9:00	9	1	0	2	0	0	12	21:00	1	0	0	0	0	0	1
9:15	8	1	0	0	0	0	9	21:15	3	0	0	0	0	0	3
9:30	7	1	3	0	0	0	11	21:30	3	0	0	0	0	0	3
9:45	3	0	1	1	0	0	5	21:45	0	0	1	0	0	0	1
10:00	8	0	0	0	0	0	8	22:00	0	0	0	0	0	0	0
10:15	6	1	0	2	0	0	9	22:15	0	0	0	0	0	0	0
10:30	3	0	2	0	0	0	5	22:30	4	0	0	0	0	0	4
10:45	4	0	2	0	1	0	7	22:45	2	0	0	0	0	0	2
11:00	7	3	3	1	0	0	14	23:00	2	0	0	0	0	0	2
11:15	5	0	4	0	0	0	9	23:15	0	0	0	0	0	0	0
11:30	12	1	1	3	0	0	17	23:30	0	0	0	0	0	0	0
11:45	6	1	1	0	0	0	8	23:45	1	0	0	0	0	0	1
TOTAL	190	18	34	26	2	0	270	TOTAL	274	19	16	10	0	1	320
				AM PEAK HOUR			7:15 AM					AM PEAK HOUR			2:45 PM
				AM PEAK VOLUME			52					AM PEAK VOLUME			52

PM Peak Hour - Northbound

Start Time	Total Volume	Passenger Cars	Trucks	MedTrk
4:45 PM	37	34	3	0

CLASS 1	PASSENGER VEHICLES	TOTAL: AM+PM	464	37	50	36	2	1	590
CLASS 2	2-AXLE TRUCKS	% OF TOTAL	78.6%	6.3%	8.5%	6.1%	0.3%	0.2%	100.0%
CLASS 3	3-AXLE TRUCKS								
CLASS 4	4 OR MORE AXLE TRUCKS								
CLASS 5	RV	TOTAL: ALL	1,001	88	109	81	3	1	1,283
CLASS 6	Buses	% OF TOTAL	78.0%	6.9%	8.5%	6.3%	0.2%	0.1%	100.0%

A102423

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, October 10, 2023
JOB #: SC4225
CITY: Ontario
LOCATION: CLASS5 Ontario Ave south of East Riverside Dr

AM TIME	SB						
	1	2	3	4	5	6	TOTAL
0:00	1	0	0	0	0	0	1
0:15	1	0	0	0	0	0	1
0:30	0	0	0	0	0	0	0
0:45	0	0	0	0	0	0	0
1:00	1	0	0	0	0	0	1
1:15	0	0	0	0	0	0	0
1:30	3	0	0	0	0	0	3
1:45	0	0	0	0	0	0	0
2:00	0	0	0	0	0	0	0
2:15	2	0	0	0	0	0	2
2:30	2	0	0	0	0	0	2
2:45	0	0	0	0	0	0	0
3:00	0	0	0	0	0	0	0
3:15	1	0	0	0	0	0	1
3:30	2	0	0	0	0	0	2
3:45	4	0	0	0	0	0	4
4:00	1	0	0	0	0	0	1
4:15	0	0	0	0	0	0	0
4:30	2	0	0	0	0	0	2
4:45	4	0	0	0	0	0	4
5:00	0	0	0	0	0	0	0
5:15	5	0	1	0	0	0	6
5:30	3	1	0	0	0	0	4
5:45	10	0	0	0	0	0	10
6:00	13	0	0	0	0	0	13
6:15	9	0	1	0	0	0	10
6:30	5	1	3	0	0	0	9
6:45	8	0	1	0	0	0	9
7:00	8	1	0	0	0	0	9
7:15	4	2	0	0	0	0	6
7:30	8	1	0	0	0	0	9
7:45	7	1	0	1	0	0	9
8:00	12	2	0	1	0	0	15
8:15	4	0	5	1	0	0	10
8:30	7	1	1	1	0	0	10
8:45	6	0	1	1	0	0	8
9:00	9	0	0	0	0	0	9
9:15	8	1	2	1	0	0	12
9:30	4	1	0	2	0	0	7
9:45	6	3	1	2	0	0	12
10:00	8	1	2	1	0	0	12
10:15	4	0	0	1	0	0	5
10:30	6	0	3	3	0	0	12
10:45	5	0	2	1	0	0	8
11:00	3	1	4	1	0	0	9
11:15	9	0	2	0	0	0	11
11:30	9	0	0	1	0	0	10
11:45	8	1	1	1	1	0	12
TOTAL	212	18	30	19	1	0	280

AM PEAK HOUR	7:45 AM
AM PEAK VOLUME	44

PM Time	SB						
	1	2	3	4	5	6	TOTAL
12:00	5	1	2	0	0	0	8
12:15	13	2	2	2	0	0	19
12:30	9	4	1	0	0	0	14
12:45	9	1	1	2	0	0	13
13:00	9	2	2	0	0	0	13
13:15	9	1	3	0	0	0	13
13:30	4	1	0	2	0	0	7
13:45	9	3	1	2	0	0	15
14:00	6	0	1	2	0	0	9
14:15	8	1	4	1	0	0	14
14:30	9	5	1	0	0	0	15
14:45	8	1	0	4	0	0	13
15:00	4	3	1	0	0	0	8
15:15	13	1	1	0	0	0	15
15:30	7	0	0	1	0	0	8
15:45	7	0	0	0	0	0	7
16:00	13	1	0	0	0	0	14
16:15	11	0	0	0	0	0	11
16:30	7	1	0	0	0	0	8
16:45	8	1	2	2	0	0	13
17:00	15	1	1	0	0	0	17
17:15	10	0	1	0	0	0	11
17:30	15	0	0	0	0	0	15
17:45	6	1	1	1	0	0	9
18:00	13	0	0	0	0	0	13
18:15	7	0	1	1	0	0	9
18:30	6	1	0	0	0	0	7
18:45	6	0	0	0	0	0	6
19:00	8	0	0	1	0	0	9
19:15	5	1	0	0	0	0	6
19:30	7	0	0	0	0	0	7
19:45	5	0	0	0	0	0	5
20:00	9	0	1	0	0	0	10
20:15	4	0	0	1	0	0	5
20:30	7	0	0	0	0	0	7
20:45	3	0	1	1	0	0	5
21:00	3	0	0	0	0	0	3
21:15	6	0	0	0	0	0	6
21:30	4	0	0	1	0	0	5
21:45	3	0	0	1	0	0	4
22:00	2	0	0	0	0	0	2
22:15	3	0	0	0	0	0	3
22:30	3	0	1	1	0	0	5
22:45	5	0	0	0	0	0	5
23:00	1	0	0	0	0	0	1
23:15	1	0	0	0	0	0	1
23:30	0	0	0	0	0	0	0
23:45	0	0	0	0	0	0	0
TOTAL	325	33	29	26	0	0	413

AM PEAK HOUR	12:15 PM
AM PEAK VOLUME	59

PM Peak Hour - Southbound

Start Time	Total Volume	Passenger C	Trucks	MedTrk
4:45 PM	56	48	8	2

CLASS 1	PASSENGER VEHICLES	TOTAL: AM+PM	537	51	59	45	1	0	693
CLASS 2	2-AXLE TRUCKS	% OF TOTAL	77.5%	7.4%	8.5%	6.5%	0.1%	0.0%	100.0%
CLASS 3	3-AXLE TRUCKS								
CLASS 4	4 OR MORE AXLE TRUCKS								
CLASS 5	RV								
CLASS 6	BUS								

A102423

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, October 10, 2023 **CITY:** Ontario

JOB #: SC4225 **LOCATION:** CLASS5 Ontario Ave south of East Riverside Dr

AM TIME	COMBINED 1	2	3	4	5	6	TOTAL	PM Time	COMBINED 1	2	3	4	5	6	TOTAL
0:00	1	0	0	0	0	0	1	12:00	13	1	3	0	0	0	17
0:15	3	0	0	0	0	0	3	12:15	22	2	3	3	0	0	30
0:30	0	0	0	0	0	0	0	12:30	15	8	2	0	0	0	25
0:45	0	0	0	0	0	0	0	12:45	13	1	2	2	0	0	18
1:00	1	0	0	0	0	0	1	13:00	16	2	2	1	0	0	21
1:15	1	0	0	0	0	0	1	13:15	15	1	4	1	0	0	21
1:30	3	0	0	0	0	0	3	13:30	12	1	1	4	0	0	18
1:45	1	0	0	0	0	0	1	13:45	13	3	1	2	0	0	19
2:00	0	0	0	0	0	0	0	14:00	16	2	2	2	0	0	22
2:15	2	0	0	0	0	0	2	14:15	12	2	4	1	0	0	19
2:30	2	0	0	0	0	0	2	14:30	18	9	2	0	0	0	29
2:45	0	0	0	0	0	0	0	14:45	20	2	1	4	0	1	28
3:00	0	0	0	0	0	0	0	15:00	13	4	2	0	0	0	19
3:15	1	0	0	0	0	0	1	15:15	18	1	1	1	0	0	21
3:30	2	0	0	0	0	0	2	15:30	24	1	1	2	0	0	28
3:45	4	0	0	2	0	0	6	15:45	15	1	0	0	0	0	16
4:00	2	1	0	2	0	0	5	16:00	23	1	0	1	0	0	25
4:15	1	0	0	3	0	0	4	16:15	17	1	1	0	0	0	19
4:30	3	0	0	0	0	0	3	16:30	14	1	1	0	0	0	16
4:45	5	0	0	3	0	0	8	16:45	18	1	3	2	0	0	24
5:00	1	0	0	0	0	0	1	17:00	26	1	1	0	0	0	28
5:15	6	0	1	0	0	0	7	17:15	16	0	2	0	0	0	18
5:30	6	1	0	0	0	0	7	17:30	22	0	0	1	0	0	23
5:45	12	0	1	2	0	0	15	17:45	14	2	1	1	0	0	18
6:00	16	0	2	0	0	0	18	18:00	20	0	0	1	0	0	21
6:15	16	2	4	0	0	0	22	18:15	13	0	1	1	0	0	15
6:30	13	1	5	0	0	0	19	18:30	10	1	0	0	0	0	11
6:45	17	0	2	1	0	0	20	18:45	18	1	0	0	0	0	19
7:00	12	1	0	0	0	0	13	19:00	12	1	0	1	0	0	14
7:15	15	4	3	0	0	0	22	19:15	12	1	0	0	0	0	13
7:30	16	1	0	0	0	0	17	19:30	9	0	0	0	0	0	9
7:45	22	2	0	2	0	0	26	19:45	11	0	0	0	0	0	11
8:00	20	3	1	2	0	0	26	20:00	10	0	1	0	0	0	11
8:15	14	2	6	3	0	0	25	20:15	9	0	0	1	0	0	10
8:30	12	1	1	1	1	0	16	20:30	13	0	0	0	0	0	13
8:45	15	0	4	1	0	0	20	20:45	10	0	1	1	0	0	12
9:00	18	1	0	2	0	0	21	21:00	4	0	0	0	0	0	4
9:15	16	2	2	1	0	0	21	21:15	9	0	0	0	0	0	9
9:30	11	2	3	2	0	0	18	21:30	7	0	0	1	0	0	8
9:45	9	3	2	3	0	0	17	21:45	3	0	1	1	0	0	5
10:00	16	1	2	1	0	0	20	22:00	2	0	0	0	0	0	2
10:15	10	1	0	3	0	0	14	22:15	3	0	0	0	0	0	3
10:30	9	0	5	3	0	0	17	22:30	7	0	1	1	0	0	9
10:45	9	0	4	1	1	0	15	22:45	7	0	0	0	0	0	7
11:00	10	4	7	2	0	0	23	23:00	3	0	0	0	0	0	3
11:15	14	0	6	0	0	0	20	23:15	1	0	0	0	0	0	1
11:30	21	1	1	4	0	0	27	23:30	0	0	0	0	0	0	0
11:45	14	2	2	1	1	0	20	23:45	1	0	0	0	0	0	1
TOTAL	402	36	64	45	3	0	550	TOTAL	599	52	45	36	0	1	733

AM PEAK HOUR	7:30 AM
AM PEAK VOLUME	94

AM PEAK HOUR	2:00 PM
AM PEAK VOLUME	98

PH Start Time	
15:00	84
15:15	90
15:30	88
15:45	76
16:00	84
16:15	87
16:30	86
16:45	93
17:00	87
17:15	80
17:30	77
17:45	65
18:00	66
4:45 PM	93

CLASS 1	PASSENGER VEHICLES
CLASS 2	2-AXLE TRUCKS
CLASS 3	3-AXLE TRUCKS
CLASS 4	4 OR MORE AXLE TRUCKS
CLASS 5	RV
CLASS 6	Buses

TOTAL: AM+PM	1,001	88	109	81	3	1	1,283
% OF TOTAL	78.0%	6.9%	8.5%	6.3%	0.2%	0.1%	100.0%

A102423

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, October 10, 2023 **CITY:** Ontario

JOB #: SC4225 **LOCATION:** CLASS4 S Viveyard Ave north of East Riverside Dr

AM TIME	NB 1	2	3	4	5	6	TOTAL	PM Time	NB 1	2	3	4	5	6	TOTAL
0:00	7	1	1	1	0	0	10	**12:00**	85	9	1	2	0	0	97
0:15	6	0	1	0	0	0	7	**12:15**	76	6	2	3	0	0	87
0:30	4	0	0	0	0	0	4	**12:30**	80	4	0	0	0	0	84
0:45	10	0	0	0	0	0	10	**12:45**	82	10	3	3	0	1	99
1:00	3	1	0	1	0	0	5	**13:00**	86	3	1	4	0	0	94
1:15	3	2	0	0	0	0	5	**13:15**	81	5	2	6	0	0	94
1:30	4	0	0	0	0	0	4	**13:30**	75	7	1	1	0	0	84
1:45	3	0	1	1	0	0	5	**13:45**	94	4	1	3	0	1	103
2:00	1	0	0	1	0	0	2	**14:00**	107	5	1	1	1	1	116
2:15	6	0	1	0	0	0	7	**14:15**	104	4	2	3	0	0	113
2:30	5	0	0	0	0	0	5	**14:30**	109	4	2	2	0	0	117
2:45	4	0	0	0	0	0	4	**14:45**	113	5	1	2	0	4	125
3:00	2	0	1	0	0	0	3	**15:00**	109	4	0	2	0	2	117
3:15	3	0	0	2	0	0	5	**15:15**	92	4	2	0	0	0	98
3:30	8	1	0	1	0	0	10	**15:30**	115	9	0	2	0	0	126
3:45	7	0	2	2	0	0	11	**15:45**	114	5	1	0	0	0	120
4:00	7	3	0	3	0	0	13	**16:00**	91	5	2	1	0	1	100
4:15	6	1	2	2	0	0	11	**16:15**	120	11	1	1	0	0	133
4:30	8	1	0	4	0	0	13	**16:30**	90	7	1	1	0	0	99
4:45	18	1	1	6	0	1	27	**16:45**	109	4	1	2	0	1	117
5:00	22	0	1	6	0	0	29	**17:00**	111	5	4	0	0	0	120
5:15	22	0	0	2	0	0	24	**17:15**	96	2	1	0	0	0	99
5:30	37	2	0	0	0	0	39	**17:30**	112	0	1	1	0	0	114
5:45	23	0	3	3	0	1	30	**17:45**	102	4	0	1	0	1	108
6:00	31	3	1	2	0	0	37	**18:00**	110	3	0	3	0	0	116
6:15	41	5	2	2	0	0	50	**18:15**	77	1	0	1	0	0	79
6:30	58	8	4	3	0	1	74	**18:30**	71	3	1	2	0	0	77
6:45	83	5	6	3	0	1	98	**18:45**	78	3	0	0	0	1	82
7:00	81	8	1	3	0	0	93	**19:00**	70	4	1	2	0	0	77
7:15	112	15	2	3	0	2	134	**19:15**	62	2	0	1	0	0	65
7:30	113	5	0	1	0	0	119	**19:30**	70	1	0	0	0	0	71
7:45	126	10	2	0	0	3	141	**19:45**	54	2	0	0	0	1	57
8:00	138	7	3	2	0	0	150	**20:00**	42	0	1	2	0	0	45
8:15	126	2	1	3	0	1	133	**20:15**	51	0	0	0	0	0	51
8:30	128	6	2	0	1	0	137	**20:30**	44	2	0	1	0	0	47
8:45	119	7	1	3	0	1	131	**20:45**	34	0	0	1	0	1	36
9:00	102	6	3	3	0	0	114	**21:00**	45	1	0	0	0	0	46
9:15	73	8	1	1	0	0	83	**21:15**	38	0	1	0	0	0	39
9:30	72	7	0	2	0	0	81	**21:30**	40	1	0	1	0	0	42
9:45	61	7	3	2	0	1	74	**21:45**	26	1	0	1	0	0	28
10:00	71	4	0	1	0	0	76	**22:00**	21	2	0	0	0	0	23
10:15	84	4	0	3	0	0	91	**22:15**	30	1	0	0	0	0	31
10:30	69	6	3	2	0	1	81	**22:30**	19	0	1	0	0	0	20
10:45	61	4	1	0	1	1	68	**22:45**	14	2	0	0	0	0	16
11:00	94	4	3	2	0	1	104	**23:00**	15	1	0	2	0	0	18
11:15	71	9	0	4	0	0	84	**23:15**	7	0	1	0	0	0	8
11:30	98	7	0	2	0	2	109	**23:30**	12	1	1	0	0	0	14
11:45	88	9	4	2	0	1	104	**23:45**	8	0	1	1	0	0	10
TOTAL	2,319	169	57	84	2	18	2,649	**TOTAL**	3,391	157	39	59	1	15	3,662

AM PEAK HOUR	7:45 AM
AM PEAK VOLUME	561

AM PEAK HOUR	3:30 PM
AM PEAK VOLUME	479

PM Peak Hour - Northtbound

Start Time	Total Volume	Passenger Car	Trucks	Med Truck
4:45 PM	450	428	22	11

CLASS 1	PASSENGER VEHICLES	**TOTAL: AM+PM**	5,710	326	96	143	3	33	6,311
CLASS 2	2-AXLE TRUCKS	**% OF TOTAL**	90.5%	5.2%	1.5%	2.3%	0.0%	0.5%	100.0%
CLASS 3	3-AXLE TRUCKS								
CLASS 4	4 OR MORE AXLE TRUCKS								
CLASS 5	RV	**TOTAL: ALL**	13,789	683	186	298	4	86	15,046
CLASS 6	Buses	**% OF TOTAL**	91.6%	4.5%	1.2%	2.0%	0.0%	0.6%	100.0%

A102423

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, October 10, 2023
JOB #: SC4225

CITY: Ontario
LOCATION: CLASS4 S Viveyard Ave north of East Riverside Dr

AM TIME	SB 1	2	3	4	5	6	TOTAL	PM Time	SB 1	2	3	4	5	6	TOTAL
0:00	26	0	0	2	0	0	28	**12:00**	104	9	1	3	0	2	119
0:15	21	0	0	0	0	0	21	**12:15**	105	3	3	3	0	1	115
0:30	18	0	0	1	0	0	19	**12:30**	93	7	1	5	0	0	106
0:45	19	0	0	0	0	0	19	**12:45**	116	5	1	7	0	2	131
1:00	18	1	0	0	0	0	19	**13:00**	98	7	0	3	0	1	109
1:15	12	1	0	1	0	0	14	**13:15**	105	7	0	1	0	0	113
1:30	12	0	1	0	0	0	13	**13:30**	92	4	3	2	0	0	101
1:45	12	0	0	0	0	0	12	**13:45**	107	13	2	3	0	1	126
2:00	7	0	0	0	0	0	7	**14:00**	118	3	0	3	0	3	127
2:15	14	0	1	0	0	0	15	**14:15**	123	9	1	2	0	1	136
2:30	15	0	0	0	0	0	15	**14:30**	109	8	2	3	0	0	122
2:45	8	0	0	0	0	0	8	**14:45**	109	2	1	0	0	1	113
3:00	10	3	0	0	0	0	13	**15:00**	126	4	2	4	0	3	139
3:15	10	0	0	1	0	0	11	**15:15**	116	10	2	1	0	1	130
3:30	21	0	1	0	0	0	22	**15:30**	119	3	1	3	0	0	126
3:45	20	0	0	0	0	0	20	**15:45**	130	6	0	2	0	0	138
4:00	20	0	0	2	0	0	22	**16:00**	135	7	1	3	0	3	149
4:15	17	0	0	1	0	0	18	**16:15**	122	5	1	2	0	1	131
4:30	47	1	0	0	0	0	48	**16:30**	113	4	1	1	0	0	119
4:45	39	2	0	0	0	0	41	**16:45**	137	8	3	2	0	0	150
5:00	36	1	0	0	0	0	37	**17:00**	148	5	1	1	0	1	156
5:15	33	5	1	0	0	0	39	**17:15**	157	8	2	1	0	0	168
5:30	64	2	0	1	0	0	67	**17:30**	148	4	0	2	0	0	154
5:45	66	1	2	1	0	1	71	**17:45**	135	8	0	2	0	0	145
6:00	54	4	0	0	0	0	58	**18:00**	149	2	1	2	0	1	155
6:15	70	4	2	0	0	0	76	**18:15**	147	3	0	4	0	0	154
6:30	79	4	1	1	0	0	85	**18:30**	140	1	1	0	0	0	142
6:45	97	6	2	1	0	1	107	**18:45**	134	3	0	1	0	0	138
7:00	83	6	1	0	0	1	91	**19:00**	125	2	0	1	1	1	130
7:15	91	8	4	2	0	2	107	**19:15**	118	3	2	1	0	0	124
7:30	120	9	1	0	0	0	130	**19:30**	130	0	1	3	0	0	134
7:45	147	1	0	3	0	2	153	**19:45**	109	1	1	1	0	1	113
8:00	122	8	2	2	0	5	139	**20:00**	119	1	0	0	0	0	120
8:15	104	4	1	1	0	1	111	**20:15**	94	1	0	3	0	0	98
8:30	73	10	1	0	0	1	85	**20:30**	108	1	0	4	0	0	113
8:45	115	7	2	0	0	2	126	**20:45**	109	0	2	2	0	0	113
9:00	93	5	3	0	0	2	103	**21:00**	122	6	0	4	0	1	133
9:15	77	4	0	3	0	0	84	**21:15**	107	3	1	2	0	0	113
9:30	60	4	0	1	0	0	65	**21:30**	116	2	0	2	0	0	120
9:45	89	6	1	1	0	0	97	**21:45**	88	2	2	2	0	0	94
10:00	64	6	2	3	0	0	75	**22:00**	86	2	1	4	0	0	93
10:15	88	11	4	4	0	0	107	**22:15**	70	0	4	0	0	0	74
10:30	94	9	1	4	0	3	111	**22:30**	90	3	1	1	0	0	95
10:45	97	6	2	2	0	2	109	**22:45**	82	0	0	2	0	0	84
11:00	104	8	0	5	0	3	120	**23:00**	78	4	1	1	0	0	84
11:15	103	6	2	2	0	0	113	**23:15**	48	1	0	0	0	0	49
11:30	82	2	1	4	0	2	91	**23:30**	45	1	1	0	0	0	47
11:45	91	11	3	6	0	0	111	**23:45**	38	0	0	1	0	0	39
TOTAL	2,762	166	42	55	0	28	3,053	**TOTAL**	5,317	191	48	100	1	25	5,682

AM PEAK HOUR	7:30 AM
AM PEAK VOLUME	533

AM PEAK HOUR	4:45 PM
AM PEAK VOLUME	628

PM Peak Hour - Southbound

Start Time	Total Volume	Passenger C	Trucks	Med Truck
4:45 PM	628	590	38	25

TOTAL: AM+PM	8,079	357	90	155	1	53	8,735
% OF TOTAL	92.5%	4.1%	1.0%	1.8%	0.0%	0.6%	100.0%

CLASS 1	PASSENGER VEHICLES
CLASS 2	2-AXLE TRUCKS
CLASS 3	3-AXLE TRUCKS
CLASS 4	4 OR MORE AXLE TRUCKS
CLASS 5	RV
CLASS 6	BUS

A102423

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, October 10, 2023 **CITY:** Ontario

JOB #: SC4225 **LOCATION:** CLASS4 S Viveyard Ave north of East Riverside Dr

AM TIME	COMBINED 1	2	3	4	5	6	TOTAL	PM Time	COMBINED 1	2	3	4	5	6	TOTAL
0:00	33	1	1	3	0	0	38	12:00	189	18	2	5	0	2	216
0:15	27	0	1	0	0	0	28	12:15	181	9	5	6	0	1	202
0:30	22	0	0	1	0	0	23	12:30	173	11	1	5	0	0	190
0:45	29	0	0	0	0	0	29	12:45	198	15	4	10	0	3	230
1:00	21	2	0	1	0	0	24	13:00	184	10	1	7	0	1	203
1:15	15	3	0	1	0	0	19	13:15	186	12	2	7	0	0	207
1:30	16	0	1	0	0	0	17	13:30	167	11	4	3	0	0	185
1:45	15	0	1	1	0	0	17	13:45	201	17	3	6	0	2	229
2:00	8	0	0	1	0	0	9	14:00	225	8	1	4	1	4	243
2:15	20	0	2	0	0	0	22	14:15	227	13	3	5	0	1	249
2:30	20	0	0	0	0	0	20	14:30	218	12	4	5	0	0	239
2:45	12	0	0	0	0	0	12	14:45	222	7	2	2	0	5	238
3:00	12	3	1	0	0	0	16	15:00	235	8	2	6	0	5	256
3:15	13	0	0	3	0	0	16	15:15	208	14	4	1	0	1	228
3:30	29	1	1	1	0	0	32	15:30	234	12	1	5	0	0	252
3:45	27	0	2	2	0	0	31	15:45	244	11	1	2	0	0	258
4:00	27	3	0	5	0	0	35	16:00	226	12	3	4	0	4	249
4:15	23	1	2	3	0	0	29	16:15	242	16	2	3	0	1	264
4:30	55	2	0	4	0	0	61	16:30	203	11	2	2	0	0	218
4:45	57	3	1	6	0	1	68	16:45	246	12	4	4	0	1	267
5:00	58	1	1	6	0	0	66	17:00	259	10	5	1	0	1	276
5:15	55	5	1	2	0	0	63	17:15	253	10	3	1	0	0	267
5:30	101	4	0	1	0	0	106	17:30	260	4	1	3	0	0	268
5:45	89	1	5	4	0	2	101	17:45	237	12	0	3	0	1	253
6:00	85	7	1	2	0	0	95	18:00	259	5	1	5	0	1	271
6:15	111	9	4	2	0	0	126	18:15	224	4	0	5	0	0	233
6:30	137	12	5	4	0	1	159	18:30	211	4	2	2	0	0	219
6:45	180	11	8	4	0	2	205	18:45	212	6	0	1	0	1	220
7:00	164	14	2	3	0	1	184	19:00	195	6	1	3	1	1	207
7:15	203	23	6	5	0	4	241	19:15	180	5	2	2	0	0	189
7:30	233	14	1	1	0	0	249	19:30	200	1	1	3	0	0	205
7:45	273	11	2	3	0	5	294	19:45	163	3	1	1	0	2	170
8:00	260	15	5	4	0	5	289	20:00	161	1	1	2	0	0	165
8:15	230	6	2	4	0	2	244	20:15	145	1	0	3	0	0	149
8:30	201	16	3	0	1	1	222	20:30	152	3	0	5	0	0	160
8:45	234	14	3	3	0	3	257	20:45	143	0	2	3	0	1	149
9:00	195	11	6	3	0	2	217	21:00	167	7	0	4	0	1	179
9:15	150	12	1	4	0	0	167	21:15	145	3	2	2	0	0	152
9:30	132	11	0	3	0	0	146	21:30	156	3	0	3	0	0	162
9:45	150	13	4	3	0	1	171	21:45	114	3	2	3	0	0	122
10:00	135	10	2	4	0	0	151	22:00	107	4	1	4	0	0	116
10:15	172	15	4	7	0	0	198	22:15	100	1	4	0	0	0	105
10:30	163	15	4	6	0	4	192	22:30	109	3	2	1	0	0	115
10:45	158	10	3	2	1	3	177	22:45	96	2	0	2	0	0	100
11:00	198	12	3	7	0	4	224	23:00	93	5	1	3	0	0	102
11:15	174	15	2	6	0	0	197	23:15	55	1	1	0	0	0	57
11:30	180	9	1	6	0	4	200	23:30	57	2	2	0	0	0	61
11:45	179	20	7	8	0	1	215	23:45	46	0	1	2	0	0	49
TOTAL	5,081	335	99	139	2	46	5,702	TOTAL	8,708	348	87	159	2	40	9,344

AM PEAK HOUR	7:30 AM
AM PEAK VOLUME	1,076

AM PEAK HOUR	4:45 PM
AM PEAK VOLUME	1,078

PH Start Time	
15:00	994
15:15	987
15:30	1,023
15:45	989
16:00	998
16:15	1,025
16:30	1,028
16:45	1,078
17:00	1,064
17:15	1,059
17:30	1,025
17:45	976
18:00	943
4:45 PM	1,078

TOTAL: AM+PM	13,789	683	186	298	4	86	15,046
% OF TOTAL	91.6%	4.5%	1.2%	2.0%	0.0%	0.6%	100.0%

CLASS 1	PASSENGER VEHICLES
CLASS 2	2-AXLE TRUCKS
CLASS 3	3-AXLE TRUCKS
CLASS 4	4 OR MORE AXLE TRUCKS
CLASS 5	RV
CLASS 6	Buses

A102423

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, October 10, 2023 **CITY:** Ontario

JOB #: SC4225 **LOCATION:** CLASS11 Chino Ave west of Vyneyard Ave

AM TIME	EB 1	2	3	4	5	6	TOTAL	PM Time	EB 1	2	3	4	5	6	TOTAL
0:00	1	0	0	1	0	0	2	12:00	18	1	4	3	0	0	26
0:15	0	0	0	0	0	0	0	12:15	13	0	4	4	0	0	21
0:30	0	0	0	1	0	0	1	12:30	11	5	6	5	0	0	27
0:45	1	0	0	2	0	0	3	12:45	15	0	3	3	0	0	21
1:00	0	0	0	1	0	0	1	13:00	7	2	0	6	0	0	15
1:15	2	0	0	0	0	0	2	13:15	15	0	4	6	0	0	25
1:30	0	0	0	0	0	0	0	13:30	12	3	2	2	0	0	19
1:45	1	0	0	0	0	0	1	13:45	13	2	7	1	0	0	23
2:00	0	0	0	2	0	0	2	14:00	16	3	2	4	0	0	25
2:15	0	0	0	1	0	0	1	14:15	24	2	5	8	0	0	39
2:30	0	0	1	0	0	0	1	14:30	22	0	2	2	0	0	26
2:45	0	1	0	0	0	0	1	14:45	30	2	2	3	0	0	37
3:00	0	1	0	2	0	0	3	15:00	42	2	4	3	0	0	51
3:15	1	0	0	2	0	0	3	15:15	56	4	4	4	0	0	68
3:30	0	0	0	1	0	0	1	15:30	33	3	2	4	0	0	42
3:45	0	0	1	1	0	0	2	15:45	56	3	6	1	0	0	66
4:00	0	1	0	2	0	0	3	16:00	46	3	1	2	0	1	53
4:15	0	1	0	3	0	0	4	16:15	55	4	1	2	0	0	62
4:30	2	1	0	0	0	0	3	16:30	51	3	5	2	0	0	61
4:45	4	0	0	3	0	0	7	16:45	44	2	0	4	0	0	50
5:00	0	1	0	1	0	0	2	17:00	37	2	2	3	0	0	44
5:15	1	0	1	3	0	0	5	17:15	40	2	1	2	0	0	45
5:30	1	0	2	5	0	0	8	17:30	37	4	2	0	0	0	43
5:45	3	0	2	3	0	0	8	17:45	41	0	0	1	0	0	42
6:00	3	2	2	7	0	0	14	18:00	41	2	2	0	0	0	45
6:15	3	1	0	6	0	0	10	18:15	32	1	1	1	0	0	35
6:30	5	6	1	4	0	0	16	18:30	17	0	0	0	0	0	17
6:45	5	1	0	7	0	0	13	18:45	17	0	0	1	0	0	18
7:00	9	2	0	4	0	0	15	19:00	17	1	2	4	0	0	24
7:15	11	3	2	8	0	0	24	19:15	14	1	0	1	0	0	16
7:30	12	0	1	8	0	0	21	19:30	9	0	0	2	0	0	11
7:45	21	1	0	7	0	0	29	19:45	7	2	0	0	0	0	9
8:00	13	5	1	10	0	1	30	20:00	6	1	2	0	0	0	9
8:15	15	3	1	9	0	0	28	20:15	5	0	1	3	0	0	9
8:30	10	3	1	3	0	0	17	20:30	3	2	0	1	0	0	6
8:45	3	0	5	1	0	0	9	20:45	6	1	0	0	0	0	7
9:00	9	0	1	5	0	0	15	21:00	5	0	1	2	0	0	8
9:15	8	0	2	6	0	0	16	21:15	4	0	0	3	0	0	7
9:30	5	2	2	5	0	0	14	21:30	2	0	0	3	0	0	5
9:45	11	2	1	1	0	0	15	21:45	4	0	0	1	0	0	5
10:00	8	0	2	4	0	0	14	22:00	7	0	2	0	0	0	9
10:15	4	2	2	3	0	0	11	22:15	3	0	1	1	0	0	5
10:30	9	3	2	4	0	1	19	22:30	2	0	0	1	0	0	3
10:45	9	3	2	7	0	0	21	22:45	1	0	0	3	0	0	4
11:00	7	2	4	5	0	0	18	23:00	2	0	1	2	0	0	5
11:15	11	2	1	4	0	0	18	23:15	2	0	0	1	0	0	3
11:30	9	0	2	2	0	0	13	23:30	2	0	0	1	0	0	3
11:45	12	2	0	4	0	0	18	23:45	1	0	0	2	0	0	3
TOTAL	229	51	42	158	0	2	482	TOTAL	943	63	82	108	0	1	1,197

AM PEAK HOUR	7:30 AM
AM PEAK VOLUME	108

AM PEAK HOUR	3:45 PM
AM PEAK VOLUME	242

PM Peak Hour - Eastbound

Start Time	Total Volume	Passenger Ca	Trucks	MedTrk
3:45 PM	242	208	34	13

CLASS 1	PASSENGER VEHICLES	TOTAL: AM+PM	1,172	114	124	266	0	3	1,679
CLASS 2	2-AXLE TRUCKS	% OF TOTAL	69.8%	6.8%	7.4%	15.8%	0.0%	0.2%	100.0%
CLASS 3	3-AXLE TRUCKS								
CLASS 4	4 OR MORE AXLE TRUCKS								
CLASS 5	RV	TOTAL: ALL	2,478	200	238	465	0	5	3,386
CLASS 6	Buses	% OF TOTAL	73.2%	5.9%	7.0%	13.7%	0.0%	0.1%	100.0%

A102423

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, October 10, 2023
JOB #: SC4225

CITY: Ontario
LOCATION: CLASS11 Chino Ave west of Vyneyard Ave

AM TIME	WB 1	2	3	4	5	6	TOTAL	PM Time	WB 1	2	3	4	5	6	TOTAL
0:00	2	0	0	2	0	0	4	12:00	18	2	0	1	0	0	21
0:15	2	0	0	0	0	0	2	12:15	12	1	6	3	0	0	22
0:30	2	0	0	1	0	0	3	12:30	16	2	3	5	0	0	26
0:45	0	0	0	0	0	0	0	12:45	16	3	6	4	0	0	29
1:00	1	0	1	1	0	0	3	13:00	10	0	3	1	0	0	14
1:15	2	0	0	0	0	0	2	13:15	14	1	3	4	0	0	22
1:30	1	0	0	0	0	0	1	13:30	9	0	3	2	0	0	14
1:45	1	0	0	0	0	0	1	13:45	17	4	3	6	0	0	30
2:00	1	0	0	0	0	0	1	14:00	11	1	3	4	0	0	19
2:15	1	0	0	0	0	0	1	14:15	11	0	0	1	0	0	12
2:30	1	0	0	1	0	0	2	14:30	20	4	4	0	0	0	28
2:45	1	0	0	2	0	0	3	14:45	13	0	3	11	0	0	27
3:00	0	0	0	0	0	0	0	15:00	16	0	2	4	0	0	22
3:15	0	0	0	2	0	0	2	15:15	15	1	0	5	0	0	21
3:30	1	1	0	1	0	0	3	15:30	19	5	3	3	0	0	30
3:45	3	0	0	1	0	0	4	15:45	14	2	2	1	0	0	19
4:00	3	0	0	0	0	0	3	16:00	22	1	1	2	0	1	27
4:15	3	1	0	2	0	0	6	16:15	22	1	1	2	0	0	26
4:30	3	0	1	1	0	0	5	16:30	16	2	0	1	0	0	19
4:45	4	2	0	0	0	0	6	16:45	10	0	2	1	0	0	13
5:00	5	0	0	3	0	0	8	17:00	21	2	0	1	0	0	24
5:15	13	1	0	0	0	0	14	17:15	11	1	1	2	0	0	15
5:30	11	0	0	2	0	0	13	17:30	9	0	0	2	0	0	11
5:45	20	2	1	2	0	0	25	17:45	10	1	3	0	0	0	14
6:00	32	0	1	2	0	0	35	18:00	9	1	0	2	0	0	12
6:15	33	1	7	1	0	0	42	18:15	8	1	0	1	0	0	10
6:30	47	3	3	1	0	0	54	18:30	13	1	1	4	0	0	19
6:45	47	0	4	0	0	0	51	18:45	11	0	1	0	0	0	12
7:00	45	4	1	1	0	0	51	19:00	10	0	1	0	0	0	11
7:15	48	1	4	4	0	0	57	19:15	10	1	0	1	0	0	12
7:30	59	2	2	3	0	0	66	19:30	5	0	0	0	0	0	5
7:45	62	4	1	4	0	0	71	19:45	8	0	1	3	0	0	12
8:00	58	0	3	2	0	1	64	20:00	7	0	0	1	0	0	8
8:15	39	4	1	3	0	0	47	20:15	3	1	1	3	0	0	8
8:30	25	2	0	3	0	0	30	20:30	3	0	0	1	0	0	4
8:45	42	1	3	2	0	0	48	20:45	3	0	0	5	0	0	8
9:00	20	1	5	4	0	0	30	21:00	3	0	0	2	0	0	5
9:15	15	2	3	6	0	0	26	21:15	4	0	0	1	0	0	5
9:30	25	3	1	5	0	0	34	21:30	0	0	0	2	0	0	2
9:45	22	1	0	4	0	0	27	21:45	6	0	1	4	0	0	11
10:00	23	2	1	6	0	0	32	22:00	1	0	1	0	0	0	2
10:15	23	2	0	3	0	0	28	22:15	2	0	1	2	0	0	5
10:30	17	2	3	3	0	0	25	22:30	3	0	0	1	0	0	4
10:45	22	1	1	6	0	0	30	22:45	1	0	0	2	0	0	3
11:00	14	1	4	0	0	0	19	23:00	0	0	0	1	0	0	1
11:15	19	0	1	2	0	0	22	23:15	2	0	0	1	0	0	3
11:30	15	1	1	6	0	0	23	23:30	2	0	0	0	0	0	2
11:45	6	2	1	2	0	0	11	23:45	1	0	0	2	0	0	3
TOTAL	839	47	54	94	0	1	1,035	TOTAL	467	39	60	105	0	1	672

AM PEAK HOUR	7:15 AM
AM PEAK VOLUME	258

AM PEAK HOUR	3:30 PM
AM PEAK VOLUME	102

PM Peak Hour - Westbound

Start Time	Total Volume	Passenger Cars	Trucks	MedTrk
3:45 PM	91	74	17	6

TOTAL: AM+PM	1,306	86	114	199	0	2	1,707
% OF TOTAL	76.5%	5.0%	6.7%	11.7%	0.0%	0.1%	100.0%

CLASS 1	PASSENGER VEHICLES
CLASS 2	2-AXLE TRUCKS
CLASS 3	3-AXLE TRUCKS
CLASS 4	4 OR MORE AXLE TRUCKS
CLASS 5	RV
CLASS 6	BUS

A102423

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, October 10, 2023 **CITY:** Ontario

JOB #: SC4225 **LOCATION:** CLASS11 Chino Ave west of Vyneyard Ave

AM TIME	COMBINED 1	2	3	4	5	6	TOTAL	PM Time	COMBINED 1	2	3	4	5	6	TOTAL
0:00	3	0	0	3	0	0	6	12:00	36	3	4	4	0	0	47
0:15	2	0	0	0	0	0	2	12:15	25	1	10	7	0	0	43
0:30	2	0	0	2	0	0	4	12:30	27	7	9	10	0	0	53
0:45	1	0	0	2	0	0	3	12:45	31	3	9	7	0	0	50
1:00	1	0	1	2	0	0	4	13:00	17	2	3	7	0	0	29
1:15	4	0	0	0	0	0	4	13:15	29	1	7	10	0	0	47
1:30	1	0	0	0	0	0	1	13:30	21	3	5	4	0	0	33
1:45	2	0	0	0	0	0	2	13:45	30	6	10	7	0	0	53
2:00	1	0	0	2	0	0	3	14:00	27	4	5	8	0	0	44
2:15	1	0	0	1	0	0	2	14:15	35	2	5	9	0	0	51
2:30	1	0	1	1	0	0	3	14:30	42	4	6	2	0	0	54
2:45	1	1	0	2	0	0	4	14:45	43	2	5	14	0	0	64
3:00	0	1	0	2	0	0	3	15:00	58	2	6	7	0	0	73
3:15	1	0	0	4	0	0	5	15:15	71	5	4	9	0	0	89
3:30	1	1	0	2	0	0	4	15:30	52	8	5	7	0	0	72
3:45	3	0	1	2	0	0	6	15:45	70	5	8	2	0	0	85
4:00	3	1	0	2	0	0	6	16:00	68	4	2	4	0	2	80
4:15	3	2	0	5	0	0	10	16:15	77	5	2	4	0	0	88
4:30	5	1	1	1	0	0	8	16:30	67	5	5	3	0	0	80
4:45	8	2	0	3	0	0	13	16:45	54	2	2	5	0	0	63
5:00	5	1	0	4	0	0	10	17:00	58	4	2	4	0	0	68
5:15	14	1	1	3	0	0	19	17:15	51	3	2	4	0	0	60
5:30	12	0	2	7	0	0	21	17:30	46	4	2	2	0	0	54
5:45	23	2	3	5	0	0	33	17:45	51	1	3	1	0	0	56
6:00	35	2	3	9	0	0	49	18:00	50	3	2	2	0	0	57
6:15	36	2	7	7	0	0	52	18:15	40	2	1	2	0	0	45
6:30	52	9	4	5	0	0	70	18:30	30	1	1	4	0	0	36
6:45	52	1	4	7	0	0	64	18:45	28	0	1	1	0	0	30
7:00	54	6	1	5	0	0	66	19:00	27	1	3	4	0	0	35
7:15	59	4	6	12	0	0	81	19:15	24	2	0	2	0	0	28
7:30	71	2	3	11	0	0	87	19:30	14	0	0	2	0	0	16
7:45	83	5	1	11	0	0	100	19:45	15	2	1	3	0	0	21
8:00	71	5	4	12	0	2	94	20:00	13	1	2	1	0	0	17
8:15	54	7	2	12	0	0	75	20:15	8	1	2	6	0	0	17
8:30	35	5	1	6	0	0	47	20:30	6	2	0	2	0	0	10
8:45	45	1	8	3	0	0	57	20:45	9	1	0	5	0	0	15
9:00	29	1	6	9	0	0	45	21:00	8	0	1	4	0	0	13
9:15	23	2	5	12	0	0	42	21:15	8	0	0	4	0	0	12
9:30	30	5	3	10	0	0	48	21:30	2	0	0	5	0	0	7
9:45	33	3	1	5	0	0	42	21:45	10	0	1	5	0	0	16
10:00	31	2	3	10	0	0	46	22:00	8	0	3	0	0	0	11
10:15	27	4	2	6	0	0	39	22:15	5	0	2	3	0	0	10
10:30	26	5	5	7	0	1	44	22:30	5	0	0	2	0	0	7
10:45	31	4	3	13	0	0	51	22:45	2	0	0	5	0	0	7
11:00	21	3	8	5	0	0	37	23:00	2	0	1	3	0	0	6
11:15	30	2	2	6	0	0	40	23:15	4	0	0	2	0	0	6
11:30	24	1	3	8	0	0	36	23:30	4	0	0	1	0	0	5
11:45	18	4	1	6	0	0	29	23:45	2	0	0	4	0	0	6
TOTAL	1,068	98	96	252	0	3	1,517	TOTAL	1,410	102	142	213	0	2	1,869

AM PEAK HOUR	7:15 AM
AM PEAK VOLUME	362

AM PEAK HOUR	3:45 PM
AM PEAK VOLUME	333

PH Start Time	
15:00	319
15:15	326
15:30	325
15:45	333
16:00	311
16:15	299
16:30	271
16:45	245
17:00	238
17:15	227
17:30	212
17:45	194
18:00	168
3:45 PM	333

CLASS 1	PASSENGER VEHICLES
CLASS 2	2-AXLE TRUCKS
CLASS 3	3-AXLE TRUCKS
CLASS 4	4 OR MORE AXLE TRUCKS
CLASS 5	RV
CLASS 6	Buses

TOTAL: AM+PM	2,478	200	238	465	0	5	3,386
% OF TOTAL	73.2%	5.9%	7.0%	13.7%	0.0%	0.1%	100.0%

A102423

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, October 10, 2023 **CITY:** Ontario

JOB #: SC4225 **LOCATION:** CLASS13 S Whispering Lakes Ln south of East Riverside Dr

AM TIME	NB 1	2	3	4	5	6	TOTAL	PM Time	NB 1	2	3	4	5	6	TOTAL
0:00	0	0	0	0	0	0	0	12:00	0	0	0	0	0	0	0
0:15	0	0	0	0	0	0	0	12:15	0	0	0	0	0	0	0
0:30	0	0	0	0	0	0	0	12:30	0	0	0	0	0	0	0
0:45	0	0	0	0	0	0	0	12:45	0	0	0	0	0	0	0
1:00	0	0	0	0	0	0	0	13:00	0	0	0	0	0	0	0
1:15	0	0	0	0	0	0	0	13:15	0	0	0	0	0	0	0
1:30	0	0	0	0	0	0	0	13:30	0	0	0	0	0	0	0
1:45	0	0	0	0	0	0	0	13:45	0	0	0	0	0	0	0
2:00	0	0	0	0	0	0	0	14:00	0	0	0	0	0	0	0
2:15	0	0	0	0	0	0	0	14:15	0	0	0	0	0	0	0
2:30	0	0	0	0	0	0	0	14:30	0	0	0	0	0	0	0
2:45	0	0	0	0	0	0	0	14:45	0	0	0	0	0	0	0
3:00	0	0	0	0	0	0	0	15:00	0	0	0	0	0	0	0
3:15	0	0	0	0	0	0	0	15:15	0	0	0	0	0	0	0
3:30	0	0	0	0	0	0	0	15:30	0	0	0	0	0	0	0
3:45	0	0	0	0	0	0	0	15:45	0	0	0	0	0	0	0
4:00	0	0	0	0	0	0	0	16:00	0	0	0	0	0	0	0
4:15	0	0	0	0	0	0	0	16:15	0	0	0	0	0	0	0
4:30	0	0	0	0	0	0	0	16:30	0	0	0	0	0	0	0
4:45	0	0	0	0	0	0	0	16:45	0	0	0	0	0	0	0
5:00	0	0	0	0	0	0	0	17:00	0	0	0	0	0	0	0
5:15	0	0	0	0	0	0	0	17:15	0	0	0	0	0	0	0
5:30	0	0	0	0	0	0	0	17:30	0	0	0	0	0	0	0
5:45	0	0	0	0	0	0	0	17:45	0	0	0	0	0	0	0
6:00	0	0	0	0	0	0	0	18:00	0	0	0	0	0	0	0
6:15	0	0	0	0	0	0	0	18:15	0	0	0	0	0	0	0
6:30	0	0	0	0	0	0	0	18:30	0	0	0	0	0	0	0
6:45	0	0	0	0	0	0	0	18:45	0	0	0	0	0	0	0
7:00	0	0	0	0	0	0	0	19:00	0	0	0	0	0	0	0
7:15	0	0	0	0	0	0	0	19:15	0	0	0	0	0	0	0
7:30	0	0	0	0	0	0	0	19:30	0	0	0	0	0	0	0
7:45	0	0	0	0	0	0	0	19:45	0	0	0	0	0	0	0
8:00	0	0	0	0	0	0	0	20:00	0	0	0	0	0	0	0
8:15	0	0	0	0	0	0	0	20:15	0	0	0	0	0	0	0
8:30	0	0	0	0	0	0	0	20:30	0	0	0	0	0	0	0
8:45	0	0	0	0	0	0	0	20:45	0	0	0	0	0	0	0
9:00	0	0	0	0	0	0	0	21:00	0	0	0	0	0	0	0
9:15	0	0	0	0	0	0	0	21:15	0	0	0	0	0	0	0
9:30	0	0	0	0	0	0	0	21:30	0	0	0	0	0	0	0
9:45	0	0	0	0	0	0	0	21:45	0	0	0	0	0	0	0
10:00	0	0	0	0	0	0	0	22:00	0	0	0	0	0	0	0
10:15	0	0	0	0	0	0	0	22:15	0	0	0	0	0	0	0
10:30	0	0	0	0	0	0	0	22:30	0	0	0	0	0	0	0
10:45	0	0	0	0	0	0	0	22:45	0	0	0	0	0	0	0
11:00	0	0	0	0	0	0	0	23:00	0	0	0	0	0	0	0
11:15	0	0	0	0	0	0	0	23:15	0	0	0	0	0	0	0
11:30	0	0	0	0	0	0	0	23:30	0	0	0	0	0	0	0
11:45	0	0	0	0	0	0	0	23:45	0	0	0	0	0	0	0
TOTAL	0	0	0	0	0	0	0	TOTAL	0	0	0	0	0	0	0

AM PEAK HOUR	11:45 AM	AM PEAK HOUR	11:45 PM
AM PEAK VOLUME	0	AM PEAK VOLUME	0

CLASS 1	PASSENGER VEHICLES	TOTAL: AM+PM	0	0	0	0	0	0	0
CLASS 2	2-AXLE TRUCKS	% OF TOTAL	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
CLASS 3	3-AXLE TRUCKS								
CLASS 4	4 OR MORE AXLE TRUCKS								
CLASS 5	RV	TOTAL: ALL	0	0	0	0	0	0	0
CLASS 6	Buses	% OF TOTAL	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!

A102423

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, October 10, 2023
JOB #: SC4225

CITY: Ontario
LOCATION: CLASS13 S Whispering Lakes Ln south of East Riverside Dr

AM TIME	SB 1	2	3	4	5	6	TOTAL	PM Time	SB 1	2	3	4	5	6	TOTAL
0:00	0	0	0	0	0	0	0	12:00	0	0	0	0	0	0	0
0:15	0	0	0	0	0	0	0	12:15	0	0	0	0	0	0	0
0:30	0	0	0	0	0	0	0	12:30	0	0	0	0	0	0	0
0:45	0	0	0	0	0	0	0	12:45	0	0	0	0	0	0	0
1:00	0	0	0	0	0	0	0	13:00	0	0	0	0	0	0	0
1:15	0	0	0	0	0	0	0	13:15	0	0	0	0	0	0	0
1:30	0	0	0	0	0	0	0	13:30	0	0	0	0	0	0	0
1:45	0	0	0	0	0	0	0	13:45	0	0	0	0	0	0	0
2:00	0	0	0	0	0	0	0	14:00	0	0	0	0	0	0	0
2:15	0	0	0	0	0	0	0	14:15	0	0	0	0	0	0	0
2:30	0	0	0	0	0	0	0	14:30	0	0	0	0	0	0	0
2:45	0	0	0	0	0	0	0	14:45	0	0	0	0	0	0	0
3:00	0	0	0	0	0	0	0	15:00	0	0	0	0	0	0	0
3:15	0	0	0	0	0	0	0	15:15	0	0	0	0	0	0	0
3:30	0	0	0	0	0	0	0	15:30	0	0	0	0	0	0	0
3:45	0	0	0	0	0	0	0	15:45	0	0	0	0	0	0	0
4:00	0	0	0	0	0	0	0	16:00	0	0	0	0	0	0	0
4:15	0	0	0	0	0	0	0	16:15	0	0	0	0	0	0	0
4:30	0	0	0	0	0	0	0	16:30	0	0	0	0	0	0	0
4:45	0	0	0	0	0	0	0	16:45	0	0	0	0	0	0	0
5:00	0	0	0	0	0	0	0	17:00	0	0	0	0	0	0	0
5:15	0	0	0	0	0	0	0	17:15	0	0	0	0	0	0	0
5:30	0	0	0	0	0	0	0	17:30	0	0	0	0	0	0	0
5:45	0	0	0	0	0	0	0	17:45	0	0	0	0	0	0	0
6:00	0	0	0	0	0	0	0	18:00	0	0	0	0	0	0	0
6:15	0	0	0	0	0	0	0	18:15	0	0	0	0	0	0	0
6:30	0	0	0	0	0	0	0	18:30	0	0	0	0	0	0	0
6:45	0	0	0	0	0	0	0	18:45	0	0	0	0	0	0	0
7:00	0	0	0	0	0	0	0	19:00	0	0	0	0	0	0	0
7:15	0	0	0	0	0	0	0	19:15	0	0	0	0	0	0	0
7:30	0	0	0	0	0	0	0	19:30	0	0	0	0	0	0	0
7:45	0	0	0	0	0	0	0	19:45	0	0	0	0	0	0	0
8:00	0	0	0	0	0	0	0	20:00	0	0	0	0	0	0	0
8:15	0	0	0	0	0	0	0	20:15	0	0	0	0	0	0	0
8:30	0	0	0	0	0	0	0	20:30	0	0	0	0	0	0	0
8:45	0	0	0	0	0	0	0	20:45	0	0	0	0	0	0	0
9:00	0	0	0	0	0	0	0	21:00	0	0	0	0	0	0	0
9:15	0	0	0	0	0	0	0	21:15	0	0	0	0	0	0	0
9:30	0	0	0	0	0	0	0	21:30	0	0	0	0	0	0	0
9:45	0	0	0	0	0	0	0	21:45	0	0	0	0	0	0	0
10:00	0	0	0	0	0	0	0	22:00	0	0	0	0	0	0	0
10:15	0	0	0	0	0	0	0	22:15	0	0	0	0	0	0	0
10:30	0	0	0	0	0	0	0	22:30	0	0	0	0	0	0	0
10:45	0	0	0	0	0	0	0	22:45	0	0	0	0	0	0	0
11:00	0	0	0	0	0	0	0	23:00	0	0	0	0	0	0	0
11:15	0	0	0	0	0	0	0	23:15	0	0	0	0	0	0	0
11:30	0	0	0	0	0	0	0	23:30	0	0	0	0	0	0	0
11:45	0	0	0	0	0	0	0	23:45	0	0	0	0	0	0	0
TOTAL	0	0	0	0	0	0	0	TOTAL	0	0	0	0	0	0	0

AM PEAK HOUR	11:45 AM
AM PEAK VOLUME	0

AM PEAK HOUR	11:45 PM
AM PEAK VOLUME	0

CLASS 1	PASSENGER VEHICLES
CLASS 2	2-AXLE TRUCKS
CLASS 3	3-AXLE TRUCKS
CLASS 4	4 OR MORE AXLE TRUCKS
CLASS 5	RV
CLASS 6	BUS

TOTAL: AM+PM	0	0	0	0	0	0	0
% OF TOTAL	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!

A102423

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, October 10, 2023 **CITY:** Ontario

JOB #: SC4225 **LOCATION:** CLASS13 S Whispering Lakes Ln south of East Riverside Dr

AM TIME	COMBINED 1	2	3	4	5	6	TOTAL	PM Time	COMBINED 1	2	3	4	5	6	TOTAL
0:00	0	0	0	0	0	0	0	12:00	0	0	0	0	0	0	0
0:15	0	0	0	0	0	0	0	12:15	0	0	0	0	0	0	0
0:30	0	0	0	0	0	0	0	12:30	0	0	0	0	0	0	0
0:45	0	0	0	0	0	0	0	12:45	0	0	0	0	0	0	0
1:00	0	0	0	0	0	0	0	13:00	0	0	0	0	0	0	0
1:15	0	0	0	0	0	0	0	13:15	0	0	0	0	0	0	0
1:30	0	0	0	0	0	0	0	13:30	0	0	0	0	0	0	0
1:45	0	0	0	0	0	0	0	13:45	0	0	0	0	0	0	0
2:00	0	0	0	0	0	0	0	14:00	0	0	0	0	0	0	0
2:15	0	0	0	0	0	0	0	14:15	0	0	0	0	0	0	0
2:30	0	0	0	0	0	0	0	14:30	0	0	0	0	0	0	0
2:45	0	0	0	0	0	0	0	14:45	0	0	0	0	0	0	0
3:00	0	0	0	0	0	0	0	15:00	0	0	0	0	0	0	0
3:15	0	0	0	0	0	0	0	15:15	0	0	0	0	0	0	0
3:30	0	0	0	0	0	0	0	15:30	0	0	0	0	0	0	0
3:45	0	0	0	0	0	0	0	15:45	0	0	0	0	0	0	0
4:00	0	0	0	0	0	0	0	16:00	0	0	0	0	0	0	0
4:15	0	0	0	0	0	0	0	16:15	0	0	0	0	0	0	0
4:30	0	0	0	0	0	0	0	16:30	0	0	0	0	0	0	0
4:45	0	0	0	0	0	0	0	16:45	0	0	0	0	0	0	0
5:00	0	0	0	0	0	0	0	17:00	0	0	0	0	0	0	0
5:15	0	0	0	0	0	0	0	17:15	0	0	0	0	0	0	0
5:30	0	0	0	0	0	0	0	17:30	0	0	0	0	0	0	0
5:45	0	0	0	0	0	0	0	17:45	0	0	0	0	0	0	0
6:00	0	0	0	0	0	0	0	18:00	0	0	0	0	0	0	0
6:15	0	0	0	0	0	0	0	18:15	0	0	0	0	0	0	0
6:30	0	0	0	0	0	0	0	18:30	0	0	0	0	0	0	0
6:45	0	0	0	0	0	0	0	18:45	0	0	0	0	0	0	0
7:00	0	0	0	0	0	0	0	19:00	0	0	0	0	0	0	0
7:15	0	0	0	0	0	0	0	19:15	0	0	0	0	0	0	0
7:30	0	0	0	0	0	0	0	19:30	0	0	0	0	0	0	0
7:45	0	0	0	0	0	0	0	19:45	0	0	0	0	0	0	0
8:00	0	0	0	0	0	0	0	20:00	0	0	0	0	0	0	0
8:15	0	0	0	0	0	0	0	20:15	0	0	0	0	0	0	0
8:30	0	0	0	0	0	0	0	20:30	0	0	0	0	0	0	0
8:45	0	0	0	0	0	0	0	20:45	0	0	0	0	0	0	0
9:00	0	0	0	0	0	0	0	21:00	0	0	0	0	0	0	0
9:15	0	0	0	0	0	0	0	21:15	0	0	0	0	0	0	0
9:30	0	0	0	0	0	0	0	21:30	0	0	0	0	0	0	0
9:45	0	0	0	0	0	0	0	21:45	0	0	0	0	0	0	0
10:00	0	0	0	0	0	0	0	22:00	0	0	0	0	0	0	0
10:15	0	0	0	0	0	0	0	22:15	0	0	0	0	0	0	0
10:30	0	0	0	0	0	0	0	22:30	0	0	0	0	0	0	0
10:45	0	0	0	0	0	0	0	22:45	0	0	0	0	0	0	0
11:00	0	0	0	0	0	0	0	23:00	0	0	0	0	0	0	0
11:15	0	0	0	0	0	0	0	23:15	0	0	0	0	0	0	0
11:30	0	0	0	0	0	0	0	23:30	0	0	0	0	0	0	0
11:45	0	0	0	0	0	0	0	23:45	0	0	0	0	0	0	0
TOTAL	0	0	0	0	0	0	0	TOTAL	0	0	0	0	0	0	0

AM PEAK HOUR	11:45 AM
AM PEAK VOLUME	0

AM PEAK HOUR	11:45 PM
AM PEAK VOLUME	0

PH Start Time	
15:00	0
15:15	0
15:30	0
15:45	0
16:00	0
16:15	0
16:30	0
16:45	0
17:00	0
17:15	0
17:30	0
17:45	0
18:00	0
3:45 PM	0

TOTAL: AM+PM	0	0	0	0	0	0	0
% OF TOTAL	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!

CLASS 1	PASSENGER VEHICLES
CLASS 2	2-AXLE TRUCKS
CLASS 3	3-AXLE TRUCKS
CLASS 4	4 OR MORE AXLE TRUCKS
CLASS 5	RV
CLASS 6	Buses

A102423

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, October 10, 2023 **CITY:** Ontario

JOB #: SC4225 **LOCATION:** CLASS9 East Riverside Dr east of S Archibald Ave

AM TIME	EB 1	2	3	4	5	6	TOTAL	PM Time	EB 1	2	3	4	5	6	TOTAL
0:00	16	1	0	0	0	0	17	12:00	100	4	1	3	0	0	108
0:15	13	2	0	0	0	0	15	12:15	130	8	1	2	0	0	141
0:30	6	0	0	0	0	0	6	12:30	123	3	2	0	0	0	128
0:45	5	0	0	0	0	0	5	12:45	144	4	2	2	0	0	152
1:00	12	1	0	0	0	0	13	13:00	112	2	1	1	0	1	117
1:15	11	0	0	0	0	0	11	13:15	113	8	1	3	0	0	125
1:30	9	0	1	0	0	0	10	13:30	123	8	0	0	0	0	131
1:45	8	0	0	0	0	0	8	13:45	150	9	1	0	0	1	161
2:00	2	1	0	0	0	0	3	14:00	152	9	0	2	0	1	164
2:15	3	0	0	0	0	0	3	14:15	170	10	0	3	0	3	186
2:30	10	0	0	0	0	0	10	14:30	134	8	2	1	0	0	145
2:45	6	0	0	2	0	0	8	14:45	204	6	2	3	0	1	216
3:00	11	0	0	0	0	0	11	15:00	217	3	1	0	0	3	224
3:15	9	0	0	1	0	0	10	15:15	200	6	1	1	0	1	209
3:30	9	0	0	0	0	0	9	15:30	214	9	2	3	0	0	228
3:45	12	2	0	2	0	0	16	15:45	216	4	0	1	0	0	221
4:00	10	0	0	0	0	0	10	16:00	220	11	1	2	0	0	234
4:15	12	0	0	0	0	0	12	16:15	205	13	1	2	0	1	222
4:30	13	2	0	0	0	0	15	16:30	199	8	1	2	0	0	210
4:45	28	1	0	0	0	0	29	16:45	219	7	0	4	0	1	231
5:00	20	1	0	0	0	0	21	17:00	202	6	0	1	0	0	209
5:15	14	0	0	0	0	0	14	17:15	220	2	0	1	1	0	224
5:30	23	1	0	0	0	0	24	17:30	213	5	0	2	0	0	220
5:45	30	0	0	1	0	0	31	17:45	177	3	0	1	0	0	181
6:00	32	3	0	1	0	0	36	18:00	220	5	2	2	0	0	229
6:15	30	2	0	0	0	0	32	18:15	204	0	0	1	0	0	205
6:30	48	3	2	0	0	0	53	18:30	212	4	0	2	0	0	218
6:45	57	6	0	1	0	0	64	18:45	185	2	0	0	0	0	187
7:00	70	5	1	3	0	0	79	19:00	163	2	0	3	0	0	168
7:15	65	7	2	1	0	2	77	19:15	152	3	0	0	0	0	155
7:30	104	9	1	0	0	3	117	19:30	147	0	0	0	0	0	147
7:45	156	3	0	2	0	0	161	19:45	110	0	0	0	0	0	110
8:00	147	2	0	2	0	2	153	20:00	87	1	1	0	0	0	89
8:15	129	4	1	1	0	3	138	20:15	101	1	0	0	0	0	102
8:30	71	5	0	1	0	0	77	20:30	97	1	0	0	0	0	98
8:45	93	5	0	2	0	1	101	20:45	106	1	0	1	0	0	108
9:00	79	1	1	0	0	2	83	21:00	107	3	0	2	0	0	112
9:15	76	5	1	1	0	0	83	21:15	108	2	0	0	0	0	110
9:30	81	8	1	1	0	0	91	21:30	101	2	0	2	0	0	105
9:45	65	7	1	1	0	0	74	21:45	51	0	0	0	0	0	51
10:00	65	7	1	1	0	0	74	22:00	91	1	0	1	0	0	93
10:15	93	7	2	1	0	0	103	22:15	48	0	0	0	0	0	48
10:30	85	9	0	0	0	1	95	22:30	50	1	0	0	0	0	51
10:45	83	7	0	0	0	0	90	22:45	43	2	1	0	0	0	46
11:00	123	10	3	1	0	1	138	23:00	47	0	0	1	0	0	48
11:15	112	4	2	5	0	0	123	23:15	40	1	0	0	0	0	41
11:30	88	10	0	2	0	0	100	23:30	26	0	0	0	0	0	26
11:45	112	7	0	2	0	0	121	23:45	26	0	0	0	0	0	26
TOTAL	2,356	148	20	35	0	15	2,574	TOTAL	6,679	188	24	55	1	13	6,960

AM PEAK HOUR	7:30 AM
AM PEAK VOLUME	569

AM PEAK HOUR	3:30 PM
AM PEAK VOLUME	905

PM Peak Hour - Eastbound

Start Time	Total Volume	Passenger Ca	Trucks	Medtruk
3:30 PM	905	855	50	37

CLASS 1	PASSENGER VEHICLES	TOTAL: AM+PM	9,035	336	44	90	1	28	9,534
CLASS 2	2-AXLE TRUCKS	% OF TOTAL	94.8%	3.5%	0.5%	0.9%	0.0%	0.3%	100.0%
CLASS 3	3-AXLE TRUCKS								
CLASS 4	4 OR MORE AXLE TRUCKS								
CLASS 5	RV	TOTAL: ALL	18,682	726	125	183	3	45	19,764
CLASS 6	Buses	% OF TOTAL	94.5%	3.7%	0.6%	0.9%	0.0%	0.2%	100.0%

A102423

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, October 10, 2023
JOB #: SC4225

CITY: Ontario
LOCATION: CLASS9 East Riverside Dr east of S Archibald Ave

AM TIME	WB 1	2	3	4	5	6	TOTAL
0:00	15	0	2	1	0	0	18
0:15	17	0	1	0	0	0	18
0:30	11	1	0	1	0	0	13
0:45	15	1	0	0	0	0	16
1:00	8	1	0	0	0	0	9
1:15	8	0	0	0	0	0	8
1:30	10	0	0	0	0	0	10
1:45	5	0	1	1	0	0	7
2:00	11	0	0	0	0	0	11
2:15	12	0	0	0	0	0	12
2:30	17	0	0	0	0	0	17
2:45	15	0	0	0	0	0	15
3:00	12	0	0	0	0	0	12
3:15	11	2	0	1	0	0	14
3:30	17	0	0	1	0	0	18
3:45	16	0	0	0	0	0	16
4:00	28	1	0	0	0	0	29
4:15	19	1	0	1	0	0	21
4:30	44	3	0	0	0	0	47
4:45	59	2	1	1	0	0	63
5:00	51	3	0	0	0	0	54
5:15	72	1	0	2	0	0	75
5:30	100	9	1	0	0	0	110
5:45	113	3	1	0	0	0	117
6:00	119	10	1	1	0	0	131
6:15	125	5	0	1	0	0	131
6:30	172	11	3	3	0	0	189
6:45	199	7	2	1	2	0	211
7:00	181	10	3	1	0	1	196
7:15	209	10	3	2	0	0	224
7:30	210	12	2	2	0	2	228
7:45	246	10	2	0	0	0	258
8:00	212	13	3	3	0	1	232
8:15	189	4	0	1	0	1	195
8:30	207	10	0	3	0	1	221
8:45	161	10	1	3	0	0	175
9:00	148	9	3	1	0	1	162
9:15	142	10	4	1	0	1	158
9:30	138	13	1	1	0	1	154
9:45	110	9	1	3	0	0	123
10:00	122	9	1	2	0	0	134
10:15	92	7	2	4	0	0	105
10:30	121	10	1	2	0	0	134
10:45	116	5	5	2	0	1	129
11:00	121	3	0	1	0	0	125
11:15	99	4	2	1	0	0	106
11:30	127	2	1	1	0	0	131
11:45	106	8	1	1	0	0	116
TOTAL	4,358	229	49	50	2	10	4,698

AM PEAK HOUR	7:15 AM
AM PEAK VOLUME	942

PM Time	WB 1	2	3	4	5	6	TOTAL
12:00	127	5	1	3	0	0	136
12:15	99	10	5	3	0	0	117
12:30	124	10	2	1	0	0	137
12:45	126	5	2	2	0	0	135
13:00	123	3	2	0	0	1	129
13:15	116	4	2	2	0	0	124
13:30	119	2	0	2	0	0	123
13:45	138	7	0	0	0	0	145
14:00	111	3	0	1	0	0	115
14:15	120	8	1	3	0	1	133
14:30	132	10	0	0	0	2	144
14:45	202	5	2	2	0	0	211
15:00	132	5	1	1	0	0	139
15:15	132	2	0	0	0	2	136
15:30	194	5	0	1	0	0	200
15:45	185	5	1	1	0	1	193
16:00	169	8	1	0	0	0	178
16:15	152	6	0	2	0	0	160
16:30	131	5	0	0	0	0	136
16:45	203	5	0	1	0	0	209
17:00	152	4	0	0	0	0	156
17:15	177	3	4	1	0	0	185
17:30	168	3	0	2	0	0	173
17:45	168	3	1	1	0	0	173
18:00	169	2	0	1	0	0	172
18:15	130	2	1	1	0	0	134
18:30	141	4	0	0	0	0	145
18:45	175	3	0	0	0	0	178
19:00	117	3	0	1	0	0	121
19:15	114	4	0	0	0	0	118
19:30	104	3	1	0	0	0	108
19:45	66	1	1	0	0	0	68
20:00	82	0	0	0	0	0	82
20:15	80	0	0	0	0	0	80
20:30	73	1	0	1	0	0	75
20:45	71	2	0	3	0	0	76
21:00	81	1	0	1	0	0	83
21:15	48	0	1	0	0	0	49
21:30	64	1	0	0	0	0	65
21:45	51	0	0	0	0	0	51
22:00	38	1	3	1	0	0	43
22:15	26	0	0	0	0	0	26
22:30	36	0	0	0	0	0	36
22:45	39	3	0	1	0	0	43
23:00	32	0	0	1	0	0	33
23:15	21	2	0	1	0	0	24
23:30	15	2	0	1	0	0	18
23:45	16	0	0	1	0	0	17
TOTAL	5,289	161	32	43	0	7	5,532

AM PEAK HOUR	3:30 PM
AM PEAK VOLUME	731

PM Peak Hour - Westbound

Start Time	Total Volume	Passenger C	Trucks	MdTrk
3:30 PM	731	700	31	24

CLASS 1	PASSENGER VEHICLES	TOTAL: AM+PM	9,647	390	81	93	2	17	10,230
CLASS 2	2-AXLE TRUCKS	% OF TOTAL	94.3%	3.8%	0.8%	0.9%	0.0%	0.2%	100.0%
CLASS 3	3-AXLE TRUCKS								
CLASS 4	4 OR MORE AXLE TRUCKS								
CLASS 5	RV								
CLASS 6	BUS								

A102423

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, October 10, 2023 **CITY:** Ontario

JOB #: SC4225 **LOCATION:** CLASS9 East Riverside Dr east of S Archibald Ave

AM TIME	COMBINED 1	2	3	4	5	6	TOTAL	PM Time	COMBINED 1	2	3	4	5	6	TOTAL
0:00	31	1	2	1	0	0	35	**12:00**	227	9	2	6	0	0	244
0:15	30	2	1	0	0	0	33	**12:15**	229	18	6	5	0	0	258
0:30	17	1	0	1	0	0	19	**12:30**	247	13	4	1	0	0	265
0:45	20	1	0	0	0	0	21	**12:45**	270	9	4	4	0	0	287
1:00	20	2	0	0	0	0	22	**13:00**	235	5	3	1	0	2	246
1:15	19	0	0	0	0	0	19	**13:15**	229	12	3	5	0	0	249
1:30	19	0	1	0	0	0	20	**13:30**	242	10	0	2	0	0	254
1:45	13	0	1	1	0	0	15	**13:45**	288	16	1	0	0	1	306
2:00	13	1	0	0	0	0	14	**14:00**	263	12	0	3	0	1	279
2:15	15	0	0	0	0	0	15	**14:15**	290	18	1	6	0	4	319
2:30	27	0	0	0	0	0	27	**14:30**	266	18	2	1	0	2	289
2:45	21	0	0	2	0	0	23	**14:45**	406	11	4	5	0	1	427
3:00	23	0	0	0	0	0	23	**15:00**	349	8	2	1	0	3	363
3:15	20	2	0	2	0	0	24	**15:15**	332	8	1	1	0	3	345
3:30	26	0	0	1	0	0	27	**15:30**	408	14	2	4	0	0	428
3:45	28	2	0	2	0	0	32	**15:45**	401	9	1	2	0	1	414
4:00	38	1	0	0	0	0	39	**16:00**	389	19	2	2	0	0	412
4:15	31	1	0	1	0	0	33	**16:15**	357	19	1	4	0	1	382
4:30	57	5	0	0	0	0	62	**16:30**	330	13	1	2	0	0	346
4:45	87	3	1	1	0	0	92	**16:45**	422	12	0	5	0	1	440
5:00	71	4	0	0	0	0	75	**17:00**	354	10	0	1	0	0	365
5:15	86	1	0	2	0	0	89	**17:15**	397	5	4	2	1	0	409
5:30	123	10	1	0	0	0	134	**17:30**	381	8	0	4	0	0	393
5:45	143	3	1	1	0	0	148	**17:45**	345	6	1	2	0	0	354
6:00	151	13	1	2	0	0	167	**18:00**	389	7	2	3	0	0	401
6:15	155	7	0	1	0	0	163	**18:15**	334	2	1	2	0	0	339
6:30	220	14	5	3	0	0	242	**18:30**	353	8	0	2	0	0	363
6:45	256	13	2	2	2	0	275	**18:45**	360	5	0	0	0	0	365
7:00	251	15	4	4	0	1	275	**19:00**	280	5	0	4	0	0	289
7:15	274	17	5	3	0	2	301	**19:15**	266	7	0	0	0	0	273
7:30	314	21	3	2	0	5	345	**19:30**	251	3	1	0	0	0	255
7:45	402	13	2	2	0	0	419	**19:45**	176	1	1	0	0	0	178
8:00	359	15	3	5	0	3	385	**20:00**	169	1	1	0	0	0	171
8:15	318	8	1	2	0	4	333	**20:15**	181	1	0	0	0	0	182
8:30	278	15	0	4	0	1	298	**20:30**	170	2	0	1	0	0	173
8:45	254	15	1	5	0	1	276	**20:45**	177	3	0	4	0	0	184
9:00	227	10	4	1	0	3	245	**21:00**	188	4	0	3	0	0	195
9:15	218	15	5	2	0	1	241	**21:15**	156	2	1	0	0	0	159
9:30	219	21	2	2	0	1	245	**21:30**	165	3	0	2	0	0	170
9:45	175	16	2	4	0	0	197	**21:45**	102	0	0	0	0	0	102
10:00	187	16	2	3	0	0	208	**22:00**	129	2	3	2	0	0	136
10:15	185	14	4	5	0	0	208	**22:15**	74	0	0	0	0	0	74
10:30	206	19	1	2	0	1	229	**22:30**	86	1	0	0	0	0	87
10:45	199	12	5	2	0	1	219	**22:45**	82	5	1	1	0	0	89
11:00	244	13	3	2	0	1	263	**23:00**	79	0	0	2	0	0	81
11:15	211	8	4	6	0	0	229	**23:15**	61	3	0	1	0	0	65
11:30	215	12	1	3	0	0	231	**23:30**	41	2	0	1	0	0	44
11:45	218	15	1	3	0	0	237	**23:45**	42	0	0	1	0	0	43
TOTAL	6,714	377	69	85	2	25	7,272	**TOTAL**	11,968	349	56	98	1	20	12,492

AM PEAK HOUR	7:30 AM
AM PEAK VOLUME	1,482

AM PEAK HOUR	3:30 PM
AM PEAK VOLUME	1,636

PH Start Time	
15:00	1,550
15:15	1,599
15:30	1,636
15:45	1,554
16:00	1,580
16:15	1,533
16:30	1,560
16:45	1,607
17:00	1,521
17:15	1,557
17:30	1,487
17:45	1,457
18:00	1,468
3:30 PM	1,636

CLASS 1	PASSENGER VEHICLES
CLASS 2	2-AXLE TRUCKS
CLASS 3	3-AXLE TRUCKS
CLASS 4	4 OR MORE AXLE TRUCKS
CLASS 5	RV
CLASS 6	Buses

TOTAL: AM+PM	18,682	726	125	183	3	45	19,764
% OF TOTAL	94.5%	3.7%	0.6%	0.9%	0.0%	0.2%	100.0%

A102423

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, October 10, 2023 **CITY:** Ontario

JOB #: SC4225 **LOCATION:** CLASS12 Chino Ave east of Vineyard Ave

AM TIME	EB 1	2	3	4	5	6	TOTAL	PM Time	EB 1	2	3	4	5	6	TOTAL
0:00	0	0	0	1	0	0	1	12:00	18	1	4	3	0	0	26
0:15	0	0	0	0	0	0	0	12:15	13	1	4	4	0	0	22
0:30	1	0	0	1	0	0	2	12:30	11	5	6	6	0	0	28
0:45	1	0	0	2	0	0	3	12:45	15	0	3	4	0	0	22
1:00	4	0	0	1	0	0	5	13:00	7	1	0	6	0	0	14
1:15	3	0	0	0	0	0	3	13:15	17	1	4	6	0	0	28
1:30	0	0	0	0	0	0	0	13:30	16	3	3	2	0	0	24
1:45	1	0	0	0	0	0	1	13:45	16	2	7	1	0	0	26
2:00	0	0	0	2	0	0	2	14:00	20	2	2	4	0	0	28
2:15	0	0	0	1	0	0	1	14:15	27	2	5	8	0	0	42
2:30	0	0	1	0	0	0	1	14:30	32	0	2	3	0	0	37
2:45	0	1	0	0	0	0	1	14:45	34	3	2	3	0	0	42
3:00	1	1	0	2	0	0	4	15:00	46	2	4	3	0	0	55
3:15	2	0	0	3	0	0	5	15:15	56	4	4	4	0	0	68
3:30	0	0	0	1	0	0	1	15:30	39	3	2	4	0	0	48
3:45	0	0	1	1	0	0	2	15:45	59	3	6	2	0	0	70
4:00	0	1	0	2	0	0	3	16:00	50	3	1	2	0	1	57
4:15	0	1	0	3	0	0	4	16:15	56	5	1	2	0	0	64
4:30	1	1	0	0	0	0	2	16:30	58	4	5	2	0	0	69
4:45	4	0	0	3	0	0	7	16:45	48	2	0	4	0	0	54
5:00	0	1	0	2	0	0	3	17:00	40	3	2	4	0	0	49
5:15	1	0	1	3	0	0	5	17:15	42	2	1	2	0	0	47
5:30	1	0	2	5	0	0	8	17:30	37	4	2	0	0	0	43
5:45	3	0	2	4	0	0	9	17:45	43	1	0	1	0	0	45
6:00	3	2	3	6	0	0	14	18:00	47	2	2	0	0	0	51
6:15	4	1	1	7	0	0	13	18:15	32	1	1	1	0	0	35
6:30	5	6	1	5	0	0	17	18:30	19	0	0	0	0	0	19
6:45	7	2	0	9	0	0	18	18:45	17	0	0	1	0	0	18
7:00	10	2	0	5	0	0	17	19:00	17	1	2	4	0	0	24
7:15	12	3	2	7	0	0	24	19:15	19	1	0	1	0	0	21
7:30	12	0	1	8	0	0	21	19:30	11	0	0	2	0	0	13
7:45	22	1	0	7	0	0	30	19:45	9	2	0	0	0	0	11
8:00	11	5	1	11	0	1	29	20:00	6	1	2	0	0	0	9
8:15	15	3	1	8	0	0	27	20:15	6	0	1	5	0	0	12
8:30	11	3	1	3	0	0	18	20:30	5	2	0	1	0	0	8
8:45	4	1	5	1	0	0	11	20:45	6	1	0	0	0	0	7
9:00	9	0	1	6	0	0	16	21:00	5	0	1	2	0	0	8
9:15	9	0	2	6	0	0	17	21:15	4	0	0	3	0	0	7
9:30	5	3	2	5	0	0	15	21:30	3	0	0	3	0	0	6
9:45	11	2	1	1	0	0	15	21:45	4	0	0	1	0	0	5
10:00	9	0	2	4	0	0	15	22:00	7	0	2	0	0	0	9
10:15	4	3	2	3	0	0	12	22:15	3	0	1	1	0	0	5
10:30	9	3	2	4	0	1	19	22:30	2	0	0	1	0	0	3
10:45	9	3	2	8	0	0	22	22:45	1	0	0	3	0	0	4
11:00	9	2	4	5	0	0	20	23:00	2	0	1	2	0	0	5
11:15	12	2	1	4	0	0	19	23:15	3	0	0	1	0	0	4
11:30	10	0	2	3	0	0	15	23:30	2	0	0	1	0	0	3
11:45	11	3	0	4	0	0	18	23:45	1	0	0	3	0	0	4
TOTAL	246	56	44	167	0	2	515	TOTAL	1,031	68	83	116	0	1	1,299

AM PEAK HOUR	7:30 AM
AM PEAK VOLUME	107

AM PEAK HOUR	3:45 PM
AM PEAK VOLUME	260

PM Peak Hour - Eastbound

Start Time	Total Volume	Passenger Cars	Trucks	MedTrk
3:45 PM	260	223	37	15

CLASS 1	PASSENGER VEHICLES	TOTAL: AM+PM	1,277	124	127	283	0	3	1,814
CLASS 2	2-AXLE TRUCKS	% OF TOTAL	70.4%	6.8%	7.0%	15.6%	0.0%	0.2%	100.0%
CLASS 3	3-AXLE TRUCKS								
CLASS 4	4 OR MORE AXLE TRUCKS								
CLASS 5	RV	TOTAL: ALL	2,640	214	243	490	0	5	3,592
CLASS 6	Buses	% OF TOTAL	73.5%	6.0%	6.8%	13.6%	0.0%	0.1%	100.0%

A102423

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, October 10, 2023
JOB #: SC4225

CITY: Ontario
LOCATION: CLASS12 Chino Ave east of Vineyard Ave

AM TIME	WB 1	2	3	4	5	6	TOTAL	PM Time	WB 1	2	3	4	5	6	TOTAL
0:00	2	0	0	2	0	0	4	12:00	18	2	0	3	0	0	23
0:15	2	0	0	0	0	0	2	12:15	12	1	6	3	0	0	22
0:30	2	0	0	1	0	0	3	12:30	16	2	3	5	0	0	26
0:45	0	0	0	0	0	0	0	12:45	18	3	6	4	0	0	31
1:00	1	0	1	1	0	0	3	13:00	11	1	3	1	0	0	16
1:15	2	0	0	0	0	0	2	13:15	14	1	3	4	0	0	22
1:30	1	0	0	0	0	0	1	13:30	12	0	3	2	0	0	17
1:45	1	0	0	1	0	0	2	13:45	18	4	3	6	0	0	31
2:00	1	0	0	0	0	0	1	14:00	17	1	5	4	0	0	27
2:15	1	0	0	0	0	0	1	14:15	12	0	0	1	0	0	13
2:30	3	0	0	1	0	0	4	14:30	19	4	4	1	0	0	28
2:45	2	0	0	2	0	0	4	14:45	14	0	3	11	0	0	28
3:00	0	0	0	0	0	0	0	15:00	16	0	2	4	0	0	22
3:15	1	0	0	2	0	0	3	15:15	15	2	0	5	0	0	22
3:30	4	1	0	1	0	0	6	15:30	20	6	3	3	0	0	32
3:45	6	0	0	1	0	0	7	15:45	14	2	2	1	0	0	19
4:00	3	0	0	0	0	0	3	16:00	22	1	1	3	0	1	28
4:15	3	1	0	3	0	0	7	16:15	22	1	1	2	0	0	26
4:30	3	0	1	0	0	0	4	16:30	15	2	0	1	0	0	18
4:45	5	2	0	0	0	0	7	16:45	11	0	2	1	0	0	14
5:00	7	0	0	3	0	0	10	17:00	22	2	0	1	0	0	25
5:15	13	1	0	0	0	0	14	17:15	11	1	1	2	0	0	15
5:30	15	0	0	2	0	0	17	17:30	8	0	0	2	0	0	10
5:45	23	2	1	2	0	0	28	17:45	11	1	3	0	0	0	15
6:00	36	0	1	2	0	0	39	18:00	9	1	0	2	0	0	12
6:15	35	1	7	2	0	0	45	18:15	8	1	0	1	0	0	10
6:30	48	3	3	1	0	0	55	18:30	14	1	1	4	0	0	20
6:45	47	0	4	0	0	0	51	18:45	11	0	1	0	0	0	12
7:00	45	5	1	1	0	0	52	19:00	10	0	1	0	0	0	11
7:15	50	1	4	4	0	0	59	19:15	12	1	0	1	0	0	14
7:30	59	2	2	3	0	0	66	19:30	8	0	0	0	0	0	8
7:45	63	4	1	4	0	0	72	19:45	9	0	1	3	0	0	13
8:00	57	0	3	2	0	1	63	20:00	8	0	0	1	0	0	9
8:15	39	4	1	3	0	0	47	20:15	3	1	1	3	0	0	8
8:30	25	2	0	3	0	0	30	20:30	3	0	0	1	0	0	4
8:45	43	1	3	2	0	0	49	20:45	3	0	0	5	0	0	8
9:00	21	1	5	4	0	0	31	21:00	3	0	0	2	0	0	5
9:15	15	2	3	6	0	0	26	21:15	5	0	0	1	0	0	6
9:30	25	3	1	6	0	0	35	21:30	0	0	0	2	0	0	2
9:45	22	1	0	3	0	0	26	21:45	6	0	1	4	0	0	11
10:00	22	2	1	8	0	0	33	22:00	2	0	1	0	0	0	3
10:15	24	2	0	3	0	0	29	22:15	2	0	1	2	0	0	5
10:30	16	2	3	3	0	0	24	22:30	4	0	0	1	0	0	5
10:45	21	1	1	6	0	0	29	22:45	1	0	0	2	0	0	3
11:00	13	1	4	0	0	0	18	23:00	0	0	0	1	0	0	1
11:15	21	0	1	2	0	0	24	23:15	2	0	0	1	0	0	3
11:30	15	1	1	6	0	0	23	23:30	2	0	0	0	0	0	2
11:45	6	2	1	2	0	0	11	23:45	1	0	0	2	0	0	3
TOTAL	869	48	54	98	0	1	1,070	TOTAL	494	42	62	109	0	1	708
				AM PEAK HOUR			7:15 AM					AM PEAK HOUR			3:30 PM
				AM PEAK VOLUME			260					AM PEAK VOLUME			105

PM Peak Hour - Westbound

Start Time	Total Volume	Passenger C	Trucks	MedTrk
3:45 PM	91	73	18	6

CLASS 1	PASSENGER VEHICLES	**TOTAL: AM+PM**	1,363	90	116	207	0	2	1,778
CLASS 2	2-AXLE TRUCKS	**% OF TOTAL**	76.7%	5.1%	6.5%	11.6%	0.0%	0.1%	100.0%
CLASS 3	3-AXLE TRUCKS								
CLASS 4	4 OR MORE AXLE TRUCKS								
CLASS 5	RV								
CLASS 6	BUS								

A102423

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, October 10, 2023 **CITY:** Ontario

JOB #: SC4225 **LOCATION:** CLASS12 Chino Ave east of Vineyard Ave

AM TIME	COMBINED 1	2	3	4	5	6	TOTAL	PM Time	COMBINED 1	2	3	4	5	6	TOTAL
0:00	2	0	0	3	0	0	5	12:00	36	3	4	6	0	0	49
0:15	2	0	0	0	0	0	2	12:15	25	2	10	7	0	0	44
0:30	3	0	0	2	0	0	5	12:30	27	7	9	11	0	0	54
0:45	1	0	0	2	0	0	3	12:45	33	3	9	8	0	0	53
1:00	5	0	1	2	0	0	8	13:00	18	2	3	7	0	0	30
1:15	5	0	0	0	0	0	5	13:15	31	2	7	10	0	0	50
1:30	1	0	0	0	0	0	1	13:30	28	3	6	4	0	0	41
1:45	2	0	0	1	0	0	3	13:45	34	6	10	7	0	0	57
2:00	1	0	0	2	0	0	3	14:00	37	3	7	8	0	0	55
2:15	1	0	0	1	0	0	2	14:15	39	2	5	9	0	0	55
2:30	3	0	1	1	0	0	5	14:30	51	4	6	4	0	0	65
2:45	2	1	0	2	0	0	5	14:45	48	3	5	14	0	0	70
3:00	1	1	0	2	0	0	4	15:00	62	2	6	7	0	0	77
3:15	3	0	0	5	0	0	8	15:15	71	6	4	9	0	0	90
3:30	4	1	0	2	0	0	7	15:30	59	9	5	7	0	0	80
3:45	6	0	1	2	0	0	9	15:45	73	5	8	3	0	0	89
4:00	3	1	0	2	0	0	6	16:00	72	4	2	5	0	2	85
4:15	3	2	0	6	0	0	11	16:15	78	6	2	4	0	0	90
4:30	4	1	1	0	0	0	6	16:30	73	6	5	3	0	0	87
4:45	9	2	0	3	0	0	14	16:45	59	2	2	5	0	0	68
5:00	7	1	0	5	0	0	13	17:00	62	5	2	5	0	0	74
5:15	14	1	1	3	0	0	19	17:15	53	3	2	4	0	0	62
5:30	16	0	2	7	0	0	25	17:30	45	4	2	2	0	0	53
5:45	26	2	3	6	0	0	37	17:45	54	2	3	1	0	0	60
6:00	39	2	4	8	0	0	53	18:00	56	3	2	2	0	0	63
6:15	39	2	8	9	0	0	58	18:15	40	2	1	2	0	0	45
6:30	53	9	4	6	0	0	72	18:30	33	1	1	4	0	0	39
6:45	54	2	4	9	0	0	69	18:45	28	0	1	1	0	0	30
7:00	55	7	1	6	0	0	69	19:00	27	1	3	4	0	0	35
7:15	62	4	6	11	0	0	83	19:15	31	2	0	2	0	0	35
7:30	71	2	3	11	0	0	87	19:30	19	0	0	2	0	0	21
7:45	85	5	1	11	0	0	102	19:45	18	2	1	3	0	0	24
8:00	68	5	4	13	0	2	92	20:00	14	1	2	1	0	0	18
8:15	54	7	2	11	0	0	74	20:15	9	1	2	8	0	0	20
8:30	36	5	1	6	0	0	48	20:30	8	2	0	2	0	0	12
8:45	47	2	8	3	0	0	60	20:45	9	1	0	5	0	0	15
9:00	30	1	6	10	0	0	47	21:00	8	0	1	4	0	0	13
9:15	24	2	5	12	0	0	43	21:15	9	0	0	4	0	0	13
9:30	30	6	3	11	0	0	50	21:30	3	0	0	5	0	0	8
9:45	33	3	1	4	0	0	41	21:45	10	0	1	5	0	0	16
10:00	31	2	3	12	0	0	48	22:00	9	0	3	0	0	0	12
10:15	28	5	2	6	0	0	41	22:15	5	0	2	3	0	0	10
10:30	25	5	5	7	0	1	43	22:30	6	0	0	2	0	0	8
10:45	30	4	3	14	0	0	51	22:45	2	0	0	5	0	0	7
11:00	22	3	8	5	0	0	38	23:00	2	0	1	3	0	0	6
11:15	33	2	2	6	0	0	43	23:15	5	0	0	2	0	0	7
11:30	25	1	3	9	0	0	38	23:30	4	0	0	1	0	0	5
11:45	17	5	1	6	0	0	29	23:45	2	0	0	5	0	0	7
TOTAL	1,115	104	98	265	0	3	1,585	TOTAL	1,525	110	145	225	0	2	2,007

AM PEAK HOUR	7:15 AM
AM PEAK VOLUME	364

AM PEAK HOUR	3:45 PM
AM PEAK VOLUME	351

PH Start Time	
15:00	336
15:15	344
15:30	344
15:45	351
16:00	330
16:15	319
16:30	291
16:45	257
17:00	249
17:15	238
17:30	221
17:45	207
18:00	177
3:45 PM	351

CLASS 1	PASSENGER VEHICLES
CLASS 2	2-AXLE TRUCKS
CLASS 3	3-AXLE TRUCKS
CLASS 4	4 OR MORE AXLE TRUCKS
CLASS 5	RV
CLASS 6	Buses

TOTAL: AM+PM	2,640	214	243	490	0	5	3,592
% OF TOTAL	73.5%	6.0%	6.8%	13.6%	0.0%	0.1%	100.0%

A102423

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, October 10, 2023 **CITY:** Ontario

JOB #: SC4225 **LOCATION:** CLASS10 S Archibalt Ave south of E Chino Ave

AM TIME	NB 1	2	3	4	5	6	TOTAL	PM Time	NB 1	2	3	4	5	6	TOTAL
0:00	15	1	0	2	0	0	18	12:00	135	9	2	11	0	0	157
0:15	17	2	0	4	0	0	23	12:15	115	13	1	16	0	1	146
0:30	26	0	0	4	0	0	30	12:30	117	12	4	11	0	0	144
0:45	17	0	1	3	0	0	21	12:45	143	14	8	12	0	1	178
1:00	19	0	0	6	0	0	25	13:00	136	14	6	15	0	0	171
1:15	19	0	1	1	0	0	21	13:15	124	12	6	12	0	0	154
1:30	14	0	1	3	0	0	18	13:30	132	7	2	11	0	0	152
1:45	14	0	2	5	0	0	21	13:45	143	7	9	13	0	2	174
2:00	10	0	0	0	0	0	10	14:00	137	14	3	11	0	0	165
2:15	14	0	2	2	0	0	18	14:15	180	16	1	16	0	2	215
2:30	15	0	0	6	0	0	21	14:30	211	12	5	11	0	1	240
2:45	18	1	1	4	0	0	24	14:45	209	15	4	11	0	1	240
3:00	19	0	2	3	0	0	24	15:00	188	10	12	9	0	0	219
3:15	26	1	1	2	0	0	30	15:15	194	11	3	21	0	1	230
3:30	29	0	1	5	0	0	35	15:30	195	16	6	11	0	0	228
3:45	41	4	2	4	0	0	51	15:45	203	10	2	11	0	1	227
4:00	23	1	0	4	0	0	28	16:00	169	9	2	10	0	2	192
4:15	51	4	2	3	0	0	60	16:15	206	12	1	15	0	0	234
4:30	78	4	2	7	0	0	91	16:30	169	15	7	10	0	0	201
4:45	101	7	1	4	0	1	114	16:45	174	9	2	10	0	1	196
5:00	105	8	4	3	0	0	120	17:00	177	8	1	12	0	0	198
5:15	81	5	2	6	0	0	94	17:15	192	7	1	8	0	0	208
5:30	132	4	1	8	0	0	145	17:30	173	8	1	9	0	0	191
5:45	112	4	5	4	0	1	126	17:45	189	7	3	13	0	1	213
6:00	132	5	3	4	0	0	144	18:00	161	3	2	4	0	0	170
6:15	154	11	1	5	0	0	171	18:15	161	9	2	4	0	0	176
6:30	177	17	3	9	0	1	207	18:30	167	4	2	7	0	0	180
6:45	216	13	3	6	0	1	239	18:45	159	2	8	10	0	1	180
7:00	219	13	2	13	0	0	247	19:00	111	6	1	9	0	0	127
7:15	250	9	4	17	0	0	280	19:15	135	8	7	3	0	0	153
7:30	306	12	5	16	0	2	341	19:30	115	2	2	4	0	0	123
7:45	319	9	4	18	0	2	352	19:45	96	4	2	6	0	1	109
8:00	263	10	3	17	0	1	294	20:00	97	1	4	3	0	0	105
8:15	261	14	5	16	0	3	299	20:15	89	1	6	4	0	0	100
8:30	223	11	5	6	0	0	245	20:30	93	1	2	4	0	0	100
8:45	251	11	3	9	0	2	276	20:45	72	2	1	9	0	1	85
9:00	195	14	2	7	0	0	218	21:00	68	0	1	3	0	0	72
9:15	158	17	7	13	0	0	195	21:15	69	0	1	3	0	0	73
9:30	150	17	5	9	0	0	181	21:30	54	0	1	5	0	0	60
9:45	127	15	4	7	0	1	154	21:45	49	0	1	4	0	0	54
10:00	164	11	7	14	0	0	196	22:00	60	0	2	8	0	0	70
10:15	125	11	9	15	0	0	160	22:15	55	0	3	4	0	0	62
10:30	165	12	5	16	0	0	198	22:30	40	2	1	3	0	0	46
10:45	139	22	3	17	0	2	183	22:45	43	1	1	4	0	0	49
11:00	140	15	8	14	0	0	177	23:00	32	0	1	5	0	0	38
11:15	159	13	7	18	0	0	197	23:15	28	0	1	3	0	0	32
11:30	135	8	4	9	0	1	157	23:30	33	0	1	6	0	0	40
11:45	134	13	5	7	0	0	159	23:45	33	0	0	3	0	0	36
TOTAL	5,558	349	138	375	0	18	6,438	TOTAL	6,031	313	145	407	0	17	6,913

AM PEAK HOUR	7:30 AM
AM PEAK VOLUME	1,286

AM PEAK HOUR	2:30 PM
AM PEAK VOLUME	929

PM Peak Hour - Northbound

Start Time	Total Volume	Passenger Cars	Trucks	MedTrk
5:00 PM	810	731	79	30

CLASS 1	PASSENGER VEHICLES	TOTAL: AM+PM	11,589	662	283	782	0	35	13,351
CLASS 2	2-AXLE TRUCKS	% OF TOTAL	86.8%	5.0%	2.1%	5.9%	0.0%	0.3%	100.0%
CLASS 3	3-AXLE TRUCKS								
CLASS 4	4 OR MORE AXLE TRUCKS								
CLASS 5	RV	TOTAL: ALL	20,978	1,196	541	1,350	2	65	24,132
CLASS 6	Buses	% OF TOTAL	86.9%	5.0%	2.2%	5.6%	0.0%	0.3%	100.0%

A102423

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, October 10, 2023
JOB #: SC4225

CITY: Ontario
LOCATION: CLASS10 S Archibalt Ave south of E Chino Ave

AM TIME	SB 1	2	3	4	5	6	TOTAL	PM Time	SB 1	2	3	4	5	6	TOTAL
0:00	31	0	0	3	0	0	34	**12:00**	116	8	4	16	0	1	145
0:15	30	0	0	2	0	0	32	**12:15**	125	12	6	13	0	0	156
0:30	24	0	2	4	0	0	30	**12:30**	123	11	5	6	0	0	145
0:45	25	0	2	1	0	0	28	**12:45**	110	8	1	12	0	0	131
1:00	12	0	0	3	0	0	15	**13:00**	148	7	3	8	0	2	168
1:15	18	0	2	2	0	0	22	**13:15**	117	7	3	8	0	0	135
1:30	23	1	2	2	0	0	28	**13:30**	145	11	3	5	0	1	165
1:45	16	0	3	0	0	0	19	**13:45**	134	10	5	5	0	1	155
2:00	14	0	1	3	0	0	18	**14:00**	135	11	3	9	0	2	160
2:15	12	0	1	0	0	0	13	**14:15**	116	6	2	12	0	0	136
2:30	13	0	1	6	0	0	20	**14:30**	167	11	3	7	0	4	192
2:45	14	0	2	1	0	0	17	**14:45**	145	4	2	8	0	2	161
3:00	10	0	1	0	0	0	11	**15:00**	130	7	5	12	0	1	155
3:15	11	0	2	1	0	0	14	**15:15**	163	7	2	7	0	0	179
3:30	28	1	0	0	0	0	29	**15:30**	175	8	4	12	0	0	199
3:45	25	1	3	1	0	0	30	**15:45**	180	11	6	9	0	0	206
4:00	30	0	3	2	0	0	35	**16:00**	170	11	5	8	0	0	194
4:15	24	0	3	4	0	0	31	**16:15**	161	10	4	6	1	0	182
4:30	44	2	0	3	0	0	49	**16:30**	205	4	2	10	0	0	221
4:45	53	4	2	4	0	0	63	**16:45**	194	13	3	13	0	0	223
5:00	33	0	2	4	0	0	39	**17:00**	210	4	5	14	0	0	233
5:15	43	2	2	3	0	0	50	**17:15**	233	4	3	1	0	1	242
5:30	64	2	1	1	0	0	68	**17:30**	207	5	3	10	0	0	225
5:45	71	4	3	3	0	0	81	**17:45**	225	8	1	4	0	0	238
6:00	41	8	1	4	0	1	55	**18:00**	197	8	1	6	0	1	213
6:15	54	6	5	6	0	0	71	**18:15**	180	6	1	11	0	0	198
6:30	80	12	1	2	0	0	95	**18:30**	165	5	4	8	0	0	182
6:45	97	16	5	4	0	0	122	**18:45**	171	2	0	8	0	0	181
7:00	76	14	1	7	0	1	99	**19:00**	152	3	2	8	1	1	167
7:15	96	10	3	11	0	1	121	**19:15**	146	6	2	5	0	0	159
7:30	113	14	3	10	0	0	140	**19:30**	138	2	2	5	0	0	147
7:45	121	3	6	8	0	0	138	**19:45**	128	0	4	5	0	0	137
8:00	106	14	2	9	0	4	135	**20:00**	122	4	0	9	0	1	136
8:15	112	11	2	4	0	0	129	**20:15**	134	0	1	4	0	0	139
8:30	98	12	4	4	0	0	118	**20:30**	124	2	1	7	0	0	134
8:45	99	13	3	5	0	1	121	**20:45**	97	0	0	4	0	0	101
9:00	107	10	5	7	0	1	130	**21:00**	127	3	1	5	0	1	137
9:15	78	13	6	4	0	0	101	**21:15**	112	1	3	4	0	0	120
9:30	92	6	2	6	0	0	106	**21:30**	135	1	4	3	0	0	143
9:45	77	11	8	11	0	0	107	**21:45**	84	0	1	6	0	0	91
10:00	107	16	5	11	0	0	139	**22:00**	78	4	6	5	0	0	93
10:15	85	12	4	14	0	0	115	**22:15**	85	0	4	1	0	0	90
10:30	78	18	2	12	0	0	110	**22:30**	75	2	2	3	0	0	82
10:45	89	11	7	9	0	0	116	**22:45**	64	1	1	3	0	0	69
11:00	79	14	4	9	0	2	108	**23:00**	54	1	1	2	0	0	58
11:15	96	6	5	8	0	0	115	**23:15**	50	0	2	4	0	0	56
11:30	89	9	3	5	0	0	106	**23:30**	44	0	3	4	0	0	51
11:45	107	9	3	9	0	0	128	**23:45**	48	0	1	1	0	0	50
TOTAL	2,845	285	128	232	0	11	3,501	**TOTAL**	6,544	249	130	336	2	19	7,280
				AM PEAK HOUR			7:30 AM					**AM PEAK HOUR**			5:00 PM
				AM PEAK VOLUME			542					**AM PEAK VOLUME**			938

PM Peak Hour - Southbound

Start Time	Total Volume	Passenger C	Trucks	MdTrk
5:00 PM	938	875	63	21

CLASS 1	PASSENGER VEHICLES	**TOTAL: AM+PM**	9,389	534	258	568	2	30	10,781
CLASS 2	2-AXLE TRUCKS	**% OF TOTAL**	87.1%	5.0%	2.4%	5.3%	0.0%	0.3%	100.0%
CLASS 3	3-AXLE TRUCKS								
CLASS 4	4 OR MORE AXLE TRUCKS								
CLASS 5	RV								
CLASS 6	BUS								

A102423

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Tuesday, October 10, 2023 **CITY:** Ontario

JOB #: SC4225 **LOCATION:** CLASS10 S Archibalt Ave south of E Chino Ave

AM TIME	COMBINED 1	2	3	4	5	6	TOTAL	PM Time	COMBINED 1	2	3	4	5	6	TOTAL
0:00	46	1	0	5	0	0	52	12:00	251	17	6	27	0	1	302
0:15	47	2	0	6	0	0	55	12:15	240	25	7	29	0	1	302
0:30	50	0	2	8	0	0	60	12:30	240	23	9	17	0	0	289
0:45	42	0	3	4	0	0	49	12:45	253	22	9	24	0	1	309
1:00	31	0	0	9	0	0	40	13:00	284	21	9	23	0	2	339
1:15	37	0	3	3	0	0	43	13:15	241	19	9	20	0	0	289
1:30	37	1	3	5	0	0	46	13:30	277	18	5	16	0	1	317
1:45	30	0	5	5	0	0	40	13:45	277	17	14	18	0	3	329
2:00	24	0	1	3	0	0	28	14:00	272	25	6	20	0	2	325
2:15	26	0	3	2	0	0	31	14:15	296	22	3	28	0	2	351
2:30	28	0	1	12	0	0	41	14:30	378	23	8	18	0	5	432
2:45	32	1	3	5	0	0	41	14:45	354	19	6	19	0	3	401
3:00	29	0	3	3	0	0	35	15:00	318	17	17	21	0	1	374
3:15	37	1	3	3	0	0	44	15:15	357	18	5	28	0	1	409
3:30	57	1	1	5	0	0	64	15:30	370	24	10	23	0	0	427
3:45	66	5	5	5	0	0	81	15:45	383	21	8	20	0	1	433
4:00	53	1	3	6	0	0	63	16:00	339	20	7	18	0	2	386
4:15	75	4	5	7	0	0	91	16:15	367	22	5	21	1	0	416
4:30	122	6	2	10	0	0	140	16:30	374	19	9	20	0	0	422
4:45	154	11	3	8	0	1	177	16:45	368	22	5	23	0	1	419
5:00	138	8	6	7	0	0	159	17:00	387	12	6	26	0	0	431
5:15	124	7	4	9	0	0	144	17:15	425	11	4	9	0	1	450
5:30	196	6	2	9	0	0	213	17:30	380	13	4	19	0	0	416
5:45	183	8	8	7	0	1	207	17:45	414	15	4	17	0	1	451
6:00	173	13	4	8	0	1	199	18:00	358	11	3	10	0	1	383
6:15	208	17	6	11	0	0	242	18:15	341	15	3	15	0	0	374
6:30	257	29	4	11	0	1	302	18:30	332	9	6	15	0	0	362
6:45	313	29	8	10	0	1	361	18:45	330	4	8	18	0	1	361
7:00	295	27	3	20	0	1	346	19:00	263	9	3	17	1	1	294
7:15	346	19	7	28	0	1	401	19:15	281	14	9	8	0	0	312
7:30	419	26	8	26	0	2	481	19:30	253	4	4	9	0	0	270
7:45	440	12	10	26	0	2	490	19:45	224	4	6	11	0	1	246
8:00	369	24	5	26	0	5	429	20:00	219	5	4	12	0	1	241
8:15	373	25	7	20	0	3	428	20:15	223	1	7	8	0	0	239
8:30	321	23	9	10	0	0	363	20:30	217	3	3	11	0	0	234
8:45	350	24	6	14	0	3	397	20:45	169	2	1	13	0	1	186
9:00	302	24	7	14	0	1	348	21:00	195	3	2	8	0	1	209
9:15	236	30	13	17	0	0	296	21:15	181	1	4	7	0	0	193
9:30	242	23	7	15	0	0	287	21:30	189	1	5	8	0	0	203
9:45	204	26	12	18	0	1	261	21:45	133	0	2	10	0	0	145
10:00	271	27	12	25	0	0	335	22:00	138	4	8	13	0	0	163
10:15	210	23	13	29	0	0	275	22:15	140	0	7	5	0	0	152
10:30	243	30	7	28	0	0	308	22:30	115	4	3	6	0	0	128
10:45	228	33	10	26	0	2	299	22:45	107	2	2	7	0	0	118
11:00	219	29	12	23	0	2	285	23:00	86	1	2	7	0	0	96
11:15	255	19	12	26	0	0	312	23:15	78	0	3	7	0	0	88
11:30	224	17	7	14	0	1	263	23:30	77	0	4	10	0	0	91
11:45	241	22	8	16	0	0	287	23:45	81	0	1	4	0	0	86
TOTAL	8,403	634	266	607	0	29	9,939	TOTAL	12,575	562	275	743	2	36	14,193

AM PEAK HOUR	7:30 AM
AM PEAK VOLUME	1,828

AM PEAK HOUR	5:00 PM
AM PEAK VOLUME	1,748

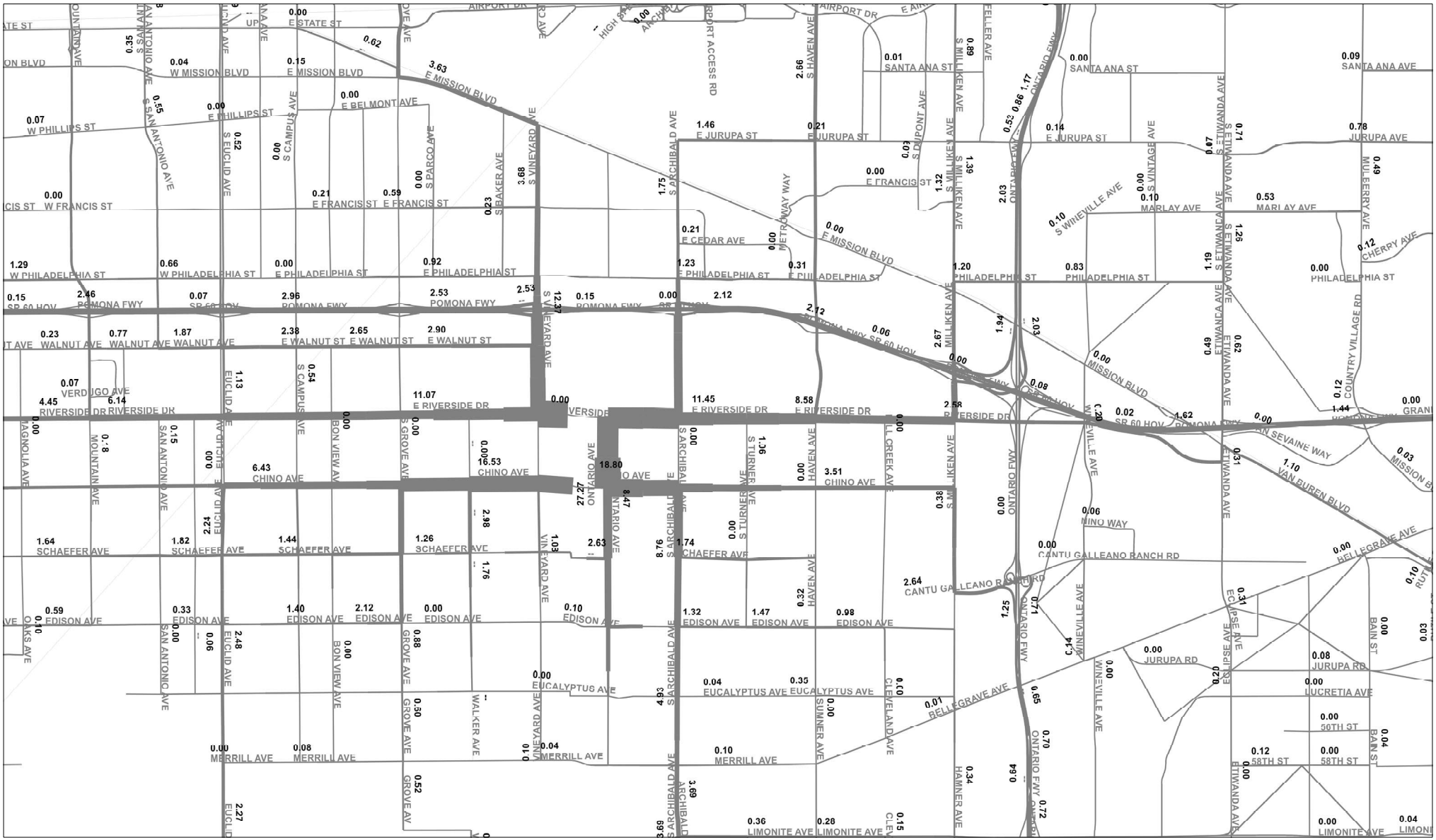
PH Start Time	
15:00	1,643
15:15	1,655
15:30	1,662
15:45	1,657
16:00	1,643
16:15	1,688
16:30	1,722
16:45	1,716
17:00	1,748
17:15	1,700
17:30	1,624
17:45	1,570
18:00	1,480
5:00 PM	1,748

TOTAL: AM+PM	20,978	1,196	541	1,350	2	65	24,132
% OF TOTAL	86.9%	5.0%	2.2%	5.6%	0.0%	0.3%	100.0%

CLASS 1	PASSENGER VEHICLES
CLASS 2	2-AXLE TRUCKS
CLASS 3	3-AXLE TRUCKS
CLASS 4	4 OR MORE AXLE TRUCKS
CLASS 5	RV
CLASS 6	Buses

Appendix D
SBTAM Select Zone Model Run
Retail Trip Distribution

Appendix D - SBTAM PM Peak Period Retail Select Zone Bandwidth Plot



Appendix E
Cumulative Projects

							AM						PM					
MasterID	City	Project Description	Land Use	Qty	Units	Source	In %	Out %	Rate	In	Out	Total	In %	Out %	Rate	In	Out	Total
1	Ontario	PDEV21-018 - Industrial Development	Industrial Park	168.17	KSF	ITE Code 130	81%	19%	0.34	46	11	57	22%	78%	0.34	10	47	57
2	Ontario	File No. PDEV19-057-Industrial	Industrial Park	281.00	KSF	ITE Code 130	81%	19%	0.34	78	18	96	22%	78%	0.34	16	80	96
3	Ontario	File PDEV18-031 - Commercial/Industrial	Shopping Plaza (40-150k)	52.00	KSF	ITE Code 821 Pass by	62%	38%	1.73	33	21	54	49%	51%	5.19	79	83	162
4	Ontario	File PDEV18-031 - Commercial/Industrial	Industrial Park	968.03	KSF	ITE Code 130	81%	19%	0.34	266	63	329	22%	78%	0.34	56	273	329
5	Ontario	File No. PDEV19-059-Industrial	Strip Retail Plaza (<40k)	5.55	KSF	ITE Code 822 Pass by	60%	40%	2.36	5	3	8	50%	50%	6.59	11	11	22
6	Ontario	File No. PDEV19-059-Industrial	Industrial Park	295.99	KSF	ITE Code 130	81%	19%	0.34	82	19	101	22%	78%	0.34	17	84	101
7	Ontario	File No. PDEV21-037-Industrial	Industrial Park	167.40	KSF	ITE Code 130	81%	19%	0.34	46	11	57	22%	78%	0.34	10	47	57
8	Ontario	Industrial Building(s)	Industrial Park	393.33	KSF	ITE Code 130	81%	19%	0.34	109	25	134	22%	78%	0.34	23	111	134
9	Ontario	Ontario Ranch Business Park SP	Warehousing/Business Park	1905.03	KSF	See Project TIA	See Project TIA			267	75	342	See Project TIA			100	292	392
10	Ontario	Merrill Commerce Center SP	Warehousing/Mixed Use	8455.00	KSF	See Project TIA	See Project TIA			1120	300	1420	See Project TIA			433	1269	1701
11	Ontario	South Ontario Logistics Center SP	Warehousing	5333.52	KSF	See Project TIA	See Project TIA			782	209	991	See Project TIA			283	853	1136
12	Ontario	Ontario Ranch Business Park SP Expansion	Warehousing/Business Park	1640.69	KSF	See Project TIA	See Project TIA			216	58	274	See Project TIA			83	240	323
13	Ontario	Rich Haven Specific Plan Commerical	Shopping Center (>150k)	204.50	KSF	ITE Code 820 Pass by	62%	38%	0.84	76	46	122	48%	52%	3.4	237	257	494
14	Ontario	Portion of Grand Park SP	SF Attached Housing	362.00	DU	ITE Code 215	25%	75%	0.48	44	130	174	59%	41%	0.57	122	84	206
15	Ontario	Edenglen	MF Housing (Low Rise)	108.00	DU	ITE Code 220	24%	76%	0.4	10	33	43	63%	37%	0.51	35	20	55
16	Ontario	Rich Haven	MF Housing (Low Rise)	120.00	DU	ITE Code 220	24%	76%	0.4	12	36	48	63%	37%	0.51	38	23	61
17	Ontario	The Avenue	SF Detached Housing	106.00	DU	ITE Code 210	25%	75%	0.7	19	55	74	63%	37%	0.94	63	37	100
18	Ontario	The Avenue School	Elementary School	800.00	Students	ITE Code 520	54%	46%	0.74	320	272	592	46%	54%	0.16	59	69	128
19	Ontario	Parkside Specific Plan (SF)	SF Detached Housing	540.00	DU	ITE Code 210	25%	75%	0.7	95	283	378	63%	37%	0.94	320	188	508
20	Ontario	Parkside Specific Plan (MF)	MF Housing (Low Rise)	508.00	DU	ITE Code 220	24%	76%	0.4	49	154	203	63%	37%	0.51	163	96	259
21	Ontario	Commercial	Shopping Center (>150k)	210.00	KSF	ITE Code 820 Pass by	62%	38%	0.84	78	47	125	48%	52%	3.4	243	264	507
22	Ontario	SF Residential	SF Detached Housing	3733.00	DU	ITE Code 210	25%	75%	0.7	653	1960	2613	63%	37%	0.94	2211	1298	3509
23	Ontario	Commercial	Shopping Plaza (40-150k)	87.00	KSF	ITE Code 821 Pass by	62%	38%	1.73	56	34	90	49%	51%	5.19	133	138	271
24	Ontario	Elementary School	Elementary School	800.00	Students	ITE Code 520	54%	46%	0.74	320	272	592	46%	54%	0.16	59	69	128
25	Ontario	Middle School	Middle School	1200.00	Students	ITE Code 522	54%	46%	0.67	434	370	804	48%	52%	0.15	86	94	180
26	Chino	Total Preserve SP - SF Res	SF Detached Housing	1791.00	DU	ITE Code 210	25%	75%	0.7	314	940	1254	63%	37%	0.94	1061	623	1684
27	Chino	Total Preserve SP - MF Res	MF Housing (Low Rise)	2675.00	DU	ITE Code 220	24%	76%	0.4	257	813	1070	63%	37%	0.51	859	505	1364
28	Chino	Majestic Chino Logistics Center	Var.	2082.75	KSF	See Project TIA	See Project TIA			195	57	252	See Project TIA			95	243	338
29	Chino	Industrial Building(s)	Industrial Park	325.00	KSF	ITE Code 130	81%	19%	0.34	90	21	111	22%	78%	0.34	19	92	111
30	Chino	Preserve SP Business Park	Var.	798.00	KSF	See Project TIA	See Project TIA			540	95	635	See Project TIA			137	343	480
31	Chino	Altitude Business Center (Preserve SP)	Industrial Park	50.00	KSF	ITE Code 130	81%	19%	0.34	14	3	17	22%	78%	0.34	3	14	17
32	Chino	SF/MF Housing	MF Housing (Low Rise)	149.00	DU	ITE Code 220	24%	76%	0.4	14	46	60	63%	37%	0.51	48	28	76
33	Chino	Preserve SP - Industrial	Industrial Park	925.36	KSF	ITE Code 130	81%	19%	0.34	255	60	315	22%	78%	0.34	54	261	315
34	Chino	Commercial	Shopping Plaza (40-150k)	71.36	KSF	ITE Code 821 Pass by	62%	38%	1.73	46	28	74	49%	51%	5.19	109	113	222
35	Chino	Industrial Building(s)	Industrial Park	305.00	KSF	ITE Code 130	81%	19%	0.34	84	20	104	22%	78%	0.34	18	86	104
36	Chino	FedEx	Industrial Park	476.29	KSF	ITE Code 130	81%	19%	0.34	131	31	162	22%	78%	0.34	28	134	162
37	Chino	El Pollo Loco	Fast Food Restaurant with Drive Through	2.00	KSF	ITE Code 934 Pass By	51%	49%	44.61	23	22	45	52%	48%	33.03	16	14	30
38	Chino	Goodman-Commerce Center Offices	Business Park	160.00	KSF	ITE Code 770	85%	15%	1.35	184	32	216	26%	74%	1.22	51	144	195
39	Chino	Goodman-Commerce Center Shopping Center	Shopping Plaza (40-150k)	63.00	KSF	ITE Code 821 Pass by	62%	38%	1.73	40	25	65	49%	51%	5.19	96	100	196
40	Chino	Commercial	Shopping Plaza (40-150k)	50.63	KSF	ITE Code 821 Pass by	62%	38%	1.73	33	20	53	49%	51%	5.19	77	81	158
41	Chino	Church	Church	27.00	KSF	ITE Code 560	62%	38%	0.32	6	3	9	44%	56%	0.49	6	7	13
42	Chino	Commercial	Strip Retail Plaza (<40k)	6.44	KSF	ITE Code 822 Pass by	60%	40%	2.36	5	4	9	50%	50%	6.59	13	12	25
43	Chino	Restaurant	Fast Food Restaurant with Drive Through	2.31	KSF	ITE Code 934 Pass By	51%	49%	44.61	27	25	52	52%	48%	33.03	18	16	34
44	Chino	Car Wash	Automatic Car Wash	3.61	KSF	ITE Code 948	50%	50%	14.2	26	25	51	50%	50%	14.2	26	25	51
45	Eastvale	Leal SP - 168 units	MF Housing (Low Rise)	168.00	DU	ITE Code 220	24%	76%	0.4	16	51	67	63%	37%	0.51	54	32	86
46	Eastvale	Leal SP - 102 units	MF Housing (Low Rise)	102.00	DU	ITE Code 220	24%	76%	0.4	10	31	41	63%	37%	0.51	33	19	52
47	Eastvale	Leal SP - 94 units	SF Detached Housing	94.00	DU	ITE Code 210	25%	75%	0.7	17	49	66	63%	37%	0.94	55	33	88
48	Eastvale	Leal SP - 74 units	SF Detached Housing	74.00	DU	ITE Code 210	25%	75%	0.7	13	39	52	63%	37%	0.94	44	26	70
49	Eastvale	Leal SP - 320 units	MF Housing (Low Rise)	320.00	DU	ITE Code 220	24%	76%	0.4	31	97	128	63%	37%	0.51	103	60	163
50	Eastvale	Restaurant Building	High Turnover Sit Down Restaurant	7.76	KSF	ITE Code 932	55%	45%	9.57	41	33	74	61%	39%	9.05	43	27	70
51	Eastvale	Business Park	Business Park	249.97	KSF	ITE Code 770	85%	15%	1.35	286	51	337	26%	74%	1.22	79	226	305
52	Eastvale	Fast Food Pad	Fast Food Restaurant with Drive Through	2.21	KSF	ITE Code 934 Pass By	51%	49%	44.61	25	24	49	52%	48%	33.03	17	16	33
53	Eastvale	Walmart Eastvale	Commercial/Gas Station	177, 16	KSF, Gas Pumps	See Project TIA	See Project TIA			490	370	860	See Project TIA			526	533	1058
54	Eastvale	Homestead	Industrial Park	1080.60	KSF	ITE Code 130	81%	19%	0.34	297	70	367	22%	78%	0.34	62	305	367
									Totals	**8726**	**7590**	**16316**			**Totals**	**8640**	**10145**	**18783**

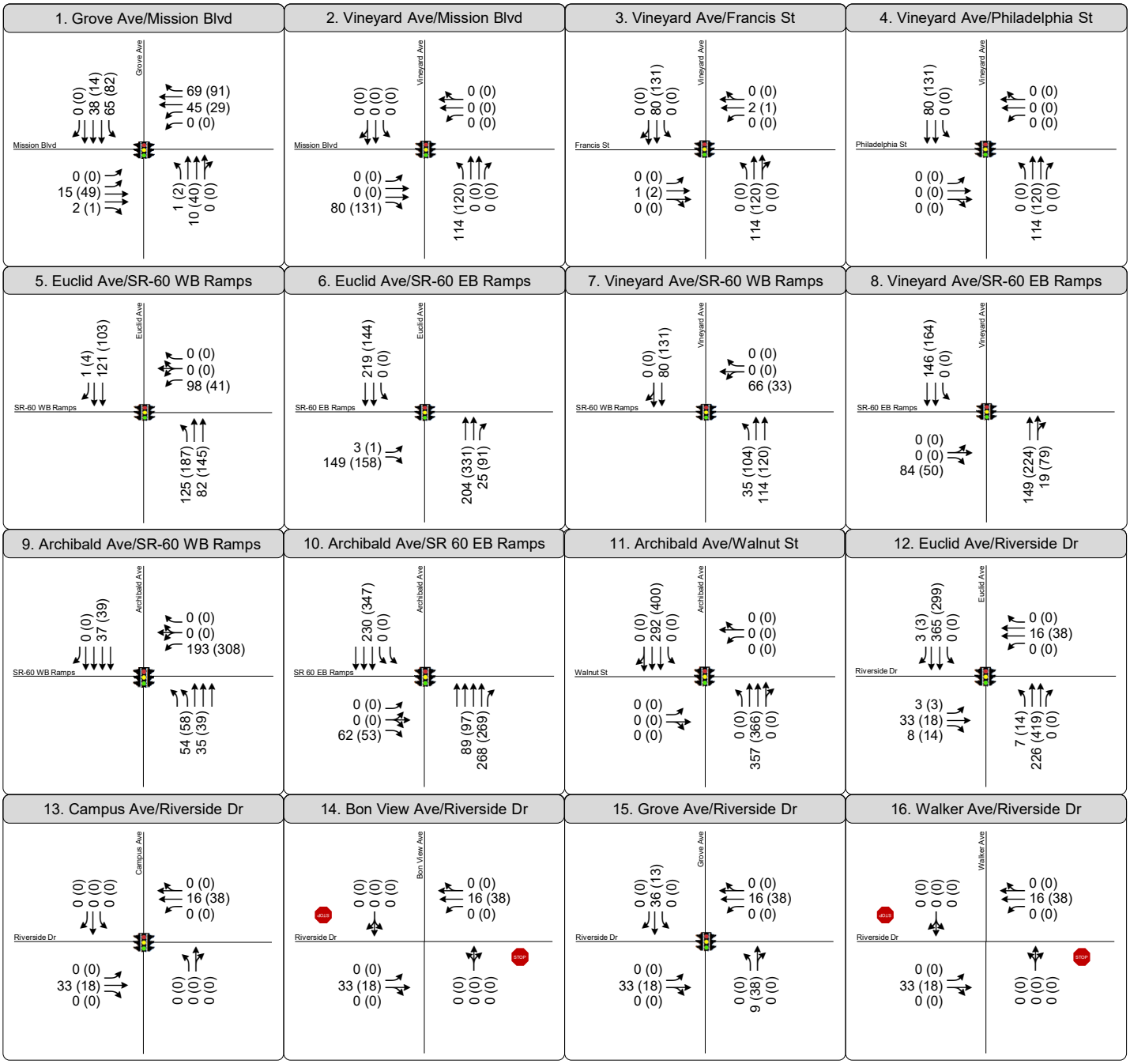


Figure 1

Peak Hour Traffic Volumes and Lane Configurations - Ontario Regional Sports Complex

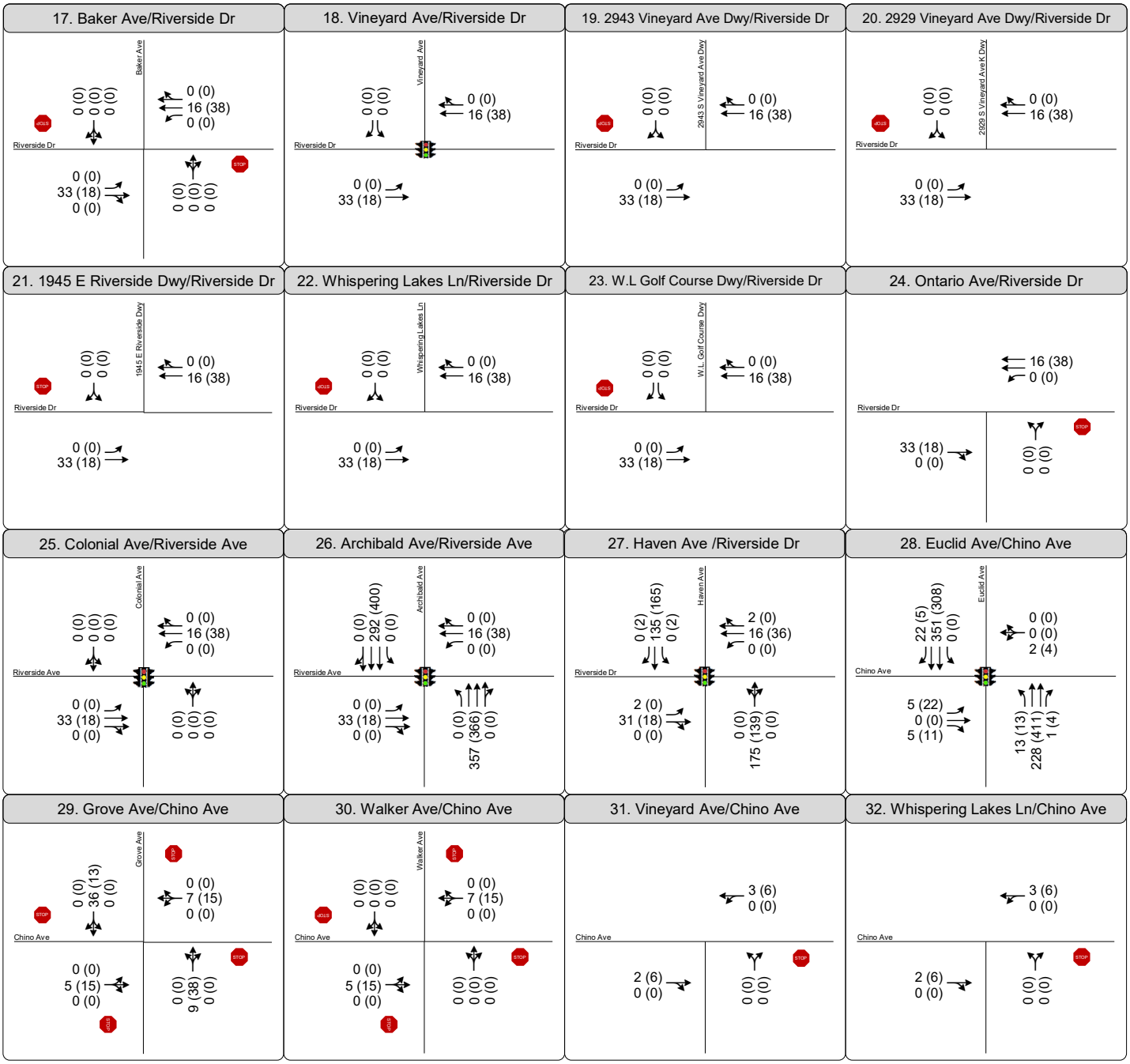


Figure 1

Peak Hour Traffic Volumes and Lane Configurations - Ontario Regional Sports Complex

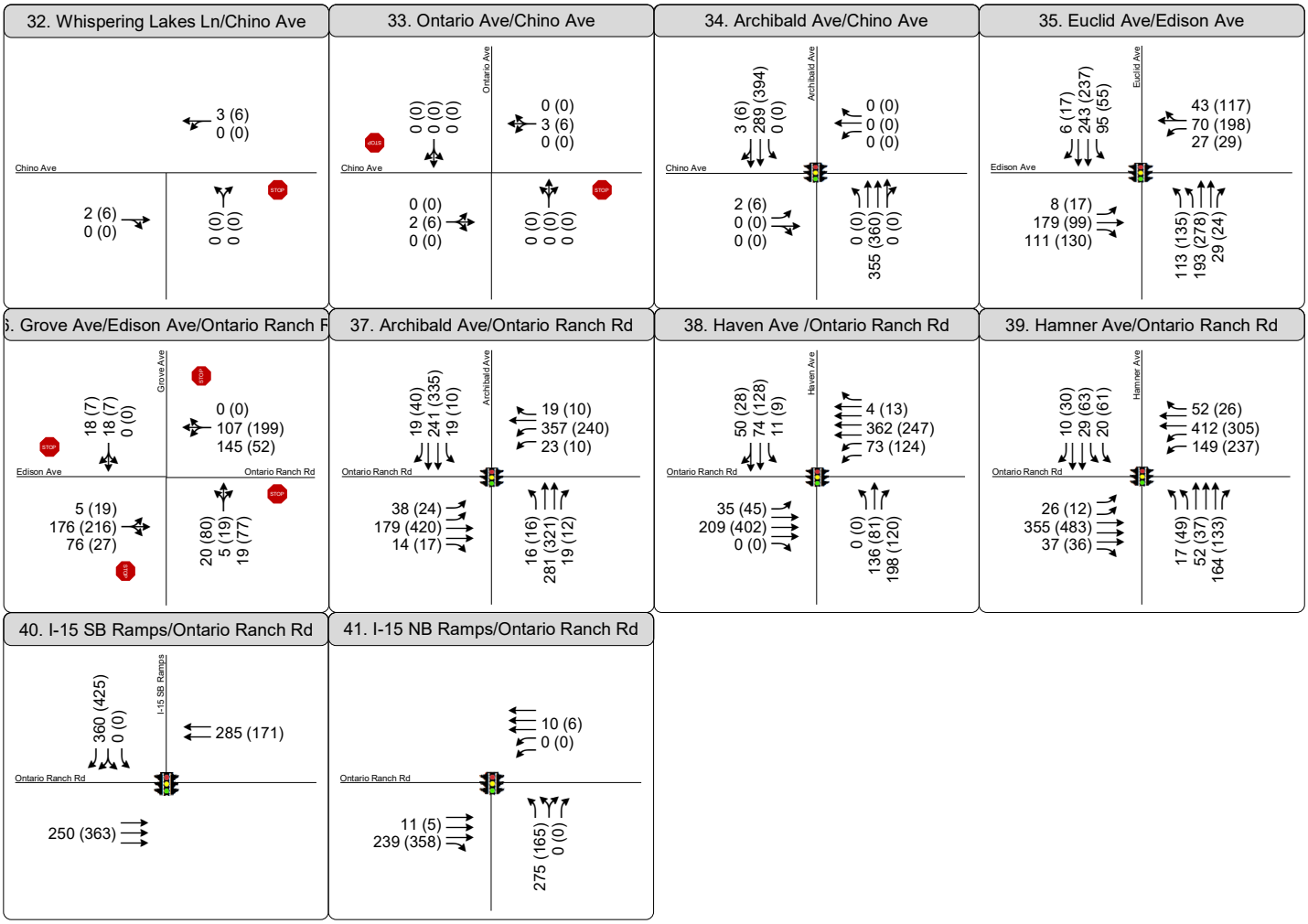


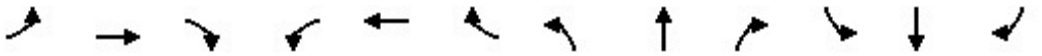
Figure 1

Peak Hour Traffic Volumes and Lane Configurations - Ontario Regional Sports Complex

Appendix F
Level of Service (LOS) Worksheets

HCM 6th Signalized Intersection Summary
1: Grove Ave & Mission Blvd

02/22/2024



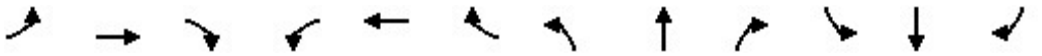
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	263	556	157	46	634	392	110	634	27	452	920	229
Future Volume (veh/h)	263	556	157	46	634	392	110	634	27	452	920	229
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	289	611	65	51	697	153	121	697	29	497	1011	103
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	343	944	419	179	775	344	143	928	38	521	2028	619
Arrive On Green	0.10	0.27	0.27	0.05	0.22	0.22	0.08	0.19	0.19	0.30	0.40	0.40
Sat Flow, veh/h	3401	3497	1551	3401	3497	1549	1753	4944	205	1753	5025	1534
Grp Volume(v), veh/h	289	611	65	51	697	153	121	471	255	497	1011	103
Grp Sat Flow(s),veh/h/ln	1700	1749	1551	1700	1749	1549	1753	1675	1798	1753	1675	1534
Q Serve(g_s), s	12.6	23.3	4.8	2.2	29.2	12.9	10.3	20.1	20.2	41.9	22.7	6.5
Cycle Q Clear(g_c), s	12.6	23.3	4.8	2.2	29.2	12.9	10.3	20.1	20.2	41.9	22.7	6.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.11	1.00		1.00
Lane Grp Cap(c), veh/h	343	944	419	179	775	344	143	629	338	521	2028	619
V/C Ratio(X)	0.84	0.65	0.16	0.28	0.90	0.45	0.85	0.75	0.75	0.95	0.50	0.17
Avail Cap(c_a), veh/h	677	944	419	451	812	360	232	778	417	639	2028	619
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	66.6	48.7	41.9	68.7	57.0	50.7	68.3	57.9	57.9	52.0	33.6	28.8
Incr Delay (d2), s/veh	4.2	1.7	0.2	0.6	12.7	1.1	11.6	3.8	7.1	21.8	0.3	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.6	10.2	1.8	0.9	13.8	5.0	5.0	8.6	9.6	21.1	9.1	2.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	70.9	50.3	42.1	69.3	69.8	51.8	79.9	61.7	65.0	73.7	33.9	28.9
LnGrp LOS	E	D	D	E	E	D	E	E	E	E	C	C
Approach Vol, veh/h		965			901			847			1611	
Approach Delay, s/veh		55.9			66.7			65.3			45.8	
Approach LOS		E			E			E			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	51.8	35.3	15.4	48.2	19.3	67.9	22.7	40.9
Change Period (Y+Rc), s	7.0	7.0	7.5	7.5	7.0	7.0	7.5	7.5
Max Green Setting (Gmax), s	55.0	35.0	20.0	35.0	20.0	35.0	30.0	35.0
Max Q Clear Time (g_c+I1), s	43.9	22.2	4.2	25.3	12.3	24.7	14.6	31.2
Green Ext Time (p_c), s	0.9	4.5	0.1	3.2	0.1	6.0	0.6	1.9

Intersection Summary	
HCM 6th Ctrl Delay	56.2
HCM 6th LOS	E

Notes

User approved pedestrian interval to be less than phase max green.



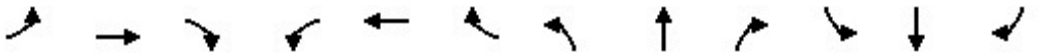
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	19	708	157	61	970	7	128	22	22	7	29	45
Future Volume (veh/h)	19	708	157	61	970	7	128	22	22	7	29	45
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	21	796	76	69	1090	8	144	25	6	8	33	0
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	61	1313	578	146	1508	11	330	537	236	333	537	
Arrive On Green	0.04	0.38	0.38	0.08	0.42	0.42	0.15	0.15	0.15	0.15	0.15	0.00
Sat Flow, veh/h	1753	3497	1539	1753	3558	26	1354	3497	1537	1357	3589	0
Grp Volume(v), veh/h	21	796	76	69	536	562	144	25	6	8	33	0
Grp Sat Flow(s),veh/h/ln	1753	1749	1539	1753	1749	1836	1354	1749	1537	1357	1749	0
Q Serve(g_s), s	0.6	10.0	1.8	2.0	13.8	13.8	5.5	0.3	0.2	0.3	0.4	0.0
Cycle Q Clear(g_c), s	0.6	10.0	1.8	2.0	13.8	13.8	5.9	0.3	0.2	0.6	0.4	0.0
Prop In Lane	1.00		1.00	1.00		0.01	1.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	61	1313	578	146	741	778	330	537	236	333	537	
V/C Ratio(X)	0.34	0.61	0.13	0.47	0.72	0.72	0.44	0.05	0.03	0.02	0.06	
Avail Cap(c_a), veh/h	647	1937	852	647	968	1016	622	1291	567	625	1291	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	25.5	13.7	11.1	23.7	13.0	13.0	22.1	19.5	19.5	19.8	19.6	0.0
Incr Delay (d2), s/veh	1.2	0.6	0.1	0.9	2.4	2.3	1.6	0.1	0.1	0.0	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	2.9	0.5	0.7	4.1	4.3	1.6	0.1	0.1	0.1	0.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.7	14.3	11.3	24.6	15.3	15.2	23.7	19.6	19.6	19.9	19.7	0.0
LnGrp LOS	C	B	B	C	B	B	C	B	B	B	B	
Approach Vol, veh/h		893			1167			175			41	A
Approach Delay, s/veh		14.4			15.8			23.0			19.7	
Approach LOS		B			B			C			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.5	27.3		15.3	8.9	30.0		15.3				
Change Period (Y+Rc), s	7.0	7.0		7.0	7.0	7.0		7.0				
Max Green Setting (Gmax), s	20.0	30.0		20.0	20.0	30.0		20.0				
Max Q Clear Time (g_c+I1), s	4.0	12.0		7.9	2.6	15.8		2.6				
Green Ext Time (p_c), s	0.1	6.6		0.7	0.0	7.2		0.2				

Intersection Summary			
HCM 6th Ctrl Delay		15.9	
HCM 6th LOS		B	

Notes

Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.

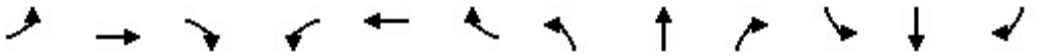


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	13	101	57	23	124	11	103	241	100	15	228	12
Future Volume (veh/h)	13	101	57	23	124	11	103	241	100	15	228	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.98	0.99		0.98	1.00		0.98	0.99		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	14	111	12	25	136	7	113	265	79	16	251	11
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	337	470	50	352	548	28	432	653	190	350	592	26
Arrive On Green	0.02	0.15	0.15	0.04	0.16	0.16	0.10	0.25	0.25	0.02	0.17	0.17
Sat Flow, veh/h	1753	3180	338	1753	3381	173	1753	2658	774	1753	3410	149
Grp Volume(v), veh/h	14	60	63	25	70	73	113	172	172	16	128	134
Grp Sat Flow(s),veh/h/ln	1753	1749	1770	1753	1749	1805	1753	1749	1683	1753	1749	1810
Q Serve(g_s), s	0.3	1.5	1.5	0.6	1.7	1.7	2.5	4.1	4.2	0.4	3.2	3.3
Cycle Q Clear(g_c), s	0.3	1.5	1.5	0.6	1.7	1.7	2.5	4.1	4.2	0.4	3.2	3.3
Prop In Lane	1.00		0.19	1.00		0.10	1.00		0.46	1.00		0.08
Lane Grp Cap(c), veh/h	337	259	262	352	283	292	432	429	413	350	304	314
V/C Ratio(X)	0.04	0.23	0.24	0.07	0.25	0.25	0.26	0.40	0.42	0.05	0.42	0.43
Avail Cap(c_a), veh/h	851	1258	1273	841	1258	1299	797	1241	1194	841	1241	1284
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.2	18.5	18.6	16.7	18.0	18.1	14.2	15.6	15.6	16.0	18.2	18.2
Incr Delay (d2), s/veh	0.1	0.6	0.7	0.1	0.6	0.6	0.4	0.9	1.0	0.1	1.3	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.5	0.6	0.2	0.6	0.6	0.8	1.4	1.4	0.1	1.2	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	17.2	19.2	19.2	16.8	18.7	18.7	14.6	16.4	16.6	16.1	19.5	19.5
LnGrp LOS	B	B	B	B	B	B	B	B	B	B	B	B
Approach Vol, veh/h		137			168			457			278	
Approach Delay, s/veh		19.0			18.4			16.0			19.3	
Approach LOS		B			B			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.2	19.1	8.2	13.8	11.7	15.6	7.5	14.5
Change Period (Y+Rc), s	7.0	7.0	6.5	6.5	7.0	7.0	6.5	6.5
Max Green Setting (Gmax), s	15.0	35.0	15.5	35.5	15.0	35.0	15.5	35.5
Max Q Clear Time (g_c+I1), s	2.4	6.2	2.6	3.5	4.5	5.3	2.3	3.7
Green Ext Time (p_c), s	0.0	2.7	0.0	0.8	0.2	2.0	0.0	1.0

Intersection Summary	
HCM 6th Ctrl Delay	17.7
HCM 6th LOS	B

Min green cannot be greater than Max Green.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	243	1	280	195	769	0	0	775	369
Future Volume (veh/h)	0	0	0	243	1	280	195	769	0	0	775	369
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1841	1841	1841	1841	1841	0	0	1841	1841
Adj Flow Rate, veh/h				282	0	49	207	818	0	0	824	189
Peak Hour Factor				0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %				4	4	4	4	4	0	0	4	4
Cap, veh/h				389	0	173	252	2604	0	0	1899	843
Arrive On Green				0.11	0.00	0.11	0.05	0.25	0.00	0.00	0.54	0.54
Sat Flow, veh/h				3506	0	1560	1753	3589	0	0	3589	1553
Grp Volume(v), veh/h				282	0	49	207	818	0	0	824	189
Grp Sat Flow(s),veh/h/ln				1753	0	1560	1753	1749	0	0	1749	1553
Q Serve(g_s), s				7.0	0.0	2.6	10.5	17.2	0.0	0.0	12.7	5.7
Cycle Q Clear(g_c), s				7.0	0.0	2.6	10.5	17.2	0.0	0.0	12.7	5.7
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				389	0	173	252	2604	0	0	1899	843
V/C Ratio(X)				0.72	0.00	0.28	0.82	0.31	0.00	0.00	0.43	0.22
Avail Cap(c_a), veh/h				506	0	225	526	2604	0	0	1899	843
HCM Platoon Ratio				1.00	1.00	1.00	0.33	0.33	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.75	0.75	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				38.7	0.0	36.7	41.7	15.2	0.0	0.0	12.3	10.7
Incr Delay (d2), s/veh				4.5	0.0	1.3	5.0	0.2	0.0	0.0	0.7	0.6
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				3.2	0.0	1.0	5.1	8.0	0.0	0.0	4.6	1.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				43.2	0.0	38.0	46.8	15.4	0.0	0.0	13.0	11.3
LnGrp LOS				D	A	D	D	B	A	A	B	B
Approach Vol, veh/h					331			1025			1013	
Approach Delay, s/veh					42.4			21.7			12.7	
Approach LOS					D			C			B	

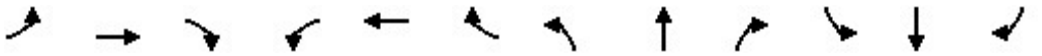
Timer - Assigned Phs	2		5	6		8						
Phs Duration (G+Y+Rc), s	73.0		18.1	54.9		17.0						
Change Period (Y+Rc), s	6.0		* 5.2	6.0		7.0						
Max Green Setting (Gmax), s	64.0		* 27	31.0		13.0						
Max Q Clear Time (g_c+I1), s	19.2		12.5	14.7		9.0						
Green Ext Time (p_c), s	9.4		0.5	7.5		0.6						

Intersection Summary	
HCM 6th Ctrl Delay	20.8
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



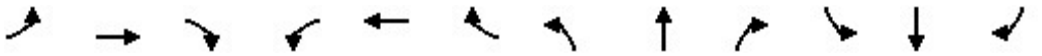
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	314	2	297	0	0	0	0	605	350	284	798	0
Future Volume (veh/h)	314	2	297	0	0	0	0	605	350	284	798	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841				0	1841	1841	1841	1841	0
Adj Flow Rate, veh/h	331	2	193				0	637	127	299	840	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4				0	4	4	4	4	0
Cap, veh/h	387	0	345				0	1379	611	330	2220	0
Arrive On Green	0.22	0.22	0.22				0.00	0.39	0.39	0.38	1.00	0.00
Sat Flow, veh/h	1753	0	1560				0	3589	1550	1753	3589	0
Grp Volume(v), veh/h	331	0	193				0	637	127	299	840	0
Grp Sat Flow(s),veh/h/ln	1753	0	1560				0	1749	1550	1753	1749	0
Q Serve(g_s), s	16.3	0.0	9.9				0.0	12.1	4.9	14.5	0.0	0.0
Cycle Q Clear(g_c), s	16.3	0.0	9.9				0.0	12.1	4.9	14.5	0.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	387	0	345				0	1379	611	330	2220	0
V/C Ratio(X)	0.85	0.00	0.56				0.00	0.46	0.21	0.91	0.38	0.00
Avail Cap(c_a), veh/h	487	0	433				0	1379	611	429	2220	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.81	0.81	0.00
Uniform Delay (d), s/veh	33.7	0.0	31.2				0.0	20.2	18.0	27.3	0.0	0.0
Incr Delay (d2), s/veh	12.8	0.0	2.0				0.0	1.1	0.8	16.2	0.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.1	0.0	3.9				0.0	4.8	1.8	6.0	0.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	46.4	0.0	33.2				0.0	21.3	18.8	43.5	0.4	0.0
LnGrp LOS	D	A	C				A	C	B	D	A	A
Approach Vol, veh/h		524						764			1139	
Approach Delay, s/veh		41.6						20.9			11.7	
Approach LOS		D						C			B	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	21.6	41.5		26.9		63.1
Change Period (Y+Rc), s	* 4.7	6.0		7.0		6.0
Max Green Setting (Gmax), s	* 22	25.0		25.0		52.0
Max Q Clear Time (g_c+I1), s	16.5	14.1		18.3		2.0
Green Ext Time (p_c), s	0.4	4.9		1.6		10.0

Intersection Summary	
HCM 6th Ctrl Delay	21.0
HCM 6th LOS	C

Notes

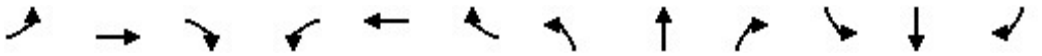
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	151	2	246	225	909	0	0	328	137
Future Volume (veh/h)	0	0	0	151	2	246	225	909	0	0	328	137
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		0.97
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1841	1841	1841	1841	1841	0	0	1841	1841
Adj Flow Rate, veh/h				153	2	127	227	918	0	0	331	92
Peak Hour Factor				0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %				4	4	4	4	4	0	0	4	4
Cap, veh/h				216	3	195	261	2554	0	0	1399	382
Arrive On Green				0.12	0.12	0.12	0.30	1.00	0.00	0.00	0.52	0.52
Sat Flow, veh/h				1732	23	1560	1753	3589	0	0	2789	736
Grp Volume(v), veh/h				155	0	127	227	918	0	0	213	210
Grp Sat Flow(s),veh/h/ln				1754	0	1560	1753	1749	0	0	1749	1685
Q Serve(g_s), s				6.8	0.0	6.2	9.8	0.0	0.0	0.0	5.3	5.5
Cycle Q Clear(g_c), s				6.8	0.0	6.2	9.8	0.0	0.0	0.0	5.3	5.5
Prop In Lane				0.99		1.00	1.00		0.00	0.00		0.44
Lane Grp Cap(c), veh/h				219	0	195	261	2554	0	0	907	874
V/C Ratio(X)				0.71	0.00	0.65	0.87	0.36	0.00	0.00	0.23	0.24
Avail Cap(c_a), veh/h				447	0	398	351	2554	0	0	907	874
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.53	0.53	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				33.6	0.0	33.4	27.3	0.0	0.0	0.0	10.5	10.6
Incr Delay (d2), s/veh				3.1	0.0	2.7	8.7	0.2	0.0	0.0	0.6	0.7
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				3.0	0.0	2.4	3.8	0.1	0.0	0.0	1.9	1.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				36.7	0.0	36.1	36.0	0.2	0.0	0.0	11.1	11.2
LnGrp LOS				D	A	D	D	A	A	A	B	B
Approach Vol, veh/h					282			1145			423	
Approach Delay, s/veh					36.4			7.3			11.2	
Approach LOS					D			A			B	

Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		64.2			16.9	47.3		15.8				
Change Period (Y+Rc), s		5.8			5.0	5.8		5.8				
Max Green Setting (Gmax), s		48.0			16.0	27.0		20.4				
Max Q Clear Time (g_c+I1), s		2.0			11.8	7.5		8.8				
Green Ext Time (p_c), s		5.6			0.2	1.7		0.8				

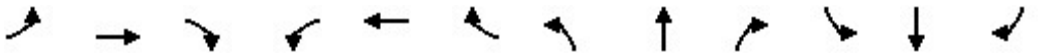
Intersection Summary												
HCM 6th Ctrl Delay			12.6									
HCM 6th LOS			B									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	486	1	246	0	0	0	0	655	250	133	360	0
Future Volume (veh/h)	486	1	246	0	0	0	0	655	250	133	360	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		0.97	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841				0	1841	1841	1841	1841	0
Adj Flow Rate, veh/h	501	1	79				0	675	211	137	371	0
Peak Hour Factor	0.97	0.97	0.97				0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	4	4	4				0	4	4	4	4	0
Cap, veh/h	538	1	480				0	952	297	209	1914	0
Arrive On Green	0.31	0.31	0.31				0.00	0.37	0.37	0.04	0.18	0.00
Sat Flow, veh/h	1750	3	1560				0	2694	813	1753	3589	0
Grp Volume(v), veh/h	502	0	79				0	454	432	137	371	0
Grp Sat Flow(s),veh/h/ln	1753	0	1560				0	1749	1666	1753	1749	0
Q Serve(g_s), s	22.2	0.0	3.0				0.0	17.8	17.8	6.2	7.2	0.0
Cycle Q Clear(g_c), s	22.2	0.0	3.0				0.0	17.8	17.8	6.2	7.2	0.0
Prop In Lane	1.00		1.00				0.00		0.49	1.00		0.00
Lane Grp Cap(c), veh/h	539	0	480				0	640	609	209	1914	0
V/C Ratio(X)	0.93	0.00	0.16				0.00	0.71	0.71	0.66	0.19	0.00
Avail Cap(c_a), veh/h	557	0	495				0	640	609	263	1914	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	0.33	0.33	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.96	0.96	0.00
Uniform Delay (d), s/veh	26.9	0.0	20.2				0.0	21.7	21.7	36.8	17.8	0.0
Incr Delay (d2), s/veh	21.9	0.0	0.1				0.0	6.5	6.9	1.9	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.1	0.0	1.1				0.0	7.6	7.3	2.7	2.8	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	48.8	0.0	20.3				0.0	28.3	28.6	38.7	18.0	0.0
LnGrp LOS	D	A	C				A	C	C	D	B	A
Approach Vol, veh/h		581						886			508	
Approach Delay, s/veh		44.9						28.4			23.6	
Approach LOS		D						C			C	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	14.5	35.1		30.4		49.6
Change Period (Y+Rc), s	5.0	5.8		5.8		5.8
Max Green Setting (Gmax), s	12.0	26.0		25.4		43.0
Max Q Clear Time (g_c+I1), s	8.2	19.8		24.2		9.2
Green Ext Time (p_c), s	0.1	2.3		0.4		1.9

Intersection Summary		
HCM 6th Ctrl Delay		32.0
HCM 6th LOS		C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	299	2	404	488	737	0	0	481	81
Future Volume (veh/h)	0	0	0	299	2	404	488	737	0	0	481	81
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		0.97
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1781	1781	1781	1781	1781	0	0	1781	1781
Adj Flow Rate, veh/h				361	0	98	514	776	0	0	506	20
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				8	8	8	8	8	0	0	8	8
Cap, veh/h				882	0	393	1097	2972	0	0	1362	324
Arrive On Green				0.26	0.00	0.26	0.11	0.20	0.00	0.00	0.22	0.22
Sat Flow, veh/h				3393	0	1510	3291	5024	0	0	6378	1458
Grp Volume(v), veh/h				361	0	98	514	776	0	0	506	20
Grp Sat Flow(s),veh/h/ln				1697	0	1510	1646	1621	0	0	1532	1458
Q Serve(g_s), s				7.9	0.0	4.6	13.2	12.1	0.0	0.0	6.3	1.0
Cycle Q Clear(g_c), s				7.9	0.0	4.6	13.2	12.1	0.0	0.0	6.3	1.0
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				882	0	393	1097	2972	0	0	1362	324
V/C Ratio(X)				0.41	0.00	0.25	0.47	0.26	0.00	0.00	0.37	0.06
Avail Cap(c_a), veh/h				882	0	393	1097	2972	0	0	1362	324
HCM Platoon Ratio				1.00	1.00	1.00	0.33	0.33	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.73	0.73	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				27.6	0.0	26.4	32.6	18.8	0.0	0.0	29.7	27.6
Incr Delay (d2), s/veh				1.4	0.0	1.5	1.1	0.2	0.0	0.0	0.8	0.4
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				3.3	0.0	4.4	5.8	4.9	0.0	0.0	2.3	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				29.0	0.0	27.9	33.6	19.0	0.0	0.0	30.5	28.0
LnGrp LOS				C	A	C	C	B	A	A	C	C
Approach Vol, veh/h					459			1290			526	
Approach Delay, s/veh					28.7			24.8			30.4	
Approach LOS					C			C			C	

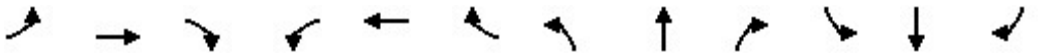
Timer - Assigned Phs	2	4	5	6
Phs Duration (G+Y+Rc), s	60.8	29.2	35.0	25.8
Change Period (Y+Rc), s	5.8	5.8	5.0	5.8
Max Green Setting (Gmax), s	55.0	23.4	30.0	20.0
Max Q Clear Time (g_c+I1), s	14.1	9.9	15.2	8.3
Green Ext Time (p_c), s	5.7	1.4	0.9	2.5

Intersection Summary	
HCM 6th Ctrl Delay	26.9
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

User approved volume balancing among the lanes for turning movement.



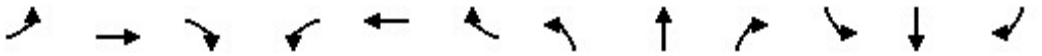
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	262	5	428	0	0	0	0	1232	421	138	621	0
Future Volume (veh/h)	262	5	428	0	0	0	0	1232	421	138	621	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		0.97	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1781	1781	1781				0	1781	1781	1781	1781	0
Adj Flow Rate, veh/h	334	0	116				0	1311	145	147	661	0
Peak Hour Factor	0.94	0.94	0.94				0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	8	8	8				0	8	8	8	8	0
Cap, veh/h	1146	0	510				0	1975	472	512	2594	0
Arrive On Green	0.34	0.00	0.34				0.00	0.32	0.32	0.31	1.00	0.00
Sat Flow, veh/h	3393	0	1510				0	6378	1465	3291	5024	0
Grp Volume(v), veh/h	334	0	116				0	1311	145	147	661	0
Grp Sat Flow(s),veh/h/ln	1697	0	1510				0	1532	1465	1646	1621	0
Q Serve(g_s), s	6.5	0.0	5.0				0.0	16.6	6.7	3.0	0.0	0.0
Cycle Q Clear(g_c), s	6.5	0.0	5.0				0.0	16.6	6.7	3.0	0.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	1146	0	510				0	1975	472	512	2594	0
V/C Ratio(X)	0.29	0.00	0.23				0.00	0.66	0.31	0.29	0.25	0.00
Avail Cap(c_a), veh/h	1146	0	510				0	1975	472	512	2594	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.89	0.89	0.00
Uniform Delay (d), s/veh	21.9	0.0	21.4				0.0	26.3	22.9	27.2	0.0	0.0
Incr Delay (d2), s/veh	0.6	0.0	1.0				0.0	1.8	1.7	1.3	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	0.0	1.9				0.0	5.8	2.4	1.2	0.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	22.5	0.0	22.4				0.0	28.1	24.6	28.5	0.2	0.0
LnGrp LOS	C	A	C				A	C	C	C	A	A
Approach Vol, veh/h		450						1456			808	
Approach Delay, s/veh		22.5						27.7			5.4	
Approach LOS		C						C			A	

Timer - Assigned Phs	1	2				6		8				
Phs Duration (G+Y+Rc), s	19.0	34.8				53.8		36.2				
Change Period (Y+Rc), s	5.0	5.8				5.8		5.8				
Max Green Setting (Gmax), s	14.0	29.0				48.0		30.4				
Max Q Clear Time (g_c+I1), s	5.0	18.6				2.0		8.5				
Green Ext Time (p_c), s	0.1	6.2				4.7		1.6				

Intersection Summary			
HCM 6th Ctrl Delay			20.2
HCM 6th LOS			C

Notes

User approved volume balancing among the lanes for turning movement.



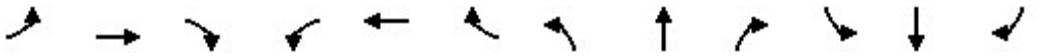
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	14	12	38	113	34	188	131	1286	51	66	447	12
Future Volume (veh/h)	14	12	38	113	34	188	131	1286	51	66	447	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.98		0.96	0.98		0.96	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781
Adj Flow Rate, veh/h	15	13	6	123	37	32	142	1398	53	72	486	12
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	8	8	8	8	8	8	8	8	8	8	8	8
Cap, veh/h	224	174	80	267	132	114	172	2715	103	91	2526	62
Arrive On Green	0.15	0.15	0.15	0.15	0.15	0.15	0.10	0.57	0.57	0.05	0.52	0.52
Sat Flow, veh/h	1249	1137	525	1303	864	748	1697	4802	182	1697	4877	120
Grp Volume(v), veh/h	15	0	19	123	0	69	142	944	507	72	322	176
Grp Sat Flow(s),veh/h/ln	1249	0	1662	1303	0	1612	1697	1621	1742	1697	1621	1755
Q Serve(g_s), s	1.0	0.0	0.9	8.0	0.0	3.4	7.4	16.1	16.1	3.8	4.8	4.8
Cycle Q Clear(g_c), s	4.4	0.0	0.9	8.9	0.0	3.4	7.4	16.1	16.1	3.8	4.8	4.8
Prop In Lane	1.00		0.32	1.00		0.46	1.00		0.10	1.00		0.07
Lane Grp Cap(c), veh/h	224	0	254	267	0	247	172	1833	985	91	1679	909
V/C Ratio(X)	0.07	0.00	0.07	0.46	0.00	0.28	0.83	0.52	0.52	0.79	0.19	0.19
Avail Cap(c_a), veh/h	341	0	410	389	0	398	183	1833	985	268	1679	909
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.7	0.0	32.7	36.5	0.0	33.7	39.7	12.0	12.0	42.1	11.6	11.6
Incr Delay (d2), s/veh	0.1	0.0	0.1	0.9	0.0	0.5	22.7	1.0	1.9	5.5	0.3	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	0.4	2.6	0.0	1.4	4.0	5.0	5.6	1.7	1.6	1.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	35.8	0.0	32.7	37.4	0.0	34.2	62.3	13.0	13.9	47.6	11.9	12.1
LnGrp LOS	D	A	C	D	A	C	E	B	B	D	B	B
Approach Vol, veh/h		34			192			1593			570	
Approach Delay, s/veh		34.1			36.2			17.7			16.5	
Approach LOS		C			D			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.4	57.4		21.3	15.6	53.1		21.3				
Change Period (Y+Rc), s	6.5	6.5		7.5	6.5	6.5		7.5				
Max Green Setting (Gmax), s	14.2	32.2		22.2	9.7	37.6		22.2				
Max Q Clear Time (g_c+I1), s	5.8	18.1		6.4	9.4	6.8		10.9				
Green Ext Time (p_c), s	0.0	8.5		0.1	0.0	3.6		0.4				

Intersection Summary		
HCM 6th Ctrl Delay		19.1
HCM 6th LOS		B

Notes

User approved pedestrian interval to be less than phase max green.



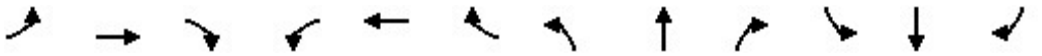
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	122	387	41	244	729	75	47	542	123	133	651	126
Future Volume (veh/h)	122	387	41	244	729	75	47	542	123	133	651	126
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	1.00		0.95	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	133	421	12	265	792	29	51	589	33	145	708	76
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	202	494	407	299	1131	492	132	821	348	177	912	576
Arrive On Green	0.12	0.27	0.27	0.17	0.32	0.32	0.08	0.23	0.23	0.10	0.26	0.26
Sat Flow, veh/h	1753	1841	1518	1753	3497	1522	1753	3497	1484	1753	3497	1517
Grp Volume(v), veh/h	133	421	12	265	792	29	51	589	33	145	708	76
Grp Sat Flow(s),veh/h/ln	1753	1841	1518	1753	1749	1522	1753	1749	1484	1753	1749	1517
Q Serve(g_s), s	7.4	22.0	0.6	15.0	20.1	1.3	2.8	15.7	1.8	8.2	19.1	3.3
Cycle Q Clear(g_c), s	7.4	22.0	0.6	15.0	20.1	1.3	2.8	15.7	1.8	8.2	19.1	3.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	202	494	407	299	1131	492	132	821	348	177	912	576
V/C Ratio(X)	0.66	0.85	0.03	0.89	0.70	0.06	0.39	0.72	0.09	0.82	0.78	0.13
Avail Cap(c_a), veh/h	347	779	643	558	1901	827	173	1378	585	325	1464	815
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.0	35.2	27.4	41.2	30.1	23.7	44.7	35.8	30.4	44.7	34.8	20.8
Incr Delay (d2), s/veh	1.4	6.9	0.0	3.6	1.1	0.1	1.9	1.2	0.1	8.9	1.5	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.2	10.3	0.2	6.4	8.0	0.5	1.3	6.6	0.6	3.9	8.0	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	44.4	42.2	27.4	44.7	31.2	23.8	46.6	37.0	30.5	53.6	36.3	20.9
LnGrp LOS	D	D	C	D	C	C	D	D	C	D	D	C
Approach Vol, veh/h		566			1086			673			929	
Approach Delay, s/veh		42.4			34.3			37.4			37.7	
Approach LOS		D			C			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.5	29.8	22.0	34.3	12.8	32.5	16.4	39.8
Change Period (Y+Rc), s	* 5.2	6.0	* 4.7	7.0	* 5.2	6.0	* 4.7	7.0
Max Green Setting (Gmax), s	* 19	40.0	* 32	43.0	* 10	42.5	* 20	55.2
Max Q Clear Time (g_c+I1), s	10.2	17.7	17.0	24.0	4.8	21.1	9.4	22.1
Green Ext Time (p_c), s	0.2	3.9	0.3	3.2	0.0	4.9	0.1	8.1

Intersection Summary	
HCM 6th Ctrl Delay	37.3
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



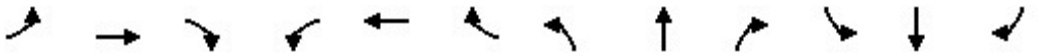
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	81	531	32	79	859	213	23	278	82	98	247	169
Future Volume (veh/h)	81	531	32	79	859	213	23	278	82	98	247	169
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	1.00		0.97	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	88	577	13	86	934	211	25	302	78	107	268	54
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	148	661	544	147	1012	228	289	426	110	197	559	465
Arrive On Green	0.08	0.36	0.36	0.08	0.36	0.36	0.30	0.30	0.30	0.30	0.30	0.30
Sat Flow, veh/h	1767	1856	1527	1767	2847	642	1099	1412	365	992	1856	1544
Grp Volume(v), veh/h	88	577	13	86	578	567	25	0	380	107	268	54
Grp Sat Flow(s),veh/h/ln	1767	1856	1527	1767	1763	1727	1099	0	1776	992	1856	1544
Q Serve(g_s), s	4.0	24.1	0.5	3.9	26.1	26.1	1.6	0.0	15.8	8.9	9.8	2.1
Cycle Q Clear(g_c), s	4.0	24.1	0.5	3.9	26.1	26.1	11.4	0.0	15.8	24.7	9.8	2.1
Prop In Lane	1.00		1.00	1.00		0.37	1.00		0.21	1.00		1.00
Lane Grp Cap(c), veh/h	148	661	544	147	627	614	289	0	535	197	559	465
V/C Ratio(X)	0.59	0.87	0.02	0.59	0.92	0.92	0.09	0.00	0.71	0.54	0.48	0.12
Avail Cap(c_a), veh/h	426	671	552	426	638	624	289	0	535	197	559	465
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.6	24.9	17.3	36.6	25.6	25.6	28.3	0.0	25.7	36.7	23.7	21.0
Incr Delay (d2), s/veh	1.4	12.1	0.0	1.4	18.9	19.6	0.2	0.0	4.5	3.0	0.6	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	11.4	0.1	1.6	12.8	12.7	0.4	0.0	6.8	2.2	4.1	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	38.1	37.0	17.4	38.0	44.6	45.2	28.4	0.0	30.3	39.7	24.3	21.1
LnGrp LOS	D	D	B	D	D	D	C	A	C	D	C	C
Approach Vol, veh/h		678			1231			405			429	
Approach Delay, s/veh		36.8			44.4			30.2			27.7	
Approach LOS		D			D			C			C	

Timer - Assigned Phs	2	3	4	6	7	8
Phs Duration (G+Y+Rc), s	31.5	14.4	37.0	31.5	14.4	37.0
Change Period (Y+Rc), s	6.5	7.5	7.5	6.5	7.5	7.5
Max Green Setting (Gmax), s	25.0	20.0	30.0	25.0	20.0	30.0
Max Q Clear Time (g_c+I1), s	17.8	5.9	26.1	26.7	6.0	28.1
Green Ext Time (p_c), s	1.5	0.1	1.2	0.0	0.1	1.3

Intersection Summary	
HCM 6th Ctrl Delay	37.8
HCM 6th LOS	D

Notes

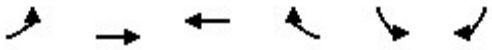
User approved pedestrian interval to be less than phase max green.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	184	626	3	3	1028	224	4	1	8	148	13	170
Future Volume (veh/h)	184	626	3	3	1028	224	4	1	8	148	13	170
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.97	1.00		0.96	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	204	696	3	3	1142	238	4	1	1	164	14	46
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	239	918	4	7	1059	219	11	60	60	198	331	274
Arrive On Green	0.14	0.50	0.50	0.00	0.37	0.37	0.01	0.07	0.07	0.11	0.18	0.18
Sat Flow, veh/h	1767	1846	8	1767	2892	598	1767	833	833	1767	1856	1535
Grp Volume(v), veh/h	204	0	699	3	693	687	4	0	2	164	14	46
Grp Sat Flow(s),veh/h/ln	1767	0	1854	1767	1763	1727	1767	0	1666	1767	1856	1535
Q Serve(g_s), s	10.8	0.0	29.1	0.2	35.0	35.0	0.2	0.0	0.1	8.7	0.6	2.4
Cycle Q Clear(g_c), s	10.8	0.0	29.1	0.2	35.0	35.0	0.2	0.0	0.1	8.7	0.6	2.4
Prop In Lane	1.00		0.00	1.00		0.35	1.00		0.50	1.00		1.00
Lane Grp Cap(c), veh/h	239	0	922	7	645	632	11	0	121	198	331	274
V/C Ratio(X)	0.85	0.00	0.76	0.42	1.07	1.09	0.36	0.00	0.02	0.83	0.04	0.17
Avail Cap(c_a), veh/h	370	0	922	370	645	632	370	0	523	370	582	482
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.4	0.0	19.4	47.5	30.3	30.3	47.3	0.0	41.2	41.5	32.5	33.3
Incr Delay (d2), s/veh	9.4	0.0	3.8	27.2	56.8	61.6	13.7	0.0	0.1	6.4	0.1	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.1	0.0	11.7	0.1	23.5	23.8	0.1	0.0	0.0	4.0	0.3	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	49.8	0.0	23.2	74.7	87.1	91.9	61.0	0.0	41.3	47.9	32.6	33.6
LnGrp LOS	D	A	C	E	F	F	E	A	D	D	C	C
Approach Vol, veh/h		903			1383			6			224	
Approach Delay, s/veh		29.2			89.5			54.4			44.0	
Approach LOS		C			F			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	20.4	42.5	8.1	24.5	7.9	55.1	18.2	14.4
Change Period (Y+Rc), s	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5
Max Green Setting (Gmax), s	20.0	35.0	20.0	30.0	20.0	35.0	20.0	30.0
Max Q Clear Time (g_c+I1), s	12.8	37.0	2.2	4.4	2.2	31.1	10.7	2.1
Green Ext Time (p_c), s	0.2	0.0	0.0	0.2	0.0	1.7	0.2	0.0

Intersection Summary	
HCM 6th Ctrl Delay	63.7
HCM 6th LOS	E



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	252	472	814	292	278	251
Future Volume (veh/h)	252	472	814	292	278	251
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			0.97	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	268	502	866	278	296	57
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	306	1176	976	313	345	307
Arrive On Green	0.17	0.63	0.37	0.37	0.20	0.20
Sat Flow, veh/h	1767	1856	2698	834	1767	1572
Grp Volume(v), veh/h	268	502	586	558	296	57
Grp Sat Flow(s),veh/h/ln	1767	1856	1763	1676	1767	1572
Q Serve(g_s), s	12.9	11.9	27.2	27.3	14.2	2.6
Cycle Q Clear(g_c), s	12.9	11.9	27.2	27.3	14.2	2.6
Prop In Lane	1.00			0.50	1.00	1.00
Lane Grp Cap(c), veh/h	306	1176	660	628	345	307
V/C Ratio(X)	0.88	0.43	0.89	0.89	0.86	0.19
Avail Cap(c_a), veh/h	404	1176	705	670	505	449
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.3	8.1	25.6	25.7	34.1	29.4
Incr Delay (d2), s/veh	14.3	0.3	12.8	13.6	10.6	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.3	3.5	12.2	11.7	6.7	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	49.6	8.4	38.4	39.3	44.6	29.8
LnGrp LOS	D	A	D	D	D	C
Approach Vol, veh/h		770	1144		353	
Approach Delay, s/veh		22.7	38.8		42.2	
Approach LOS		C	D		D	

Timer - Assigned Phs	4	6	7	8
Phs Duration (G+Y+Rc), s	63.0	24.6	22.7	40.3
Change Period (Y+Rc), s	7.5	7.5	7.5	7.5
Max Green Setting (Gmax), s	35.0	25.0	20.0	35.0
Max Q Clear Time (g_c+I1), s	13.9	16.2	14.9	29.3
Green Ext Time (p_c), s	3.2	0.9	0.2	3.4

Intersection Summary	
HCM 6th Ctrl Delay	33.9
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

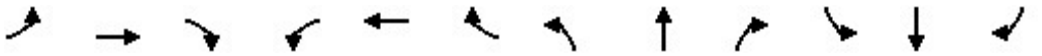
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	8	699	9	24	1084	5	34	3	62	6	1	26
Future Volume (veh/h)	8	699	9	24	1084	5	34	3	62	6	1	26
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	0.99		0.98	0.99		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	9	752	10	26	1166	5	37	3	10	6	1	4
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	29	1555	21	76	1668	7	245	30	33	190	46	63
Arrive On Green	0.02	0.44	0.44	0.04	0.46	0.46	0.11	0.11	0.11	0.11	0.11	0.11
Sat Flow, veh/h	1767	3561	47	1767	3600	15	916	268	296	569	410	560
Grp Volume(v), veh/h	9	372	390	26	571	600	50	0	0	11	0	0
Grp Sat Flow(s),veh/h/ln	1767	1763	1845	1767	1763	1852	1480	0	0	1539	0	0
Q Serve(g_s), s	0.2	6.7	6.7	0.6	11.4	11.4	0.6	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.2	6.7	6.7	0.6	11.4	11.4	1.2	0.0	0.0	0.3	0.0	0.0
Prop In Lane	1.00		0.03	1.00		0.01	0.74		0.20	0.55		0.36
Lane Grp Cap(c), veh/h	29	770	806	76	817	858	309	0	0	299	0	0
V/C Ratio(X)	0.31	0.48	0.48	0.34	0.70	0.70	0.16	0.00	0.00	0.04	0.00	0.00
Avail Cap(c_a), veh/h	800	1396	1462	800	1396	1467	957	0	0	963	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	21.5	8.9	8.9	20.5	9.4	9.4	17.9	0.0	0.0	17.5	0.0	0.0
Incr Delay (d2), s/veh	5.8	0.5	0.5	2.6	1.1	1.0	0.2	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	1.5	1.5	0.3	2.6	2.7	0.4	0.0	0.0	0.1	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	27.3	9.4	9.3	23.1	10.5	10.5	18.1	0.0	0.0	17.5	0.0	0.0
LnGrp LOS	C	A	A	C	B	B	B	A	A	B	A	A
Approach Vol, veh/h		771			1197			50			11	
Approach Delay, s/veh		9.6			10.8			18.1			17.5	
Approach LOS		A			B			B			B	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		11.0	6.9	26.3		11.0	5.7	27.5				
Change Period (Y+Rc), s		6.0	5.0	7.0		6.0	5.0	7.0				
Max Green Setting (Gmax), s		25.0	20.0	35.0		25.0	20.0	35.0				
Max Q Clear Time (g_c+I1), s		3.2	2.6	8.7		2.3	2.2	13.4				
Green Ext Time (p_c), s		0.2	0.0	4.1		0.0	0.0	7.1				

Intersection Summary		
HCM 6th Ctrl Delay		10.5
HCM 6th LOS		B

Notes

User approved pedestrian interval to be less than phase max green.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	217	373	215	101	589	223	310	1021	71	125	290	190
Future Volume (veh/h)	217	373	215	101	589	223	310	1021	71	125	290	190
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.97	1.00		0.97	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781
Adj Flow Rate, veh/h	236	405	189	110	640	241	337	1110	74	136	315	127
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	8	8	8	8	8	8	8	8	8	8	8	8
Cap, veh/h	280	845	389	143	710	267	382	1371	91	172	592	221
Arrive On Green	0.16	0.38	0.38	0.08	0.30	0.30	0.22	0.29	0.29	0.10	0.17	0.17
Sat Flow, veh/h	1697	2234	1028	1697	2386	898	1697	4649	310	1697	3448	1288
Grp Volume(v), veh/h	236	305	289	110	454	427	337	774	410	136	295	147
Grp Sat Flow(s),veh/h/ln	1697	1692	1570	1697	1692	1592	1697	1621	1716	1697	1621	1494
Q Serve(g_s), s	15.3	15.5	15.9	7.2	29.2	29.2	21.8	25.1	25.1	8.9	9.4	10.3
Cycle Q Clear(g_c), s	15.3	15.5	15.9	7.2	29.2	29.2	21.8	25.1	25.1	8.9	9.4	10.3
Prop In Lane	1.00		0.65	1.00		0.56	1.00		0.18	1.00		0.86
Lane Grp Cap(c), veh/h	280	640	594	143	504	474	382	956	506	172	556	256
V/C Ratio(X)	0.84	0.48	0.49	0.77	0.90	0.90	0.88	0.81	0.81	0.79	0.53	0.57
Avail Cap(c_a), veh/h	524	640	594	524	522	491	524	1001	530	524	1001	461
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.9	26.7	26.8	50.9	38.2	38.2	42.5	37.0	37.0	49.7	42.8	43.2
Incr Delay (d2), s/veh	13.5	1.2	1.3	16.9	19.5	20.5	16.7	5.7	10.3	15.5	1.7	4.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.2	6.1	5.8	3.6	14.1	13.4	10.4	10.1	11.4	4.4	3.7	3.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	59.4	27.9	28.2	67.8	57.7	58.8	59.2	42.7	47.3	65.2	44.5	47.5
LnGrp LOS	E	C	C	E	E	E	E	D	D	E	D	D
Approach Vol, veh/h		830			991			1521			578	
Approach Delay, s/veh		37.0			59.3			47.6			50.1	
Approach LOS		D			E			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.5	37.4	13.5	46.9	29.5	23.5	22.7	37.7
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0
Max Q Clear Time (g_c+I1), s	10.9	27.1	9.2	17.9	23.8	12.3	17.3	31.2
Green Ext Time (p_c), s	0.8	5.8	0.6	5.5	1.7	4.7	1.4	2.5

Intersection Summary	
HCM 6th Ctrl Delay	48.7
HCM 6th LOS	D

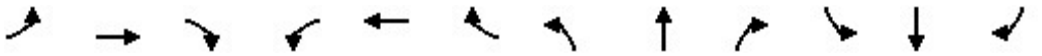
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	298	379	16	100	452	146	11	306	129	255	188	284
Future Volume (veh/h)	298	379	16	100	452	146	11	306	129	255	188	284
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	1.00		0.97	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	310	395	17	104	471	127	11	319	124	266	196	56
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	337	572	25	130	565	151	9	268	104	309	325	269
Arrive On Green	0.19	0.32	0.32	0.07	0.21	0.21	0.22	0.22	0.22	0.17	0.17	0.17
Sat Flow, veh/h	1767	1763	76	1767	2736	732	42	1228	477	1767	1856	1536
Grp Volume(v), veh/h	310	0	412	104	302	296	454	0	0	266	196	56
Grp Sat Flow(s),veh/h/ln	1767	0	1839	1767	1763	1705	1747	0	0	1767	1856	1536
Q Serve(g_s), s	19.7	0.0	22.4	6.6	18.8	19.1	25.0	0.0	0.0	16.8	11.2	3.6
Cycle Q Clear(g_c), s	19.7	0.0	22.4	6.6	18.8	19.1	25.0	0.0	0.0	16.8	11.2	3.6
Prop In Lane	1.00		0.04	1.00		0.43	0.02		0.27	1.00		1.00
Lane Grp Cap(c), veh/h	337	0	596	130	364	352	381	0	0	309	325	269
V/C Ratio(X)	0.92	0.00	0.69	0.80	0.83	0.84	1.19	0.00	0.00	0.86	0.60	0.21
Avail Cap(c_a), veh/h	386	0	596	308	461	446	381	0	0	386	405	335
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.5	0.0	33.7	52.3	43.5	43.7	44.8	0.0	0.0	45.9	43.6	40.5
Incr Delay (d2), s/veh	23.5	0.0	3.4	4.3	9.8	11.0	109.1	0.0	0.0	14.0	1.3	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.5	0.0	10.0	3.0	8.8	8.8	22.0	0.0	0.0	8.3	5.1	1.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	69.0	0.0	37.1	56.6	53.4	54.6	153.9	0.0	0.0	60.0	45.0	40.8
LnGrp LOS	E	A	D	E	D	D	F	A	A	E	D	D
Approach Vol, veh/h		722			702			454			518	
Approach Delay, s/veh		50.8			54.4			153.9			52.2	
Approach LOS		D			D			F			D	

Timer - Assigned Phs	2	3	4	6	7	8
Phs Duration (G+Y+Rc), s	30.0	15.4	44.1	25.0	28.9	30.7
Change Period (Y+Rc), s	5.0	7.0	7.0	5.0	7.0	7.0
Max Green Setting (Gmax), s	25.0	20.0	30.0	25.0	25.0	30.0
Max Q Clear Time (g_c+I1), s	27.0	8.6	24.4	18.8	21.7	21.1
Green Ext Time (p_c), s	0.0	0.1	1.1	0.9	0.2	2.2

Intersection Summary	
HCM 6th Ctrl Delay	71.7
HCM 6th LOS	E

Notes

User approved pedestrian interval to be less than phase max green.



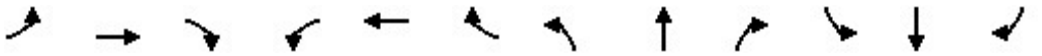
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	52	220	46	93	188	28	41	640	147	42	832	68
Future Volume (veh/h)	52	220	46	93	188	28	41	640	147	42	832	68
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.97	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	60	253	16	107	216	29	47	736	101	48	956	37
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	262	571	475	139	246	30	128	1175	509	266	1515	673
Arrive On Green	0.31	0.31	0.31	0.31	0.31	0.31	0.07	0.34	0.34	0.15	0.43	0.43
Sat Flow, veh/h	1115	1841	1532	296	793	98	1753	3497	1514	1753	3497	1555
Grp Volume(v), veh/h	60	253	16	352	0	0	47	736	101	48	956	37
Grp Sat Flow(s),veh/h/ln	1115	1841	1532	1187	0	0	1753	1749	1514	1753	1749	1555
Q Serve(g_s), s	0.0	11.0	0.7	18.6	0.0	0.0	2.6	17.7	4.7	2.4	21.3	1.4
Cycle Q Clear(g_c), s	7.8	11.0	0.7	29.6	0.0	0.0	2.6	17.7	4.7	2.4	21.3	1.4
Prop In Lane	1.00		1.00	0.30		0.08	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	262	571	475	415	0	0	128	1175	509	266	1515	673
V/C Ratio(X)	0.23	0.44	0.03	0.85	0.00	0.00	0.37	0.63	0.20	0.18	0.63	0.05
Avail Cap(c_a), veh/h	262	571	475	415	0	0	245	1175	509	266	1515	673
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.5	27.6	24.1	36.0	0.0	0.0	44.2	27.9	23.6	37.0	22.1	16.5
Incr Delay (d2), s/veh	0.4	0.5	0.0	15.2	0.0	0.0	0.7	2.5	0.9	0.1	2.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	4.7	0.3	9.6	0.0	0.0	1.1	7.2	1.7	1.0	8.3	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	27.0	28.1	24.1	51.2	0.0	0.0	44.8	30.4	24.5	37.1	24.1	16.6
LnGrp LOS	C	C	C	D	A	A	D	C	C	D	C	B
Approach Vol, veh/h		329			352			884			1041	
Approach Delay, s/veh		27.7			51.2			30.5			24.5	
Approach LOS		C			D			C			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	21.7	40.1		38.2	12.0	49.8		38.2				
Change Period (Y+Rc), s	6.5	* 6.5		7.2	* 4.7	6.5		7.2				
Max Green Setting (Gmax), s	14.0	* 34		31.0	* 14	36.6		31.0				
Max Q Clear Time (g_c+I1), s	4.4	19.7		13.0	4.6	23.3		31.6				
Green Ext Time (p_c), s	0.0	4.1		1.5	0.0	5.1		0.0				

Intersection Summary		
HCM 6th Ctrl Delay		30.5
HCM 6th LOS		C

Notes

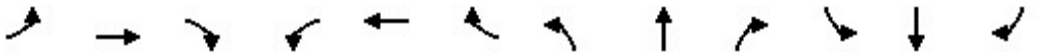
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	77	42	33	38	125	203	98	1140	32	87	455	62
Future Volume (veh/h)	77	42	33	38	125	203	98	1140	32	87	455	62
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781
Adj Flow Rate, veh/h	84	46	16	41	136	35	107	1239	34	95	495	62
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	8	8	8	8	8	8	8	8	8	8	8	8
Cap, veh/h	109	166	58	77	202	169	136	1905	52	121	1156	144
Arrive On Green	0.06	0.13	0.13	0.05	0.11	0.11	0.08	0.39	0.39	0.07	0.38	0.38
Sat Flow, veh/h	1697	1253	436	1697	1781	1486	1697	4863	133	1697	3020	377
Grp Volume(v), veh/h	84	0	62	41	136	35	107	826	447	95	276	281
Grp Sat Flow(s),veh/h/ln	1697	0	1689	1697	1781	1486	1697	1621	1755	1697	1692	1704
Q Serve(g_s), s	3.8	0.0	2.6	1.8	5.7	1.7	4.8	16.2	16.2	4.3	9.4	9.5
Cycle Q Clear(g_c), s	3.8	0.0	2.6	1.8	5.7	1.7	4.8	16.2	16.2	4.3	9.4	9.5
Prop In Lane	1.00		0.26	1.00		1.00	1.00		0.08	1.00		0.22
Lane Grp Cap(c), veh/h	109	0	224	77	202	169	136	1270	687	121	648	652
V/C Ratio(X)	0.77	0.00	0.28	0.53	0.67	0.21	0.79	0.65	0.65	0.78	0.43	0.43
Avail Cap(c_a), veh/h	435	0	758	435	799	667	544	1871	1012	544	976	983
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.9	0.0	30.5	36.4	33.2	31.4	35.2	19.4	19.4	35.6	17.7	17.8
Incr Delay (d2), s/veh	4.2	0.0	0.9	2.1	5.4	0.9	3.8	0.8	1.5	4.2	0.6	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	0.0	1.1	0.8	2.6	0.6	2.0	5.3	5.9	1.8	3.3	3.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	40.1	0.0	31.4	38.6	38.6	32.2	39.0	20.2	20.9	39.8	18.4	18.4
LnGrp LOS	D	A	C	D	D	C	D	C	C	D	B	B
Approach Vol, veh/h		146			212			1380			652	
Approach Delay, s/veh		36.4			37.6			21.9			21.5	
Approach LOS		D			D			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.1	38.0	10.0	16.8	13.7	37.4	11.5	15.3
Change Period (Y+Rc), s	7.5	7.5	6.5	6.5	7.5	7.5	6.5	6.5
Max Green Setting (Gmax), s	25.0	45.0	20.0	35.0	25.0	45.0	20.0	35.0
Max Q Clear Time (g_c+I1), s	6.3	18.2	3.8	4.6	6.8	11.5	5.8	7.7
Green Ext Time (p_c), s	0.1	12.3	0.0	0.4	0.1	4.7	0.1	1.2

Intersection Summary	
HCM 6th Ctrl Delay	24.0
HCM 6th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	59	143	80	67	393	34	163	683	39	43	797	120
Future Volume (veh/h)	59	143	80	67	393	34	163	683	39	43	797	120
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.97	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	64	155	29	73	427	35	177	742	17	47	866	46
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	181	608	507	405	554	45	410	1269	550	141	1129	494
Arrive On Green	0.33	0.33	0.33	0.33	0.33	0.33	0.12	0.36	0.36	0.08	0.32	0.32
Sat Flow, veh/h	914	1841	1532	1177	1676	137	3401	3497	1515	1753	3497	1532
Grp Volume(v), veh/h	64	155	29	73	0	462	177	742	17	47	866	46
Grp Sat Flow(s),veh/h/ln	914	1841	1532	1177	0	1813	1700	1749	1515	1753	1749	1532
Q Serve(g_s), s	5.5	5.0	1.1	3.9	0.0	18.6	3.9	14.0	0.6	2.1	18.1	1.7
Cycle Q Clear(g_c), s	24.1	5.0	1.1	8.9	0.0	18.6	3.9	14.0	0.6	2.1	18.1	1.7
Prop In Lane	1.00		1.00	1.00		0.08	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	181	608	507	405	0	599	410	1269	550	141	1129	494
V/C Ratio(X)	0.35	0.25	0.06	0.18	0.00	0.77	0.43	0.58	0.03	0.33	0.77	0.09
Avail Cap(c_a), veh/h	216	678	565	522	0	780	1045	1933	838	538	1933	847
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.3	19.9	18.6	23.2	0.0	24.5	33.2	21.0	16.7	35.4	24.8	19.2
Incr Delay (d2), s/veh	1.2	0.2	0.0	0.2	0.0	3.5	0.3	0.4	0.0	0.5	1.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	2.0	0.3	1.0	0.0	7.8	1.5	5.0	0.2	0.8	6.7	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	36.5	20.1	18.6	23.4	0.0	28.0	33.5	21.4	16.7	35.9	25.9	19.3
LnGrp LOS	D	C	B	C	A	C	C	C	B	D	C	B
Approach Vol, veh/h		248			535			936			959	
Approach Delay, s/veh		24.2			27.4			23.6			26.1	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.2	36.0		34.1	14.5	32.8		34.1				
Change Period (Y+Rc), s	* 4.7	6.5		7.2	* 4.7	6.5		7.2				
Max Green Setting (Gmax), s	* 25	45.0		30.0	* 25	45.0		35.0				
Max Q Clear Time (g_c+I1), s	4.1	16.0		26.1	5.9	20.1		20.6				
Green Ext Time (p_c), s	0.0	4.8		0.4	0.3	5.7		2.5				

Intersection Summary	
HCM 6th Ctrl Delay	25.3
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

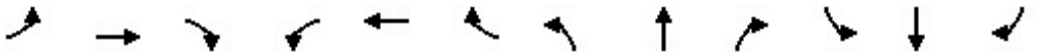
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	35	112	73	287	327	108	113	914	156	56	444	70
Future Volume (veh/h)	35	112	73	287	327	108	113	914	156	56	444	70
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	36	117	0	299	341	38	118	952	0	58	462	30
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	125	527		505	483	401	166	1411		88	1256	544
Arrive On Green	0.04	0.15	0.00	0.15	0.26	0.26	0.09	0.40	0.00	0.05	0.36	0.36
Sat Flow, veh/h	3401	3497	1560	3401	1841	1530	1753	3497	1560	1753	3497	1515
Grp Volume(v), veh/h	36	117	0	299	341	38	118	952	0	58	462	30
Grp Sat Flow(s),veh/h/ln	1700	1749	1560	1700	1841	1530	1753	1749	1560	1753	1749	1515
Q Serve(g_s), s	0.7	1.9	0.0	5.3	10.8	1.2	4.2	14.4	0.0	2.1	6.3	0.8
Cycle Q Clear(g_c), s	0.7	1.9	0.0	5.3	10.8	1.2	4.2	14.4	0.0	2.1	6.3	0.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	125	527		505	483	401	166	1411		88	1256	544
V/C Ratio(X)	0.29	0.22		0.59	0.71	0.09	0.71	0.67		0.66	0.37	0.06
Avail Cap(c_a), veh/h	1841	1893		1841	996	828	949	1893		949	1893	820
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.3	24.1	0.0	25.7	21.6	18.1	28.4	15.8	0.0	30.2	15.3	13.5
Incr Delay (d2), s/veh	2.7	0.5	0.0	2.4	4.0	0.2	11.4	1.2	0.0	16.7	0.4	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.7	0.0	2.1	4.5	0.4	2.1	4.6	0.0	1.2	2.1	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	33.0	24.6	0.0	28.1	25.6	18.3	39.9	17.0	0.0	46.9	15.7	13.6
LnGrp LOS	C	C		C	C	B	D	B		D	B	B
Approach Vol, veh/h		153	A		678			1070	A		550	
Approach Delay, s/veh		26.6			26.3			19.5			18.9	
Approach LOS		C			C			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.2	30.1	13.6	13.7	10.1	27.2	6.4	21.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0
Max Q Clear Time (g_c+I1), s	4.1	16.4	7.3	3.9	6.2	8.3	2.7	12.8
Green Ext Time (p_c), s	0.3	9.7	2.3	1.2	0.7	5.4	0.2	3.7

Intersection Summary	
HCM 6th Ctrl Delay	21.7
HCM 6th LOS	C

Notes

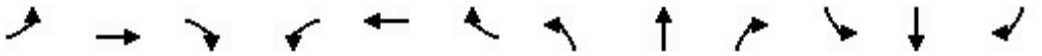
Unsignalized Delay for [NBR, EBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	103	352	20	161	535	188	31	304	110	149	220	51
Future Volume (veh/h)	103	352	20	161	535	188	31	304	110	149	220	51
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.96	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	110	374	5	171	569	39	33	323	34	159	234	42
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	149	979	297	314	1280	304	82	453	376	198	925	163
Arrive On Green	0.09	0.19	0.19	0.09	0.20	0.20	0.05	0.25	0.25	0.11	0.31	0.31
Sat Flow, veh/h	1753	5025	1526	3401	6332	1504	1753	1841	1529	1753	2962	522
Grp Volume(v), veh/h	110	374	5	171	569	39	33	323	34	159	136	140
Grp Sat Flow(s),veh/h/ln	1753	1675	1526	1700	1583	1504	1753	1841	1529	1753	1749	1735
Q Serve(g_s), s	4.5	4.8	0.2	3.5	5.8	1.6	1.3	11.8	1.3	6.5	4.3	4.4
Cycle Q Clear(g_c), s	4.5	4.8	0.2	3.5	5.8	1.6	1.3	11.8	1.3	6.5	4.3	4.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.30
Lane Grp Cap(c), veh/h	149	979	297	314	1280	304	82	453	376	198	546	542
V/C Ratio(X)	0.74	0.38	0.02	0.54	0.44	0.13	0.40	0.71	0.09	0.80	0.25	0.26
Avail Cap(c_a), veh/h	477	2734	830	925	3446	819	477	1177	978	477	1118	1110
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.8	25.7	23.9	31.9	25.7	24.0	34.0	25.3	21.4	31.8	18.8	18.9
Incr Delay (d2), s/veh	2.7	0.3	0.0	0.5	0.3	0.3	1.2	0.8	0.0	2.9	0.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	1.7	0.1	1.3	1.9	0.5	0.6	4.7	0.4	2.7	1.6	1.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	35.5	26.1	23.9	32.4	26.1	24.3	35.2	26.1	21.4	34.7	18.9	19.0
LnGrp LOS	D	C	C	C	C	C	D	C	C	C	B	B
Approach Vol, veh/h		489			779			390			435	
Approach Delay, s/veh		28.2			27.4			26.5			24.7	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.8	24.6	13.3	20.8	9.9	29.5	12.8	21.4
Change Period (Y+Rc), s	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
Max Green Setting (Gmax), s	20.0	47.0	20.0	40.0	20.0	47.0	20.0	40.0
Max Q Clear Time (g_c+I1), s	8.5	13.8	5.5	6.8	3.3	6.4	6.5	7.8
Green Ext Time (p_c), s	0.1	1.1	0.2	3.4	0.0	0.9	0.1	5.4

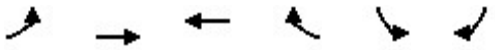
Intersection Summary	
HCM 6th Ctrl Delay	26.8
HCM 6th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	117	443	101	213	676	263	139	572	316	118	174	39
Future Volume (veh/h)	117	443	101	213	676	263	139	572	316	118	174	39
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	122	461	30	222	704	112	145	596	72	123	181	10
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	280	1383	421	320	1005	440	230	969	294	202	646	281
Arrive On Green	0.08	0.28	0.28	0.09	0.29	0.29	0.07	0.19	0.19	0.06	0.18	0.18
Sat Flow, veh/h	3401	5025	1530	3401	3497	1531	3401	5025	1526	3401	3497	1525
Grp Volume(v), veh/h	122	461	30	222	704	112	145	596	72	123	181	10
Grp Sat Flow(s),veh/h/ln	1700	1675	1530	1700	1749	1531	1700	1675	1526	1700	1749	1525
Q Serve(g_s), s	2.7	5.8	1.1	5.0	14.2	4.5	3.3	8.6	3.2	2.8	3.5	0.4
Cycle Q Clear(g_c), s	2.7	5.8	1.1	5.0	14.2	4.5	3.3	8.6	3.2	2.8	3.5	0.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	280	1383	421	320	1005	440	230	969	294	202	646	281
V/C Ratio(X)	0.44	0.33	0.07	0.69	0.70	0.25	0.63	0.62	0.24	0.61	0.28	0.04
Avail Cap(c_a), veh/h	1501	2218	676	1501	1544	676	1072	1585	481	1072	1544	673
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.6	22.9	21.2	34.8	25.2	21.7	36.0	29.3	27.1	36.4	27.8	26.5
Incr Delay (d2), s/veh	0.8	0.2	0.1	2.0	1.1	0.4	2.1	0.7	0.5	2.2	0.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	2.0	0.4	2.0	5.3	1.5	1.3	3.2	1.1	1.1	1.4	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	35.4	23.1	21.3	36.8	26.3	22.1	38.1	30.0	27.6	38.6	28.1	26.6
LnGrp LOS	D	C	C	D	C	C	D	C	C	D	C	C
Approach Vol, veh/h		613			1038			813			314	
Approach Delay, s/veh		25.5			28.1			31.2			32.2	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.0	29.3	12.9	22.1	14.0	30.3	12.2	22.8
Change Period (Y+Rc), s	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5
Max Green Setting (Gmax), s	35.0	35.0	25.0	35.0	35.0	35.0	25.0	25.0
Max Q Clear Time (g_c+I1), s	7.0	7.8	5.3	5.5	4.7	16.2	4.8	10.6
Green Ext Time (p_c), s	0.5	3.1	0.3	1.2	0.3	5.2	0.2	3.5

Intersection Summary	
HCM 6th Ctrl Delay	28.9
HCM 6th LOS	C



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑	↑↑		↰↰	↱
Traffic Volume (veh/h)	0	658	617	0	228	1065
Future Volume (veh/h)	0	658	617	0	228	1065
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	0	1841	1841	0	1841	1841
Adj Flow Rate, veh/h	0	715	671	0	248	1021
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	4	4	0	4	4
Cap, veh/h	0	1491	1038	0	754	1342
Arrive On Green	0.00	0.30	0.30	0.00	0.43	0.43
Sat Flow, veh/h	0	5356	3681	0	1753	3120
Grp Volume(v), veh/h	0	715	671	0	248	1021
Grp Sat Flow(s),veh/h/ln	0	1675	1749	0	1753	1560
Q Serve(g_s), s	0.0	5.3	7.5	0.0	4.2	12.5
Cycle Q Clear(g_c), s	0.0	5.3	7.5	0.0	4.2	12.5
Prop In Lane	0.00			0.00	1.00	1.00
Lane Grp Cap(c), veh/h	0	1491	1038	0	754	1342
V/C Ratio(X)	0.00	0.48	0.65	0.00	0.33	0.76
Avail Cap(c_a), veh/h	0	3350	2331	0	1169	2080
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	13.0	13.8	0.0	8.5	10.9
Incr Delay (d2), s/veh	0.0	0.2	0.7	0.0	0.3	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	1.4	2.1	0.0	1.1	2.9
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.0	13.2	14.5	0.0	8.8	11.8
LnGrp LOS	A	B	B	A	A	B
Approach Vol, veh/h		715	671		1269	
Approach Delay, s/veh		13.2	14.5		11.2	
Approach LOS		B	B		B	

Timer - Assigned Phs	2	4	6
Phs Duration (G+Y+Rc), s	20.2	24.9	20.2
Change Period (Y+Rc), s	6.8	5.5	6.8
Max Green Setting (Gmax), s	30.0	30.0	30.0
Max Q Clear Time (g_c+I1), s	7.3	14.5	9.5
Green Ext Time (p_c), s	4.3	4.9	3.8

Intersection Summary	
HCM 6th Ctrl Delay	12.6
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	307	579	172	281	454	318
Future Volume (veh/h)	307	579	172	281	454	318
Initial Q (Qb), veh	0	216	0	0	0	182
Ped-Bike Adj(A_pbT)		0.97	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	313	378	176	287	463	95
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	4	4	4	4	4	4
Cap, veh/h	1752	1072	266	2496	1223	544
Arrive On Green	0.29	0.29	0.10	0.51	0.21	0.21
Sat Flow, veh/h	5191	1511	3401	5191	3506	1560
Grp Volume(v), veh/h	313	378	176	287	463	95
Grp Sat Flow(s),veh/h/ln	1675	1511	1700	1675	1753	1560
Q Serve(g_s), s	2.2	7.9	2.3	1.4	5.7	2.4
Cycle Q Clear(g_c), s	2.2	7.9	2.3	1.4	5.7	2.4
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1752	1072	266	2496	1223	544
V/C Ratio(X)	0.18	0.35	0.66	0.11	0.38	0.17
Avail Cap(c_a), veh/h	3204	1286	2169	3204	2236	995
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.5	8.5	38.5	11.6	21.0	28.0
Incr Delay (d2), s/veh	0.0	0.2	2.8	0.0	0.2	0.2
Initial Q Delay(d3),s/veh	0.0	434.1	0.0	0.0	0.0	833.2
%ile BackOfQ(50%),veh/ln	1.3	150.6	1.8	0.8	3.5	136.7
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	19.5	442.7	41.3	11.6	21.2	861.4
LnGrp LOS	B	F	D	B	C	F
Approach Vol, veh/h	691			463	558	
Approach Delay, s/veh	251.0			22.9	164.3	
Approach LOS	F			C	F	

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	10.5	20.8				31.3	15.7
Change Period (Y+Rc), s	6.0	7.3				7.3	6.0
Max Green Setting (Gmax), s	30.0	30.0				30.0	30.0
Max Q Clear Time (g_c+I1), s	4.3	9.9				3.4	7.7
Green Ext Time (p_c), s	0.5	3.0				1.6	2.1

Intersection Summary		
HCM 6th Ctrl Delay	161.0	
HCM 6th LOS	F	

Notes

User approved pedestrian interval to be less than phase max green.
User approved volume balancing among the lanes for turning movement.

Intersection	
Intersection Delay, s/veh	0
Intersection LOS	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	8	8	8	8	8	8	8	8	8	8	8	8
Mvmt Flow	0	0	0	0	0	0	0	0	0	0	0	0
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	0	0	0	0
HCM LOS	-	-	-	-

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	0%	0%	0%	0%
Vol Thru, %	100%	100%	100%	100%
Vol Right, %	0%	0%	0%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	0	0	0	0
LT Vol	0	0	0	0
Through Vol	0	0	0	0
RT Vol	0	0	0	0
Lane Flow Rate	0	0	0	0
Geometry Grp	1	1	1	1
Degree of Util (X)	0	0	0	0
Departure Headway (Hd)	4.036	4.036	4.036	4.036
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	0	0	0	0
Service Time	2.036	2.036	2.036	2.036
HCM Lane V/C Ratio	0	0	0	0
HCM Control Delay	7	7	7	7
HCM Lane LOS	N	N	N	N
HCM 95th-tile Q	0	0	0	0

Intersection	
Intersection Delay, s/veh	10.6
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	31	10	22	158	53	36	10	126	71	22	134	27
Future Vol, veh/h	31	10	22	158	53	36	10	126	71	22	134	27
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles, %	8	8	8	8	8	8	8	8	8	8	8	8
Mvmt Flow	33	11	24	170	57	39	11	135	76	24	144	29
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	9.1	11.5	10.3	10.3
HCM LOS	A	B	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	5%	49%	64%	12%
Vol Thru, %	61%	16%	21%	73%
Vol Right, %	34%	35%	15%	15%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	207	63	247	183
LT Vol	10	31	158	22
Through Vol	126	10	53	134
RT Vol	71	22	36	27
Lane Flow Rate	223	68	266	197
Geometry Grp	1	1	1	1
Degree of Util (X)	0.307	0.103	0.383	0.281
Departure Headway (Hd)	4.973	5.467	5.195	5.132
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	714	660	685	691
Service Time	3.069	3.467	3.292	3.23
HCM Lane V/C Ratio	0.312	0.103	0.388	0.285
HCM Control Delay	10.3	9.1	11.5	10.3
HCM Lane LOS	B	A	B	B
HCM 95th-tile Q	1.3	0.3	1.8	1.2

Intersection	
Intersection Delay, s/veh	12.4
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	9	172	8	7	462	24	13	28	7	6	9	6
Future Vol, veh/h	9	172	8	7	462	24	13	28	7	6	9	6
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles, %	4	4	4	4	4	4	4	4	4	4	4	4
Mvmt Flow	9	177	8	7	476	25	13	29	7	6	9	6
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	9.3	14.1	9	8.7
HCM LOS	A	B	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	27%	5%	1%	29%
Vol Thru, %	58%	91%	94%	43%
Vol Right, %	15%	4%	5%	29%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	48	189	493	21
LT Vol	13	9	7	6
Through Vol	28	172	462	9
RT Vol	7	8	24	6
Lane Flow Rate	49	195	508	22
Geometry Grp	1	1	1	1
Degree of Util (X)	0.076	0.253	0.614	0.033
Departure Headway (Hd)	5.518	4.672	4.351	5.488
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	647	768	828	649
Service Time	3.572	2.706	2.377	3.548
HCM Lane V/C Ratio	0.076	0.254	0.614	0.034
HCM Control Delay	9	9.3	14.1	8.7
HCM Lane LOS	A	A	B	A
HCM 95th-tile Q	0.2	1	4.3	0.1

Intersection	
Int Delay, s/veh	1.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	81	605	24	182	1046	47	13	21	142	10	21	88
Future Vol, veh/h	81	605	24	182	1046	47	13	21	142	10	21	88
Conflicting Peds, #/hr	5	0	5	5	0	5	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	127	-	-	143	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	92	688	27	207	1189	53	15	24	161	11	24	100

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1247	0	0	720	0	0	1912	2552	707	2613	2539	626
Stage 1	-	-	-	-	-	-	891	891	-	1635	1635	-
Stage 2	-	-	-	-	-	-	1021	1661	-	978	904	-
Critical Hdwy	4.145	-	-	4.145	-	-	7.345	6.545	6.245	7.345	6.545	6.945
Critical Hdwy Stg 1	-	-	-	-	-	-	6.145	5.545	-	6.545	5.545	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.545	5.545	-	6.145	5.545	-
Follow-up Hdwy	2.2285	-	-	2.2285	-	-	3.5285	4.0285	3.3285	3.5285	4.0285	3.3285
Pot Cap-1 Maneuver	552	-	-	874	-	-	46	26	432	14	27	426
Stage 1	-	-	-	-	-	-	334	358	-	105	157	-
Stage 2	-	-	-	-	-	-	252	152	-	299	353	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	549	-	-	870	-	-	-	~ 16	430	-	~ 17	424
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	~ 16	-	-	~ 17	-
Stage 1	-	-	-	-	-	-	277	296	-	87	119	-
Stage 2	-	-	-	-	-	-	117	115	-	143	292	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.5	1.5		
HCM LOS			-	-

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	549	-	-	870	-	-	-
HCM Lane V/C Ratio	-	0.168	-	-	0.238	-	-	-
HCM Control Delay (s)	-	12.9	-	-	10.4	-	-	-
HCM Lane LOS	-	B	-	-	B	-	-	-
HCM 95th %tile Q(veh)	-	0.6	-	-	0.9	-	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	77.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	10	638	118	56	1069	17	102	12	82	20	10	42
Future Vol, veh/h	10	638	118	56	1069	17	102	12	82	20	10	42
Conflicting Peds, #/hr	5	0	5	5	0	5	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	69	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	11	693	128	61	1162	18	111	13	89	22	11	46

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1185	0	0	826	0	0	1493	2091	762	2128	2146	595
Stage 1	-	-	-	-	-	-	784	784	-	1298	1298	-
Stage 2	-	-	-	-	-	-	709	1307	-	830	848	-
Critical Hdwy	4.145	-	-	4.145	-	-	7.345	6.545	6.245	7.345	6.545	6.945
Critical Hdwy Stg 1	-	-	-	-	-	-	6.145	5.545	-	6.545	5.545	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.545	5.545	-	6.145	5.545	-
Follow-up Hdwy	2.2285	-	-	2.2285	-	-	3.5285	4.0285	3.3285	3.5285	4.0285	3.3285
Pot Cap-1 Maneuver	583	-	-	797	-	-	~ 92	52	402	32	48	446
Stage 1	-	-	-	-	-	-	383	401	-	170	229	-
Stage 2	-	-	-	-	-	-	390	227	-	362	375	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	580	-	-	793	-	-	~ 62	47	400	~ 18	43	444
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 62	47	-	~ 18	43	-
Stage 1	-	-	-	-	-	-	374	391	-	166	210	-
Stage 2	-	-	-	-	-	-	306	208	-	267	366	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.5	$ 686.6	$ 462.8
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	93	580	-	-	793	-	-	50
HCM Lane V/C Ratio	2.291	0.019	-	-	0.077	-	-	1.565
HCM Control Delay (s)	$ 686.6	11.3	-	-	9.9	-	-	$ 462.8
HCM Lane LOS	F	B	-	-	A	-	-	F
HCM 95th %tile Q(veh)	19.2	0.1	-	-	0.2	-	-	7.5

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	8.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	27	694	15	6	1045	11	55	4	20	13	3	40
Future Vol, veh/h	27	694	15	6	1045	11	55	4	20	13	3	40
Conflicting Peds, #/hr	5	0	5	5	0	5	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	98	-	-	47	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	30	771	17	7	1161	12	61	4	22	14	3	44

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1178	0	0	793	0	0	1441	2037	785	2039	2039	592
Stage 1	-	-	-	-	-	-	845	845	-	1186	1186	-
Stage 2	-	-	-	-	-	-	596	1192	-	853	853	-
Critical Hdwy	4.145	-	-	4.145	-	-	7.345	6.545	6.245	7.345	6.545	6.945
Critical Hdwy Stg 1	-	-	-	-	-	-	6.145	5.545	-	6.545	5.545	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.545	5.545	-	6.145	5.545	-
Follow-up Hdwy	2.2285	-	-	2.2285	-	-	3.5285	4.0285	3.3285	3.5285	4.0285	3.3285
Pot Cap-1 Maneuver	586	-	-	820	-	-	101	56	390	37	56	448
Stage 1	-	-	-	-	-	-	355	376	-	200	260	-
Stage 2	-	-	-	-	-	-	456	258	-	351	373	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	583	-	-	816	-	-	82	52	388	31	52	446
Mov Cap-2 Maneuver	-	-	-	-	-	-	82	52	-	31	52	-
Stage 1	-	-	-	-	-	-	335	355	-	189	256	-
Stage 2	-	-	-	-	-	-	402	254	-	310	352	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.4	0.1	139	89.2
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	99	583	-	-	816	-	-	99
HCM Lane V/C Ratio	0.887	0.051	-	-	0.008	-	-	0.629
HCM Control Delay (s)	139	11.5	-	-	9.4	-	-	89.2
HCM Lane LOS	F	B	-	-	A	-	-	F
HCM 95th %tile Q(veh)	5.1	0.2	-	-	0	-	-	3.1

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	749	1096	22	1	11
Future Vol, veh/h	0	749	1096	22	1	11
Conflicting Peds, #/hr	5	0	0	5	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	25	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	0	814	1191	24	1	12

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1220	0	-	0	2022	613
Stage 1	-	-	-	-	1208	-
Stage 2	-	-	-	-	814	-
Critical Hdwy	4.145	-	-	-	6.645	6.945
Critical Hdwy Stg 1	-	-	-	-	5.845	-
Critical Hdwy Stg 2	-	-	-	-	5.445	-
Follow-up Hdwy	2.2285	-	-	-	3.5285	3.3285
Pot Cap-1 Maneuver	565	-	-	-	56	434
Stage 1	-	-	-	-	245	-
Stage 2	-	-	-	-	432	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	562	-	-	-	55	432
Mov Cap-2 Maneuver	-	-	-	-	165	-
Stage 1	-	-	-	-	244	-
Stage 2	-	-	-	-	430	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	14.8
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	562	-	-	-	381
HCM Lane V/C Ratio	-	-	-	-	0.034
HCM Control Delay (s)	0	-	-	-	14.8
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.1

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	749	1116	7	0	3
Future Vol, veh/h	0	749	1116	7	0	3
Conflicting Peds, #/hr	5	0	0	5	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	25	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	0	814	1213	8	0	3

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1226	0	-	0	2036	616
Stage 1	-	-	-	-	1222	-
Stage 2	-	-	-	-	814	-
Critical Hdwy	4.145	-	-	-	6.645	6.945
Critical Hdwy Stg 1	-	-	-	-	5.845	-
Critical Hdwy Stg 2	-	-	-	-	5.445	-
Follow-up Hdwy	2.2285	-	-	-	3.5285	3.3285
Pot Cap-1 Maneuver	562	-	-	-	55	432
Stage 1	-	-	-	-	241	-
Stage 2	-	-	-	-	432	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	559	-	-	-	54	430
Mov Cap-2 Maneuver	-	-	-	-	163	-
Stage 1	-	-	-	-	240	-
Stage 2	-	-	-	-	430	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	13.4
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	559	-	-	-	430
HCM Lane V/C Ratio	-	-	-	-	0.008
HCM Control Delay (s)	0	-	-	-	13.4
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	2	767	1102	15	8	2
Future Vol, veh/h	2	767	1102	15	8	2
Conflicting Peds, #/hr	5	0	0	5	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	2	834	1198	16	9	2

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1219	0	-	0	2049	612
Stage 1	-	-	-	-	1211	-
Stage 2	-	-	-	-	838	-
Critical Hdwy	4.145	-	-	-	6.645	6.945
Critical Hdwy Stg 1	-	-	-	-	5.845	-
Critical Hdwy Stg 2	-	-	-	-	5.445	-
Follow-up Hdwy	2.2285	-	-	-	3.5285	3.3285
Pot Cap-1 Maneuver	565	-	-	-	54	435
Stage 1	-	-	-	-	244	-
Stage 2	-	-	-	-	421	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	562	-	-	-	53	433
Mov Cap-2 Maneuver	-	-	-	-	162	-
Stage 1	-	-	-	-	242	-
Stage 2	-	-	-	-	419	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	25.7
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	562	-	-	-	185
HCM Lane V/C Ratio	0.004	-	-	-	0.059
HCM Control Delay (s)	11.4	-	-	-	25.7
HCM Lane LOS	B	-	-	-	D
HCM 95th %tile Q(veh)	0	-	-	-	0.2

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	13	762	1104	17	16	17
Future Vol, veh/h	13	762	1104	17	16	17
Conflicting Peds, #/hr	5	0	0	5	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	350	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	14	837	1213	19	18	19

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1237	0	-	0	2093	621
Stage 1	-	-	-	-	1228	-
Stage 2	-	-	-	-	865	-
Critical Hdwy	4.145	-	-	-	6.645	6.945
Critical Hdwy Stg 1	-	-	-	-	5.845	-
Critical Hdwy Stg 2	-	-	-	-	5.445	-
Follow-up Hdwy	2.2285	-	-	-	3.5285	3.3285
Pot Cap-1 Maneuver	556	-	-	-	50	429
Stage 1	-	-	-	-	239	-
Stage 2	-	-	-	-	409	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	553	-	-	-	48	427
Mov Cap-2 Maneuver	-	-	-	-	155	-
Stage 1	-	-	-	-	232	-
Stage 2	-	-	-	-	407	-

Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	23.5
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	553	-	-	-	231
HCM Lane V/C Ratio	0.026	-	-	-	0.157
HCM Control Delay (s)	11.7	-	-	-	23.5
HCM Lane LOS	B	-	-	-	C
HCM 95th %tile Q(veh)	0.1	-	-	-	0.5

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	27	727	1130	14	2	2
Future Vol, veh/h	27	727	1130	14	2	2
Conflicting Peds, #/hr	5	0	0	5	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	175	-	-	-	0	76
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	30	799	1242	15	2	2

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1262	0	-	0	2114	634
Stage 1	-	-	-	-	1255	-
Stage 2	-	-	-	-	859	-
Critical Hdwy	4.145	-	-	-	6.645	6.945
Critical Hdwy Stg 1	-	-	-	-	5.845	-
Critical Hdwy Stg 2	-	-	-	-	5.445	-
Follow-up Hdwy	2.2285	-	-	-	3.5285	3.3285
Pot Cap-1 Maneuver	544	-	-	-	49	421
Stage 1	-	-	-	-	231	-
Stage 2	-	-	-	-	412	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	541	-	-	-	46	419
Mov Cap-2 Maneuver	-	-	-	-	46	-
Stage 1	-	-	-	-	217	-
Stage 2	-	-	-	-	410	-

Approach	EB	WB	SB
HCM Control Delay, s	0.4	0	50.4
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	541	-	-	-	46	419
HCM Lane V/C Ratio	0.055	-	-	-	0.048	0.005
HCM Control Delay (s)	12	-	-	-	87.2	13.6
HCM Lane LOS	B	-	-	-	F	B
HCM 95th %tile Q(veh)	0.2	-	-	-	0.1	0

Intersection	
Int Delay, s/veh	1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	725	27	16	1095	33	18
Future Vol, veh/h	725	27	16	1095	33	18
Conflicting Peds, #/hr	0	5	5	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	200	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	780	29	17	1177	35	19

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	814	0	1423	800
Stage 1	-	-	-	-	800	-
Stage 2	-	-	-	-	623	-
Critical Hdwy	-	-	4.145	-	6.645	6.245
Critical Hdwy Stg 1	-	-	-	-	5.445	-
Critical Hdwy Stg 2	-	-	-	-	5.845	-
Follow-up Hdwy	-	-	2.2285	-	3.5285	3.3285
Pot Cap-1 Maneuver	-	-	806	-	137	382
Stage 1	-	-	-	-	439	-
Stage 2	-	-	-	-	496	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	802	-	133	380
Mov Cap-2 Maneuver	-	-	-	-	133	-
Stage 1	-	-	-	-	437	-
Stage 2	-	-	-	-	486	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	35.2
HCM LOS			E

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	173	-	-	802	-
HCM Lane V/C Ratio	0.317	-	-	0.021	-
HCM Control Delay (s)	35.2	-	-	9.6	-
HCM Lane LOS	E	-	-	A	-
HCM 95th %tile Q(veh)	1.3	-	-	0.1	-

Intersection	
Int Delay, s/veh	0.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	101	3	3	257	1	3
Future Vol, veh/h	101	3	3	257	1	3
Conflicting Peds, #/hr	0	5	5	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	8	8	8	8	8	8
Mvmt Flow	112	3	3	286	1	3

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	120	0	411	119
Stage 1	-	-	-	-	119	-
Stage 2	-	-	-	-	292	-
Critical Hdwy	-	-	4.18	-	6.48	6.28
Critical Hdwy Stg 1	-	-	-	-	5.48	-
Critical Hdwy Stg 2	-	-	-	-	5.48	-
Follow-up Hdwy	-	-	2.272	-	3.572	3.372
Pot Cap-1 Maneuver	-	-	1431	-	586	917
Stage 1	-	-	-	-	891	-
Stage 2	-	-	-	-	744	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1424	-	581	913
Mov Cap-2 Maneuver	-	-	-	-	581	-
Stage 1	-	-	-	-	887	-
Stage 2	-	-	-	-	742	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	9.5
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	799	-	-	1424	-
HCM Lane V/C Ratio	0.006	-	-	0.002	-
HCM Control Delay (s)	9.5	-	-	7.5	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0	-

Intersection	
Int Delay, s/veh	0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	104	2	0	254	2	0
Future Vol, veh/h	104	2	0	254	2	0
Conflicting Peds, #/hr	0	5	5	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	8	8	8	8	8	8
Mvmt Flow	111	2	0	270	2	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	118	0	387	117
Stage 1	-	-	-	-	117	-
Stage 2	-	-	-	-	270	-
Critical Hdwy	-	-	4.18	-	6.48	6.28
Critical Hdwy Stg 1	-	-	-	-	5.48	-
Critical Hdwy Stg 2	-	-	-	-	5.48	-
Follow-up Hdwy	-	-	2.272	-	3.572	3.372
Pot Cap-1 Maneuver	-	-	1434	-	605	919
Stage 1	-	-	-	-	893	-
Stage 2	-	-	-	-	762	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1427	-	602	915
Mov Cap-2 Maneuver	-	-	-	-	602	-
Stage 1	-	-	-	-	889	-
Stage 2	-	-	-	-	762	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	11
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	602	-	-	1427	-
HCM Lane V/C Ratio	0.004	-	-	-	-
HCM Control Delay (s)	11	-	-	0	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0	-

Intersection	
Int Delay, s/veh	1.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	8	95	4	6	242	34	4	5	8	11	5	8
Future Vol, veh/h	8	95	4	6	242	34	4	5	8	11	5	8
Conflicting Peds, #/hr	5	0	5	5	0	5	5	0	5	5	0	5
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	8	8	8	8	8	8	8	8	8	8	8	8
Mvmt Flow	8	98	4	6	249	35	4	5	8	11	5	8

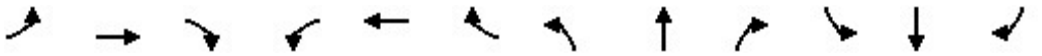
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	289	0	0	107	0	0	411	422	110	412	407	277
Stage 1	-	-	-	-	-	-	121	121	-	284	284	-
Stage 2	-	-	-	-	-	-	290	301	-	128	123	-
Critical Hdwy	4.18	-	-	4.18	-	-	7.18	6.58	6.28	7.18	6.58	6.28
Critical Hdwy Stg 1	-	-	-	-	-	-	6.18	5.58	-	6.18	5.58	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.18	5.58	-	6.18	5.58	-
Follow-up Hdwy	2.272	-	-	2.272	-	-	3.572	4.072	3.372	3.572	4.072	3.372
Pot Cap-1 Maneuver	1239	-	-	1447	-	-	541	514	927	540	524	748
Stage 1	-	-	-	-	-	-	869	784	-	710	666	-
Stage 2	-	-	-	-	-	-	705	654	-	861	783	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1233	-	-	1440	-	-	521	503	918	521	512	741
Mov Cap-2 Maneuver	-	-	-	-	-	-	521	503	-	521	512	-
Stage 1	-	-	-	-	-	-	859	775	-	701	659	-
Stage 2	-	-	-	-	-	-	685	647	-	838	774	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.6	0.2	10.7	11.5
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	646	1233	-	-	1440	-	-	576
HCM Lane V/C Ratio	0.027	0.007	-	-	0.004	-	-	0.043
HCM Control Delay (s)	10.7	7.9	0	-	7.5	0	-	11.5
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.1

HCM 6th Signalized Intersection Summary
1: Grove Ave & Mission Blvd

02/22/2024



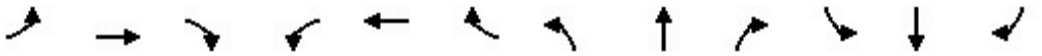
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	243	686	107	28	684	491	193	925	52	400	801	198
Future Volume (veh/h)	243	686	107	28	684	491	193	925	52	400	801	198
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	245	693	34	28	691	183	195	934	51	404	809	72
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	302	961	427	145	800	354	218	1122	61	431	1768	539
Arrive On Green	0.09	0.27	0.27	0.04	0.23	0.23	0.12	0.23	0.23	0.25	0.35	0.35
Sat Flow, veh/h	3401	3497	1551	3401	3497	1550	1753	4871	265	1753	5025	1533
Grp Volume(v), veh/h	245	693	34	28	691	183	195	642	343	404	809	72
Grp Sat Flow(s),veh/h/ln	1700	1749	1551	1700	1749	1550	1753	1675	1786	1753	1675	1533
Q Serve(g_s), s	9.9	25.2	2.3	1.1	26.7	14.5	15.4	25.6	25.7	31.8	17.5	4.5
Cycle Q Clear(g_c), s	9.9	25.2	2.3	1.1	26.7	14.5	15.4	25.6	25.7	31.8	17.5	4.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.15	1.00		1.00
Lane Grp Cap(c), veh/h	302	961	427	145	800	354	218	772	412	431	1768	539
V/C Ratio(X)	0.81	0.72	0.08	0.19	0.86	0.52	0.89	0.83	0.83	0.94	0.46	0.13
Avail Cap(c_a), veh/h	725	961	427	484	870	386	249	834	445	686	1768	539
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	62.9	46.1	37.8	65.0	52.1	47.4	60.7	51.5	51.6	52.0	35.2	31.0
Incr Delay (d2), s/veh	3.9	2.8	0.1	0.5	8.7	1.4	27.9	7.2	12.8	13.2	0.3	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.4	11.1	0.9	0.5	12.2	5.6	8.4	11.2	12.6	15.2	7.0	1.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	66.8	48.9	37.9	65.5	60.8	48.8	88.5	58.7	64.4	65.1	35.5	31.1
LnGrp LOS	E	D	D	E	E	D	F	E	E	E	D	C
Approach Vol, veh/h		972			902			1180			1285	
Approach Delay, s/veh		53.0			58.5			65.3			44.6	
Approach LOS		D			E			E			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	41.6	39.4	13.5	46.2	24.5	56.5	20.0	39.7
Change Period (Y+Rc), s	7.0	7.0	7.5	7.5	7.0	7.0	7.5	7.5
Max Green Setting (Gmax), s	55.0	35.0	20.0	35.0	20.0	35.0	30.0	35.0
Max Q Clear Time (g_c+I1), s	33.8	27.7	3.1	27.2	17.4	19.5	11.9	28.7
Green Ext Time (p_c), s	0.8	4.1	0.0	3.1	0.1	6.4	0.5	2.8

Intersection Summary	
HCM 6th Ctrl Delay	55.0
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.



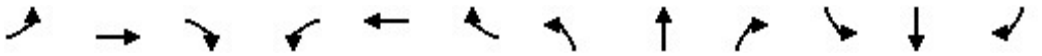
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	46	1025	153	47	783	4	223	40	82	4	29	41
Future Volume (veh/h)	46	1025	153	47	783	4	223	40	82	4	29	41
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	48	1068	80	49	816	4	232	42	21	4	30	0
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	110	1384	609	111	1415	7	395	753	331	383	753	
Arrive On Green	0.06	0.40	0.40	0.06	0.40	0.40	0.22	0.22	0.22	0.22	0.22	0.00
Sat Flow, veh/h	1753	3497	1539	1753	3568	17	1358	3497	1538	1318	3589	0
Grp Volume(v), veh/h	48	1068	80	49	400	420	232	42	21	4	30	0
Grp Sat Flow(s),veh/h/ln	1753	1749	1539	1753	1749	1837	1358	1749	1538	1318	1749	0
Q Serve(g_s), s	1.7	17.1	2.1	1.7	11.5	11.5	10.5	0.6	0.7	0.2	0.4	0.0
Cycle Q Clear(g_c), s	1.7	17.1	2.1	1.7	11.5	11.5	11.0	0.6	0.7	0.8	0.4	0.0
Prop In Lane	1.00		1.00	1.00		0.01	1.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	110	1384	609	111	693	729	395	753	331	383	753	
V/C Ratio(X)	0.44	0.77	0.13	0.44	0.58	0.58	0.59	0.06	0.06	0.01	0.04	
Avail Cap(c_a), veh/h	544	1627	716	544	813	855	523	1084	477	508	1084	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	29.1	17.0	12.4	29.1	15.2	15.2	24.4	20.1	20.1	20.4	20.0	0.0
Incr Delay (d2), s/veh	1.0	2.3	0.1	1.0	1.1	1.0	2.4	0.1	0.1	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	5.7	0.6	0.7	3.7	3.9	3.2	0.2	0.2	0.0	0.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	30.2	19.2	12.6	30.1	16.3	16.3	26.7	20.2	20.3	20.4	20.1	0.0
LnGrp LOS	C	B	B	C	B	B	C	C	C	C	C	
Approach Vol, veh/h		1196			869			295			34	A
Approach Delay, s/veh		19.2			17.1			25.3			20.1	
Approach LOS		B			B			C			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.1	32.5		20.9	11.0	32.6		20.9				
Change Period (Y+Rc), s	7.0	7.0		7.0	7.0	7.0		7.0				
Max Green Setting (Gmax), s	20.0	30.0		20.0	20.0	30.0		20.0				
Max Q Clear Time (g_c+I1), s	3.7	19.1		13.0	3.7	13.5		2.8				
Green Ext Time (p_c), s	0.0	6.4		1.0	0.0	5.6		0.1				

Intersection Summary		
HCM 6th Ctrl Delay		19.2
HCM 6th LOS		B

Notes

Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.

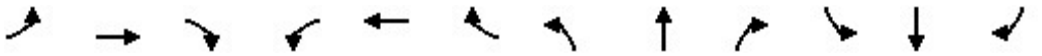


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	21	247	82	112	178	39	31	228	36	18	288	9
Future Volume (veh/h)	21	247	82	112	178	39	31	228	36	18	288	9
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	24	287	69	130	207	31	36	265	33	21	335	9
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	407	557	131	393	786	116	313	648	80	319	666	18
Arrive On Green	0.03	0.20	0.20	0.09	0.26	0.26	0.05	0.21	0.21	0.03	0.19	0.19
Sat Flow, veh/h	1753	2794	659	1753	3049	449	1753	3126	385	1753	3477	93
Grp Volume(v), veh/h	24	178	178	130	117	121	36	147	151	21	168	176
Grp Sat Flow(s),veh/h/ln	1753	1749	1705	1753	1749	1749	1753	1749	1762	1753	1749	1821
Q Serve(g_s), s	0.6	5.2	5.4	3.2	3.1	3.1	0.9	4.2	4.3	0.5	4.9	4.9
Cycle Q Clear(g_c), s	0.6	5.2	5.4	3.2	3.1	3.1	0.9	4.2	4.3	0.5	4.9	4.9
Prop In Lane	1.00		0.39	1.00		0.26	1.00		0.22	1.00		0.05
Lane Grp Cap(c), veh/h	407	349	340	393	451	451	313	363	365	319	335	349
V/C Ratio(X)	0.06	0.51	0.52	0.33	0.26	0.27	0.12	0.41	0.41	0.07	0.50	0.50
Avail Cap(c_a), veh/h	824	1085	1058	707	1085	1085	692	1070	1078	726	1070	1114
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.1	20.4	20.5	15.8	16.9	16.9	17.2	19.6	19.7	17.7	20.7	20.7
Incr Delay (d2), s/veh	0.1	1.6	1.8	0.5	0.4	0.4	0.2	1.0	1.1	0.1	1.7	1.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	1.9	1.9	1.1	1.1	1.1	0.3	1.5	1.6	0.2	1.9	2.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	17.2	22.0	22.3	16.3	17.3	17.4	17.4	20.7	20.7	17.8	22.3	22.3
LnGrp LOS	B	C	C	B	B	B	B	C	C	B	C	C
Approach Vol, veh/h		380			368			334			365	
Approach Delay, s/veh		21.8			17.0			20.3			22.1	
Approach LOS		C			B			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.7	18.9	11.7	17.9	9.6	18.0	8.4	21.2
Change Period (Y+Rc), s	7.0	7.0	6.5	6.5	7.0	7.0	6.5	6.5
Max Green Setting (Gmax), s	15.0	35.0	15.5	35.5	15.0	35.0	15.5	35.5
Max Q Clear Time (g_c+I1), s	2.5	6.3	5.2	7.4	2.9	6.9	2.6	5.1
Green Ext Time (p_c), s	0.0	2.3	0.2	2.7	0.0	2.7	0.0	1.8

Intersection Summary	
HCM 6th Ctrl Delay	20.3
HCM 6th LOS	C

Min green cannot be greater than Max Green.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	450	2	416	241	743	0	0	768	568
Future Volume (veh/h)	0	0	0	450	2	416	241	743	0	0	768	568
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		0.99
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1841	1841	1841	1841	1841	0	0	1841	1841
Adj Flow Rate, veh/h				558	0	189	251	774	0	0	800	193
Peak Hour Factor				0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %				4	4	4	4	4	0	0	4	4
Cap, veh/h				748	0	333	283	2246	0	0	1479	656
Arrive On Green				0.21	0.00	0.21	0.32	1.00	0.00	0.00	0.42	0.42
Sat Flow, veh/h				3506	0	1560	1753	3589	0	0	3589	1551
Grp Volume(v), veh/h				558	0	189	251	774	0	0	800	193
Grp Sat Flow(s),veh/h/ln				1753	0	1560	1753	1749	0	0	1749	1551
Q Serve(g_s), s				13.4	0.0	9.8	12.2	0.0	0.0	0.0	15.4	7.4
Cycle Q Clear(g_c), s				13.4	0.0	9.8	12.2	0.0	0.0	0.0	15.4	7.4
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				748	0	333	283	2246	0	0	1479	656
V/C Ratio(X)				0.75	0.00	0.57	0.89	0.34	0.00	0.00	0.54	0.29
Avail Cap(c_a), veh/h				1169	0	520	390	2246	0	0	1479	656
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.76	0.76	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				33.1	0.0	31.7	29.7	0.0	0.0	0.0	19.4	17.1
Incr Delay (d2), s/veh				2.1	0.0	2.2	13.2	0.3	0.0	0.0	1.4	1.1
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				5.8	0.0	3.8	5.1	0.1	0.0	0.0	6.0	2.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				35.3	0.0	33.9	42.9	0.3	0.0	0.0	20.9	18.3
LnGrp LOS				D	A	C	D	A	A	A	C	B
Approach Vol, veh/h					747			1025			993	
Approach Delay, s/veh					34.9			10.7			20.3	
Approach LOS					C			B			C	

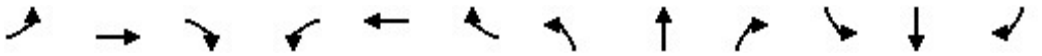
Timer - Assigned Phs	2		5	6		8						
Phs Duration (G+Y+Rc), s	63.8		19.7	44.1		26.2						
Change Period (Y+Rc), s	6.0		* 5.2	6.0		7.0						
Max Green Setting (Gmax), s	47.0		* 20	21.0		30.0						
Max Q Clear Time (g_c+I1), s	2.0		14.2	17.4		15.4						
Green Ext Time (p_c), s	8.8		0.4	2.3		3.8						

Intersection Summary	
HCM 6th Ctrl Delay	20.7
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



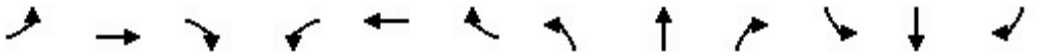
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	257	0	209	0	0	0	0	761	318	253	929	0
Future Volume (veh/h)	257	0	209	0	0	0	0	761	318	253	929	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1841	0	1841				0	1841	1841	1841	1841	0
Adj Flow Rate, veh/h	262	0	115				0	777	125	258	948	0
Peak Hour Factor	0.98	0.98	0.98				0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	4	0	4				0	4	4	4	4	0
Cap, veh/h	318	0	283				0	1572	697	303	2359	0
Arrive On Green	0.18	0.00	0.18				0.00	0.45	0.45	0.06	0.22	0.00
Sat Flow, veh/h	1753	0	1560				0	3589	1551	1753	3589	0
Grp Volume(v), veh/h	262	0	115				0	777	125	258	948	0
Grp Sat Flow(s),veh/h/ln	1753	0	1560				0	1749	1551	1753	1749	0
Q Serve(g_s), s	12.9	0.0	5.9				0.0	14.2	4.3	13.1	20.8	0.0
Cycle Q Clear(g_c), s	12.9	0.0	5.9				0.0	14.2	4.3	13.1	20.8	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	318	0	283				0	1572	697	303	2359	0
V/C Ratio(X)	0.82	0.00	0.41				0.00	0.49	0.18	0.85	0.40	0.00
Avail Cap(c_a), veh/h	487	0	433				0	1572	697	448	2359	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	0.33	0.33	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.65	0.65	0.00
Uniform Delay (d), s/veh	35.5	0.0	32.6				0.0	17.5	14.8	41.3	19.5	0.0
Incr Delay (d2), s/veh	8.7	0.0	1.3				0.0	1.1	0.6	6.8	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.2	0.0	2.3				0.0	5.5	1.5	6.7	9.7	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	44.2	0.0	33.9				0.0	18.7	15.4	48.0	19.8	0.0
LnGrp LOS	D	A	C				A	B	B	D	B	A
Approach Vol, veh/h		377						902			1206	
Approach Delay, s/veh		41.0						18.2			25.9	
Approach LOS		D						B			C	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	20.3	46.4		23.3		66.7
Change Period (Y+Rc), s	* 4.7	6.0		7.0		6.0
Max Green Setting (Gmax), s	* 23	24.0		25.0		52.0
Max Q Clear Time (g_c+I1), s	15.1	16.2		14.9		22.8
Green Ext Time (p_c), s	0.4	4.5		1.4		10.2

Intersection Summary		
HCM 6th Ctrl Delay		25.4
HCM 6th LOS		C

Notes

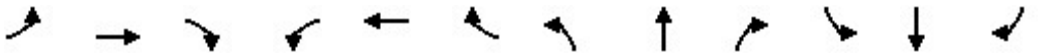
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	206	4	136	183	417	0	0	664	504
Future Volume (veh/h)	0	0	0	206	4	136	183	417	0	0	664	504
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		0.97
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1841	1841	1841	1841	1841	0	0	1841	1841
Adj Flow Rate, veh/h				219	4	28	195	444	0	0	706	391
Peak Hour Factor				0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %				4	4	4	4	4	0	0	4	4
Cap, veh/h				269	5	243	230	2445	0	0	1086	601
Arrive On Green				0.16	0.16	0.16	0.26	1.00	0.00	0.00	0.51	0.51
Sat Flow, veh/h				1723	31	1560	1753	3589	0	0	2241	1188
Grp Volume(v), veh/h				223	0	28	195	444	0	0	574	523
Grp Sat Flow(s),veh/h/ln				1755	0	1560	1753	1749	0	0	1749	1589
Q Serve(g_s), s				9.8	0.0	1.2	8.4	0.0	0.0	0.0	19.3	19.4
Cycle Q Clear(g_c), s				9.8	0.0	1.2	8.4	0.0	0.0	0.0	19.3	19.4
Prop In Lane				0.98		1.00	1.00		0.00	0.00		0.75
Lane Grp Cap(c), veh/h				274	0	243	230	2445	0	0	884	803
V/C Ratio(X)				0.81	0.00	0.12	0.85	0.18	0.00	0.00	0.65	0.65
Avail Cap(c_a), veh/h				447	0	398	351	2445	0	0	884	803
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.85	0.85	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				32.6	0.0	29.0	28.8	0.0	0.0	0.0	14.6	14.6
Incr Delay (d2), s/veh				4.4	0.0	0.2	8.5	0.1	0.0	0.0	3.7	4.1
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				4.4	0.0	0.5	3.4	0.0	0.0	0.0	7.3	6.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				37.0	0.0	29.2	37.2	0.1	0.0	0.0	18.3	18.7
LnGrp LOS				D	A	C	D	A	A	A	B	B
Approach Vol, veh/h					251			639			1097	
Approach Delay, s/veh					36.2			11.5			18.4	
Approach LOS					D			B			B	

Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		61.7			15.5	46.2		18.3				
Change Period (Y+Rc), s		5.8			5.0	5.8		5.8				
Max Green Setting (Gmax), s		48.0			16.0	27.0		20.4				
Max Q Clear Time (g_c+I1), s		2.0			10.4	21.4		11.8				
Green Ext Time (p_c), s		2.3			0.2	2.7		0.7				

Intersection Summary												
HCM 6th Ctrl Delay			18.4									
HCM 6th LOS			B									



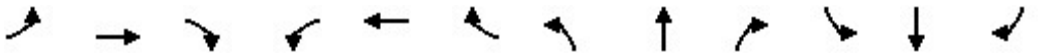
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	134	1	241	0	0	0	0	462	285	254	622	0
Future Volume (veh/h)	134	1	241	0	0	0	0	462	285	254	622	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		0.97	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841				0	1841	1841	1841	1841	0
Adj Flow Rate, veh/h	138	1	39				0	476	206	262	641	0
Peak Hour Factor	0.97	0.97	0.97				0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	4	4	4				0	4	4	4	4	0
Cap, veh/h	213	2	191				0	1166	501	309	2561	0
Arrive On Green	0.12	0.12	0.12				0.00	0.49	0.49	0.06	0.24	0.00
Sat Flow, veh/h	1741	13	1560				0	2453	1014	1753	3589	0
Grp Volume(v), veh/h	139	0	39				0	352	330	262	641	0
Grp Sat Flow(s),veh/h/ln	1754	0	1560				0	1749	1626	1753	1749	0
Q Serve(g_s), s	6.0	0.0	1.8				0.0	10.2	10.3	11.8	11.8	0.0
Cycle Q Clear(g_c), s	6.0	0.0	1.8				0.0	10.2	10.3	11.8	11.8	0.0
Prop In Lane	0.99		1.00				0.00		0.62	1.00		0.00
Lane Grp Cap(c), veh/h	215	0	191				0	863	803	309	2561	0
V/C Ratio(X)	0.65	0.00	0.20				0.00	0.41	0.41	0.85	0.25	0.00
Avail Cap(c_a), veh/h	381	0	339				0	863	803	592	2561	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	0.33	0.33	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.49	0.49	0.00
Uniform Delay (d), s/veh	33.4	0.0	31.6				0.0	12.8	12.9	36.6	12.6	0.0
Incr Delay (d2), s/veh	2.4	0.0	0.4				0.0	1.4	1.6	1.3	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.7	0.0	0.7				0.0	3.7	3.5	5.4	4.6	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	35.9	0.0	32.0				0.0	14.3	14.4	37.9	12.7	0.0
LnGrp LOS	D	A	C				A	B	B	D	B	A
Approach Vol, veh/h		178						682			903	
Approach Delay, s/veh		35.0						14.3			20.0	
Approach LOS		D						B			C	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	19.1	45.3		15.6		64.4
Change Period (Y+Rc), s	5.0	5.8		5.8		5.8
Max Green Setting (Gmax), s	27.0	19.0		17.4		51.0
Max Q Clear Time (g_c+I1), s	13.8	12.3		8.0		13.8
Green Ext Time (p_c), s	0.3	1.8		0.4		3.5

Intersection Summary	
HCM 6th Ctrl Delay	19.3
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.

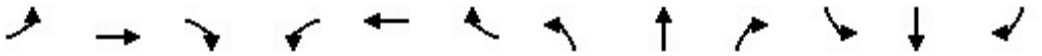


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	390	5	243	467	386	0	0	1025	245
Future Volume (veh/h)	0	0	0	390	5	243	467	386	0	0	1025	245
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		0.97
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1781	1781	1781	1781	1781	0	0	1781	1781
Adj Flow Rate, veh/h				445	0	62	497	411	0	0	1090	73
Peak Hour Factor				0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %				8	8	8	8	8	0	0	8	8
Cap, veh/h				845	0	376	951	3026	0	0	1702	406
Arrive On Green				0.25	0.00	0.25	0.48	1.00	0.00	0.00	0.28	0.28
Sat Flow, veh/h				3393	0	1510	3291	5024	0	0	6378	1462
Grp Volume(v), veh/h				445	0	62	497	411	0	0	1090	73
Grp Sat Flow(s),veh/h/ln				1697	0	1510	1646	1621	0	0	1532	1462
Q Serve(g_s), s				10.2	0.0	2.9	9.4	0.0	0.0	0.0	14.1	3.4
Cycle Q Clear(g_c), s				10.2	0.0	2.9	9.4	0.0	0.0	0.0	14.1	3.4
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				845	0	376	951	3026	0	0	1702	406
V/C Ratio(X)				0.53	0.00	0.17	0.52	0.14	0.00	0.00	0.64	0.18
Avail Cap(c_a), veh/h				845	0	376	951	3026	0	0	1702	406
HCM Platoon Ratio				1.00	1.00	1.00	1.67	1.67	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.83	0.83	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				29.2	0.0	26.5	19.0	0.0	0.0	0.0	28.6	24.7
Incr Delay (d2), s/veh				2.3	0.0	0.9	1.7	0.1	0.0	0.0	1.9	1.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				4.3	0.0	2.8	3.1	0.0	0.0	0.0	5.0	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				31.6	0.0	27.4	20.7	0.1	0.0	0.0	30.4	25.7
LnGrp LOS				C	A	C	C	A	A	A	C	C
Approach Vol, veh/h					507			908			1163	
Approach Delay, s/veh					31.1			11.4			30.1	
Approach LOS					C			B			C	

Timer - Assigned Phs	2	4	5	6
Phs Duration (G+Y+Rc), s	61.8	28.2	31.0	30.8
Change Period (Y+Rc), s	5.8	5.8	5.0	5.8
Max Green Setting (Gmax), s	56.0	22.4	26.0	25.0
Max Q Clear Time (g_c+I1), s	2.0	12.2	11.4	16.1
Green Ext Time (p_c), s	2.8	1.4	0.8	4.6

Intersection Summary	
HCM 6th Ctrl Delay	23.7
HCM 6th LOS	C

Notes
User approved pedestrian interval to be less than phase max green.
User approved volume balancing among the lanes for turning movement.

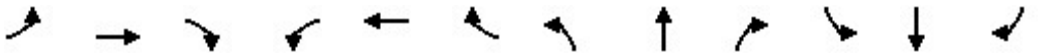


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	82	5	428	0	0	0	0	837	484	435	976	0
Future Volume (veh/h)	82	5	428	0	0	0	0	837	484	435	976	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		0.97	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1781	1781	1781				0	1781	1781	1781	1781	0
Adj Flow Rate, veh/h	58	0	328				0	872	129	453	1017	0
Peak Hour Factor	0.96	0.96	0.96				0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	8	8	8				0	8	8	8	8	0
Cap, veh/h	498	0	886				0	1566	373	878	2810	0
Arrive On Green	0.29	0.00	0.29				0.00	0.26	0.26	0.09	0.19	0.00
Sat Flow, veh/h	1697	0	3019				0	6378	1461	3291	5024	0
Grp Volume(v), veh/h	58	0	328				0	872	129	453	1017	0
Grp Sat Flow(s),veh/h/ln	1697	0	1510				0	1532	1461	1646	1621	0
Q Serve(g_s), s	2.3	0.0	7.8				0.0	11.1	6.5	11.8	16.4	0.0
Cycle Q Clear(g_c), s	2.3	0.0	7.8				0.0	11.1	6.5	11.8	16.4	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	498	0	886				0	1566	373	878	2810	0
V/C Ratio(X)	0.12	0.00	0.37				0.00	0.56	0.35	0.52	0.36	0.00
Avail Cap(c_a), veh/h	498	0	886				0	1566	373	878	2810	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	0.33	0.33	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.73	0.73	0.00
Uniform Delay (d), s/veh	23.3	0.0	25.2				0.0	29.1	27.4	35.5	22.0	0.0
Incr Delay (d2), s/veh	0.5	0.0	1.2				0.0	1.4	2.5	1.6	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	0.0	2.9				0.0	4.0	2.4	5.2	7.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.7	0.0	26.4				0.0	30.5	29.9	37.1	22.3	0.0
LnGrp LOS	C	A	C				A	C	C	D	C	A
Approach Vol, veh/h		386						1001			1470	
Approach Delay, s/veh		26.0						30.4			26.8	
Approach LOS		C						C			C	

Timer - Assigned Phs	1	2				6		8				
Phs Duration (G+Y+Rc), s	29.0	28.8				57.8		32.2				
Change Period (Y+Rc), s	5.0	5.8				5.8		5.8				
Max Green Setting (Gmax), s	24.0	23.0				52.0		26.4				
Max Q Clear Time (g_c+I1), s	13.8	13.1				18.4		9.8				
Green Ext Time (p_c), s	0.7	4.2				7.7		1.4				

Intersection Summary			
HCM 6th Ctrl Delay			28.0
HCM 6th LOS			C

Notes
User approved pedestrian interval to be less than phase max green.
User approved volume balancing among the lanes for turning movement.



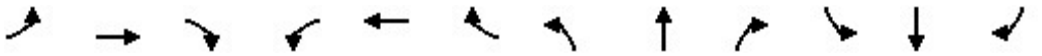
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	17	10	43	25	25	75	104	995	40	88	902	20
Future Volume (veh/h)	17	10	43	25	25	75	104	995	40	88	902	20
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.98		0.95	0.98		0.95	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781
Adj Flow Rate, veh/h	18	11	6	27	27	9	111	1059	41	94	960	20
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	8	8	8	8	8	8	8	8	8	8	8	8
Cap, veh/h	207	126	69	222	149	50	138	2802	108	118	2804	58
Arrive On Green	0.12	0.12	0.12	0.12	0.12	0.12	0.08	0.58	0.58	0.07	0.57	0.57
Sat Flow, veh/h	1278	1064	580	1298	1261	420	1697	4798	186	1697	4899	102
Grp Volume(v), veh/h	18	0	17	27	0	36	111	715	385	94	635	345
Grp Sat Flow(s),veh/h/ln	1278	0	1644	1298	0	1682	1697	1621	1741	1697	1621	1759
Q Serve(g_s), s	1.2	0.0	0.8	1.7	0.0	1.7	5.8	10.6	10.6	4.9	9.4	9.4
Cycle Q Clear(g_c), s	2.9	0.0	0.8	2.5	0.0	1.7	5.8	10.6	10.6	4.9	9.4	9.4
Prop In Lane	1.00		0.35	1.00		0.25	1.00		0.11	1.00		0.06
Lane Grp Cap(c), veh/h	207	0	195	222	0	199	138	1894	1017	118	1856	1007
V/C Ratio(X)	0.09	0.00	0.09	0.12	0.00	0.18	0.80	0.38	0.38	0.79	0.34	0.34
Avail Cap(c_a), veh/h	371	0	406	388	0	415	183	1894	1017	183	1856	1007
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.0	0.0	35.3	36.5	0.0	35.7	40.6	10.0	10.0	41.2	10.2	10.2
Incr Delay (d2), s/veh	0.1	0.0	0.1	0.2	0.0	0.3	12.9	0.6	1.1	5.9	0.5	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.0	0.3	0.6	0.0	0.7	2.8	3.2	3.6	2.2	2.9	3.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	37.2	0.0	35.5	36.6	0.0	36.1	53.6	10.6	11.1	47.1	10.7	11.2
LnGrp LOS	D	A	D	D	A	D	D	B	B	D	B	B
Approach Vol, veh/h		35			63			1211			1074	
Approach Delay, s/veh		36.3			36.3			14.7			14.1	
Approach LOS		D			D			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	12.8	59.1		18.2	13.8	58.0		18.2				
Change Period (Y+Rc), s	6.5	6.5		7.5	6.5	6.5		7.5				
Max Green Setting (Gmax), s	9.7	37.6		22.2	9.7	37.6		22.2				
Max Q Clear Time (g_c+I1), s	6.9	12.6		4.9	7.8	11.4		4.5				
Green Ext Time (p_c), s	0.0	8.5		0.1	0.0	7.8		0.1				

Intersection Summary			
HCM 6th Ctrl Delay		15.3	
HCM 6th LOS		B	

Notes

User approved pedestrian interval to be less than phase max green.



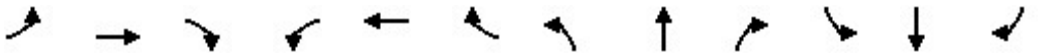
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	129	483	54	133	379	61	49	685	245	102	652	151
Future Volume (veh/h)	129	483	54	133	379	61	49	685	245	102	652	151
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.95	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	134	503	20	139	395	22	51	714	133	106	679	67
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	200	575	475	201	1094	476	131	902	384	162	965	597
Arrive On Green	0.11	0.31	0.31	0.11	0.31	0.31	0.07	0.26	0.26	0.09	0.28	0.28
Sat Flow, veh/h	1753	1841	1521	1753	3497	1521	1753	3497	1488	1753	3497	1518
Grp Volume(v), veh/h	134	503	20	139	395	22	51	714	133	106	679	67
Grp Sat Flow(s),veh/h/ln	1753	1841	1521	1753	1749	1521	1753	1749	1488	1753	1749	1518
Q Serve(g_s), s	7.5	26.6	0.9	7.8	9.0	1.0	2.9	19.6	7.5	6.0	17.9	2.9
Cycle Q Clear(g_c), s	7.5	26.6	0.9	7.8	9.0	1.0	2.9	19.6	7.5	6.0	17.9	2.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	200	575	475	201	1094	476	131	902	384	162	965	597
V/C Ratio(X)	0.67	0.87	0.04	0.69	0.36	0.05	0.39	0.79	0.35	0.65	0.70	0.11
Avail Cap(c_a), veh/h	342	769	636	550	1876	816	170	1360	579	320	1445	805
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.7	33.5	24.6	43.8	27.4	24.6	45.4	35.6	31.1	45.1	33.5	20.0
Incr Delay (d2), s/veh	1.5	9.7	0.1	1.6	0.3	0.1	1.9	1.9	0.5	4.4	1.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.2	12.7	0.3	3.3	3.6	0.4	1.3	8.3	2.6	2.7	7.4	1.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	45.2	43.1	24.7	45.4	27.7	24.7	47.3	37.5	31.6	49.5	34.4	20.1
LnGrp LOS	D	D	C	D	C	C	D	D	C	D	C	C
Approach Vol, veh/h		657			556			898			852	
Approach Delay, s/veh		43.0			32.0			37.2			35.2	
Approach LOS		D			C			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.7	32.5	16.5	39.2	12.9	34.4	16.4	39.2
Change Period (Y+Rc), s	* 5.2	6.0	* 4.7	7.0	* 5.2	6.0	* 4.7	7.0
Max Green Setting (Gmax), s	* 19	40.0	* 32	43.0	* 10	42.5	* 20	55.2
Max Q Clear Time (g_c+I1), s	8.0	21.6	9.8	28.6	4.9	19.9	9.5	11.0
Green Ext Time (p_c), s	0.2	4.9	0.2	3.6	0.0	4.7	0.1	3.7

Intersection Summary	
HCM 6th Ctrl Delay	36.9
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



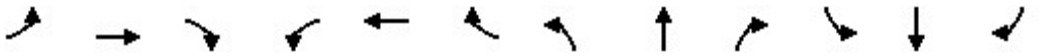
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	124	700	37	31	463	87	19	385	79	93	133	109
Future Volume (veh/h)	124	700	37	31	463	87	19	385	79	93	133	109
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	1.00		0.97	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	132	745	16	33	493	77	20	410	78	99	141	36
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	166	690	568	92	1005	156	401	467	89	136	575	478
Arrive On Green	0.09	0.37	0.37	0.05	0.33	0.33	0.31	0.31	0.31	0.31	0.31	0.31
Sat Flow, veh/h	1767	1856	1528	1767	3049	474	1233	1507	287	899	1856	1544
Grp Volume(v), veh/h	132	745	16	33	284	286	20	0	488	99	141	36
Grp Sat Flow(s),veh/h/ln	1767	1856	1528	1767	1763	1760	1233	0	1793	899	1856	1544
Q Serve(g_s), s	5.9	30.0	0.5	1.5	10.4	10.5	1.0	0.0	20.8	4.2	4.6	1.3
Cycle Q Clear(g_c), s	5.9	30.0	0.5	1.5	10.4	10.5	5.6	0.0	20.8	25.0	4.6	1.3
Prop In Lane	1.00		1.00	1.00		0.27	1.00		0.16	1.00		1.00
Lane Grp Cap(c), veh/h	166	690	568	92	581	580	401	0	556	136	575	478
V/C Ratio(X)	0.79	1.08	0.03	0.36	0.49	0.49	0.05	0.00	0.88	0.73	0.25	0.08
Avail Cap(c_a), veh/h	438	690	568	438	655	654	401	0	556	136	575	478
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.8	25.3	16.1	37.0	21.6	21.7	22.9	0.0	26.4	39.4	20.8	19.7
Incr Delay (d2), s/veh	3.2	57.8	0.0	0.9	0.8	0.8	0.1	0.0	15.0	17.8	0.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	22.4	0.2	0.6	3.9	4.0	0.3	0.0	10.5	2.6	1.9	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	39.0	83.2	16.1	37.8	22.4	22.4	22.9	0.0	41.4	57.2	21.0	19.7
LnGrp LOS	D	F	B	D	C	C	C	A	D	E	C	B
Approach Vol, veh/h		893			603			508			276	
Approach Delay, s/veh		75.4			23.3			40.7			33.8	
Approach LOS		E			C			D			C	

Timer - Assigned Phs	2	3	4	6	7	8
Phs Duration (G+Y+Rc), s	31.5	11.7	37.5	31.5	15.1	34.1
Change Period (Y+Rc), s	6.5	7.5	7.5	6.5	7.5	7.5
Max Green Setting (Gmax), s	25.0	20.0	30.0	25.0	20.0	30.0
Max Q Clear Time (g_c+I1), s	22.8	3.5	32.0	27.0	7.9	12.5
Green Ext Time (p_c), s	0.8	0.0	0.0	0.0	0.1	3.4

Intersection Summary	
HCM 6th Ctrl Delay	48.9
HCM 6th LOS	D

Notes

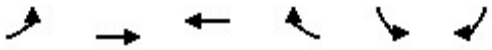
User approved pedestrian interval to be less than phase max green.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	228	784	1	2	472	162	9	4	22	223	28	185
Future Volume (veh/h)	228	784	1	2	472	162	9	4	22	223	28	185
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.97	1.00		0.96	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	235	808	1	2	487	143	9	4	3	230	29	55
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	275	763	1	5	691	201	24	78	58	270	407	337
Arrive On Green	0.16	0.41	0.41	0.00	0.26	0.26	0.01	0.08	0.08	0.15	0.22	0.22
Sat Flow, veh/h	1767	1853	2	1767	2670	778	1767	968	726	1767	1856	1536
Grp Volume(v), veh/h	235	0	809	2	320	310	9	0	7	230	29	55
Grp Sat Flow(s),veh/h/ln	1767	0	1855	1767	1763	1685	1767	0	1693	1767	1856	1536
Q Serve(g_s), s	11.0	0.0	35.0	0.1	14.0	14.2	0.4	0.0	0.3	10.8	1.1	2.5
Cycle Q Clear(g_c), s	11.0	0.0	35.0	0.1	14.0	14.2	0.4	0.0	0.3	10.8	1.1	2.5
Prop In Lane	1.00		0.00	1.00		0.46	1.00		0.43	1.00		1.00
Lane Grp Cap(c), veh/h	275	0	764	5	456	436	24	0	136	270	407	337
V/C Ratio(X)	0.86	0.00	1.06	0.42	0.70	0.71	0.38	0.00	0.05	0.85	0.07	0.16
Avail Cap(c_a), veh/h	416	0	764	416	726	693	416	0	597	416	655	542
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.0	0.0	25.0	42.3	28.5	28.6	41.6	0.0	36.1	35.1	26.3	26.9
Incr Delay (d2), s/veh	9.2	0.0	49.5	37.7	2.4	2.6	7.1	0.0	0.2	8.5	0.1	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.1	0.0	23.6	0.1	5.7	5.5	0.2	0.0	0.1	5.0	0.4	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	44.1	0.0	74.5	80.0	30.9	31.2	48.7	0.0	36.3	43.6	26.4	27.1
LnGrp LOS	D	A	F	E	C	C	D	A	D	D	C	C
Approach Vol, veh/h		1044			632			16			314	
Approach Delay, s/veh		67.7			31.2			43.3			39.1	
Approach LOS		E			C			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	20.7	29.5	8.6	26.2	7.7	42.5	20.5	14.3
Change Period (Y+Rc), s	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5
Max Green Setting (Gmax), s	20.0	35.0	20.0	30.0	20.0	35.0	20.0	30.0
Max Q Clear Time (g_c+I1), s	13.0	16.2	2.4	4.5	2.1	37.0	12.8	2.3
Green Ext Time (p_c), s	0.3	3.9	0.0	0.3	0.0	0.0	0.3	0.0

Intersection Summary	
HCM 6th Ctrl Delay	51.5
HCM 6th LOS	D



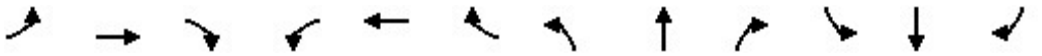
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	204	755	452	246	497	131
Future Volume (veh/h)	204	755	452	246	497	131
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			0.97	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	212	786	471	179	518	41
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	254	924	642	242	552	491
Arrive On Green	0.14	0.50	0.26	0.26	0.31	0.31
Sat Flow, veh/h	1767	1856	2572	934	1767	1572
Grp Volume(v), veh/h	212	786	334	316	518	41
Grp Sat Flow(s),veh/h/ln	1767	1856	1763	1651	1767	1572
Q Serve(g_s), s	9.2	29.1	13.7	13.9	22.5	1.5
Cycle Q Clear(g_c), s	9.2	29.1	13.7	13.9	22.5	1.5
Prop In Lane	1.00			0.57	1.00	1.00
Lane Grp Cap(c), veh/h	254	924	456	427	552	491
V/C Ratio(X)	0.83	0.85	0.73	0.74	0.94	0.08
Avail Cap(c_a), veh/h	448	924	781	731	559	498
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.9	17.3	26.7	26.8	26.4	19.2
Incr Delay (d2), s/veh	5.3	7.8	2.7	3.0	23.9	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.9	11.5	5.4	5.2	12.1	1.5
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	38.2	25.0	29.5	29.9	50.3	19.3
LnGrp LOS	D	C	C	C	D	B
Approach Vol, veh/h		998	650		559	
Approach Delay, s/veh		27.8	29.7		48.0	
Approach LOS		C	C		D	

Timer - Assigned Phs			4		6	7	8
Phs Duration (G+Y+Rc), s			46.8		32.2	18.9	28.0
Change Period (Y+Rc), s			7.5		7.5	7.5	7.5
Max Green Setting (Gmax), s			35.0		25.0	20.0	35.0
Max Q Clear Time (g_c+I1), s			31.1		24.5	11.2	15.9
Green Ext Time (p_c), s			1.9		0.1	0.3	4.0

Intersection Summary	
HCM 6th Ctrl Delay	33.5
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.



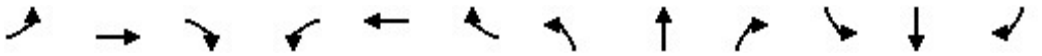
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	36	1205	31	36	702	17	14	0	31	3	3	22
Future Volume (veh/h)	36	1205	31	36	702	17	14	0	31	3	3	22
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	0.98		1.00	0.98		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	37	1242	32	37	724	18	14	0	0	3	3	2
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	101	1705	44	101	1707	42	251	0	0	136	54	28
Arrive On Green	0.06	0.49	0.49	0.06	0.49	0.49	0.07	0.00	0.00	0.07	0.07	0.07
Sat Flow, veh/h	1767	3509	90	1767	3512	87	1393	0	0	428	788	405
Grp Volume(v), veh/h	37	624	650	37	363	379	14	0	0	8	0	0
Grp Sat Flow(s),veh/h/ln	1767	1763	1836	1767	1763	1837	1393	0	0	1622	0	0
Q Serve(g_s), s	0.9	13.1	13.1	0.9	6.2	6.2	0.2	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.9	13.1	13.1	0.9	6.2	6.2	0.4	0.0	0.0	0.2	0.0	0.0
Prop In Lane	1.00		0.05	1.00		0.05	1.00		0.00	0.37		0.25
Lane Grp Cap(c), veh/h	101	857	892	101	857	893	251	0	0	219	0	0
V/C Ratio(X)	0.37	0.73	0.73	0.37	0.42	0.42	0.06	0.00	0.00	0.04	0.00	0.00
Avail Cap(c_a), veh/h	761	1329	1384	761	1329	1385	895	0	0	955	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	21.1	9.5	9.5	21.1	7.7	7.7	20.3	0.0	0.0	20.2	0.0	0.0
Incr Delay (d2), s/veh	2.2	1.2	1.2	2.2	0.3	0.3	0.1	0.0	0.0	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	2.8	2.9	0.4	1.4	1.4	0.1	0.0	0.0	0.1	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.3	10.7	10.7	23.3	8.1	8.0	20.4	0.0	0.0	20.3	0.0	0.0
LnGrp LOS	C	B	B	C	A	A	C	A	A	C	A	A
Approach Vol, veh/h		1311			779			14			8	
Approach Delay, s/veh		11.0			8.8			20.4			20.3	
Approach LOS		B			A			C			C	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		9.2	7.7	29.6		9.2	7.7	29.6				
Change Period (Y+Rc), s		6.0	5.0	7.0		6.0	5.0	7.0				
Max Green Setting (Gmax), s		25.0	20.0	35.0		25.0	20.0	35.0				
Max Q Clear Time (g_c+I1), s		2.4	2.9	15.1		2.2	2.9	8.2				
Green Ext Time (p_c), s		0.0	0.0	7.5		0.0	0.0	4.2				

Intersection Summary	
HCM 6th Ctrl Delay	10.3
HCM 6th LOS	B

Notes

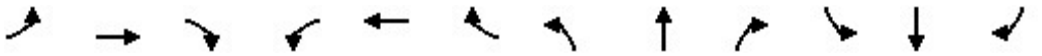
User approved pedestrian interval to be less than phase max green.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	239	617	364	149	384	190	231	697	61	206	566	141
Future Volume (veh/h)	239	617	364	149	384	190	231	697	61	206	566	141
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.97	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781
Adj Flow Rate, veh/h	241	623	320	151	388	155	233	704	57	208	572	116
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	8	8	8	8	8	8	8	8	8	8	8	8
Cap, veh/h	291	709	364	193	642	252	283	1123	90	256	930	184
Arrive On Green	0.17	0.33	0.33	0.11	0.27	0.27	0.17	0.25	0.25	0.15	0.23	0.23
Sat Flow, veh/h	1697	2145	1101	1697	2352	925	1697	4577	368	1697	4047	803
Grp Volume(v), veh/h	241	492	451	151	277	266	233	497	264	208	456	232
Grp Sat Flow(s),veh/h/ln	1697	1692	1554	1697	1692	1585	1697	1621	1703	1697	1621	1608
Q Serve(g_s), s	13.8	27.6	27.6	8.7	14.3	14.7	13.3	13.7	13.9	11.9	12.7	13.1
Cycle Q Clear(g_c), s	13.8	27.6	27.6	8.7	14.3	14.7	13.3	13.7	13.9	11.9	12.7	13.1
Prop In Lane	1.00		0.71	1.00		0.58	1.00		0.22	1.00		0.50
Lane Grp Cap(c), veh/h	291	559	514	193	462	432	283	796	418	256	745	369
V/C Ratio(X)	0.83	0.88	0.88	0.78	0.60	0.61	0.82	0.62	0.63	0.81	0.61	0.63
Avail Cap(c_a), veh/h	590	589	541	590	589	552	590	1128	593	590	1128	560
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.2	31.8	31.8	43.3	31.8	31.9	40.5	33.8	33.9	41.3	34.7	34.9
Incr Delay (d2), s/veh	11.9	15.0	16.1	13.5	2.7	3.0	12.0	1.7	3.3	12.3	1.7	3.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.4	12.7	11.8	4.2	5.8	5.6	6.2	5.3	5.8	5.6	4.9	5.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	52.1	46.8	47.9	56.9	34.5	34.9	52.5	35.5	37.2	53.6	36.5	38.6
LnGrp LOS	D	D	D	E	C	C	D	D	D	D	D	D
Approach Vol, veh/h		1184			694			994			896	
Approach Delay, s/veh		48.3			39.5			39.9			41.0	
Approach LOS		D			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	19.2	28.7	15.5	37.2	20.8	27.1	21.3	31.4
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0
Max Q Clear Time (g_c+I1), s	13.9	15.9	10.7	29.6	15.3	15.1	15.8	16.7
Green Ext Time (p_c), s	1.3	7.6	0.9	3.7	1.4	7.1	1.5	5.2

Intersection Summary	
HCM 6th Ctrl Delay	42.7
HCM 6th LOS	D



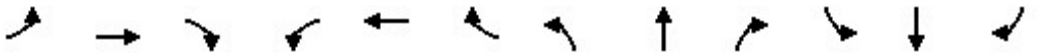
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	228	315	50	83	306	77	22	297	52	111	433	389
Future Volume (veh/h)	228	315	50	83	306	77	22	297	52	111	433	389
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	1.00		0.97	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	238	328	49	86	319	62	23	309	50	116	451	141
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	270	373	56	123	454	87	25	333	54	418	439	364
Arrive On Green	0.15	0.24	0.24	0.07	0.15	0.15	0.23	0.23	0.23	0.24	0.24	0.24
Sat Flow, veh/h	1767	1569	234	1767	2938	563	108	1454	235	1767	1856	1541
Grp Volume(v), veh/h	238	0	377	86	190	191	382	0	0	116	451	141
Grp Sat Flow(s),veh/h/ln	1767	0	1804	1767	1763	1738	1798	0	0	1767	1856	1541
Q Serve(g_s), s	13.9	0.0	21.3	5.0	10.8	11.1	22.0	0.0	0.0	5.7	25.0	8.1
Cycle Q Clear(g_c), s	13.9	0.0	21.3	5.0	10.8	11.1	22.0	0.0	0.0	5.7	25.0	8.1
Prop In Lane	1.00		0.13	1.00		0.32	0.06		0.13	1.00		1.00
Lane Grp Cap(c), veh/h	270	0	429	123	273	269	412	0	0	418	439	364
V/C Ratio(X)	0.88	0.00	0.88	0.70	0.70	0.71	0.93	0.00	0.00	0.28	1.03	0.39
Avail Cap(c_a), veh/h	418	0	512	334	500	493	425	0	0	418	439	364
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.9	0.0	38.8	48.1	42.3	42.5	39.9	0.0	0.0	33.0	40.4	33.9
Incr Delay (d2), s/veh	8.9	0.0	14.2	2.7	3.2	3.5	25.7	0.0	0.0	0.3	50.3	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.5	0.0	10.6	2.2	4.7	4.8	12.2	0.0	0.0	2.4	17.0	2.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	52.8	0.0	53.1	50.8	45.5	45.9	65.6	0.0	0.0	33.3	90.7	34.4
LnGrp LOS	D	A	D	D	D	D	E	A	A	C	F	C
Approach Vol, veh/h		615			467			382			708	
Approach Delay, s/veh		52.9			46.7			65.6			70.1	
Approach LOS		D			D			E			E	

Timer - Assigned Phs	2	3	4	6	7	8
Phs Duration (G+Y+Rc), s	29.2	14.4	32.1	30.0	23.1	23.4
Change Period (Y+Rc), s	5.0	7.0	7.0	5.0	7.0	7.0
Max Green Setting (Gmax), s	25.0	20.0	30.0	25.0	25.0	30.0
Max Q Clear Time (g_c+I1), s	24.0	7.0	23.3	27.0	15.9	13.1
Green Ext Time (p_c), s	0.2	0.1	1.1	0.0	0.2	1.7

Intersection Summary	
HCM 6th Ctrl Delay	59.4
HCM 6th LOS	E

Notes

User approved pedestrian interval to be less than phase max green.



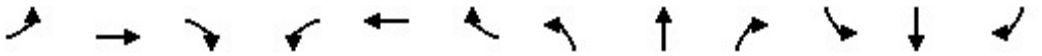
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	94	348	44	66	68	19	30	872	238	12	766	65
Future Volume (veh/h)	94	348	44	66	68	19	30	872	238	12	766	65
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.97	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	95	352	12	67	69	15	30	881	185	12	774	35
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	314	508	422	114	104	18	99	1077	466	376	1692	752
Arrive On Green	0.28	0.28	0.28	0.28	0.28	0.28	0.06	0.31	0.31	0.21	0.48	0.48
Sat Flow, veh/h	1290	1841	1530	224	378	66	1753	3497	1513	1753	3497	1555
Grp Volume(v), veh/h	95	352	12	151	0	0	30	881	185	12	774	35
Grp Sat Flow(s),veh/h/ln	1290	1841	1530	668	0	0	1753	1749	1513	1753	1749	1555
Q Serve(g_s), s	0.0	17.1	0.6	7.6	0.0	0.0	1.6	23.3	9.6	0.5	14.7	1.2
Cycle Q Clear(g_c), s	9.4	17.1	0.6	24.8	0.0	0.0	1.6	23.3	9.6	0.5	14.7	1.2
Prop In Lane	1.00		1.00	0.44		0.10	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	314	508	422	236	0	0	99	1077	466	376	1692	752
V/C Ratio(X)	0.30	0.69	0.03	0.64	0.00	0.00	0.30	0.82	0.40	0.03	0.46	0.05
Avail Cap(c_a), veh/h	368	585	487	292	0	0	280	1077	466	376	1692	752
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.6	32.4	26.4	37.6	0.0	0.0	45.3	32.0	27.3	31.1	17.1	13.6
Incr Delay (d2), s/veh	0.5	2.9	0.0	3.2	0.0	0.0	0.6	6.9	2.5	0.0	0.9	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	7.7	0.2	3.6	0.0	0.0	0.7	10.1	3.6	0.2	5.5	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	30.2	35.4	26.5	40.8	0.0	0.0	45.9	38.9	29.8	31.1	18.0	13.8
LnGrp LOS	C	D	C	D	A	A	D	D	C	C	B	B
Approach Vol, veh/h		459			151			1096			821	
Approach Delay, s/veh		34.1			40.8			37.6			18.0	
Approach LOS		C			D			D			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	27.9	37.3		34.8	10.4	54.9		34.8				
Change Period (Y+Rc), s	6.5	* 6.5		7.2	* 4.7	6.5		7.2				
Max Green Setting (Gmax), s	16.0	* 31		31.8	* 16	33.8		31.8				
Max Q Clear Time (g_c+I1), s	2.5	25.3		19.1	3.6	16.7		26.8				
Green Ext Time (p_c), s	0.0	2.8		1.9	0.0	4.5		0.3				

Intersection Summary			
HCM 6th Ctrl Delay		30.8	
HCM 6th LOS		C	

Notes

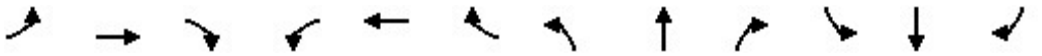
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	88	80	40	19	19	96	23	752	27	100	871	45
Future Volume (veh/h)	88	80	40	19	19	96	23	752	27	100	871	45
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781
Adj Flow Rate, veh/h	91	82	30	20	20	15	24	775	26	103	898	45
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	8	8	8	8	8	8	8	8	8	8	8	8
Cap, veh/h	124	162	59	47	153	127	55	1662	56	132	1276	64
Arrive On Green	0.07	0.13	0.13	0.03	0.09	0.09	0.03	0.34	0.34	0.08	0.39	0.39
Sat Flow, veh/h	1697	1234	452	1697	1781	1484	1697	4830	162	1697	3276	164
Grp Volume(v), veh/h	91	0	112	20	20	15	24	520	281	103	464	479
Grp Sat Flow(s),veh/h/ln	1697	0	1686	1697	1781	1484	1697	1621	1749	1697	1692	1748
Q Serve(g_s), s	3.5	0.0	4.1	0.8	0.7	0.6	0.9	8.4	8.4	4.0	15.4	15.4
Cycle Q Clear(g_c), s	3.5	0.0	4.1	0.8	0.7	0.6	0.9	8.4	8.4	4.0	15.4	15.4
Prop In Lane	1.00		0.27	1.00		1.00	1.00		0.09	1.00		0.09
Lane Grp Cap(c), veh/h	124	0	221	47	153	127	55	1116	602	132	659	681
V/C Ratio(X)	0.73	0.00	0.51	0.42	0.13	0.12	0.44	0.47	0.47	0.78	0.70	0.70
Avail Cap(c_a), veh/h	508	0	883	508	933	778	635	2184	1178	635	1140	1177
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.3	0.0	27.0	31.9	28.2	28.2	31.7	17.1	17.1	30.3	17.1	17.1
Incr Delay (d2), s/veh	3.1	0.0	2.5	2.2	0.5	0.6	2.0	0.4	0.8	3.8	2.0	1.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	0.0	1.7	0.3	0.3	0.2	0.4	2.7	3.0	1.6	5.2	5.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	33.4	0.0	29.6	34.2	28.8	28.8	33.8	17.5	17.9	34.1	19.1	19.1
LnGrp LOS	C	A	C	C	C	C	C	B	B	C	B	B
Approach Vol, veh/h		203			55			825			1046	
Approach Delay, s/veh		31.3			30.7			18.1			20.6	
Approach LOS		C			C			B			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.7	30.5	8.4	15.3	9.7	33.5	11.4	12.2
Change Period (Y+Rc), s	7.5	7.5	6.5	6.5	7.5	7.5	6.5	6.5
Max Green Setting (Gmax), s	25.0	45.0	20.0	35.0	25.0	45.0	20.0	35.0
Max Q Clear Time (g_c+I1), s	6.0	10.4	2.8	6.1	2.9	17.4	5.5	2.7
Green Ext Time (p_c), s	0.1	7.6	0.0	0.8	0.0	8.6	0.1	0.2

Intersection Summary	
HCM 6th Ctrl Delay	20.9
HCM 6th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	147	390	164	24	148	38	107	816	60	64	726	108
Future Volume (veh/h)	147	390	164	24	148	38	107	816	60	64	726	108
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.97	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	153	406	56	25	154	34	111	850	21	67	756	39
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	351	538	447	191	425	94	441	1151	498	186	1068	468
Arrive On Green	0.29	0.29	0.29	0.29	0.29	0.29	0.13	0.33	0.33	0.11	0.31	0.31
Sat Flow, veh/h	1172	1841	1531	914	1455	321	3401	3497	1514	1753	3497	1531
Grp Volume(v), veh/h	153	406	56	25	0	188	111	850	21	67	756	39
Grp Sat Flow(s),veh/h/ln	1172	1841	1531	914	0	1776	1700	1749	1514	1753	1749	1531
Q Serve(g_s), s	8.0	13.5	1.8	1.7	0.0	5.7	2.0	14.5	0.6	2.4	12.9	1.2
Cycle Q Clear(g_c), s	13.7	13.5	1.8	15.2	0.0	5.7	2.0	14.5	0.6	2.4	12.9	1.2
Prop In Lane	1.00		1.00	1.00		0.18	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	351	538	447	191	0	519	441	1151	498	186	1068	468
V/C Ratio(X)	0.44	0.75	0.13	0.13	0.00	0.36	0.25	0.74	0.04	0.36	0.71	0.08
Avail Cap(c_a), veh/h	530	819	681	398	0	921	1260	2333	1010	650	2333	1022
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.3	21.7	17.5	28.6	0.0	18.9	26.4	20.1	15.4	28.0	20.8	16.7
Incr Delay (d2), s/veh	0.9	2.2	0.1	0.3	0.0	0.4	0.1	0.9	0.0	0.4	0.9	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	5.4	0.6	0.4	0.0	2.1	0.7	5.0	0.2	0.9	4.5	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	25.2	23.9	17.7	28.9	0.0	19.3	26.5	21.0	15.4	28.5	21.6	16.8
LnGrp LOS	C	C	B	C	A	B	C	C	B	C	C	B
Approach Vol, veh/h		615			213			982			862	
Approach Delay, s/veh		23.6			20.5			21.5			22.0	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.9	28.7		26.9	13.5	27.1		26.9				
Change Period (Y+Rc), s	* 4.7	6.5		7.2	* 4.7	6.5		7.2				
Max Green Setting (Gmax), s	* 25	45.0		30.0	* 25	45.0		35.0				
Max Q Clear Time (g_c+I1), s	4.4	16.5		15.7	4.0	14.9		17.2				
Green Ext Time (p_c), s	0.1	5.6		2.6	0.1	5.0		0.9				

Intersection Summary			
HCM 6th Ctrl Delay		22.1	
HCM 6th LOS		C	

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

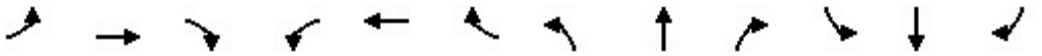
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	89	408	151	175	108	71	58	597	267	106	666	30
Future Volume (veh/h)	89	408	151	175	108	71	58	597	267	106	666	30
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	97	443	0	190	117	19	63	649	0	115	724	12
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	226	797		357	491	408	95	1085		162	1220	528
Arrive On Green	0.07	0.23	0.00	0.11	0.27	0.27	0.05	0.31	0.00	0.09	0.35	0.35
Sat Flow, veh/h	3401	3497	1560	3401	1841	1530	1753	3497	1560	1753	3497	1514
Grp Volume(v), veh/h	97	443	0	190	117	19	63	649	0	115	724	12
Grp Sat Flow(s),veh/h/ln	1700	1749	1560	1700	1841	1530	1753	1749	1560	1753	1749	1514
Q Serve(g_s), s	1.7	6.8	0.0	3.2	3.0	0.6	2.1	9.5	0.0	3.9	10.3	0.3
Cycle Q Clear(g_c), s	1.7	6.8	0.0	3.2	3.0	0.6	2.1	9.5	0.0	3.9	10.3	0.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	226	797		357	491	408	95	1085		162	1220	528
V/C Ratio(X)	0.43	0.56		0.53	0.24	0.05	0.67	0.60		0.71	0.59	0.02
Avail Cap(c_a), veh/h	1965	2021		1965	1064	884	1013	2021		1013	2021	875
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.2	20.7	0.0	25.7	17.4	16.5	28.1	17.7	0.0	26.7	16.2	12.9
Incr Delay (d2), s/veh	2.7	1.3	0.0	2.6	0.5	0.1	15.9	1.1	0.0	11.4	1.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	2.5	0.0	1.3	1.1	0.2	1.2	3.2	0.0	1.9	3.3	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	29.9	22.0	0.0	28.3	17.9	16.6	44.0	18.8	0.0	38.1	17.2	13.0
LnGrp LOS	C	C		C	B	B	D	B		D	B	B
Approach Vol, veh/h		540	A		326			712	A		851	
Approach Delay, s/veh		23.4			23.9			21.1			20.0	
Approach LOS		C			C			C			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.6	22.8	10.4	17.8	7.3	25.1	8.0	20.1
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0
Max Q Clear Time (g_c+I1), s	5.9	11.5	5.2	8.8	4.1	12.3	3.7	5.0
Green Ext Time (p_c), s	0.7	7.3	1.4	5.0	0.3	8.2	0.7	1.2

Intersection Summary	
HCM 6th Ctrl Delay	21.6
HCM 6th LOS	C

Notes

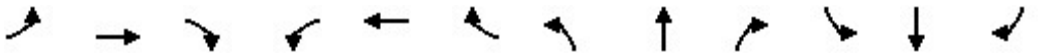
Unsignalized Delay for [NBR, EBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	168	640	35	228	459	193	17	178	71	180	351	44
Future Volume (veh/h)	168	640	35	228	459	193	17	178	71	180	351	44
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.97	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	175	667	9	238	478	40	18	185	18	188	366	41
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	215	1229	374	334	1393	331	51	326	270	229	883	98
Arrive On Green	0.12	0.24	0.24	0.10	0.22	0.22	0.03	0.18	0.18	0.13	0.28	0.28
Sat Flow, veh/h	1753	5025	1529	3401	6332	1506	1753	1841	1524	1753	3166	352
Grp Volume(v), veh/h	175	667	9	238	478	40	18	185	18	188	201	206
Grp Sat Flow(s),veh/h/ln	1753	1675	1529	1700	1583	1506	1753	1841	1524	1753	1749	1769
Q Serve(g_s), s	7.2	8.6	0.3	5.1	4.7	1.6	0.8	6.8	0.7	7.8	7.0	7.1
Cycle Q Clear(g_c), s	7.2	8.6	0.3	5.1	4.7	1.6	0.8	6.8	0.7	7.8	7.0	7.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.20
Lane Grp Cap(c), veh/h	215	1229	374	334	1393	331	51	326	270	229	488	494
V/C Ratio(X)	0.81	0.54	0.02	0.71	0.34	0.12	0.35	0.57	0.07	0.82	0.41	0.42
Avail Cap(c_a), veh/h	471	2699	821	913	3401	809	471	1162	962	471	1104	1117
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.8	24.5	21.4	32.6	24.5	23.3	35.5	28.0	25.5	31.5	21.9	21.9
Incr Delay (d2), s/veh	2.8	0.5	0.0	1.1	0.2	0.2	1.5	0.6	0.0	2.8	0.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.0	3.1	0.1	1.9	1.6	0.5	0.3	2.8	0.2	3.2	2.6	2.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	34.7	25.0	21.4	33.6	24.7	23.5	37.0	28.6	25.5	34.3	22.1	22.1
LnGrp LOS	C	C	C	C	C	C	D	C	C	C	C	C
Approach Vol, veh/h		851			756			221			595	
Approach Delay, s/veh		27.0			27.5			29.0			26.0	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.2	19.7	13.8	24.7	8.7	27.3	15.6	22.9
Change Period (Y+Rc), s	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
Max Green Setting (Gmax), s	20.0	47.0	20.0	40.0	20.0	47.0	20.0	40.0
Max Q Clear Time (g_c+I1), s	9.8	8.8	7.1	10.6	2.8	9.1	9.2	6.7
Green Ext Time (p_c), s	0.2	0.6	0.3	6.3	0.0	1.3	0.2	4.5

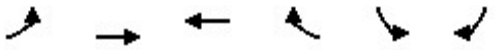
Intersection Summary	
HCM 6th Ctrl Delay	27.1
HCM 6th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	104	559	224	413	522	167	306	423	286	257	565	105
Future Volume (veh/h)	104	559	224	413	522	167	306	423	286	257	565	105
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	108	582	46	430	544	51	319	441	73	268	589	26
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	230	950	288	522	961	420	403	1250	381	350	816	356
Arrive On Green	0.07	0.19	0.19	0.15	0.27	0.27	0.12	0.25	0.25	0.10	0.23	0.23
Sat Flow, veh/h	3401	5025	1525	3401	3497	1530	3401	5025	1529	3401	3497	1528
Grp Volume(v), veh/h	108	582	46	430	544	51	319	441	73	268	589	26
Grp Sat Flow(s),veh/h/ln	1700	1675	1525	1700	1749	1530	1700	1675	1529	1700	1749	1528
Q Serve(g_s), s	3.0	10.4	2.5	12.0	13.1	2.5	8.9	7.1	3.7	7.5	15.2	1.3
Cycle Q Clear(g_c), s	3.0	10.4	2.5	12.0	13.1	2.5	8.9	7.1	3.7	7.5	15.2	1.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	230	950	288	522	961	420	403	1250	381	350	816	356
V/C Ratio(X)	0.47	0.61	0.16	0.82	0.57	0.12	0.79	0.35	0.19	0.77	0.72	0.07
Avail Cap(c_a), veh/h	1214	1794	545	1214	1249	546	867	1281	390	867	1249	546
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.0	36.5	33.2	40.2	30.5	26.7	42.0	30.3	29.0	42.8	34.7	29.3
Incr Delay (d2), s/veh	1.1	0.8	0.3	2.5	0.6	0.2	2.7	0.2	0.3	2.6	1.5	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	4.0	0.9	4.9	5.2	0.9	3.7	2.7	1.3	3.1	6.2	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	45.1	37.2	33.6	42.7	31.2	26.8	44.7	30.5	29.3	45.5	36.1	29.4
LnGrp LOS	D	D	C	D	C	C	D	C	C	D	D	C
Approach Vol, veh/h		736			1025			833			883	
Approach Delay, s/veh		38.2			35.8			35.8			38.8	
Approach LOS		D			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	22.5	26.0	19.1	30.4	14.1	34.4	17.6	31.9
Change Period (Y+Rc), s	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5
Max Green Setting (Gmax), s	35.0	35.0	25.0	35.0	35.0	35.0	25.0	25.0
Max Q Clear Time (g_c+I1), s	14.0	12.4	10.9	17.2	5.0	15.1	9.5	9.1
Green Ext Time (p_c), s	1.0	3.8	0.7	4.0	0.2	3.8	0.6	2.7

Intersection Summary	
HCM 6th Ctrl Delay	37.1
HCM 6th LOS	D



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑	↑↑		↰↰	↱
Traffic Volume (veh/h)	0	983	579	0	282	1185
Future Volume (veh/h)	0	983	579	0	282	1185
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	0	1841	1841	0	1841	1841
Adj Flow Rate, veh/h	0	1156	681	0	332	1262
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	0	4	4	0	4	4
Cap, veh/h	0	1699	1183	0	803	1428
Arrive On Green	0.00	0.34	0.34	0.00	0.46	0.46
Sat Flow, veh/h	0	5356	3681	0	1753	3120
Grp Volume(v), veh/h	0	1156	681	0	332	1262
Grp Sat Flow(s),veh/h/ln	0	1675	1749	0	1753	1560
Q Serve(g_s), s	0.0	11.9	9.6	0.0	7.6	22.2
Cycle Q Clear(g_c), s	0.0	11.9	9.6	0.0	7.6	22.2
Prop In Lane	0.00			0.00	1.00	1.00
Lane Grp Cap(c), veh/h	0	1699	1183	0	803	1428
V/C Ratio(X)	0.00	0.68	0.58	0.00	0.41	0.88
Avail Cap(c_a), veh/h	0	2500	1740	0	872	1552
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	17.2	16.4	0.0	10.9	14.9
Incr Delay (d2), s/veh	0.0	0.5	0.4	0.0	0.3	6.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	3.6	3.1	0.0	2.3	7.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.0	17.6	16.8	0.0	11.3	20.9
LnGrp LOS	A	B	B	A	B	C
Approach Vol, veh/h		1156	681		1594	
Approach Delay, s/veh		17.6	16.8		18.9	
Approach LOS		B	B		B	

Timer - Assigned Phs	2	4	6
Phs Duration (G+Y+Rc), s	27.2	33.1	27.2
Change Period (Y+Rc), s	6.8	5.5	6.8
Max Green Setting (Gmax), s	30.0	30.0	30.0
Max Q Clear Time (g_c+I1), s	13.9	24.2	11.6
Green Ext Time (p_c), s	6.5	3.4	3.8

Intersection Summary	
HCM 6th Ctrl Delay	18.1
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	577	715	257	347	364	115
Future Volume (veh/h)	577	715	257	347	364	115
Initial Q (Qb), veh	0	105	0	0	0	76
Ped-Bike Adj(A_pbT)		0.97	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	656	812	292	394	414	131
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	4	4	4	4	4	4
Cap, veh/h	1736	1029	395	2667	1108	464
Arrive On Green	0.43	0.43	0.12	0.64	0.17	0.17
Sat Flow, veh/h	5191	1517	3401	5191	3506	1560
Grp Volume(v), veh/h	656	812	292	394	414	131
Grp Sat Flow(s),veh/h/ln	1675	1517	1700	1675	1753	1560
Q Serve(g_s), s	5.9	30.0	5.7	2.1	7.8	5.3
Cycle Q Clear(g_c), s	5.9	30.0	5.7	2.1	7.8	5.3
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1736	1029	395	2667	1108	464
V/C Ratio(X)	0.38	0.79	0.74	0.15	0.37	0.28
Avail Cap(c_a), veh/h	2166	916	1466	3220	1511	672
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.7	9.9	37.4	10.6	23.0	29.0
Incr Delay (d2), s/veh	0.1	5.1	2.7	0.0	0.2	0.3
Initial Q Delay(d3),s/veh	0.0	272.6	0.0	0.0	0.0	268.8
%ile BackOfQ(50%),veh/ln	3.0	100.8	2.9	1.1	3.3	43.6
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	21.9	287.5	40.1	10.7	23.2	298.2
LnGrp LOS	C	F	D	B	C	F
Approach Vol, veh/h	1468			686	545	
Approach Delay, s/veh	168.8			23.2	89.3	
Approach LOS	F			C	F	

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	14.6	37.3				51.9	17.7
Change Period (Y+Rc), s	6.0	7.3				7.3	6.0
Max Green Setting (Gmax), s	30.0	30.0				30.0	30.0
Max Q Clear Time (g_c+I1), s	7.7	32.0				4.1	9.8
Green Ext Time (p_c), s	0.9	0.0				2.3	1.9

Intersection Summary	
HCM 6th Ctrl Delay	115.7
HCM 6th LOS	F

Notes

User approved pedestrian interval to be less than phase max green.
User approved volume balancing among the lanes for turning movement.

Intersection	
Intersection Delay, s/veh	0
Intersection LOS	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles, %	8	8	8	8	8	8	8	8	8	8	8	8
Mvmt Flow	0	0	0	0	0	0	0	0	0	0	0	0
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	0	0	0	0
HCM LOS	-	-	-	-

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	0%	0%	0%	0%
Vol Thru, %	100%	100%	100%	100%
Vol Right, %	0%	0%	0%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	0	0	0	0
LT Vol	0	0	0	0
Through Vol	0	0	0	0
RT Vol	0	0	0	0
Lane Flow Rate	0	0	0	0
Geometry Grp	1	1	1	1
Degree of Util (X)	0	0	0	0
Departure Headway (Hd)	4.036	4.036	4.036	4.036
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	0	0	0	0
Service Time	2.036	2.036	2.036	2.036
HCM Lane V/C Ratio	0	0	0	0
HCM Control Delay	7	7	7	7
HCM Lane LOS	N	N	N	N
HCM 95th-tile Q	0	0	0	0

Intersection	
Intersection Delay, s/veh	9.7
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	33	8	21	30	32	20	7	138	150	46	122	23
Future Vol, veh/h	33	8	21	30	32	20	7	138	150	46	122	23
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	8	8	8	8	8	8	8	8	8	8	8	8
Mvmt Flow	36	9	23	33	35	22	8	150	163	50	133	25
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8.9	9.1	10.2	9.6
HCM LOS	A	A	B	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	2%	53%	37%	24%
Vol Thru, %	47%	13%	39%	64%
Vol Right, %	51%	34%	24%	12%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	295	62	82	191
LT Vol	7	33	30	46
Through Vol	138	8	32	122
RT Vol	150	21	20	23
Lane Flow Rate	321	67	89	208
Geometry Grp	1	1	1	1
Degree of Util (X)	0.391	0.098	0.13	0.275
Departure Headway (Hd)	4.392	5.26	5.248	4.772
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	818	677	678	749
Service Time	2.432	3.33	3.315	2.82
HCM Lane V/C Ratio	0.392	0.099	0.131	0.278
HCM Control Delay	10.2	8.9	9.1	9.6
HCM Lane LOS	B	A	A	A
HCM 95th-tile Q	1.9	0.3	0.4	1.1

Intersection	
Intersection Delay, s/veh	14.2
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	18	471	6	5	196	16	5	12	6	19	7	6
Future Vol, veh/h	18	471	6	5	196	16	5	12	6	19	7	6
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles, %	4	4	4	4	4	4	4	4	4	4	4	4
Mvmt Flow	20	535	7	6	223	18	6	14	7	22	8	7
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	16.7	9.9	9	9.2
HCM LOS	C	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	22%	4%	2%	59%
Vol Thru, %	52%	95%	90%	22%
Vol Right, %	26%	1%	7%	19%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	23	495	217	32
LT Vol	5	18	5	19
Through Vol	12	471	196	7
RT Vol	6	6	16	6
Lane Flow Rate	26	563	247	36
Geometry Grp	1	1	1	1
Degree of Util (X)	0.041	0.69	0.321	0.059
Departure Headway (Hd)	5.697	4.415	4.69	5.795
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	624	816	764	614
Service Time	3.771	2.445	2.729	3.865
HCM Lane V/C Ratio	0.042	0.69	0.323	0.059
HCM Control Delay	9	16.7	9.9	9.2
HCM Lane LOS	A	C	A	A
HCM 95th-tile Q	0.1	5.7	1.4	0.2

Intersection	
Int Delay, s/veh	28.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	38	805	30	94	551	13	23	20	201	3	13	30
Future Vol, veh/h	38	805	30	94	551	13	23	20	201	3	13	30
Conflicting Peds, #/hr	5	0	5	5	0	5	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	127	-	-	143	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	40	847	32	99	580	14	24	21	212	3	14	32

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	599	0	0	884	0	0	1443	1745	868	1850	1754	302
Stage 1	-	-	-	-	-	-	948	948	-	790	790	-
Stage 2	-	-	-	-	-	-	495	797	-	1060	964	-
Critical Hdwy	4.145	-	-	4.145	-	-	7.345	6.545	6.245	7.345	6.545	6.945
Critical Hdwy Stg 1	-	-	-	-	-	-	6.145	5.545	-	6.545	5.545	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.545	5.545	-	6.145	5.545	-
Follow-up Hdwy	2.2285	-	-	2.2285	-	-	3.5285	4.0285	3.3285	3.5285	4.0285	3.3285
Pot Cap-1 Maneuver	970	-	-	758	-	-	100	85	349	51	84	692
Stage 1	-	-	-	-	-	-	311	337	-	349	399	-
Stage 2	-	-	-	-	-	-	524	396	-	269	331	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	965	-	-	754	-	-	71	70	347	13	69	689
Mov Cap-2 Maneuver	-	-	-	-	-	-	71	70	-	13	69	-
Stage 1	-	-	-	-	-	-	297	321	-	333	345	-
Stage 2	-	-	-	-	-	-	417	343	-	94	316	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.4	1.5	194.1	72.1
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	205	965	-	-	754	-	-	99
HCM Lane V/C Ratio	1.253	0.041	-	-	0.131	-	-	0.489
HCM Control Delay (s)	194.1	8.9	-	-	10.5	-	-	72.1
HCM Lane LOS	F	A	-	-	B	-	-	F
HCM 95th %tile Q(veh)	13.6	0.1	-	-	0.5	-	-	2.1

Intersection	
Int Delay, s/veh	27.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	22	857	155	47	522	20	89	15	82	9	2	22
Future Vol, veh/h	22	857	155	47	522	20	89	15	82	9	2	22
Conflicting Peds, #/hr	5	0	5	5	0	5	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	69	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	98	98	98	98	98	98	98	98	98	98	98	98
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	22	874	158	48	533	20	91	15	84	9	2	22

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	558	0	0	1037	0	0	1366	1656	958	1691	1725	282
Stage 1	-	-	-	-	-	-	1002	1002	-	644	644	-
Stage 2	-	-	-	-	-	-	364	654	-	1047	1081	-
Critical Hdwy	4.145	-	-	4.145	-	-	7.345	6.545	6.245	7.345	6.545	6.945
Critical Hdwy Stg 1	-	-	-	-	-	-	6.145	5.545	-	6.545	5.545	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.545	5.545	-	6.145	5.545	-
Follow-up Hdwy	2.2285	-	-	2.2285	-	-	3.5285	4.0285	3.3285	3.5285	4.0285	3.3285
Pot Cap-1 Maneuver	1005	-	-	663	-	-	114	97	309	66	88	713
Stage 1	-	-	-	-	-	-	290	318	-	427	465	-
Stage 2	-	-	-	-	-	-	626	460	-	273	291	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1000	-	-	660	-	-	100	87	308	39	79	710
Mov Cap-2 Maneuver	-	-	-	-	-	-	100	87	-	39	79	-
Stage 1	-	-	-	-	-	-	282	309	-	415	429	-
Stage 2	-	-	-	-	-	-	559	424	-	185	283	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.2	0.9	259.4	48.8
HCM LOS			F	E

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	140	1000	-	-	660	-	-	115
HCM Lane V/C Ratio	1.356	0.022	-	-	0.073	-	-	0.293
HCM Control Delay (s)	259.4	8.7	-	-	10.9	-	-	48.8
HCM Lane LOS	F	A	-	-	B	-	-	E
HCM 95th %tile Q(veh)	12.1	0.1	-	-	0.2	-	-	1.1

Intersection	
Int Delay, s/veh	1.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	17	914	15	14	560	36	14	3	21	8	3	17
Future Vol, veh/h	17	914	15	14	560	36	14	3	21	8	3	17
Conflicting Peds, #/hr	5	0	5	5	0	5	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	98	-	-	47	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	18	993	16	15	609	39	15	3	23	9	3	18

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	653	0	0	1014	0	0	1378	1725	1006	1714	1714	329
Stage 1	-	-	-	-	-	-	1042	1042	-	664	664	-
Stage 2	-	-	-	-	-	-	336	683	-	1050	1050	-
Critical Hdwy	4.145	-	-	4.145	-	-	7.345	6.545	6.245	7.345	6.545	6.945
Critical Hdwy Stg 1	-	-	-	-	-	-	6.145	5.545	-	6.545	5.545	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.545	5.545	-	6.145	5.545	-
Follow-up Hdwy	2.2285	-	-	2.2285	-	-	3.5285	4.0285	3.3285	3.5285	4.0285	3.3285
Pot Cap-1 Maneuver	926	-	-	677	-	-	112	88	290	64	89	665
Stage 1	-	-	-	-	-	-	275	304	-	415	455	-
Stage 2	-	-	-	-	-	-	650	446	-	272	301	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	922	-	-	674	-	-	102	84	289	55	84	662
Mov Cap-2 Maneuver	-	-	-	-	-	-	102	84	-	55	84	-
Stage 1	-	-	-	-	-	-	268	296	-	405	443	-
Stage 2	-	-	-	-	-	-	613	434	-	243	293	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.2	0.2	36.5	39.3
HCM LOS			E	E

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	155	922	-	-	674	-	-	135
HCM Lane V/C Ratio	0.266	0.02	-	-	0.023	-	-	0.225
HCM Control Delay (s)	36.5	9	-	-	10.5	-	-	39.3
HCM Lane LOS	E	A	-	-	B	-	-	E
HCM 95th %tile Q(veh)	1	0.1	-	-	0.1	-	-	0.8

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	1251	687	21	5	11
Future Vol, veh/h	0	1251	687	21	5	11
Conflicting Peds, #/hr	5	0	0	5	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	25	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	0	1317	723	22	5	12

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	750	0	-	0	2056	378
Stage 1	-	-	-	-	739	-
Stage 2	-	-	-	-	1317	-
Critical Hdwy	4.145	-	-	-	6.645	6.945
Critical Hdwy Stg 1	-	-	-	-	5.845	-
Critical Hdwy Stg 2	-	-	-	-	5.445	-
Follow-up Hdwy	2.2285	-	-	-	3.5285	3.3285
Pot Cap-1 Maneuver	851	-	-	-	53	618
Stage 1	-	-	-	-	432	-
Stage 2	-	-	-	-	248	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	847	-	-	-	52	615
Mov Cap-2 Maneuver	-	-	-	-	165	-
Stage 1	-	-	-	-	430	-
Stage 2	-	-	-	-	247	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	16.4
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	847	-	-	-	332
HCM Lane V/C Ratio	-	-	-	-	0.051
HCM Control Delay (s)	0	-	-	-	16.4
HCM Lane LOS	A	-	-	-	C
HCM 95th %tile Q(veh)	0	-	-	-	0.2

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	4	1251	692	15	2	17
Future Vol, veh/h	4	1251	692	15	2	17
Conflicting Peds, #/hr	5	0	0	5	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	25	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	4	1317	728	16	2	18

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	749	0	-	0	2066	377
Stage 1	-	-	-	-	741	-
Stage 2	-	-	-	-	1325	-
Critical Hdwy	4.145	-	-	-	6.645	6.945
Critical Hdwy Stg 1	-	-	-	-	5.845	-
Critical Hdwy Stg 2	-	-	-	-	5.445	-
Follow-up Hdwy	2.2285	-	-	-	3.5285	3.3285
Pot Cap-1 Maneuver	852	-	-	-	53	619
Stage 1	-	-	-	-	431	-
Stage 2	-	-	-	-	246	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	848	-	-	-	52	616
Mov Cap-2 Maneuver	-	-	-	-	164	-
Stage 1	-	-	-	-	427	-
Stage 2	-	-	-	-	245	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	12.9
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	848	-	-	-	477
HCM Lane V/C Ratio	0.005	-	-	-	0.042
HCM Control Delay (s)	9.3	-	-	-	12.9
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.1

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	2	1257	706	15	24	1
Future Vol, veh/h	2	1257	706	15	24	1
Conflicting Peds, #/hr	5	0	0	5	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	2	1296	728	15	25	1

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	748	0	-	0	2041	377
Stage 1	-	-	-	-	741	-
Stage 2	-	-	-	-	1300	-
Critical Hdwy	4.145	-	-	-	6.645	6.945
Critical Hdwy Stg 1	-	-	-	-	5.845	-
Critical Hdwy Stg 2	-	-	-	-	5.445	-
Follow-up Hdwy	2.2285	-	-	-	3.5285	3.3285
Pot Cap-1 Maneuver	853	-	-	-	55	619
Stage 1	-	-	-	-	431	-
Stage 2	-	-	-	-	253	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	849	-	-	-	54	616
Mov Cap-2 Maneuver	-	-	-	-	167	-
Stage 1	-	-	-	-	428	-
Stage 2	-	-	-	-	252	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	29.6
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	849	-	-	-	172
HCM Lane V/C Ratio	0.002	-	-	-	0.15
HCM Control Delay (s)	9.3	-	-	-	29.6
HCM Lane LOS	A	-	-	-	D
HCM 95th %tile Q(veh)	0	-	-	-	0.5

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	13	1270	711	26	30	10
Future Vol, veh/h	13	1270	711	26	30	10
Conflicting Peds, #/hr	5	0	0	5	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	350	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	14	1323	741	27	31	10

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	773	0	-	0	2111	389
Stage 1	-	-	-	-	760	-
Stage 2	-	-	-	-	1351	-
Critical Hdwy	4.145	-	-	-	6.645	6.945
Critical Hdwy Stg 1	-	-	-	-	5.845	-
Critical Hdwy Stg 2	-	-	-	-	5.445	-
Follow-up Hdwy	2.2285	-	-	-	3.5285	3.3285
Pot Cap-1 Maneuver	835	-	-	-	49	608
Stage 1	-	-	-	-	421	-
Stage 2	-	-	-	-	239	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	831	-	-	-	48	605
Mov Cap-2 Maneuver	-	-	-	-	158	-
Stage 1	-	-	-	-	412	-
Stage 2	-	-	-	-	238	-

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	28.6
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	831	-	-	-	194
HCM Lane V/C Ratio	0.016	-	-	-	0.215
HCM Control Delay (s)	9.4	-	-	-	28.6
HCM Lane LOS	A	-	-	-	D
HCM 95th %tile Q(veh)	0.1	-	-	-	0.8

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	6	1297	720	10	11	17
Future Vol, veh/h	6	1297	720	10	11	17
Conflicting Peds, #/hr	5	0	0	5	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	175	-	-	-	0	76
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	99	99	99	99	99	99
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	6	1310	727	10	11	17

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	742	0	-	0	2059	374
Stage 1	-	-	-	-	737	-
Stage 2	-	-	-	-	1322	-
Critical Hdwy	4.145	-	-	-	6.645	6.945
Critical Hdwy Stg 1	-	-	-	-	5.845	-
Critical Hdwy Stg 2	-	-	-	-	5.445	-
Follow-up Hdwy	2.2285	-	-	-	3.5285	3.3285
Pot Cap-1 Maneuver	857	-	-	-	53	622
Stage 1	-	-	-	-	433	-
Stage 2	-	-	-	-	246	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	853	-	-	-	52	619
Mov Cap-2 Maneuver	-	-	-	-	52	-
Stage 1	-	-	-	-	428	-
Stage 2	-	-	-	-	245	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	42.9
HCM LOS			E

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	853	-	-	-	52	619
HCM Lane V/C Ratio	0.007	-	-	-	0.214	0.028
HCM Control Delay (s)	9.3	-	-	-	92.1	11
HCM Lane LOS	A	-	-	-	F	B
HCM 95th %tile Q(veh)	0	-	-	-	0.7	0.1

Intersection	
Int Delay, s/veh	1.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1263	45	11	705	25	12
Future Vol, veh/h	1263	45	11	705	25	12
Conflicting Peds, #/hr	0	5	5	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	200	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	1358	48	12	758	27	13

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1411	0	1790	1387
Stage 1	-	-	-	-	1387	-
Stage 2	-	-	-	-	403	-
Critical Hdwy	-	-	4.145	-	6.645	6.245
Critical Hdwy Stg 1	-	-	-	-	5.445	-
Critical Hdwy Stg 2	-	-	-	-	5.845	-
Follow-up Hdwy	-	-	2.2285	-	3.5285	3.3285
Pot Cap-1 Maneuver	-	-	477	-	80	173
Stage 1	-	-	-	-	229	-
Stage 2	-	-	-	-	642	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	475	-	78	172
Mov Cap-2 Maneuver	-	-	-	-	78	-
Stage 1	-	-	-	-	228	-
Stage 2	-	-	-	-	626	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.2	67.8
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	95	-	-	475	-
HCM Lane V/C Ratio	0.419	-	-	0.025	-
HCM Control Delay (s)	67.8	-	-	12.8	-
HCM Lane LOS	F	-	-	B	-
HCM 95th %tile Q(veh)	1.7	-	-	0.1	-

Intersection	
Int Delay, s/veh	0.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	226	0	2	84	1	18
Future Vol, veh/h	226	0	2	84	1	18
Conflicting Peds, #/hr	0	5	5	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	8	8	8	8	8	8
Mvmt Flow	243	0	2	90	1	19

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	248	0	342	248
Stage 1	-	-	-	-	248	-
Stage 2	-	-	-	-	94	-
Critical Hdwy	-	-	4.18	-	6.48	6.28
Critical Hdwy Stg 1	-	-	-	-	5.48	-
Critical Hdwy Stg 2	-	-	-	-	5.48	-
Follow-up Hdwy	-	-	2.272	-	3.572	3.372
Pot Cap-1 Maneuver	-	-	1283	-	642	776
Stage 1	-	-	-	-	779	-
Stage 2	-	-	-	-	915	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1277	-	638	772
Mov Cap-2 Maneuver	-	-	-	-	638	-
Stage 1	-	-	-	-	775	-
Stage 2	-	-	-	-	913	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.2	9.8
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	764	-	-	1277	-
HCM Lane V/C Ratio	0.027	-	-	0.002	-
HCM Control Delay (s)	9.8	-	-	7.8	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Intersection	
Int Delay, s/veh	0.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	244	0	2	81	2	2
Future Vol, veh/h	244	0	2	81	2	2
Conflicting Peds, #/hr	0	5	5	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	8	8	8	8	8	8
Mvmt Flow	252	0	2	84	2	2

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	257	0	345	257
Stage 1	-	-	-	-	257	-
Stage 2	-	-	-	-	88	-
Critical Hdwy	-	-	4.18	-	6.48	6.28
Critical Hdwy Stg 1	-	-	-	-	5.48	-
Critical Hdwy Stg 2	-	-	-	-	5.48	-
Follow-up Hdwy	-	-	2.272	-	3.572	3.372
Pot Cap-1 Maneuver	-	-	1274	-	640	767
Stage 1	-	-	-	-	772	-
Stage 2	-	-	-	-	921	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1268	-	636	763
Mov Cap-2 Maneuver	-	-	-	-	636	-
Stage 1	-	-	-	-	768	-
Stage 2	-	-	-	-	919	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.2	10.2
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	694	-	-	1268	-
HCM Lane V/C Ratio	0.006	-	-	0.002	-
HCM Control Delay (s)	10.2	-	-	7.8	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0	-

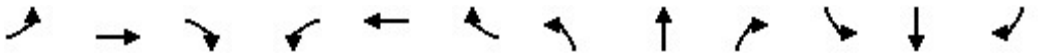
Intersection	
Int Delay, s/veh	1.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	4	233	4	2	75	11	2	12	9	20	7	7
Future Vol, veh/h	4	233	4	2	75	11	2	12	9	20	7	7
Conflicting Peds, #/hr	5	0	5	5	0	5	5	0	5	5	0	5
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	8	8	8	8	8	8	8	8	8	8	8	8
Mvmt Flow	4	240	4	2	77	11	2	12	9	21	7	7

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	93	0	0	249	0	0	354	352	252	358	349	93
Stage 1	-	-	-	-	-	-	255	255	-	92	92	-
Stage 2	-	-	-	-	-	-	99	97	-	266	257	-
Critical Hdwy	4.18	-	-	4.18	-	-	7.18	6.58	6.28	7.18	6.58	6.28
Critical Hdwy Stg 1	-	-	-	-	-	-	6.18	5.58	-	6.18	5.58	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.18	5.58	-	6.18	5.58	-
Follow-up Hdwy	2.272	-	-	2.272	-	-	3.572	4.072	3.372	3.572	4.072	3.372
Pot Cap-1 Maneuver	1464	-	-	1282	-	-	590	563	772	586	565	948
Stage 1	-	-	-	-	-	-	736	685	-	900	807	-
Stage 2	-	-	-	-	-	-	893	803	-	726	684	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1457	-	-	1276	-	-	572	555	765	561	557	939
Mov Cap-2 Maneuver	-	-	-	-	-	-	572	555	-	561	557	-
Stage 1	-	-	-	-	-	-	730	680	-	893	801	-
Stage 2	-	-	-	-	-	-	872	797	-	699	679	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.2	11	11.3
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	624	1457	-	-	1276	-	-	611
HCM Lane V/C Ratio	0.038	0.003	-	-	0.002	-	-	0.057
HCM Control Delay (s)	11	7.5	0	-	7.8	0	-	11.3
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.2



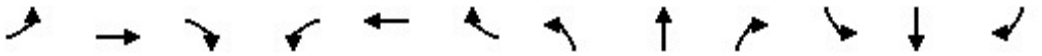
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	219	617	96	25	616	442	174	833	47	360	721	178
Future Volume (veh/h)	219	617	96	25	616	442	174	833	47	360	721	178
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	238	671	33	27	670	168	189	905	49	391	784	68
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	297	956	424	144	798	354	213	1127	61	419	1753	535
Arrive On Green	0.09	0.27	0.27	0.04	0.23	0.23	0.12	0.23	0.23	0.24	0.35	0.35
Sat Flow, veh/h	3401	3497	1551	3401	3497	1550	1753	4874	263	1753	5025	1533
Grp Volume(v), veh/h	238	671	33	27	670	168	189	621	333	391	784	68
Grp Sat Flow(s),veh/h/ln	1700	1749	1551	1700	1749	1550	1753	1675	1787	1753	1675	1533
Q Serve(g_s), s	9.3	23.4	2.1	1.0	24.8	12.7	14.4	23.7	23.8	29.6	16.3	4.1
Cycle Q Clear(g_c), s	9.3	23.4	2.1	1.0	24.8	12.7	14.4	23.7	23.8	29.6	16.3	4.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.15	1.00		1.00
Lane Grp Cap(c), veh/h	297	956	424	144	798	354	213	775	413	419	1753	535
V/C Ratio(X)	0.80	0.70	0.08	0.19	0.84	0.47	0.89	0.80	0.80	0.93	0.45	0.13
Avail Cap(c_a), veh/h	753	956	424	502	903	400	259	865	461	711	1753	535
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	60.7	44.3	36.6	62.6	49.9	45.3	58.6	49.2	49.2	50.5	34.1	30.1
Incr Delay (d2), s/veh	3.8	2.4	0.1	0.5	6.7	1.2	24.4	5.4	9.9	10.7	0.3	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.1	10.2	0.8	0.4	11.1	4.8	7.6	10.2	11.4	13.9	6.5	1.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	64.5	46.7	36.7	63.1	56.6	46.5	83.0	54.6	59.1	61.2	34.3	30.2
LnGrp LOS	E	D	D	E	E	D	F	D	E	E	C	C
Approach Vol, veh/h		942			865			1143			1243	
Approach Delay, s/veh		50.9			54.8			60.6			42.6	
Approach LOS		D			D			E			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	39.4	38.4	13.2	44.5	23.5	54.3	19.3	38.4
Change Period (Y+Rc), s	7.0	7.0	7.5	7.5	7.0	7.0	7.5	7.5
Max Green Setting (Gmax), s	55.0	35.0	20.0	35.0	20.0	35.0	30.0	35.0
Max Q Clear Time (g_c+I1), s	31.6	25.8	3.0	25.4	16.4	18.3	11.3	26.8
Green Ext Time (p_c), s	0.8	4.8	0.0	3.4	0.1	6.4	0.5	3.3

Intersection Summary	
HCM 6th Ctrl Delay	51.9
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.



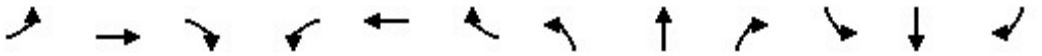
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	41	923	138	42	705	4	201	36	74	4	26	37
Future Volume (veh/h)	41	923	138	42	705	4	201	36	74	4	26	37
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	45	1003	71	46	766	4	218	39	20	4	28	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	107	1361	599	109	1391	7	390	723	318	379	723	
Arrive On Green	0.06	0.39	0.39	0.06	0.39	0.39	0.21	0.21	0.21	0.21	0.21	0.00
Sat Flow, veh/h	1753	3497	1539	1753	3567	19	1360	3497	1538	1323	3589	0
Grp Volume(v), veh/h	45	1003	71	46	375	395	218	39	20	4	28	0
Grp Sat Flow(s),veh/h/ln	1753	1749	1539	1753	1749	1837	1360	1749	1538	1323	1749	0
Q Serve(g_s), s	1.5	15.1	1.8	1.6	10.2	10.2	9.4	0.5	0.6	0.1	0.4	0.0
Cycle Q Clear(g_c), s	1.5	15.1	1.8	1.6	10.2	10.2	9.8	0.5	0.6	0.7	0.4	0.0
Prop In Lane	1.00		1.00	1.00		0.01	1.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	107	1361	599	109	682	716	390	723	318	379	723	
V/C Ratio(X)	0.42	0.74	0.12	0.42	0.55	0.55	0.56	0.05	0.06	0.01	0.04	
Avail Cap(c_a), veh/h	571	1710	753	571	855	898	552	1140	501	537	1140	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	27.8	16.1	12.0	27.7	14.5	14.5	23.4	19.5	19.6	19.8	19.5	0.0
Incr Delay (d2), s/veh	1.0	1.6	0.1	1.0	1.0	0.9	2.1	0.1	0.1	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	4.8	0.5	0.6	3.2	3.4	2.8	0.2	0.2	0.0	0.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	28.7	17.6	12.1	28.7	15.5	15.5	25.5	19.6	19.7	19.8	19.5	0.0
LnGrp LOS	C	B	B	C	B	B	C	B	B	B	B	
Approach Vol, veh/h		1119			816			277			32	A
Approach Delay, s/veh		17.7			16.3			24.3			19.5	
Approach LOS		B			B			C			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.8	30.9		19.7	10.7	30.9		19.7				
Change Period (Y+Rc), s	7.0	7.0		7.0	7.0	7.0		7.0				
Max Green Setting (Gmax), s	20.0	30.0		20.0	20.0	30.0		20.0				
Max Q Clear Time (g_c+I1), s	3.6	17.1		11.8	3.5	12.2		2.7				
Green Ext Time (p_c), s	0.0	6.8		1.0	0.0	5.4		0.1				

Intersection Summary			
HCM 6th Ctrl Delay		18.0	
HCM 6th LOS		B	

Notes

Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.

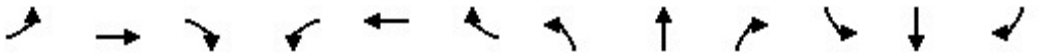


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	19	222	74	101	160	35	28	205	32	16	259	8
Future Volume (veh/h)	19	222	74	101	160	35	28	205	32	16	259	8
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.98	1.00		0.98	1.00		0.98	0.99		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	21	241	55	110	174	26	30	223	25	17	282	8
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	400	517	116	406	743	109	318	612	68	325	617	17
Arrive On Green	0.03	0.18	0.18	0.09	0.24	0.24	0.04	0.19	0.19	0.03	0.18	0.18
Sat Flow, veh/h	1753	2827	631	1753	3050	448	1753	3166	351	1753	3471	98
Grp Volume(v), veh/h	21	147	149	110	98	102	30	122	126	17	142	148
Grp Sat Flow(s),veh/h/ln	1753	1749	1710	1753	1749	1749	1753	1749	1768	1753	1749	1820
Q Serve(g_s), s	0.5	4.0	4.1	2.6	2.4	2.5	0.7	3.2	3.3	0.4	3.9	3.9
Cycle Q Clear(g_c), s	0.5	4.0	4.1	2.6	2.4	2.5	0.7	3.2	3.3	0.4	3.9	3.9
Prop In Lane	1.00		0.37	1.00		0.26	1.00		0.20	1.00		0.05
Lane Grp Cap(c), veh/h	400	320	313	406	426	426	318	338	342	325	311	324
V/C Ratio(X)	0.05	0.46	0.48	0.27	0.23	0.24	0.09	0.36	0.37	0.05	0.46	0.46
Avail Cap(c_a), veh/h	858	1168	1142	758	1168	1169	742	1152	1165	776	1152	1199
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	16.7	19.4	19.4	15.1	16.1	16.1	16.7	18.6	18.6	17.1	19.5	19.6
Incr Delay (d2), s/veh	0.1	1.5	1.6	0.4	0.4	0.4	0.2	0.9	0.9	0.1	1.5	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	1.5	1.5	0.8	0.8	0.8	0.3	1.2	1.2	0.1	1.4	1.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	16.7	20.8	21.0	15.5	16.5	16.5	16.8	19.5	19.6	17.2	21.0	21.0
LnGrp LOS	B	C	C	B	B	B	B	B	B	B	C	C
Approach Vol, veh/h		317			310			278			307	
Approach Delay, s/veh		20.6			16.2			19.2			20.8	
Approach LOS		C			B			B			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.3	17.3	11.3	16.2	9.1	16.5	8.1	19.4
Change Period (Y+Rc), s	7.0	7.0	6.5	6.5	7.0	7.0	6.5	6.5
Max Green Setting (Gmax), s	15.0	35.0	15.5	35.5	15.0	35.0	15.5	35.5
Max Q Clear Time (g_c+I1), s	2.4	5.3	4.6	6.1	2.7	5.9	2.5	4.5
Green Ext Time (p_c), s	0.0	1.9	0.2	2.2	0.0	2.2	0.0	1.4

Intersection Summary	
HCM 6th Ctrl Delay	19.2
HCM 6th LOS	B

Min green cannot be greater than Max Green.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	287	4	357	351	794	0	0	783	500
Future Volume (veh/h)	0	0	0	287	4	357	351	794	0	0	783	500
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		0.99
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1841	1841	1841	1841	1841	0	0	1841	1841
Adj Flow Rate, veh/h				339	0	83	366	827	0	0	816	176
Peak Hour Factor				0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %				4	4	4	4	4	0	0	4	4
Cap, veh/h				529	0	235	418	2284	0	0	1175	520
Arrive On Green				0.15	0.00	0.15	0.24	0.65	0.00	0.00	0.34	0.34
Sat Flow, veh/h				3506	0	1560	1753	3589	0	0	3589	1548
Grp Volume(v), veh/h				339	0	83	366	827	0	0	816	176
Grp Sat Flow(s),veh/h/ln				1753	0	1560	1753	1749	0	0	1749	1548
Q Serve(g_s), s				6.0	0.0	3.2	13.3	7.1	0.0	0.0	13.4	5.6
Cycle Q Clear(g_c), s				6.0	0.0	3.2	13.3	7.1	0.0	0.0	13.4	5.6
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				529	0	235	418	2284	0	0	1175	520
V/C Ratio(X)				0.64	0.00	0.35	0.88	0.36	0.00	0.00	0.69	0.34
Avail Cap(c_a), veh/h				1058	0	471	529	2284	0	0	1583	701
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				26.4	0.0	25.2	24.3	5.2	0.0	0.0	19.1	16.5
Incr Delay (d2), s/veh				1.8	0.0	1.3	12.7	0.1	0.0	0.0	1.1	0.5
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				2.5	0.0	1.2	6.4	1.7	0.0	0.0	4.9	1.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				28.3	0.0	26.5	37.0	5.4	0.0	0.0	20.2	17.0
LnGrp LOS				C	A	C	D	A	A	A	C	B
Approach Vol, veh/h					422			1193			992	
Approach Delay, s/veh					27.9			15.1			19.6	
Approach LOS					C			B			B	

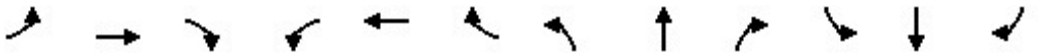
Timer - Assigned Phs	2		5	6		8						
Phs Duration (G+Y+Rc), s	49.3		21.0	28.3		17.0						
Change Period (Y+Rc), s	6.0		* 5.2	6.0		7.0						
Max Green Setting (Gmax), s	30.0		* 20	30.0		20.0						
Max Q Clear Time (g_c+I1), s	9.1		15.3	15.4		8.0						
Green Ext Time (p_c), s	7.5		0.5	6.9		1.8						

Intersection Summary		
HCM 6th Ctrl Delay	18.9	
HCM 6th LOS	B	

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



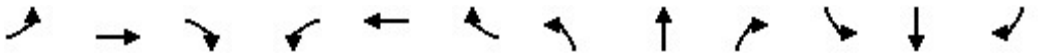
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	342	2	338	0	0	0	0	830	384	318	774	0
Future Volume (veh/h)	342	2	338	0	0	0	0	830	384	318	774	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841				0	1841	1841	1841	1841	0
Adj Flow Rate, veh/h	345	2	178				0	838	131	321	782	0
Peak Hour Factor	0.99	0.99	0.99				0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	4	4	4				0	4	4	4	4	0
Cap, veh/h	401	0	357				0	1144	506	367	2093	0
Arrive On Green	0.23	0.23	0.23				0.00	0.33	0.33	0.21	0.60	0.00
Sat Flow, veh/h	1753	0	1560				0	3589	1548	1753	3589	0
Grp Volume(v), veh/h	345	0	178				0	838	131	321	782	0
Grp Sat Flow(s),veh/h/ln	1753	0	1560				0	1749	1548	1753	1749	0
Q Serve(g_s), s	14.2	0.0	7.5				0.0	16.0	4.7	13.4	8.7	0.0
Cycle Q Clear(g_c), s	14.2	0.0	7.5				0.0	16.0	4.7	13.4	8.7	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	401	0	357				0	1144	506	367	2093	0
V/C Ratio(X)	0.86	0.00	0.50				0.00	0.73	0.26	0.88	0.37	0.00
Avail Cap(c_a), veh/h	465	0	414				0	1393	617	465	2093	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	27.9	0.0	25.3				0.0	22.4	18.6	28.8	7.8	0.0
Incr Delay (d2), s/veh	14.4	0.0	1.5				0.0	2.1	0.5	14.2	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.3	0.0	2.8				0.0	6.2	1.6	6.6	2.6	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	42.3	0.0	26.8				0.0	24.5	19.1	43.0	8.0	0.0
LnGrp LOS	D	A	C				A	C	B	D	A	A
Approach Vol, veh/h		523						969			1103	
Approach Delay, s/veh		37.0						23.8			18.2	
Approach LOS		D						C			B	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	20.5	30.6		24.2		51.1
Change Period (Y+Rc), s	* 4.7	6.0		7.0		6.0
Max Green Setting (Gmax), s	* 20	30.0		20.0		30.0
Max Q Clear Time (g_c+I1), s	15.4	18.0		16.2		10.7
Green Ext Time (p_c), s	0.4	6.7		1.0		6.8

Intersection Summary	
HCM 6th Ctrl Delay	24.1
HCM 6th LOS	C

Notes

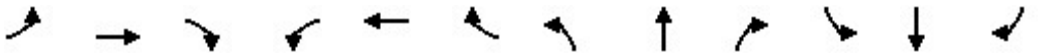
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	241	1	130	229	353	0	0	329	154
Future Volume (veh/h)	0	0	0	241	1	130	229	353	0	0	329	154
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		0.97
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1841	1841	1841	1841	1841	0	0	1841	1841
Adj Flow Rate, veh/h				251	1	27	239	368	0	0	343	100
Peak Hour Factor				0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %				4	4	4	4	4	0	0	4	4
Cap, veh/h				299	1	267	284	2392	0	0	1224	351
Arrive On Green				0.17	0.17	0.17	0.05	0.23	0.00	0.00	0.46	0.46
Sat Flow, veh/h				1746	7	1560	1753	3589	0	0	2756	763
Grp Volume(v), veh/h				252	0	27	239	368	0	0	223	220
Grp Sat Flow(s),veh/h/ln				1753	0	1560	1753	1749	0	0	1749	1678
Q Serve(g_s), s				11.1	0.0	1.2	10.8	6.8	0.0	0.0	6.3	6.5
Cycle Q Clear(g_c), s				11.1	0.0	1.2	10.8	6.8	0.0	0.0	6.3	6.5
Prop In Lane				1.00		1.00	1.00		0.00	0.00		0.45
Lane Grp Cap(c), veh/h				300	0	267	284	2392	0	0	803	771
V/C Ratio(X)				0.84	0.00	0.10	0.84	0.15	0.00	0.00	0.28	0.29
Avail Cap(c_a), veh/h				403	0	359	394	2392	0	0	803	771
HCM Platoon Ratio				1.00	1.00	1.00	0.33	0.33	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.91	0.91	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				32.1	0.0	28.0	36.8	12.4	0.0	0.0	13.4	13.5
Incr Delay (d2), s/veh				10.2	0.0	0.1	9.1	0.1	0.0	0.0	0.9	0.9
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				5.4	0.0	0.4	5.5	2.1	0.0	0.0	2.4	2.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				42.4	0.0	28.1	46.0	12.5	0.0	0.0	14.3	14.4
LnGrp LOS				D	A	C	D	B	A	A	B	B
Approach Vol, veh/h					279			607			443	
Approach Delay, s/veh					41.0			25.7			14.3	
Approach LOS					D			C			B	

Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		60.5			18.0	42.6		19.5				
Change Period (Y+Rc), s		5.8			5.0	5.8		5.8				
Max Green Setting (Gmax), s		50.0			18.0	27.0		18.4				
Max Q Clear Time (g_c+I1), s		8.8			12.8	8.5		13.1				
Green Ext Time (p_c), s		1.9			0.2	1.8		0.6				

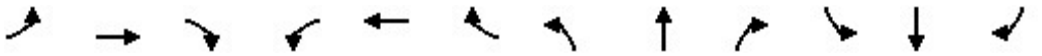
Intersection Summary												
HCM 6th Ctrl Delay			25.1									
HCM 6th LOS			C									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	164	6	330	0	0	0	0	420	289	124	443	0
Future Volume (veh/h)	164	6	330	0	0	0	0	420	289	124	443	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		0.97	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841				0	1841	1841	1841	1841	0
Adj Flow Rate, veh/h	169	6	60				0	433	186	128	457	0
Peak Hour Factor	0.97	0.97	0.97				0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	4	4	4				0	4	4	4	4	0
Cap, veh/h	219	8	201				0	1293	549	206	2539	0
Arrive On Green	0.13	0.13	0.13				0.00	0.55	0.55	0.24	1.00	0.00
Sat Flow, veh/h	1696	60	1560				0	2462	1007	1753	3589	0
Grp Volume(v), veh/h	175	0	60				0	318	301	128	457	0
Grp Sat Flow(s),veh/h/ln	1756	0	1560				0	1749	1628	1753	1749	0
Q Serve(g_s), s	7.7	0.0	2.8				0.0	8.1	8.2	5.2	0.0	0.0
Cycle Q Clear(g_c), s	7.7	0.0	2.8				0.0	8.1	8.2	5.2	0.0	0.0
Prop In Lane	0.97		1.00				0.00		0.62	1.00		0.00
Lane Grp Cap(c), veh/h	227	0	201				0	954	888	206	2539	0
V/C Ratio(X)	0.77	0.00	0.30				0.00	0.33	0.34	0.62	0.18	0.00
Avail Cap(c_a), veh/h	448	0	398				0	954	888	373	2539	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.94	0.94	0.00
Uniform Delay (d), s/veh	33.7	0.0	31.6				0.0	10.1	10.1	29.0	0.0	0.0
Incr Delay (d2), s/veh	4.1	0.0	0.6				0.0	0.9	1.0	1.1	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.5	0.0	1.1				0.0	2.8	2.7	2.0	0.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	37.8	0.0	32.2				0.0	11.0	11.2	30.0	0.1	0.0
LnGrp LOS	D	A	C				A	B	B	C	A	A
Approach Vol, veh/h		235						619			585	
Approach Delay, s/veh		36.4						11.1			6.7	
Approach LOS		D						B			A	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	14.4	49.5		16.1		63.9
Change Period (Y+Rc), s	5.0	5.8		5.8		5.8
Max Green Setting (Gmax), s	17.0	26.0		20.4		48.0
Max Q Clear Time (g_c+I1), s	7.2	10.2		9.7		2.0
Green Ext Time (p_c), s	0.1	2.6		0.7		2.4

Intersection Summary	
HCM 6th Ctrl Delay	13.4
HCM 6th LOS	B

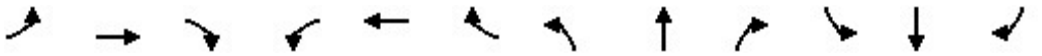


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	375	5	218	532	307	0	0	451	132
Future Volume (veh/h)	0	0	0	375	5	218	532	307	0	0	451	132
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		0.97
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1781	1781	1781	1781	1781	0	0	1781	1781
Adj Flow Rate, veh/h				409	0	53	543	313	0	0	460	34
Peak Hour Factor				0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %				8	8	8	8	8	0	0	8	8
Cap, veh/h				920	0	409	987	2918	0	0	1498	357
Arrive On Green				0.27	0.00	0.27	0.40	0.80	0.00	0.00	0.24	0.24
Sat Flow, veh/h				3393	0	1510	3291	5024	0	0	6378	1460
Grp Volume(v), veh/h				409	0	53	543	313	0	0	460	34
Grp Sat Flow(s),veh/h/ln				1697	0	1510	1646	1621	0	0	1532	1460
Q Serve(g_s), s				9.0	0.0	2.4	11.4	1.3	0.0	0.0	5.5	1.6
Cycle Q Clear(g_c), s				9.0	0.0	2.4	11.4	1.3	0.0	0.0	5.5	1.6
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				920	0	409	987	2918	0	0	1498	357
V/C Ratio(X)				0.44	0.00	0.13	0.55	0.11	0.00	0.00	0.31	0.10
Avail Cap(c_a), veh/h				920	0	409	987	2918	0	0	1498	357
HCM Platoon Ratio				1.00	1.00	1.00	1.33	1.33	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.91	0.91	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				27.2	0.0	24.8	22.4	3.8	0.0	0.0	27.8	26.3
Incr Delay (d2), s/veh				1.6	0.0	0.7	2.0	0.1	0.0	0.0	0.5	0.5
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				3.8	0.0	2.4	4.1	0.4	0.0	0.0	2.0	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				28.7	0.0	25.4	24.4	3.8	0.0	0.0	28.3	26.8
LnGrp LOS				C	A	C	C	A	A	A	C	C
Approach Vol, veh/h					462			856			494	
Approach Delay, s/veh					28.4			16.9			28.2	
Approach LOS					C			B			C	

Timer - Assigned Phs	2	4	5	6
Phs Duration (G+Y+Rc), s	59.8	30.2	32.0	27.8
Change Period (Y+Rc), s	5.8	5.8	5.0	5.8
Max Green Setting (Gmax), s	54.0	24.4	27.0	22.0
Max Q Clear Time (g_c+I1), s	3.3	11.0	13.4	7.5
Green Ext Time (p_c), s	2.1	1.4	0.9	2.5

Intersection Summary	
HCM 6th Ctrl Delay	22.9
HCM 6th LOS	C

Notes
User approved pedestrian interval to be less than phase max green.
User approved volume balancing among the lanes for turning movement.



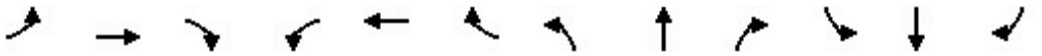
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	49	3	257	0	0	0	0	882	269	136	643	0
Future Volume (veh/h)	49	3	257	0	0	0	0	882	269	136	643	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		0.97	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1781	1781	1781				0	1781	1781	1781	1781	0
Adj Flow Rate, veh/h	35	0	98				0	909	96	140	663	0
Peak Hour Factor	0.97	0.97	0.97				0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	8	8	8				0	8	8	8	8	0
Cap, veh/h	498	0	886				0	2111	505	585	2810	0
Arrive On Green	0.29	0.00	0.29				0.00	0.34	0.34	0.06	0.19	0.00
Sat Flow, veh/h	1697	0	3019				0	6378	1466	3291	5024	0
Grp Volume(v), veh/h	35	0	98				0	909	96	140	663	0
Grp Sat Flow(s),veh/h/ln	1697	0	1510				0	1532	1466	1646	1621	0
Q Serve(g_s), s	1.3	0.0	2.1				0.0	10.3	4.1	3.7	10.4	0.0
Cycle Q Clear(g_c), s	1.3	0.0	2.1				0.0	10.3	4.1	3.7	10.4	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	498	0	886				0	2111	505	585	2810	0
V/C Ratio(X)	0.07	0.00	0.11				0.00	0.43	0.19	0.24	0.24	0.00
Avail Cap(c_a), veh/h	498	0	886				0	2111	505	585	2810	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	0.33	0.33	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.94	0.94	0.00
Uniform Delay (d), s/veh	22.9	0.0	23.2				0.0	22.7	20.7	36.5	19.6	0.0
Incr Delay (d2), s/veh	0.3	0.0	0.3				0.0	0.6	0.8	0.9	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.0	0.8				0.0	3.5	1.4	1.5	4.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.2	0.0	23.5				0.0	23.4	21.5	37.5	19.8	0.0
LnGrp LOS	C	A	C				A	C	C	D	B	A
Approach Vol, veh/h		133						1005			803	
Approach Delay, s/veh		23.4						23.2			22.9	
Approach LOS		C						C			C	

Timer - Assigned Phs	1	2				6		8				
Phs Duration (G+Y+Rc), s	21.0	36.8				57.8		32.2				
Change Period (Y+Rc), s	5.0	5.8				5.8		5.8				
Max Green Setting (Gmax), s	16.0	31.0				52.0		26.4				
Max Q Clear Time (g_c+I1), s	5.7	12.3				12.4		4.1				
Green Ext Time (p_c), s	0.1	6.0				4.7		0.4				

Intersection Summary			
HCM 6th Ctrl Delay			23.1
HCM 6th LOS			C

Notes

User approved volume balancing among the lanes for turning movement.



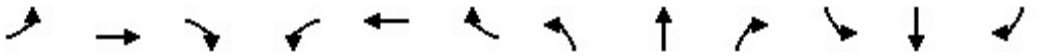
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	18	1	27	17	23	77	87	937	19	60	536	8
Future Volume (veh/h)	18	1	27	17	23	77	87	937	19	60	536	8
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.98		0.96	0.98		0.96	1.00		0.96	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781
Adj Flow Rate, veh/h	19	1	5	18	24	14	93	997	19	64	570	8
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	8	8	8	8	8	8	8	8	8	8	8	8
Cap, veh/h	311	37	185	338	154	90	117	1889	36	81	1794	25
Arrive On Green	0.15	0.15	0.15	0.15	0.15	0.15	0.07	0.38	0.38	0.05	0.36	0.36
Sat Flow, veh/h	1281	250	1250	1316	1039	606	1697	4909	93	1697	4939	69
Grp Volume(v), veh/h	19	0	6	18	0	38	93	658	358	64	374	204
Grp Sat Flow(s),veh/h/ln	1281	0	1500	1316	0	1645	1697	1621	1760	1697	1621	1766
Q Serve(g_s), s	0.6	0.0	0.2	0.6	0.0	1.0	2.6	7.7	7.7	1.8	4.1	4.1
Cycle Q Clear(g_c), s	1.6	0.0	0.2	0.7	0.0	1.0	2.6	7.7	7.7	1.8	4.1	4.1
Prop In Lane	1.00		0.83	1.00		0.37	1.00		0.05	1.00		0.04
Lane Grp Cap(c), veh/h	311	0	222	338	0	243	117	1248	677	81	1178	641
V/C Ratio(X)	0.06	0.00	0.03	0.05	0.00	0.16	0.79	0.53	0.53	0.79	0.32	0.32
Avail Cap(c_a), veh/h	646	0	614	682	0	674	695	2655	1441	695	2655	1446
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	18.9	0.0	17.8	18.1	0.0	18.2	22.4	11.6	11.6	23.0	11.2	11.2
Incr Delay (d2), s/veh	0.1	0.0	0.0	0.0	0.0	0.2	4.5	0.4	0.8	6.4	0.2	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	0.1	0.2	0.0	0.4	1.0	2.0	2.2	0.8	1.1	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	18.9	0.0	17.8	18.2	0.0	18.4	26.9	12.0	12.4	29.5	11.4	11.5
LnGrp LOS	B	A	B	B	A	B	C	B	B	C	B	B
Approach Vol, veh/h		25			56			1109			642	
Approach Delay, s/veh		18.7			18.3			13.4			13.2	
Approach LOS		B			B			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.8	25.3		14.7	9.9	24.2		14.7				
Change Period (Y+Rc), s	6.5	6.5		7.5	6.5	6.5		7.5				
Max Green Setting (Gmax), s	20.0	40.0		20.0	20.0	40.0		20.0				
Max Q Clear Time (g_c+I1), s	3.8	9.7		3.6	4.6	6.1		3.0				
Green Ext Time (p_c), s	0.0	8.2		0.0	0.1	4.4		0.1				

Intersection Summary		
HCM 6th Ctrl Delay		13.6
HCM 6th LOS		B

Notes

User approved pedestrian interval to be less than phase max green.



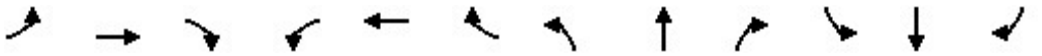
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	146	244	64	137	318	174	52	545	131	174	456	148
Future Volume (veh/h)	146	244	64	137	318	174	52	545	131	174	456	148
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	1.00		0.95	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	157	262	15	147	342	41	56	586	37	187	490	78
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	254	369	303	252	697	301	156	838	356	229	984	653
Arrive On Green	0.15	0.20	0.20	0.14	0.20	0.20	0.09	0.24	0.24	0.13	0.28	0.28
Sat Flow, veh/h	1753	1841	1510	1753	3497	1510	1753	3497	1485	1753	3497	1519
Grp Volume(v), veh/h	157	262	15	147	342	41	56	586	37	187	490	78
Grp Sat Flow(s),veh/h/ln	1753	1841	1510	1753	1749	1510	1753	1749	1485	1753	1749	1519
Q Serve(g_s), s	6.7	10.6	0.6	6.3	7.0	1.8	2.4	12.3	1.6	8.3	9.4	2.5
Cycle Q Clear(g_c), s	6.7	10.6	0.6	6.3	7.0	1.8	2.4	12.3	1.6	8.3	9.4	2.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	254	369	303	252	697	301	156	838	356	229	984	653
V/C Ratio(X)	0.62	0.71	0.05	0.58	0.49	0.14	0.36	0.70	0.10	0.82	0.50	0.12
Avail Cap(c_a), veh/h	439	987	809	706	2407	1039	219	1744	741	411	1853	1031
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.2	29.9	25.9	32.1	28.5	26.4	34.4	27.9	23.8	33.9	24.1	13.9
Incr Delay (d2), s/veh	0.9	3.6	0.1	0.8	0.8	0.3	1.4	1.1	0.1	7.0	0.4	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.7	4.7	0.2	2.5	2.7	0.6	1.0	4.9	0.5	3.8	3.7	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	33.1	33.5	26.0	32.9	29.3	26.7	35.8	28.9	23.9	41.0	24.5	14.0
LnGrp LOS	C	C	C	C	C	C	D	C	C	D	C	B
Approach Vol, veh/h		434			530			679			755	
Approach Delay, s/veh		33.1			30.1			29.2			27.5	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.7	25.2	16.2	23.1	12.3	28.6	16.3	23.0
Change Period (Y+Rc), s	* 5.2	6.0	* 4.7	7.0	* 5.2	6.0	* 4.7	7.0
Max Green Setting (Gmax), s	* 19	40.0	* 32	43.0	* 10	42.5	* 20	55.2
Max Q Clear Time (g_c+I1), s	10.3	14.3	8.3	12.6	4.4	11.4	8.7	9.0
Green Ext Time (p_c), s	0.3	4.0	0.2	2.1	0.0	3.5	0.1	3.3

Intersection Summary	
HCM 6th Ctrl Delay	29.6
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



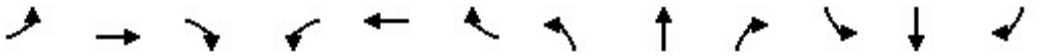
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	108	336	58	129	378	86	115	173	127	43	141	80
Future Volume (veh/h)	108	336	58	129	378	86	115	173	127	43	141	80
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	1.00		0.97	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	114	354	19	136	398	71	121	182	108	45	148	24
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	203	482	395	215	794	140	353	272	161	231	469	389
Arrive On Green	0.12	0.26	0.26	0.12	0.27	0.27	0.25	0.25	0.25	0.25	0.25	0.25
Sat Flow, veh/h	1767	1856	1522	1767	2984	527	1225	1076	639	1076	1856	1542
Grp Volume(v), veh/h	114	354	19	136	234	235	121	0	290	45	148	24
Grp Sat Flow(s),veh/h/ln	1767	1856	1522	1767	1763	1748	1225	0	1715	1076	1856	1542
Q Serve(g_s), s	3.6	10.2	0.5	4.3	6.6	6.7	5.2	0.0	8.9	2.3	3.8	0.7
Cycle Q Clear(g_c), s	3.6	10.2	0.5	4.3	6.6	6.7	9.0	0.0	8.9	11.2	3.8	0.7
Prop In Lane	1.00		1.00	1.00		0.30	1.00		0.37	1.00		1.00
Lane Grp Cap(c), veh/h	203	482	395	215	469	465	353	0	433	231	469	389
V/C Ratio(X)	0.56	0.73	0.05	0.63	0.50	0.51	0.34	0.00	0.67	0.19	0.32	0.06
Avail Cap(c_a), veh/h	602	948	778	602	901	893	565	0	730	417	790	656
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.6	19.9	16.3	24.5	18.2	18.3	21.5	0.0	19.7	24.8	17.8	16.7
Incr Delay (d2), s/veh	0.9	2.2	0.0	1.2	1.0	1.0	0.7	0.0	2.2	0.4	0.4	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	3.9	0.2	1.6	2.3	2.3	1.4	0.0	3.3	0.6	1.5	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	25.5	22.1	16.3	25.7	19.2	19.3	22.2	0.0	21.9	25.2	18.2	16.7
LnGrp LOS	C	C	B	C	B	B	C	A	C	C	B	B
Approach Vol, veh/h		487			605			411			217	
Approach Delay, s/veh		22.6			20.7			22.0			19.5	
Approach LOS		C			C			C			B	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		21.3	14.6	22.7		21.3	14.3	23.1				
Change Period (Y+Rc), s		6.5	7.5	7.5		6.5	7.5	7.5				
Max Green Setting (Gmax), s		25.0	20.0	30.0		25.0	20.0	30.0				
Max Q Clear Time (g_c+I1), s		11.0	6.3	12.2		13.2	5.6	8.7				
Green Ext Time (p_c), s		2.1	0.1	1.7		0.7	0.1	2.9				

Intersection Summary												
HCM 6th Ctrl Delay			21.4									
HCM 6th LOS			C									

Notes

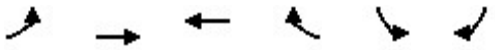
User approved pedestrian interval to be less than phase max green.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	190	407	11	6	372	133	18	12	19	142	24	191
Future Volume (veh/h)	190	407	11	6	372	133	18	12	19	142	24	191
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.97	1.00		0.97	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	200	428	12	6	392	115	19	13	3	149	25	50
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	247	634	18	14	592	171	47	140	32	190	330	273
Arrive On Green	0.14	0.35	0.35	0.01	0.22	0.22	0.03	0.10	0.10	0.11	0.18	0.18
Sat Flow, veh/h	1767	1795	50	1767	2673	773	1767	1448	334	1767	1856	1534
Grp Volume(v), veh/h	200	0	440	6	257	250	19	0	16	149	25	50
Grp Sat Flow(s),veh/h/ln	1767	0	1846	1767	1763	1684	1767	0	1782	1767	1856	1534
Q Serve(g_s), s	7.6	0.0	14.0	0.2	9.1	9.4	0.7	0.0	0.6	5.7	0.8	1.9
Cycle Q Clear(g_c), s	7.6	0.0	14.0	0.2	9.1	9.4	0.7	0.0	0.6	5.7	0.8	1.9
Prop In Lane	1.00		0.03	1.00		0.46	1.00		0.19	1.00		1.00
Lane Grp Cap(c), veh/h	247	0	652	14	390	373	47	0	172	190	330	273
V/C Ratio(X)	0.81	0.00	0.68	0.43	0.66	0.67	0.41	0.00	0.09	0.78	0.08	0.18
Avail Cap(c_a), veh/h	512	0	937	512	895	854	512	0	775	512	807	667
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.8	0.0	19.0	34.1	24.5	24.6	33.0	0.0	28.4	30.0	23.6	24.1
Incr Delay (d2), s/veh	4.8	0.0	1.5	14.9	2.3	2.5	4.1	0.0	0.3	5.2	0.1	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.2	0.0	5.2	0.1	3.6	3.5	0.3	0.0	0.2	2.5	0.3	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	33.5	0.0	20.4	48.9	26.8	27.1	37.2	0.0	28.7	35.2	23.8	24.5
LnGrp LOS	C	A	C	D	C	C	D	A	C	D	C	C
Approach Vol, veh/h		640			513			35			224	
Approach Delay, s/veh		24.5			27.2			33.3			31.6	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.1	22.8	9.3	19.8	8.0	31.8	14.9	14.2
Change Period (Y+Rc), s	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5
Max Green Setting (Gmax), s	20.0	35.0	20.0	30.0	20.0	35.0	20.0	30.0
Max Q Clear Time (g_c+I1), s	9.6	11.4	2.7	3.9	2.2	16.0	7.7	2.6
Green Ext Time (p_c), s	0.3	3.3	0.0	0.3	0.0	2.7	0.2	0.0

Intersection Summary	
HCM 6th Ctrl Delay	26.8
HCM 6th LOS	C



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	171	398	350	264	370	116
Future Volume (veh/h)	171	398	350	264	370	116
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			0.97	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	178	415	365	124	385	36
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	227	899	589	197	461	410
Arrive On Green	0.13	0.48	0.23	0.23	0.26	0.26
Sat Flow, veh/h	1767	1856	2663	858	1767	1572
Grp Volume(v), veh/h	178	415	248	241	385	36
Grp Sat Flow(s),veh/h/ln	1767	1856	1763	1666	1767	1572
Q Serve(g_s), s	5.8	8.8	7.5	7.7	12.1	1.0
Cycle Q Clear(g_c), s	5.8	8.8	7.5	7.7	12.1	1.0
Prop In Lane	1.00			0.52	1.00	1.00
Lane Grp Cap(c), veh/h	227	899	404	382	461	410
V/C Ratio(X)	0.78	0.46	0.61	0.63	0.83	0.09
Avail Cap(c_a), veh/h	599	1102	1046	989	749	667
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.9	10.1	20.4	20.5	20.6	16.5
Incr Delay (d2), s/veh	4.4	0.4	1.8	2.1	5.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.3	2.5	2.7	2.6	4.9	1.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	29.4	10.5	22.2	22.6	25.8	16.6
LnGrp LOS	C	B	C	C	C	B
Approach Vol, veh/h		593	489		421	
Approach Delay, s/veh		16.2	22.4		25.0	
Approach LOS		B	C		C	

Timer - Assigned Phs	4	6	7	8
Phs Duration (G+Y+Rc), s	36.1	22.9	15.1	21.0
Change Period (Y+Rc), s	7.5	7.5	7.5	7.5
Max Green Setting (Gmax), s	35.0	25.0	20.0	35.0
Max Q Clear Time (g_c+I1), s	10.8	14.1	7.8	9.7
Green Ext Time (p_c), s	2.6	1.3	0.2	3.1

Intersection Summary	
HCM 6th Ctrl Delay	20.7
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

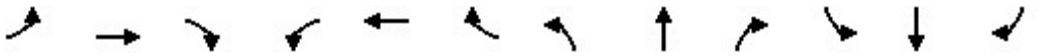
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	14	738	32	18	622	6	20	1	25	3	1	16
Future Volume (veh/h)	14	738	32	18	622	6	20	1	25	3	1	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	0.98		0.98	0.98		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	16	829	35	20	699	7	22	1	3	3	1	2
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	51	1333	56	62	1408	14	276	14	14	194	42	44
Arrive On Green	0.03	0.39	0.39	0.04	0.39	0.39	0.08	0.08	0.08	0.08	0.08	0.08
Sat Flow, veh/h	1767	3442	145	1767	3575	36	1107	165	166	549	490	519
Grp Volume(v), veh/h	16	425	439	20	345	361	26	0	0	6	0	0
Grp Sat Flow(s),veh/h/ln	1767	1763	1824	1767	1763	1848	1438	0	0	1558	0	0
Q Serve(g_s), s	0.3	7.1	7.1	0.4	5.4	5.4	0.3	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.3	7.1	7.1	0.4	5.4	5.4	0.6	0.0	0.0	0.1	0.0	0.0
Prop In Lane	1.00		0.08	1.00		0.02	0.85		0.12	0.50		0.33
Lane Grp Cap(c), veh/h	51	683	707	62	694	728	304	0	0	280	0	0
V/C Ratio(X)	0.32	0.62	0.62	0.32	0.50	0.50	0.09	0.00	0.00	0.02	0.00	0.00
Avail Cap(c_a), veh/h	967	1688	1747	967	1688	1769	1148	0	0	1175	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	17.4	9.0	9.0	17.2	8.3	8.3	15.5	0.0	0.0	15.4	0.0	0.0
Incr Delay (d2), s/veh	3.5	0.9	0.9	2.9	0.6	0.5	0.1	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	1.4	1.4	0.2	1.1	1.2	0.2	0.0	0.0	0.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	20.9	10.0	9.9	20.1	8.9	8.9	15.6	0.0	0.0	15.4	0.0	0.0
LnGrp LOS	C	A	A	C	A	A	B	A	A	B	A	A
Approach Vol, veh/h		880			726			26			6	
Approach Delay, s/veh		10.1			9.2			15.6			15.4	
Approach LOS		B			A			B			B	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		9.1	6.3	21.2		9.1	6.0	21.4				
Change Period (Y+Rc), s		6.0	5.0	7.0		6.0	5.0	7.0				
Max Green Setting (Gmax), s		25.0	20.0	35.0		25.0	20.0	35.0				
Max Q Clear Time (g_c+I1), s		2.6	2.4	9.1		2.1	2.3	7.4				
Green Ext Time (p_c), s		0.1	0.0	4.9		0.0	0.0	3.9				

Intersection Summary	
HCM 6th Ctrl Delay	9.8
HCM 6th LOS	A

Notes

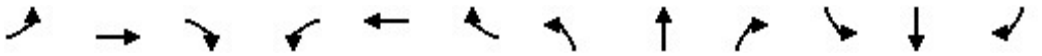
User approved pedestrian interval to be less than phase max green.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	133	347	237	130	311	181	213	622	22	164	291	123
Future Volume (veh/h)	133	347	237	130	311	181	213	622	22	164	291	123
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.97	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781
Adj Flow Rate, veh/h	136	354	169	133	317	134	217	635	21	167	297	76
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	8	8	8	8	8	8	8	8	8	8	8	8
Cap, veh/h	186	597	280	182	618	255	285	1282	42	225	894	217
Arrive On Green	0.11	0.27	0.27	0.11	0.27	0.27	0.17	0.27	0.27	0.13	0.23	0.23
Sat Flow, veh/h	1697	2218	1038	1697	2315	955	1697	4831	159	1697	3880	941
Grp Volume(v), veh/h	136	268	255	133	230	221	217	425	231	167	245	128
Grp Sat Flow(s),veh/h/ln	1697	1692	1564	1697	1692	1578	1697	1621	1748	1697	1621	1578
Q Serve(g_s), s	5.5	9.8	10.1	5.4	8.2	8.5	8.7	7.9	7.9	6.7	4.5	4.8
Cycle Q Clear(g_c), s	5.5	9.8	10.1	5.4	8.2	8.5	8.7	7.9	7.9	6.7	4.5	4.8
Prop In Lane	1.00		0.66	1.00		0.61	1.00		0.09	1.00		0.60
Lane Grp Cap(c), veh/h	186	456	421	182	452	421	285	861	464	225	747	364
V/C Ratio(X)	0.73	0.59	0.60	0.73	0.51	0.53	0.76	0.49	0.50	0.74	0.33	0.35
Avail Cap(c_a), veh/h	835	833	770	835	833	777	835	1596	860	835	1596	777
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.6	22.6	22.7	30.7	22.1	22.2	28.2	22.1	22.1	29.7	22.8	22.9
Incr Delay (d2), s/veh	11.1	2.6	3.0	11.3	1.9	2.2	8.6	0.9	1.8	9.8	0.5	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	3.7	3.6	2.6	3.1	3.0	3.8	2.7	3.1	3.1	1.6	1.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	41.8	25.1	25.6	42.0	24.0	24.4	36.8	23.0	23.9	39.4	23.3	24.1
LnGrp LOS	D	C	C	D	C	C	D	C	C	D	C	C
Approach Vol, veh/h		659			584			873			540	
Approach Delay, s/veh		28.8			28.3			26.7			28.5	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.4	22.9	11.6	23.1	15.9	20.4	11.8	23.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0
Max Q Clear Time (g_c+I1), s	8.7	9.9	7.4	12.1	10.7	6.8	7.5	10.5
Green Ext Time (p_c), s	1.1	7.3	0.8	5.5	1.4	4.2	0.9	4.8

Intersection Summary	
HCM 6th Ctrl Delay	27.9
HCM 6th LOS	C



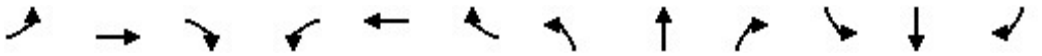
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	172	193	34	20	185	58	37	261	27	63	366	316
Future Volume (veh/h)	172	193	34	20	185	58	37	261	27	63	366	316
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.97	1.00		0.97	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	181	203	32	21	195	37	39	275	27	66	385	85
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	220	329	52	65	367	68	46	323	32	426	447	371
Arrive On Green	0.12	0.21	0.21	0.04	0.12	0.12	0.22	0.22	0.22	0.24	0.24	0.24
Sat Flow, veh/h	1767	1556	245	1767	2953	548	207	1462	144	1767	1856	1541
Grp Volume(v), veh/h	181	0	235	21	115	117	341	0	0	66	385	85
Grp Sat Flow(s),veh/h/ln	1767	0	1801	1767	1763	1739	1813	0	0	1767	1856	1541
Q Serve(g_s), s	8.3	0.0	9.8	1.0	5.0	5.2	14.9	0.0	0.0	2.4	16.4	3.7
Cycle Q Clear(g_c), s	8.3	0.0	9.8	1.0	5.0	5.2	14.9	0.0	0.0	2.4	16.4	3.7
Prop In Lane	1.00		0.14	1.00		0.32	0.11		0.08	1.00		1.00
Lane Grp Cap(c), veh/h	220	0	381	65	219	216	400	0	0	426	447	371
V/C Ratio(X)	0.82	0.00	0.62	0.32	0.52	0.54	0.85	0.00	0.00	0.16	0.86	0.23
Avail Cap(c_a), veh/h	534	0	653	427	639	630	548	0	0	534	561	466
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.3	0.0	29.6	38.8	34.0	34.0	31.0	0.0	0.0	24.8	30.1	25.2
Incr Delay (d2), s/veh	3.0	0.0	1.6	1.0	1.9	2.1	8.4	0.0	0.0	0.1	10.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.5	0.0	4.0	0.4	2.1	2.2	7.0	0.0	0.0	1.0	8.0	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	38.3	0.0	31.2	39.9	35.9	36.2	39.4	0.0	0.0	24.9	40.3	25.5
LnGrp LOS	D	A	C	D	D	D	D	A	A	C	D	C
Approach Vol, veh/h		416			253			341			536	
Approach Delay, s/veh		34.3			36.3			39.4			36.0	
Approach LOS		C			D			D			D	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		23.3	10.1	24.5		24.9	17.3	17.3				
Change Period (Y+Rc), s		5.0	7.0	7.0		5.0	7.0	7.0				
Max Green Setting (Gmax), s		25.0	20.0	30.0		25.0	25.0	30.0				
Max Q Clear Time (g_c+I1), s		16.9	3.0	11.8		18.4	10.3	7.2				
Green Ext Time (p_c), s		0.9	0.0	1.0		1.2	0.2	1.1				

Intersection Summary	
HCM 6th Ctrl Delay	36.4
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.



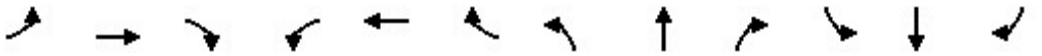
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	51	58	32	67	43	41	25	627	89	34	613	56
Future Volume (veh/h)	51	58	32	67	43	41	25	627	89	34	613	56
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	0.99		0.98	1.00		0.97	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	53	60	8	70	45	28	26	653	35	35	639	22
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	488	431	358	252	151	71	107	1047	453	137	1106	491
Arrive On Green	0.23	0.23	0.23	0.23	0.23	0.23	0.06	0.30	0.30	0.08	0.32	0.32
Sat Flow, veh/h	1300	1841	1528	595	644	302	1753	3497	1512	1753	3497	1553
Grp Volume(v), veh/h	53	60	8	143	0	0	26	653	35	35	639	22
Grp Sat Flow(s),veh/h/ln	1300	1841	1528	1541	0	0	1753	1749	1512	1753	1749	1553
Q Serve(g_s), s	0.0	1.2	0.2	1.4	0.0	0.0	0.7	7.6	0.8	0.9	7.2	0.5
Cycle Q Clear(g_c), s	1.1	1.2	0.2	3.4	0.0	0.0	0.7	7.6	0.8	0.9	7.2	0.5
Prop In Lane	1.00		1.00	0.49		0.20	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	488	431	358	474	0	0	107	1047	453	137	1106	491
V/C Ratio(X)	0.11	0.14	0.02	0.30	0.00	0.00	0.24	0.62	0.08	0.26	0.58	0.04
Avail Cap(c_a), veh/h	1145	1361	1130	1227	0	0	556	2586	1118	556	2586	1148
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	14.3	14.4	14.0	15.1	0.0	0.0	21.2	14.3	11.9	20.5	13.5	11.2
Incr Delay (d2), s/veh	0.1	0.1	0.0	0.4	0.0	0.0	0.4	0.6	0.1	0.4	0.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.4	0.1	1.0	0.0	0.0	0.2	2.3	0.2	0.3	2.1	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	14.4	14.5	14.0	15.5	0.0	0.0	21.6	14.9	12.0	20.9	14.0	11.3
LnGrp LOS	B	B	B	B	A	A	C	B	B	C	B	B
Approach Vol, veh/h		121			143			714			696	
Approach Delay, s/veh		14.4			15.5			15.0			14.3	
Approach LOS		B			B			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.4	20.7		18.3	7.6	21.5		18.3				
Change Period (Y+Rc), s	* 4.7	6.5		7.2	* 4.7	6.5		7.2				
Max Green Setting (Gmax), s	* 15	35.0		35.0	* 15	35.0		35.0				
Max Q Clear Time (g_c+I1), s	2.9	9.6		3.2	2.7	9.2		5.4				
Green Ext Time (p_c), s	0.0	4.2		0.5	0.0	4.0		0.7				

Intersection Summary		
HCM 6th Ctrl Delay		14.7
HCM 6th LOS		B

Notes

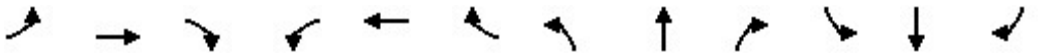
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	22	38	8	26	76	32	690	5	51	476	38
Future Volume (veh/h)	40	22	38	8	26	76	32	690	5	51	476	38
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781
Adj Flow Rate, veh/h	44	24	9	9	29	13	35	758	5	56	523	40
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	8	8	8	8	8	8	8	8	8	8	8	8
Cap, veh/h	90	144	54	24	140	117	77	1496	10	106	1010	77
Arrive On Green	0.05	0.12	0.12	0.01	0.08	0.08	0.05	0.30	0.30	0.06	0.32	0.32
Sat Flow, veh/h	1697	1224	459	1697	1781	1485	1697	4984	33	1697	3181	243
Grp Volume(v), veh/h	44	0	33	9	29	13	35	493	270	56	278	285
Grp Sat Flow(s),veh/h/ln	1697	0	1683	1697	1781	1485	1697	1621	1775	1697	1692	1731
Q Serve(g_s), s	1.4	0.0	1.0	0.3	0.8	0.5	1.1	7.0	7.0	1.8	7.4	7.5
Cycle Q Clear(g_c), s	1.4	0.0	1.0	0.3	0.8	0.5	1.1	7.0	7.0	1.8	7.4	7.5
Prop In Lane	1.00		0.27	1.00		1.00	1.00		0.02	1.00		0.14
Lane Grp Cap(c), veh/h	90	0	198	24	140	117	77	973	533	106	537	550
V/C Ratio(X)	0.49	0.00	0.17	0.38	0.21	0.11	0.46	0.51	0.51	0.53	0.52	0.52
Avail Cap(c_a), veh/h	613	0	1063	613	1126	939	766	2634	1442	766	1375	1406
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.5	0.0	22.0	27.1	23.9	23.7	25.8	16.0	16.0	25.2	15.4	15.4
Incr Delay (d2), s/veh	1.5	0.0	0.6	3.7	1.0	0.6	1.6	0.6	1.1	1.5	1.1	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.0	0.4	0.1	0.4	0.2	0.4	2.1	2.4	0.7	2.4	2.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	27.0	0.0	22.5	30.7	24.9	24.3	27.4	16.6	17.1	26.7	16.5	16.5
LnGrp LOS	C	A	C	C	C	C	C	B	B	C	B	B
Approach Vol, veh/h		77			51			798			619	
Approach Delay, s/veh		25.1			25.8			17.2			17.4	
Approach LOS		C			C			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.0	24.1	7.3	13.0	10.0	25.1	9.5	10.9
Change Period (Y+Rc), s	7.5	7.5	6.5	6.5	7.5	7.5	6.5	6.5
Max Green Setting (Gmax), s	25.0	45.0	20.0	35.0	25.0	45.0	20.0	35.0
Max Q Clear Time (g_c+I1), s	3.8	9.0	2.3	3.0	3.1	9.5	3.4	2.8
Green Ext Time (p_c), s	0.0	7.2	0.0	0.2	0.0	4.8	0.0	0.2

Intersection Summary	
HCM 6th Ctrl Delay	18.0
HCM 6th LOS	B



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	82	148	68	22	146	41	59	491	37	65	490	92
Future Volume (veh/h)	82	148	68	22	146	41	59	491	37	65	490	92
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.97	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	86	156	20	23	154	36	62	517	13	68	516	30
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	333	455	378	360	355	83	398	863	372	217	887	388
Arrive On Green	0.25	0.25	0.25	0.25	0.25	0.25	0.12	0.25	0.25	0.12	0.25	0.25
Sat Flow, veh/h	1170	1841	1529	1185	1436	336	3401	3497	1509	1753	3497	1529
Grp Volume(v), veh/h	86	156	20	23	0	190	62	517	13	68	516	30
Grp Sat Flow(s),veh/h/ln	1170	1841	1529	1185	0	1772	1700	1749	1509	1753	1749	1529
Q Serve(g_s), s	3.2	3.4	0.5	0.8	0.0	4.4	0.8	6.3	0.3	1.7	6.2	0.7
Cycle Q Clear(g_c), s	7.6	3.4	0.5	4.1	0.0	4.4	0.8	6.3	0.3	1.7	6.2	0.7
Prop In Lane	1.00		1.00	1.00		0.19	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	333	455	378	360	0	438	398	863	372	217	887	388
V/C Ratio(X)	0.26	0.34	0.05	0.06	0.00	0.43	0.16	0.60	0.03	0.31	0.58	0.08
Avail Cap(c_a), veh/h	773	1147	953	928	0	1289	1766	3269	1410	910	3269	1430
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	18.5	14.9	13.8	16.6	0.0	15.3	19.1	16.0	13.8	19.2	15.7	13.7
Incr Delay (d2), s/veh	0.4	0.4	0.1	0.1	0.0	0.7	0.1	0.7	0.0	0.3	0.6	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	1.2	0.1	0.2	0.0	1.5	0.2	1.9	0.1	0.6	1.9	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	18.9	15.4	13.9	16.7	0.0	16.0	19.2	16.7	13.8	19.5	16.3	13.8
LnGrp LOS	B	B	B	B	A	B	B	B	B	B	B	B
Approach Vol, veh/h		262			213			592			614	
Approach Delay, s/veh		16.4			16.0			16.9			16.6	
Approach LOS		B			B			B			B	

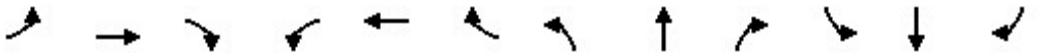
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.7	18.4		19.1	10.3	18.7		19.1				
Change Period (Y+Rc), s	* 4.7	6.5		7.2	* 4.7	6.5		7.2				
Max Green Setting (Gmax), s	* 25	45.0		30.0	* 25	45.0		35.0				
Max Q Clear Time (g_c+I1), s	3.7	8.3		9.6	2.8	8.2		6.4				
Green Ext Time (p_c), s	0.1	3.2		1.1	0.1	3.2		1.1				

Intersection Summary	
HCM 6th Ctrl Delay	16.6
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



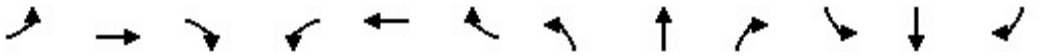
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	36	125	99	137	113	88	61	488	133	76	399	24
Future Volume (veh/h)	36	125	99	137	113	88	61	488	133	76	399	24
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	38	130	0	143	118	28	64	508	0	79	416	7
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	147	339		344	285	235	112	1111		129	1145	495
Arrive On Green	0.04	0.10	0.00	0.10	0.15	0.15	0.06	0.32	0.00	0.07	0.33	0.33
Sat Flow, veh/h	3401	3497	1560	3401	1841	1522	1753	3497	1560	1753	3497	1514
Grp Volume(v), veh/h	38	130	0	143	118	28	64	508	0	79	416	7
Grp Sat Flow(s),veh/h/ln	1700	1749	1560	1700	1841	1522	1753	1749	1560	1753	1749	1514
Q Serve(g_s), s	0.4	1.4	0.0	1.5	2.3	0.6	1.4	4.5	0.0	1.7	3.5	0.1
Cycle Q Clear(g_c), s	0.4	1.4	0.0	1.5	2.3	0.6	1.4	4.5	0.0	1.7	3.5	0.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	147	339		344	285	235	112	1111		129	1145	495
V/C Ratio(X)	0.26	0.38		0.42	0.41	0.12	0.57	0.46		0.61	0.36	0.01
Avail Cap(c_a), veh/h	3055	3141		3055	1653	1367	1575	3141		1575	3141	1359
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	18.0	16.5	0.0	16.4	14.9	14.2	17.7	10.6	0.0	17.5	10.0	8.9
Incr Delay (d2), s/veh	2.0	1.5	0.0	1.7	2.1	0.5	9.3	0.6	0.0	9.6	0.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.5	0.0	0.5	0.8	0.2	0.7	1.1	0.0	0.8	0.8	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	20.0	18.0	0.0	18.2	16.9	14.7	27.0	11.2	0.0	27.1	10.4	8.9
LnGrp LOS	B	B		B	B	B	C	B		C	B	A
Approach Vol, veh/h		168	A		289			572	A		502	
Approach Delay, s/veh		18.5			17.3			13.0			13.0	
Approach LOS		B			B			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.9	16.4	7.9	7.8	6.5	16.8	5.7	10.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0
Max Q Clear Time (g_c+I1), s	3.7	6.5	3.5	3.4	3.4	5.5	2.4	4.3
Green Ext Time (p_c), s	0.5	5.9	1.0	1.3	0.3	4.8	0.2	1.3

Intersection Summary	
HCM 6th Ctrl Delay	14.4
HCM 6th LOS	B

Notes

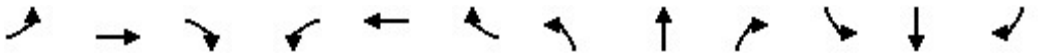
Unsignalized Delay for [NBR, EBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	122	386	33	170	346	172	13	146	62	149	260	35
Future Volume (veh/h)	122	386	33	170	346	172	13	146	62	149	260	35
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.96	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	126	398	6	175	357	31	13	151	17	154	268	31
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	176	947	288	368	1241	295	40	311	257	196	814	93
Arrive On Green	0.10	0.19	0.19	0.11	0.20	0.20	0.02	0.17	0.17	0.11	0.26	0.26
Sat Flow, veh/h	1753	5025	1525	3401	6332	1503	1753	1841	1524	1753	3155	361
Grp Volume(v), veh/h	126	398	6	175	357	31	13	151	17	154	147	152
Grp Sat Flow(s),veh/h/ln	1753	1675	1525	1700	1583	1503	1753	1841	1524	1753	1749	1767
Q Serve(g_s), s	4.3	4.3	0.2	3.0	3.0	1.0	0.4	4.6	0.6	5.3	4.2	4.3
Cycle Q Clear(g_c), s	4.3	4.3	0.2	3.0	3.0	1.0	0.4	4.6	0.6	5.3	4.2	4.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.20
Lane Grp Cap(c), veh/h	176	947	288	368	1241	295	40	311	257	196	451	456
V/C Ratio(X)	0.71	0.42	0.02	0.48	0.29	0.11	0.33	0.49	0.07	0.79	0.33	0.33
Avail Cap(c_a), veh/h	570	3268	992	1106	4118	978	570	1407	1164	570	1336	1351
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.8	22.0	20.3	25.8	21.1	20.3	29.6	23.1	21.5	26.6	18.5	18.5
Incr Delay (d2), s/veh	2.0	0.4	0.0	0.4	0.2	0.2	1.8	0.4	0.0	2.6	0.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	1.5	0.1	1.1	0.9	0.3	0.2	1.8	0.2	2.1	1.5	1.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	28.8	22.4	20.4	26.1	21.2	20.5	31.4	23.6	21.5	29.2	18.6	18.7
LnGrp LOS	C	C	C	C	C	C	C	C	C	C	B	B
Approach Vol, veh/h		530			563			181			453	
Approach Delay, s/veh		23.9			22.7			23.9			22.3	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.4	16.9	13.1	18.1	7.9	22.4	12.7	18.6
Change Period (Y+Rc), s	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
Max Green Setting (Gmax), s	20.0	47.0	20.0	40.0	20.0	47.0	20.0	40.0
Max Q Clear Time (g_c+I1), s	7.3	6.6	5.0	6.3	2.4	6.3	6.3	5.0
Green Ext Time (p_c), s	0.1	0.5	0.2	3.6	0.0	1.0	0.1	3.3

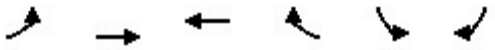
Intersection Summary	
HCM 6th Ctrl Delay	23.1
HCM 6th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	34	323	259	213	304	56	391	492	403	128	328	44
Future Volume (veh/h)	34	323	259	213	304	56	391	492	403	128	328	44
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	35	336	55	222	317	17	407	512	112	133	342	9
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	166	758	230	329	695	303	527	1365	416	220	633	276
Arrive On Green	0.05	0.15	0.15	0.10	0.20	0.20	0.16	0.27	0.27	0.06	0.18	0.18
Sat Flow, veh/h	3401	5025	1522	3401	3497	1526	3401	5025	1530	3401	3497	1525
Grp Volume(v), veh/h	35	336	55	222	317	17	407	512	112	133	342	9
Grp Sat Flow(s),veh/h/ln	1700	1675	1522	1700	1749	1526	1700	1675	1530	1700	1749	1525
Q Serve(g_s), s	0.7	4.4	2.3	4.5	5.8	0.7	8.3	6.0	4.1	2.7	6.4	0.4
Cycle Q Clear(g_c), s	0.7	4.4	2.3	4.5	5.8	0.7	8.3	6.0	4.1	2.7	6.4	0.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	166	758	230	329	695	303	527	1365	416	220	633	276
V/C Ratio(X)	0.21	0.44	0.24	0.67	0.46	0.06	0.77	0.38	0.27	0.61	0.54	0.03
Avail Cap(c_a), veh/h	1651	2439	739	1651	1698	741	1179	1742	531	1179	1698	740
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.9	27.9	27.0	31.5	25.4	23.4	29.2	21.3	20.6	32.8	26.8	24.3
Incr Delay (d2), s/veh	0.5	0.5	0.6	1.8	0.6	0.1	1.8	0.2	0.4	2.0	0.9	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	1.6	0.8	1.8	2.2	0.2	3.2	2.1	1.3	1.1	2.5	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	33.4	28.3	27.6	33.3	26.0	23.5	31.1	21.5	21.0	34.8	27.7	24.4
LnGrp LOS	C	C	C	C	C	C	C	C	C	C	C	C
Approach Vol, veh/h		426			556			1031			484	
Approach Delay, s/veh		28.7			28.8			25.2			29.6	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.5	18.4	18.7	20.6	11.0	21.8	12.2	27.1
Change Period (Y+Rc), s	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5
Max Green Setting (Gmax), s	35.0	35.0	25.0	35.0	35.0	35.0	25.0	25.0
Max Q Clear Time (g_c+I1), s	6.5	6.4	10.3	8.4	2.7	7.8	4.7	8.0
Green Ext Time (p_c), s	0.5	2.0	0.9	2.4	0.1	2.2	0.3	3.4

Intersection Summary	
HCM 6th Ctrl Delay	27.4
HCM 6th LOS	C



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	763	430	0	226	628
Future Volume (veh/h)	0	763	430	0	226	628
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	0	1841	1841	0	1841	1841
Adj Flow Rate, veh/h	0	820	462	0	188	379
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	4	4	0	4	4
Cap, veh/h	0	1804	1256	0	413	736
Arrive On Green	0.00	0.36	0.36	0.00	0.24	0.24
Sat Flow, veh/h	0	5356	3681	0	1753	3120
Grp Volume(v), veh/h	0	820	462	0	188	379
Grp Sat Flow(s),veh/h/ln	0	1675	1749	0	1753	1560
Q Serve(g_s), s	0.0	3.8	3.0	0.0	2.8	3.2
Cycle Q Clear(g_c), s	0.0	3.8	3.0	0.0	2.8	3.2
Prop In Lane	0.00			0.00	1.00	1.00
Lane Grp Cap(c), veh/h	0	1804	1256	0	413	736
V/C Ratio(X)	0.00	0.45	0.37	0.00	0.45	0.52
Avail Cap(c_a), veh/h	0	4965	3455	0	1732	3083
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	7.5	7.2	0.0	9.9	10.1
Incr Delay (d2), s/veh	0.0	0.2	0.2	0.0	0.8	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.5	0.4	0.0	0.7	0.7
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.0	7.6	7.4	0.0	10.7	10.7
LnGrp LOS	A	A	A	A	B	B
Approach Vol, veh/h		820	462		567	
Approach Delay, s/veh		7.6	7.4		10.7	
Approach LOS		A	A		B	

Timer - Assigned Phs	2	4	6
Phs Duration (G+Y+Rc), s	17.7	12.7	17.7
Change Period (Y+Rc), s	6.8	5.5	6.8
Max Green Setting (Gmax), s	30.0	30.0	30.0
Max Q Clear Time (g_c+I1), s	5.8	5.2	5.0
Green Ext Time (p_c), s	5.1	2.0	2.6

Intersection Summary	
HCM 6th Ctrl Delay	8.5
HCM 6th LOS	A

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	431	558	188	262	273	67
Future Volume (veh/h)	431	558	188	262	273	67
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		0.97	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	454	372	198	276	287	20
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	4	4	4
Cap, veh/h	1603	705	354	2805	500	222
Arrive On Green	0.32	0.32	0.10	0.56	0.14	0.14
Sat Flow, veh/h	5191	1513	3401	5191	3506	1560
Grp Volume(v), veh/h	454	372	198	276	287	20
Grp Sat Flow(s),veh/h/ln	1675	1513	1700	1675	1753	1560
Q Serve(g_s), s	3.0	7.8	2.5	1.1	3.4	0.5
Cycle Q Clear(g_c), s	3.0	7.8	2.5	1.1	3.4	0.5
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1603	705	354	2805	500	222
V/C Ratio(X)	0.28	0.53	0.56	0.10	0.57	0.09
Avail Cap(c_a), veh/h	3393	1244	2296	3393	2367	1053
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	11.3	8.5	18.9	4.6	17.8	16.5
Incr Delay (d2), s/veh	0.1	0.6	1.4	0.0	1.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	2.3	0.8	0.1	1.3	0.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	11.4	9.2	20.3	4.6	18.8	16.7
LnGrp LOS	B	A	C	A	B	B
Approach Vol, veh/h	826			474	307	
Approach Delay, s/veh	10.4			11.2	18.7	
Approach LOS	B			B	B	

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	10.6	21.5				32.1	12.3
Change Period (Y+Rc), s	6.0	7.3				7.3	6.0
Max Green Setting (Gmax), s	30.0	30.0				30.0	30.0
Max Q Clear Time (g_c+I1), s	4.5	9.8				3.1	5.4
Green Ext Time (p_c), s	0.6	3.9				1.5	1.1

Intersection Summary	
HCM 6th Ctrl Delay	12.2
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.
User approved volume balancing among the lanes for turning movement.

Intersection	
Intersection Delay, s/veh	0
Intersection LOS	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	8	8	8	8	8	8	8	8	8	8	8	8
Mvmt Flow	0	0	0	0	0	0	0	0	0	0	0	0
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	0	0	0	0
HCM LOS	-	-	-	-

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	0%	0%	0%	0%
Vol Thru, %	100%	100%	100%	100%
Vol Right, %	0%	0%	0%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	0	0	0	0
LT Vol	0	0	0	0
Through Vol	0	0	0	0
RT Vol	0	0	0	0
Lane Flow Rate	0	0	0	0
Geometry Grp	1	1	1	1
Degree of Util (X)	0	0	0	0
Departure Headway (Hd)	4.036	4.036	4.036	4.036
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	0	0	0	0
Service Time	2.036	2.036	2.036	2.036
HCM Lane V/C Ratio	0	0	0	0
HCM Control Delay	7	7	7	7
HCM Lane LOS	N	N	N	N
HCM 95th-tile Q	0	0	0	0

Intersection	
Intersection Delay, s/veh	8.4
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	31	18	16	29	24	18	8	104	33	14	77	38
Future Vol, veh/h	31	18	16	29	24	18	8	104	33	14	77	38
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles, %	8	8	8	8	8	8	8	8	8	8	8	8
Mvmt Flow	33	19	17	31	26	19	9	112	35	15	83	41
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8.3	8.3	8.5	8.3
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	6%	48%	41%	11%
Vol Thru, %	72%	28%	34%	60%
Vol Right, %	23%	25%	25%	29%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	145	65	71	129
LT Vol	8	31	29	14
Through Vol	104	18	24	77
RT Vol	33	16	18	38
Lane Flow Rate	156	70	76	139
Geometry Grp	1	1	1	1
Degree of Util (X)	0.191	0.092	0.1	0.17
Departure Headway (Hd)	4.416	4.745	4.718	4.406
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	814	756	760	816
Service Time	2.438	2.772	2.745	2.428
HCM Lane V/C Ratio	0.192	0.093	0.1	0.17
HCM Control Delay	8.5	8.3	8.3	8.3
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.7	0.3	0.3	0.6

Intersection	
Intersection Delay, s/veh	9.3
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	25	190	5	3	194	22	1	11	1	17	4	17
Future Vol, veh/h	25	190	5	3	194	22	1	11	1	17	4	17
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Heavy Vehicles, %	4	4	4	4	4	4	4	4	4	4	4	4
Mvmt Flow	30	226	6	4	231	26	1	13	1	20	5	20
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	9.5	9.3	8.3	8.3
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	8%	11%	1%	45%
Vol Thru, %	85%	86%	89%	11%
Vol Right, %	8%	2%	10%	45%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	13	220	219	38
LT Vol	1	25	3	17
Through Vol	11	190	194	4
RT Vol	1	5	22	17
Lane Flow Rate	15	262	261	45
Geometry Grp	1	1	1	1
Degree of Util (X)	0.022	0.32	0.314	0.062
Departure Headway (Hd)	5.15	4.398	4.337	4.955
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	694	820	832	722
Service Time	3.186	2.414	2.353	2.988
HCM Lane V/C Ratio	0.022	0.32	0.314	0.062
HCM Control Delay	8.3	9.5	9.3	8.3
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.1	1.4	1.3	0.2

Intersection	
Int Delay, s/veh	4.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	21	464	21	59	541	13	35	9	106	8	14	15
Future Vol, veh/h	21	464	21	59	541	13	35	9	106	8	14	15
Conflicting Peds, #/hr	5	0	5	5	0	5	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	127	-	-	143	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	23	510	23	65	595	14	38	10	116	9	15	16

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	614	0	0	538	0	0	1008	1317	527	1368	1321	310
Stage 1	-	-	-	-	-	-	573	573	-	737	737	-
Stage 2	-	-	-	-	-	-	435	744	-	631	584	-
Critical Hdwy	4.145	-	-	4.145	-	-	7.345	6.545	6.245	7.345	6.545	6.945
Critical Hdwy Stg 1	-	-	-	-	-	-	6.145	5.545	-	6.545	5.545	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.545	5.545	-	6.145	5.545	-
Follow-up Hdwy	2.2285	-	-	2.2285	-	-	3.5285	4.0285	3.3285	3.5285	4.0285	3.3285
Pot Cap-1 Maneuver	958	-	-	1022	-	-	205	156	548	114	155	684
Stage 1	-	-	-	-	-	-	501	501	-	375	422	-
Stage 2	-	-	-	-	-	-	568	419	-	466	495	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	953	-	-	1017	-	-	171	141	545	79	140	681
Mov Cap-2 Maneuver	-	-	-	-	-	-	171	141	-	79	140	-
Stage 1	-	-	-	-	-	-	486	486	-	364	393	-
Stage 2	-	-	-	-	-	-	499	390	-	350	481	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.4	0.8	27.1	33.6
HCM LOS			D	D

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	324	953	-	-	1017	-	-	166
HCM Lane V/C Ratio	0.509	0.024	-	-	0.064	-	-	0.245
HCM Control Delay (s)	27.1	8.9	-	-	8.8	-	-	33.6
HCM Lane LOS	D	A	-	-	A	-	-	D
HCM 95th %tile Q(veh)	2.7	0.1	-	-	0.2	-	-	0.9

Intersection	
Int Delay, s/veh	5.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	19	480	80	54	377	20	82	14	75	11	6	17
Future Vol, veh/h	19	480	80	54	377	20	82	14	75	11	6	17
Conflicting Peds, #/hr	5	0	5	5	0	5	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	69	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	20	495	82	56	389	21	85	14	77	11	6	18

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	415	0	0	582	0	0	891	1108	541	1139	1139	210
Stage 1	-	-	-	-	-	-	581	581	-	517	517	-
Stage 2	-	-	-	-	-	-	310	527	-	622	622	-
Critical Hdwy	4.145	-	-	4.145	-	-	7.345	6.545	6.245	7.345	6.545	6.945
Critical Hdwy Stg 1	-	-	-	-	-	-	6.145	5.545	-	6.545	5.545	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.545	5.545	-	6.145	5.545	-
Follow-up Hdwy	2.2285	-	-	2.2285	-	-	3.5285	4.0285	3.3285	3.5285	4.0285	3.3285
Pot Cap-1 Maneuver	1136	-	-	984	-	-	248	208	538	166	199	794
Stage 1	-	-	-	-	-	-	496	497	-	508	531	-
Stage 2	-	-	-	-	-	-	673	525	-	471	476	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1131	-	-	979	-	-	222	191	535	126	182	790
Mov Cap-2 Maneuver	-	-	-	-	-	-	222	191	-	126	182	-
Stage 1	-	-	-	-	-	-	485	486	-	497	498	-
Stage 2	-	-	-	-	-	-	613	492	-	384	465	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.3	1.1	34.2	22.5
HCM LOS			D	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	293	1131	-	-	979	-	-	240
HCM Lane V/C Ratio	0.602	0.017	-	-	0.057	-	-	0.146
HCM Control Delay (s)	34.2	8.2	-	-	8.9	-	-	22.5
HCM Lane LOS	D	A	-	-	A	-	-	C
HCM 95th %tile Q(veh)	3.6	0.1	-	-	0.2	-	-	0.5

Intersection	
Int Delay, s/veh	0.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	18	544	7	7	437	21	3	2	7	15	1	12
Future Vol, veh/h	18	544	7	7	437	21	3	2	7	15	1	12
Conflicting Peds, #/hr	5	0	5	5	0	5	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	98	-	-	47	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	19	561	7	7	451	22	3	2	7	15	1	12

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	478	0	0	573	0	0	848	1100	570	1088	1092	242
Stage 1	-	-	-	-	-	-	608	608	-	481	481	-
Stage 2	-	-	-	-	-	-	240	492	-	607	611	-
Critical Hdwy	4.145	-	-	4.145	-	-	7.345	6.545	6.245	7.345	6.545	6.945
Critical Hdwy Stg 1	-	-	-	-	-	-	6.145	5.545	-	6.545	5.545	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.545	5.545	-	6.145	5.545	-
Follow-up Hdwy	2.2285	-	-	2.2285	-	-	3.5285	4.0285	3.3285	3.5285	4.0285	3.3285
Pot Cap-1 Maneuver	1076	-	-	992	-	-	266	210	518	180	213	757
Stage 1	-	-	-	-	-	-	480	483	-	534	551	-
Stage 2	-	-	-	-	-	-	740	545	-	480	481	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1071	-	-	987	-	-	255	203	516	172	206	753
Mov Cap-2 Maneuver	-	-	-	-	-	-	255	203	-	172	206	-
Stage 1	-	-	-	-	-	-	469	472	-	522	544	-
Stage 2	-	-	-	-	-	-	721	538	-	463	470	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.3	0.1	16	20.6
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	341	1071	-	-	987	-	-	259
HCM Lane V/C Ratio	0.036	0.017	-	-	0.007	-	-	0.111
HCM Control Delay (s)	16	8.4	-	-	8.7	-	-	20.6
HCM Lane LOS	C	A	-	-	A	-	-	C
HCM 95th %tile Q(veh)	0.1	0.1	-	-	0	-	-	0.4

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	1	767	590	38	8	24
Future Vol, veh/h	1	767	590	38	8	24
Conflicting Peds, #/hr	5	0	0	5	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	25	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	1	807	621	40	8	25

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	666	0	-	0	1455	336
Stage 1	-	-	-	-	646	-
Stage 2	-	-	-	-	809	-
Critical Hdwy	4.145	-	-	-	6.645	6.945
Critical Hdwy Stg 1	-	-	-	-	5.845	-
Critical Hdwy Stg 2	-	-	-	-	5.445	-
Follow-up Hdwy	2.2285	-	-	-	3.5285	3.3285
Pot Cap-1 Maneuver	916	-	-	-	131	658
Stage 1	-	-	-	-	482	-
Stage 2	-	-	-	-	435	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	912	-	-	-	130	655
Mov Cap-2 Maneuver	-	-	-	-	267	-
Stage 1	-	-	-	-	479	-
Stage 2	-	-	-	-	433	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	13.1
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	912	-	-	-	480
HCM Lane V/C Ratio	0.001	-	-	-	0.07
HCM Control Delay (s)	9	-	-	-	13.1
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.2

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	8	766	609	11	3	19
Future Vol, veh/h	8	766	609	11	3	19
Conflicting Peds, #/hr	5	0	0	5	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	25	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	9	815	648	12	3	20

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	665	0	-	0	1492	335
Stage 1	-	-	-	-	659	-
Stage 2	-	-	-	-	833	-
Critical Hdwy	4.145	-	-	-	6.645	6.945
Critical Hdwy Stg 1	-	-	-	-	5.845	-
Critical Hdwy Stg 2	-	-	-	-	5.445	-
Follow-up Hdwy	2.2285	-	-	-	3.5285	3.3285
Pot Cap-1 Maneuver	916	-	-	-	124	659
Stage 1	-	-	-	-	475	-
Stage 2	-	-	-	-	423	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	912	-	-	-	122	656
Mov Cap-2 Maneuver	-	-	-	-	258	-
Stage 1	-	-	-	-	468	-
Stage 2	-	-	-	-	421	-

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	11.9
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	912	-	-	-	542
HCM Lane V/C Ratio	0.009	-	-	-	0.043
HCM Control Delay (s)	9	-	-	-	11.9
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.1

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	10	759	616	20	33	5
Future Vol, veh/h	10	759	616	20	33	5
Conflicting Peds, #/hr	5	0	0	5	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	10	782	635	21	34	5

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	661	0	-	0	1453	333
Stage 1	-	-	-	-	651	-
Stage 2	-	-	-	-	802	-
Critical Hdwy	4.145	-	-	-	6.645	6.945
Critical Hdwy Stg 1	-	-	-	-	5.845	-
Critical Hdwy Stg 2	-	-	-	-	5.445	-
Follow-up Hdwy	2.2285	-	-	-	3.5285	3.3285
Pot Cap-1 Maneuver	920	-	-	-	131	661
Stage 1	-	-	-	-	480	-
Stage 2	-	-	-	-	438	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	916	-	-	-	128	658
Mov Cap-2 Maneuver	-	-	-	-	265	-
Stage 1	-	-	-	-	472	-
Stage 2	-	-	-	-	436	-

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	19.5
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	916	-	-	-	288
HCM Lane V/C Ratio	0.011	-	-	-	0.136
HCM Control Delay (s)	9	-	-	-	19.5
HCM Lane LOS	A	-	-	-	C
HCM 95th %tile Q(veh)	0	-	-	-	0.5

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	6	786	638	15	6	4
Future Vol, veh/h	6	786	638	15	6	4
Conflicting Peds, #/hr	5	0	0	5	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	350	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	98	98	98	98	98	98
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	6	802	651	15	6	4

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	671	0	-	0	1478	338
Stage 1	-	-	-	-	664	-
Stage 2	-	-	-	-	814	-
Critical Hdwy	4.145	-	-	-	6.645	6.945
Critical Hdwy Stg 1	-	-	-	-	5.845	-
Critical Hdwy Stg 2	-	-	-	-	5.445	-
Follow-up Hdwy	2.2285	-	-	-	3.5285	3.3285
Pot Cap-1 Maneuver	912	-	-	-	126	656
Stage 1	-	-	-	-	472	-
Stage 2	-	-	-	-	432	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	908	-	-	-	124	653
Mov Cap-2 Maneuver	-	-	-	-	261	-
Stage 1	-	-	-	-	466	-
Stage 2	-	-	-	-	430	-

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	15.8
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	908	-	-	-	343
HCM Lane V/C Ratio	0.007	-	-	-	0.03
HCM Control Delay (s)	9	-	-	-	15.8
HCM Lane LOS	A	-	-	-	C
HCM 95th %tile Q(veh)	0	-	-	-	0.1

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	16	776	643	10	11	15
Future Vol, veh/h	16	776	643	10	11	15
Conflicting Peds, #/hr	5	0	0	5	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	175	-	-	-	0	76
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	17	808	670	10	11	16

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	685	0	-	0	1522	345
Stage 1	-	-	-	-	680	-
Stage 2	-	-	-	-	842	-
Critical Hdwy	4.145	-	-	-	6.645	6.945
Critical Hdwy Stg 1	-	-	-	-	5.845	-
Critical Hdwy Stg 2	-	-	-	-	5.445	-
Follow-up Hdwy	2.2285	-	-	-	3.5285	3.3285
Pot Cap-1 Maneuver	901	-	-	-	118	649
Stage 1	-	-	-	-	463	-
Stage 2	-	-	-	-	419	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	897	-	-	-	115	646
Mov Cap-2 Maneuver	-	-	-	-	115	-
Stage 1	-	-	-	-	452	-
Stage 2	-	-	-	-	417	-

Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	23
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	897	-	-	-	115	646
HCM Lane V/C Ratio	0.019	-	-	-	0.1	0.024
HCM Control Delay (s)	9.1	-	-	-	39.7	10.7
HCM Lane LOS	A	-	-	-	E	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0.3	0.1

Intersection	
Int Delay, s/veh	0.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	771	23	8	620	25	14
Future Vol, veh/h	771	23	8	620	25	14
Conflicting Peds, #/hr	0	5	5	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	200	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	803	24	8	646	26	15

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	832	0	1159	820
Stage 1	-	-	-	-	820	-
Stage 2	-	-	-	-	339	-
Critical Hdwy	-	-	4.145	-	6.645	6.245
Critical Hdwy Stg 1	-	-	-	-	5.445	-
Critical Hdwy Stg 2	-	-	-	-	5.845	-
Follow-up Hdwy	-	-	2.2285	-	3.5285	3.3285
Pot Cap-1 Maneuver	-	-	793	-	201	372
Stage 1	-	-	-	-	430	-
Stage 2	-	-	-	-	692	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	789	-	198	370
Mov Cap-2 Maneuver	-	-	-	-	198	-
Stage 1	-	-	-	-	428	-
Stage 2	-	-	-	-	685	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	23.2
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	238	-	-	789	-
HCM Lane V/C Ratio	0.171	-	-	0.011	-
HCM Control Delay (s)	23.2	-	-	9.6	-
HCM Lane LOS	C	-	-	A	-
HCM 95th %tile Q(veh)	0.6	-	-	0	-

Intersection	
Int Delay, s/veh	0.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	63	1	1	70	1	4
Future Vol, veh/h	63	1	1	70	1	4
Conflicting Peds, #/hr	0	5	5	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	83	83	83	83	83	83
Heavy Vehicles, %	8	8	8	8	8	8
Mvmt Flow	76	1	1	84	1	5

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	82	0	168	82
Stage 1	-	-	-	-	82	-
Stage 2	-	-	-	-	86	-
Critical Hdwy	-	-	4.18	-	6.48	6.28
Critical Hdwy Stg 1	-	-	-	-	5.48	-
Critical Hdwy Stg 2	-	-	-	-	5.48	-
Follow-up Hdwy	-	-	2.272	-	3.572	3.372
Pot Cap-1 Maneuver	-	-	1478	-	809	961
Stage 1	-	-	-	-	926	-
Stage 2	-	-	-	-	922	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1471	-	804	956
Mov Cap-2 Maneuver	-	-	-	-	804	-
Stage 1	-	-	-	-	921	-
Stage 2	-	-	-	-	921	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	8.9
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	921	-	-	1471	-
HCM Lane V/C Ratio	0.007	-	-	0.001	-
HCM Control Delay (s)	8.9	-	-	7.4	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0	-

Intersection	
Int Delay, s/veh	0.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	62	0	0	64	3	1
Future Vol, veh/h	62	0	0	64	3	1
Conflicting Peds, #/hr	0	5	5	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	8	8	8	8	8	8
Mvmt Flow	70	0	0	73	3	1

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	75	0	148	75
Stage 1	-	-	-	-	75	-
Stage 2	-	-	-	-	73	-
Critical Hdwy	-	-	4.18	-	6.48	6.28
Critical Hdwy Stg 1	-	-	-	-	5.48	-
Critical Hdwy Stg 2	-	-	-	-	5.48	-
Follow-up Hdwy	-	-	2.272	-	3.572	3.372
Pot Cap-1 Maneuver	-	-	1487	-	830	970
Stage 1	-	-	-	-	933	-
Stage 2	-	-	-	-	935	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1480	-	826	965
Mov Cap-2 Maneuver	-	-	-	-	826	-
Stage 1	-	-	-	-	928	-
Stage 2	-	-	-	-	935	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	9.2
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	857	-	-	1480	-
HCM Lane V/C Ratio	0.005	-	-	-	-
HCM Control Delay (s)	9.2	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0	-

Intersection	
Int Delay, s/veh	2.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	10	58	0	0	52	19	0	2	5	17	4	8
Future Vol, veh/h	10	58	0	0	52	19	0	2	5	17	4	8
Conflicting Peds, #/hr	5	0	5	5	0	5	5	0	5	5	0	5
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	8	8	8	8	8	8	8	8	8	8	8	8
Mvmt Flow	11	64	0	0	57	21	0	2	5	19	4	9

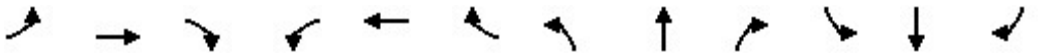
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	83	0	0	69	0	0	170	174	74	168	164	78
Stage 1	-	-	-	-	-	-	91	91	-	73	73	-
Stage 2	-	-	-	-	-	-	79	83	-	95	91	-
Critical Hdwy	4.18	-	-	4.18	-	-	7.18	6.58	6.28	7.18	6.58	6.28
Critical Hdwy Stg 1	-	-	-	-	-	-	6.18	5.58	-	6.18	5.58	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.18	5.58	-	6.18	5.58	-
Follow-up Hdwy	2.272	-	-	2.272	-	-	3.572	4.072	3.372	3.572	4.072	3.372
Pot Cap-1 Maneuver	1477	-	-	1495	-	-	780	709	971	783	718	966
Stage 1	-	-	-	-	-	-	902	808	-	922	823	-
Stage 2	-	-	-	-	-	-	915	814	-	897	808	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1470	-	-	1488	-	-	757	696	962	764	705	957
Mov Cap-2 Maneuver	-	-	-	-	-	-	757	696	-	764	705	-
Stage 1	-	-	-	-	-	-	890	797	-	910	819	-
Stage 2	-	-	-	-	-	-	897	810	-	878	797	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.1	0	9.2	9.7
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	867	1470	-	-	1488	-	-	799
HCM Lane V/C Ratio	0.009	0.007	-	-	-	-	-	0.04
HCM Control Delay (s)	9.2	7.5	0	-	0	-	-	9.7
HCM Lane LOS	A	A	A	-	A	-	-	A
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0.1

HCM 6th Signalized Intersection Summary
1: Grove Ave & Mission Blvd

02/22/2024



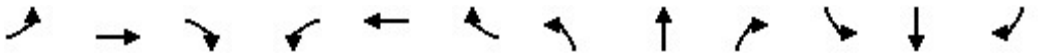
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	170	480	75	20	479	344	135	648	36	280	561	139
Future Volume (veh/h)	170	480	75	20	479	344	135	648	36	280	561	139
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	185	522	25	22	521	91	147	704	37	304	610	49
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	295	906	402	139	745	330	178	1096	57	341	1594	486
Arrive On Green	0.09	0.26	0.26	0.04	0.21	0.21	0.10	0.22	0.22	0.19	0.32	0.32
Sat Flow, veh/h	3401	3497	1551	3401	3497	1549	1753	4883	255	1753	5025	1532
Grp Volume(v), veh/h	185	522	25	22	521	91	147	482	259	304	610	49
Grp Sat Flow(s),veh/h/ln	1700	1749	1551	1700	1749	1549	1753	1675	1788	1753	1675	1532
Q Serve(g_s), s	5.4	13.4	1.3	0.6	14.2	5.1	8.5	13.4	13.5	17.4	9.7	2.3
Cycle Q Clear(g_c), s	5.4	13.4	1.3	0.6	14.2	5.1	8.5	13.4	13.5	17.4	9.7	2.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.14	1.00		1.00
Lane Grp Cap(c), veh/h	295	906	402	139	745	330	178	752	401	341	1594	486
V/C Ratio(X)	0.63	0.58	0.06	0.16	0.70	0.28	0.82	0.64	0.65	0.89	0.38	0.10
Avail Cap(c_a), veh/h	989	1187	526	660	1187	526	340	1137	607	935	1706	520
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.5	33.3	28.8	47.7	37.5	33.9	45.4	36.2	36.3	40.5	27.4	24.8
Incr Delay (d2), s/veh	1.6	0.7	0.1	0.4	1.4	0.5	7.0	1.3	2.5	6.2	0.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.3	5.5	0.4	0.3	5.8	1.8	3.9	5.3	5.9	7.8	3.7	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	47.1	34.0	28.8	48.1	39.0	34.5	52.4	37.5	38.7	46.7	27.6	25.0
LnGrp LOS	D	C	C	D	D	C	D	D	D	D	C	C
Approach Vol, veh/h		732			634			888			963	
Approach Delay, s/veh		37.1			38.6			40.3			33.5	
Approach LOS		D			D			D			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	27.0	30.1	11.7	34.2	17.5	39.7	16.5	29.5
Change Period (Y+Rc), s	7.0	7.0	7.5	7.5	7.0	7.0	7.5	7.5
Max Green Setting (Gmax), s	55.0	35.0	20.0	35.0	20.0	35.0	30.0	35.0
Max Q Clear Time (g_c+I1), s	19.4	15.5	2.6	15.4	10.5	11.7	7.4	16.2
Green Ext Time (p_c), s	0.6	5.7	0.0	3.7	0.2	5.7	0.4	3.7

Intersection Summary	
HCM 6th Ctrl Delay	37.2
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	32	718	107	33	548	3	156	28	57	3	20	29
Future Volume (veh/h)	32	718	107	33	548	3	156	28	57	3	20	29
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	35	780	46	36	596	3	170	30	15	3	22	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	94	1234	543	96	1263	6	375	610	268	367	610	
Arrive On Green	0.05	0.35	0.35	0.06	0.35	0.35	0.17	0.17	0.17	0.17	0.17	0.00
Sat Flow, veh/h	1753	3497	1539	1753	3568	18	1368	3497	1537	1339	3589	0
Grp Volume(v), veh/h	35	780	46	36	292	307	170	30	15	3	22	0
Grp Sat Flow(s),veh/h/ln	1753	1749	1539	1753	1749	1837	1368	1749	1537	1339	1749	0
Q Serve(g_s), s	1.0	9.3	1.0	1.0	6.5	6.5	5.9	0.4	0.4	0.1	0.3	0.0
Cycle Q Clear(g_c), s	1.0	9.3	1.0	1.0	6.5	6.5	6.2	0.4	0.4	0.5	0.3	0.0
Prop In Lane	1.00		1.00	1.00		0.01	1.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	94	1234	543	96	619	651	375	610	268	367	610	
V/C Ratio(X)	0.37	0.63	0.08	0.37	0.47	0.47	0.45	0.05	0.06	0.01	0.04	
Avail Cap(c_a), veh/h	697	2086	918	697	1043	1096	680	1391	611	666	1391	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	23.0	13.6	10.9	22.9	12.6	12.6	19.8	17.3	17.3	17.5	17.2	0.0
Incr Delay (d2), s/veh	0.9	0.8	0.1	0.9	0.8	0.8	1.5	0.1	0.1	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	2.7	0.3	0.4	1.9	2.0	1.7	0.1	0.1	0.0	0.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.9	14.3	10.9	23.8	13.4	13.4	21.3	17.3	17.5	17.5	17.3	0.0
LnGrp LOS	C	B	B	C	B	B	C	B	B	B	B	
Approach Vol, veh/h		861			635			215			25	A
Approach Delay, s/veh		14.5			14.0			20.5			17.3	
Approach LOS		B			B			C			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.8	24.7		15.8	9.7	24.8		15.8				
Change Period (Y+Rc), s	7.0	7.0		7.0	7.0	7.0		7.0				
Max Green Setting (Gmax), s	20.0	30.0		20.0	20.0	30.0		20.0				
Max Q Clear Time (g_c+I1), s	3.0	11.3		8.2	3.0	8.5		2.5				
Green Ext Time (p_c), s	0.0	6.4		0.9	0.0	4.4		0.1				

Intersection Summary		
HCM 6th Ctrl Delay		15.1
HCM 6th LOS		B

Notes

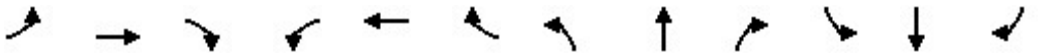
Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	15	173	57	78	125	27	22	160	25	13	202	6
Future Volume (veh/h)	15	173	57	78	125	27	22	160	25	13	202	6
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.98	0.99		0.98	0.99		0.98	0.99		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	16	188	37	85	136	17	24	174	17	14	220	6
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	386	472	91	413	696	86	327	559	54	333	560	15
Arrive On Green	0.02	0.16	0.16	0.08	0.22	0.22	0.03	0.17	0.17	0.02	0.16	0.16
Sat Flow, veh/h	1753	2912	560	1753	3127	384	1753	3215	310	1753	3475	94
Grp Volume(v), veh/h	16	111	114	85	75	78	24	94	97	14	110	116
Grp Sat Flow(s),veh/h/ln	1753	1749	1724	1753	1749	1762	1753	1749	1776	1753	1749	1821
Q Serve(g_s), s	0.4	2.8	2.9	1.9	1.7	1.7	0.5	2.3	2.3	0.3	2.7	2.8
Cycle Q Clear(g_c), s	0.4	2.8	2.9	1.9	1.7	1.7	0.5	2.3	2.3	0.3	2.7	2.8
Prop In Lane	1.00		0.33	1.00		0.22	1.00		0.17	1.00		0.05
Lane Grp Cap(c), veh/h	386	284	280	413	389	392	327	304	309	333	282	293
V/C Ratio(X)	0.04	0.39	0.41	0.21	0.19	0.20	0.07	0.31	0.31	0.04	0.39	0.39
Avail Cap(c_a), veh/h	906	1283	1265	827	1283	1293	810	1265	1285	839	1265	1317
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	16.2	18.1	18.2	14.5	15.3	15.3	16.0	17.4	17.5	16.3	18.2	18.2
Incr Delay (d2), s/veh	0.1	1.3	1.4	0.2	0.3	0.4	0.1	0.8	0.8	0.1	1.3	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	1.0	1.0	0.6	0.6	0.6	0.2	0.8	0.8	0.1	1.0	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	16.2	19.4	19.5	14.8	15.6	15.6	16.1	18.2	18.3	16.4	19.4	19.4
LnGrp LOS	B	B	B	B	B	B	B	B	B	B	B	B
Approach Vol, veh/h		241			238			215			240	
Approach Delay, s/veh		19.2			15.3			18.0			19.2	
Approach LOS		B			B			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.0	15.4	10.6	14.3	8.7	14.8	7.7	17.3
Change Period (Y+Rc), s	7.0	7.0	6.5	6.5	7.0	7.0	6.5	6.5
Max Green Setting (Gmax), s	15.0	35.0	15.5	35.5	15.0	35.0	15.5	35.5
Max Q Clear Time (g_c+I1), s	2.3	4.3	3.9	4.9	2.5	4.8	2.4	3.7
Green Ext Time (p_c), s	0.0	1.4	0.1	1.7	0.0	1.7	0.0	1.1

Intersection Summary	
HCM 6th Ctrl Delay	18.0
HCM 6th LOS	B

Min green cannot be greater than Max Green.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	246	4	285	236	700	0	0	645	448
Future Volume (veh/h)	0	0	0	246	4	285	236	700	0	0	645	448
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		0.99
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1841	1841	1841	1841	1841	0	0	1841	1841
Adj Flow Rate, veh/h				282	0	58	243	722	0	0	665	155
Peak Hour Factor				0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %				4	4	4	4	4	0	0	4	4
Cap, veh/h				629	0	280	309	2049	0	0	1105	489
Arrive On Green				0.18	0.00	0.18	0.18	0.59	0.00	0.00	0.32	0.32
Sat Flow, veh/h				3506	0	1560	1753	3589	0	0	3589	1548
Grp Volume(v), veh/h				282	0	58	243	722	0	0	665	155
Grp Sat Flow(s),veh/h/ln				1753	0	1560	1753	1749	0	0	1749	1548
Q Serve(g_s), s				4.0	0.0	1.8	7.3	6.0	0.0	0.0	8.9	4.2
Cycle Q Clear(g_c), s				4.0	0.0	1.8	7.3	6.0	0.0	0.0	8.9	4.2
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				629	0	280	309	2049	0	0	1105	489
V/C Ratio(X)				0.45	0.00	0.21	0.79	0.35	0.00	0.00	0.60	0.32
Avail Cap(c_a), veh/h				1265	0	563	633	2049	0	0	1893	838
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				20.3	0.0	19.4	21.8	6.0	0.0	0.0	16.0	14.4
Incr Delay (d2), s/veh				0.7	0.0	0.5	4.4	0.1	0.0	0.0	0.8	0.5
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				1.6	0.0	0.6	3.0	1.4	0.0	0.0	3.1	1.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				21.0	0.0	19.9	26.3	6.1	0.0	0.0	16.8	14.9
LnGrp LOS				C	A	B	C	A	A	A	B	B
Approach Vol, veh/h					340			965			820	
Approach Delay, s/veh					20.8			11.2			16.4	
Approach LOS					C			B			B	

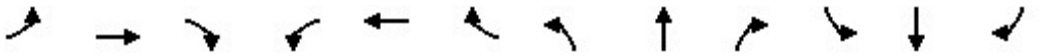
Timer - Assigned Phs	2		5	6		8						
Phs Duration (G+Y+Rc), s	38.5		15.0	23.5		16.9						
Change Period (Y+Rc), s	6.0		* 5.2	6.0		7.0						
Max Green Setting (Gmax), s	30.0		* 20	30.0		20.0						
Max Q Clear Time (g_c+I1), s	8.0		9.3	10.9		6.0						
Green Ext Time (p_c), s	6.6		0.5	6.5		1.5						

Intersection Summary		
HCM 6th Ctrl Delay	14.8	
HCM 6th LOS	B	

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



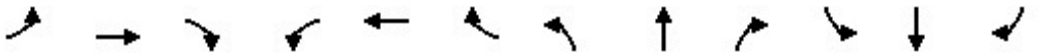
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	285	3	250	0	0	0	0	667	306	253	622	0
Future Volume (veh/h)	285	3	250	0	0	0	0	667	306	253	622	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841				0	1841	1841	1841	1841	0
Adj Flow Rate, veh/h	297	3	60				0	695	107	264	648	0
Peak Hour Factor	0.96	0.96	0.96				0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	4	4	4				0	4	4	4	4	0
Cap, veh/h	370	0	329				0	1114	493	321	2022	0
Arrive On Green	0.21	0.21	0.21				0.00	0.32	0.32	0.18	0.58	0.00
Sat Flow, veh/h	1753	0	1560				0	3589	1548	1753	3589	0
Grp Volume(v), veh/h	297	0	60				0	695	107	264	648	0
Grp Sat Flow(s),veh/h/ln	1753	0	1560				0	1749	1548	1753	1749	0
Q Serve(g_s), s	9.9	0.0	1.9				0.0	10.4	3.1	8.9	5.9	0.0
Cycle Q Clear(g_c), s	9.9	0.0	1.9				0.0	10.4	3.1	8.9	5.9	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	370	0	329				0	1114	493	321	2022	0
V/C Ratio(X)	0.80	0.00	0.18				0.00	0.62	0.22	0.82	0.32	0.00
Avail Cap(c_a), veh/h	569	0	506				0	1702	753	569	2022	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	23.1	0.0	20.0				0.0	17.9	15.4	24.2	6.7	0.0
Incr Delay (d2), s/veh	6.3	0.0	0.4				0.0	1.0	0.4	5.2	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.4	0.0	0.7				0.0	3.8	1.0	3.8	1.6	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	29.4	0.0	20.3				0.0	18.9	15.8	29.4	6.9	0.0
LnGrp LOS	C	A	C				A	B	B	C	A	A
Approach Vol, veh/h		357						802			912	
Approach Delay, s/veh		27.9						18.4			13.4	
Approach LOS		C						B			B	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	16.0	25.6		20.0		41.6
Change Period (Y+Rc), s	* 4.7	6.0		7.0		6.0
Max Green Setting (Gmax), s	* 20	30.0		20.0		30.0
Max Q Clear Time (g_c+I1), s	10.9	12.4		11.9		7.9
Green Ext Time (p_c), s	0.5	7.1		1.1		5.8

Intersection Summary	
HCM 6th Ctrl Delay	17.8
HCM 6th LOS	B

Notes

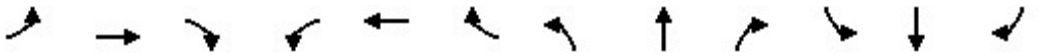
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	196	3	127	211	221	0	0	249	108
Future Volume (veh/h)	0	0	0	196	3	127	211	221	0	0	249	108
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		0.97
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1841	1841	1841	1841	1841	0	0	1841	1841
Adj Flow Rate, veh/h				213	3	33	229	240	0	0	271	62
Peak Hour Factor				0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %				4	4	4	4	4	0	0	4	4
Cap, veh/h				360	5	324	360	1890	0	0	639	143
Arrive On Green				0.21	0.21	0.21	0.21	0.54	0.00	0.00	0.23	0.23
Sat Flow, veh/h				1730	24	1560	1753	3589	0	0	2910	632
Grp Volume(v), veh/h				216	0	33	229	240	0	0	166	167
Grp Sat Flow(s),veh/h/ln				1754	0	1560	1753	1749	0	0	1749	1701
Q Serve(g_s), s				5.1	0.0	0.8	5.5	1.6	0.0	0.0	3.7	3.9
Cycle Q Clear(g_c), s				5.1	0.0	0.8	5.5	1.6	0.0	0.0	3.7	3.9
Prop In Lane				0.99		1.00	1.00		0.00	0.00		0.37
Lane Grp Cap(c), veh/h				365	0	324	360	1890	0	0	396	385
V/C Ratio(X)				0.59	0.00	0.10	0.64	0.13	0.00	0.00	0.42	0.43
Avail Cap(c_a), veh/h				951	0	846	951	2655	0	0	1327	1291
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				16.5	0.0	14.8	16.7	5.2	0.0	0.0	15.2	15.3
Incr Delay (d2), s/veh				1.1	0.0	0.1	1.4	0.0	0.0	0.0	0.5	0.6
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				1.9	0.0	0.3	1.9	0.3	0.0	0.0	1.2	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				17.6	0.0	14.9	18.1	5.2	0.0	0.0	15.8	15.9
LnGrp LOS				B	A	B	B	A	A	A	B	B
Approach Vol, veh/h					249			469			333	
Approach Delay, s/veh					17.3			11.5			15.8	
Approach LOS					B			B			B	

Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		30.7			14.5	16.2		15.4				
Change Period (Y+Rc), s		5.8			5.0	5.8		5.8				
Max Green Setting (Gmax), s		35.0			25.0	35.0		25.0				
Max Q Clear Time (g_c+I1), s		3.6			7.5	5.9		7.1				
Green Ext Time (p_c), s		1.1			0.4	1.4		1.0				

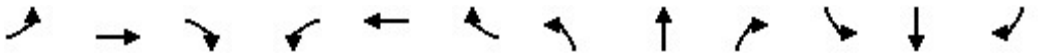
Intersection Summary												
HCM 6th Ctrl Delay			14.2									
HCM 6th LOS			B									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	86	5	282	0	0	0	0	344	256	80	362	0
Future Volume (veh/h)	86	5	282	0	0	0	0	344	256	80	362	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		0.97	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841				0	1841	1841	1841	1841	0
Adj Flow Rate, veh/h	91	5	73				0	362	127	84	381	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4				0	4	4	4	4	0
Cap, veh/h	345	19	323				0	610	210	262	1791	0
Arrive On Green	0.21	0.21	0.21				0.00	0.24	0.24	0.15	0.51	0.00
Sat Flow, veh/h	1666	92	1560				0	2619	871	1753	3589	0
Grp Volume(v), veh/h	96	0	73				0	248	241	84	381	0
Grp Sat Flow(s),veh/h/ln	1757	0	1560				0	1749	1649	1753	1749	0
Q Serve(g_s), s	1.9	0.0	1.6				0.0	5.2	5.4	1.8	2.5	0.0
Cycle Q Clear(g_c), s	1.9	0.0	1.6				0.0	5.2	5.4	1.8	2.5	0.0
Prop In Lane	0.95		1.00				0.00		0.53	1.00		0.00
Lane Grp Cap(c), veh/h	364	0	323				0	422	398	262	1791	0
V/C Ratio(X)	0.26	0.00	0.23				0.00	0.59	0.60	0.32	0.21	0.00
Avail Cap(c_a), veh/h	1063	0	944				0	1481	1396	1060	2962	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	13.7	0.0	13.6				0.0	13.9	13.9	15.7	5.5	0.0
Incr Delay (d2), s/veh	0.3	0.0	0.3				0.0	1.0	1.1	0.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	0.0	0.5				0.0	1.6	1.6	0.6	0.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	14.0	0.0	13.9				0.0	14.8	15.0	15.9	5.6	0.0
LnGrp LOS	B	A	B				A	B	B	B	A	A
Approach Vol, veh/h		169						489			465	
Approach Delay, s/veh		14.0						14.9			7.4	
Approach LOS		B						B			A	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	11.2	15.8		14.4		27.0
Change Period (Y+Rc), s	5.0	5.8		5.8		5.8
Max Green Setting (Gmax), s	25.0	35.0		25.0		35.0
Max Q Clear Time (g_c+I1), s	3.8	7.4		3.9		4.5
Green Ext Time (p_c), s	0.1	2.2		0.5		1.9

Intersection Summary		
HCM 6th Ctrl Delay		11.7
HCM 6th LOS		B



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	290	8	168	497	256	0	0	357	167
Future Volume (veh/h)	0	0	0	290	8	168	497	256	0	0	357	167
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		0.97
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1781	1781	1781	1781	1781	0	0	1781	1781
Adj Flow Rate, veh/h				332	0	44	529	272	0	0	380	45
Peak Hour Factor				0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %				8	8	8	8	8	0	0	8	8
Cap, veh/h				920	0	409	987	2918	0	0	1498	357
Arrive On Green				0.27	0.00	0.27	0.50	1.00	0.00	0.00	0.24	0.24
Sat Flow, veh/h				3393	0	1510	3291	5024	0	0	6378	1460
Grp Volume(v), veh/h				332	0	44	529	272	0	0	380	45
Grp Sat Flow(s),veh/h/ln				1697	0	1510	1646	1621	0	0	1532	1460
Q Serve(g_s), s				7.1	0.0	2.0	9.9	0.0	0.0	0.0	4.5	2.2
Cycle Q Clear(g_c), s				7.1	0.0	2.0	9.9	0.0	0.0	0.0	4.5	2.2
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				920	0	409	987	2918	0	0	1498	357
V/C Ratio(X)				0.36	0.00	0.11	0.54	0.09	0.00	0.00	0.25	0.13
Avail Cap(c_a), veh/h				920	0	409	987	2918	0	0	1498	357
HCM Platoon Ratio				1.00	1.00	1.00	1.67	1.67	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.94	0.94	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				26.5	0.0	24.6	18.2	0.0	0.0	0.0	27.4	26.5
Incr Delay (d2), s/veh				1.1	0.0	0.5	2.0	0.1	0.0	0.0	0.4	0.7
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				3.0	0.0	2.0	3.2	0.0	0.0	0.0	1.6	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				27.6	0.0	25.2	20.1	0.1	0.0	0.0	27.8	27.2
LnGrp LOS				C	A	C	C	A	A	A	C	C
Approach Vol, veh/h					376			801			425	
Approach Delay, s/veh					27.3			13.3			27.7	
Approach LOS					C			B			C	

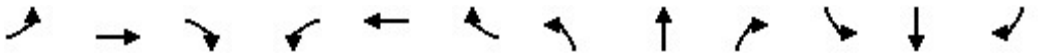
Timer - Assigned Phs	2	4	5	6
Phs Duration (G+Y+Rc), s	59.8	30.2	32.0	27.8
Change Period (Y+Rc), s	5.8	5.8	5.0	5.8
Max Green Setting (Gmax), s	54.0	24.4	27.0	22.0
Max Q Clear Time (g_c+I1), s	2.0	9.1	11.9	6.5
Green Ext Time (p_c), s	1.8	1.2	0.9	2.1

Intersection Summary	
HCM 6th Ctrl Delay	20.4
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

User approved volume balancing among the lanes for turning movement.



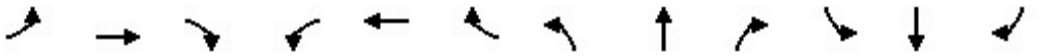
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	42	3	218	0	0	0	0	750	250	106	537	0
Future Volume (veh/h)	42	3	218	0	0	0	0	750	250	106	537	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		0.97	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1781	1781	1781				0	1781	1781	1781	1781	0
Adj Flow Rate, veh/h	31	0	86				0	806	94	114	577	0
Peak Hour Factor	0.93	0.93	0.93				0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	8	8	8				0	8	8	8	8	0
Cap, veh/h	498	0	886				0	2111	505	585	2810	0
Arrive On Green	0.29	0.00	0.29				0.00	0.34	0.34	0.06	0.19	0.00
Sat Flow, veh/h	1697	0	3019				0	6378	1466	3291	5024	0
Grp Volume(v), veh/h	31	0	86				0	806	94	114	577	0
Grp Sat Flow(s),veh/h/ln	1697	0	1510				0	1532	1466	1646	1621	0
Q Serve(g_s), s	1.2	0.0	1.9				0.0	8.9	4.0	3.0	9.0	0.0
Cycle Q Clear(g_c), s	1.2	0.0	1.9				0.0	8.9	4.0	3.0	9.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	498	0	886				0	2111	505	585	2810	0
V/C Ratio(X)	0.06	0.00	0.10				0.00	0.38	0.19	0.19	0.21	0.00
Avail Cap(c_a), veh/h	498	0	886				0	2111	505	585	2810	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	0.33	0.33	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.96	0.96	0.00
Uniform Delay (d), s/veh	22.9	0.0	23.1				0.0	22.3	20.7	36.2	19.0	0.0
Incr Delay (d2), s/veh	0.2	0.0	0.2				0.0	0.5	0.8	0.7	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.0	0.7				0.0	3.0	1.4	1.2	3.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.1	0.0	23.3				0.0	22.8	21.5	36.9	19.2	0.0
LnGrp LOS	C	A	C				A	C	C	D	B	A
Approach Vol, veh/h		117						900			691	
Approach Delay, s/veh		23.3						22.7			22.1	
Approach LOS		C						C			C	

Timer - Assigned Phs	1	2				6		8				
Phs Duration (G+Y+Rc), s	21.0	36.8				57.8		32.2				
Change Period (Y+Rc), s	5.0	5.8				5.8		5.8				
Max Green Setting (Gmax), s	16.0	31.0				52.0		26.4				
Max Q Clear Time (g_c+I1), s	5.0	10.9				11.0		3.9				
Green Ext Time (p_c), s	0.1	5.4				4.0		0.4				

Intersection Summary			
HCM 6th Ctrl Delay			22.5
HCM 6th LOS			C

Notes

User approved volume balancing among the lanes for turning movement.



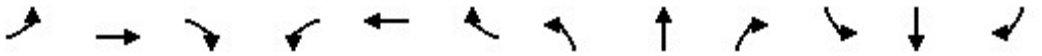
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	14	3	28	12	13	66	58	811	20	43	511	8
Future Volume (veh/h)	14	3	28	12	13	66	58	811	20	43	511	8
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.98		0.97	0.98		0.97	1.00		0.96	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781
Adj Flow Rate, veh/h	15	3	4	13	14	10	62	872	21	46	549	8
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	8	8	8	8	8	8	8	8	8	8	8	8
Cap, veh/h	319	92	122	334	129	92	82	1791	43	66	1766	26
Arrive On Green	0.14	0.14	0.14	0.14	0.14	0.14	0.05	0.37	0.37	0.04	0.36	0.36
Sat Flow, veh/h	1294	677	903	1313	951	679	1697	4880	117	1697	4936	72
Grp Volume(v), veh/h	15	0	7	13	0	24	62	579	314	46	360	197
Grp Sat Flow(s),veh/h/ln	1294	0	1581	1313	0	1631	1697	1621	1755	1697	1621	1765
Q Serve(g_s), s	0.5	0.0	0.2	0.4	0.0	0.6	1.6	6.1	6.2	1.2	3.6	3.6
Cycle Q Clear(g_c), s	1.0	0.0	0.2	0.6	0.0	0.6	1.6	6.1	6.2	1.2	3.6	3.6
Prop In Lane	1.00		0.57	1.00		0.42	1.00		0.07	1.00		0.04
Lane Grp Cap(c), veh/h	319	0	214	334	0	220	82	1190	644	66	1160	632
V/C Ratio(X)	0.05	0.00	0.03	0.04	0.00	0.11	0.76	0.49	0.49	0.70	0.31	0.31
Avail Cap(c_a), veh/h	724	0	708	744	0	730	760	2903	1571	760	2903	1581
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.4	0.0	16.8	17.0	0.0	17.0	21.0	10.9	10.9	21.2	10.4	10.4
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.2	5.4	0.4	0.7	4.8	0.2	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	0.1	0.1	0.0	0.2	0.6	1.5	1.7	0.5	0.9	1.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	17.5	0.0	16.8	17.1	0.0	17.1	26.4	11.3	11.6	26.0	10.5	10.7
LnGrp LOS	B	A	B	B	A	B	C	B	B	C	B	B
Approach Vol, veh/h		22			37			955			603	
Approach Delay, s/veh		17.3			17.1			12.4			11.8	
Approach LOS		B			B			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.2	22.9		13.5	8.6	22.5		13.5				
Change Period (Y+Rc), s	6.5	6.5		7.5	6.5	6.5		7.5				
Max Green Setting (Gmax), s	20.0	40.0		20.0	20.0	40.0		20.0				
Max Q Clear Time (g_c+I1), s	3.2	8.2		3.0	3.6	5.6		2.6				
Green Ext Time (p_c), s	0.0	7.1		0.0	0.0	4.2		0.1				

Intersection Summary		
HCM 6th Ctrl Delay		12.3
HCM 6th LOS		B

Notes

User approved pedestrian interval to be less than phase max green.



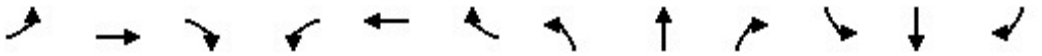
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	100	222	36	111	268	55	39	521	154	68	426	129
Future Volume (veh/h)	100	222	36	111	268	55	39	521	154	68	426	129
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	1.00		0.95	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	102	227	8	113	273	12	40	532	41	69	435	60
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	257	346	283	265	673	290	135	816	346	184	913	625
Arrive On Green	0.15	0.19	0.19	0.15	0.19	0.19	0.08	0.23	0.23	0.10	0.26	0.26
Sat Flow, veh/h	1753	1841	1508	1753	3497	1509	1753	3497	1484	1753	3497	1517
Grp Volume(v), veh/h	102	227	8	113	273	12	40	532	41	69	435	60
Grp Sat Flow(s),veh/h/ln	1753	1841	1508	1753	1749	1509	1753	1749	1484	1753	1749	1517
Q Serve(g_s), s	3.7	8.1	0.3	4.1	4.8	0.5	1.5	9.8	1.5	2.6	7.4	1.7
Cycle Q Clear(g_c), s	3.7	8.1	0.3	4.1	4.8	0.5	1.5	9.8	1.5	2.6	7.4	1.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	257	346	283	265	673	290	135	816	346	184	913	625
V/C Ratio(X)	0.40	0.66	0.03	0.43	0.41	0.04	0.30	0.65	0.12	0.38	0.48	0.10
Avail Cap(c_a), veh/h	497	1116	915	799	2723	1175	247	1973	837	465	2096	1138
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.4	26.7	23.5	27.3	25.1	23.3	30.9	24.6	21.4	29.6	22.1	12.9
Incr Delay (d2), s/veh	0.4	3.0	0.1	0.4	0.6	0.1	1.2	0.9	0.2	1.3	0.4	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	3.5	0.1	1.6	1.8	0.2	0.7	3.8	0.5	1.1	2.8	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	27.8	29.7	23.6	27.7	25.6	23.4	32.1	25.5	21.6	30.8	22.5	13.0
LnGrp LOS	C	C	C	C	C	C	C	C	C	C	C	B
Approach Vol, veh/h		337			398			613			564	
Approach Delay, s/veh		28.9			26.2			25.6			22.5	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.6	22.5	15.4	20.3	10.7	24.5	15.1	20.6
Change Period (Y+Rc), s	* 5.2	6.0	* 4.7	7.0	* 5.2	6.0	* 4.7	7.0
Max Green Setting (Gmax), s	* 19	40.0	* 32	43.0	* 10	42.5	* 20	55.2
Max Q Clear Time (g_c+I1), s	4.6	11.8	6.1	10.1	3.5	9.4	5.7	6.8
Green Ext Time (p_c), s	0.1	3.7	0.1	1.8	0.0	3.1	0.1	2.5

Intersection Summary	
HCM 6th Ctrl Delay	25.4
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



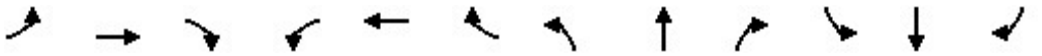
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	71	338	13	11	335	76	10	94	19	40	46	71
Future Volume (veh/h)	71	338	13	11	335	76	10	94	19	40	46	71
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	0.99		0.96	0.99		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	75	356	7	12	353	62	11	99	13	42	48	14
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	194	598	492	44	711	123	346	252	33	294	292	242
Arrive On Green	0.11	0.32	0.32	0.02	0.24	0.24	0.16	0.16	0.16	0.16	0.16	0.16
Sat Flow, veh/h	1767	1856	1526	1767	2992	520	1335	1598	210	1257	1856	1535
Grp Volume(v), veh/h	75	356	7	12	206	209	11	0	112	42	48	14
Grp Sat Flow(s),veh/h/ln	1767	1856	1526	1767	1763	1749	1335	0	1807	1257	1856	1535
Q Serve(g_s), s	1.7	7.0	0.1	0.3	4.4	4.5	0.3	0.0	2.4	1.3	1.0	0.3
Cycle Q Clear(g_c), s	1.7	7.0	0.1	0.3	4.4	4.5	1.3	0.0	2.4	3.8	1.0	0.3
Prop In Lane	1.00		1.00	1.00		0.30	1.00		0.12	1.00		1.00
Lane Grp Cap(c), veh/h	194	598	492	44	419	415	346	0	285	294	292	242
V/C Ratio(X)	0.39	0.60	0.01	0.27	0.49	0.50	0.03	0.00	0.39	0.14	0.16	0.06
Avail Cap(c_a), veh/h	814	1283	1054	814	1218	1209	905	0	1041	820	1069	884
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	18.0	12.3	10.0	20.8	14.3	14.3	16.4	0.0	16.4	18.1	15.8	15.5
Incr Delay (d2), s/veh	0.5	1.0	0.0	1.2	1.1	1.1	0.0	0.0	1.1	0.2	0.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	2.1	0.0	0.1	1.4	1.4	0.1	0.0	0.9	0.3	0.4	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	18.4	13.3	10.0	22.0	15.4	15.5	16.4	0.0	17.5	18.3	16.1	15.6
LnGrp LOS	B	B	B	C	B	B	B	A	B	B	B	B
Approach Vol, veh/h		438			427			123			104	
Approach Delay, s/veh		14.1			15.6			17.4			16.9	
Approach LOS		B			B			B			B	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		13.3	8.6	21.5		13.3	12.3	17.8				
Change Period (Y+Rc), s		6.5	7.5	7.5		6.5	7.5	7.5				
Max Green Setting (Gmax), s		25.0	20.0	30.0		25.0	20.0	30.0				
Max Q Clear Time (g_c+I1), s		4.4	2.3	9.0		5.8	3.7	6.5				
Green Ext Time (p_c), s		0.6	0.0	1.8		0.3	0.1	2.6				

Intersection Summary	
HCM 6th Ctrl Delay	15.3
HCM 6th LOS	B

Notes

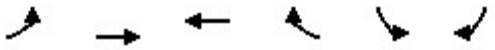
User approved pedestrian interval to be less than phase max green.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	110	360	5	2	344	119	3	6	6	149	7	97
Future Volume (veh/h)	110	360	5	2	344	119	3	6	6	149	7	97
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.97	1.00		0.97	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	115	375	5	2	358	99	3	6	2	155	7	29
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	150	537	7	5	576	157	9	141	47	199	398	329
Arrive On Green	0.08	0.29	0.29	0.00	0.21	0.21	0.00	0.11	0.11	0.11	0.21	0.21
Sat Flow, veh/h	1767	1826	24	1767	2715	739	1767	1320	440	1767	1856	1536
Grp Volume(v), veh/h	115	0	380	2	230	227	3	0	8	155	7	29
Grp Sat Flow(s),veh/h/ln	1767	0	1851	1767	1763	1691	1767	0	1760	1767	1856	1536
Q Serve(g_s), s	3.9	0.0	11.3	0.1	7.3	7.6	0.1	0.0	0.3	5.3	0.2	0.9
Cycle Q Clear(g_c), s	3.9	0.0	11.3	0.1	7.3	7.6	0.1	0.0	0.3	5.3	0.2	0.9
Prop In Lane	1.00		0.01	1.00		0.44	1.00		0.25	1.00		1.00
Lane Grp Cap(c), veh/h	150	0	544	5	374	359	9	0	187	199	398	329
V/C Ratio(X)	0.77	0.00	0.70	0.41	0.62	0.63	0.35	0.00	0.04	0.78	0.02	0.09
Avail Cap(c_a), veh/h	570	0	1045	570	995	955	570	0	852	570	898	743
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.8	0.0	19.4	30.9	22.1	22.2	30.7	0.0	24.9	26.8	19.2	19.5
Incr Delay (d2), s/veh	6.0	0.0	2.0	37.1	2.0	2.2	16.9	0.0	0.1	4.9	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	0.0	4.3	0.1	2.8	2.8	0.1	0.0	0.1	2.3	0.1	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	33.8	0.0	21.4	68.0	24.1	24.4	47.7	0.0	25.0	31.6	19.2	19.6
LnGrp LOS	C	A	C	E	C	C	D	A	C	C	B	B
Approach Vol, veh/h		495			459			11			191	
Approach Delay, s/veh		24.3			24.5			31.2			29.3	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.8	20.7	7.8	20.8	7.7	25.7	14.5	14.1
Change Period (Y+Rc), s	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5
Max Green Setting (Gmax), s	20.0	35.0	20.0	30.0	20.0	35.0	20.0	30.0
Max Q Clear Time (g_c+I1), s	5.9	9.6	2.1	2.9	2.1	13.3	7.3	2.3
Green Ext Time (p_c), s	0.1	3.0	0.0	0.1	0.0	2.4	0.2	0.0

Intersection Summary	
HCM 6th Ctrl Delay	25.3
HCM 6th LOS	C



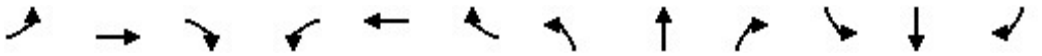
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	111	363	344	215	317	103
Future Volume (veh/h)	111	363	344	215	317	103
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			0.97	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	114	374	355	117	327	31
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	166	880	609	197	413	368
Arrive On Green	0.09	0.47	0.23	0.23	0.23	0.23
Sat Flow, veh/h	1767	1856	2686	839	1767	1572
Grp Volume(v), veh/h	114	374	239	233	327	31
Grp Sat Flow(s),veh/h/ln	1767	1856	1763	1670	1767	1572
Q Serve(g_s), s	3.2	6.8	6.2	6.4	8.9	0.8
Cycle Q Clear(g_c), s	3.2	6.8	6.2	6.4	8.9	0.8
Prop In Lane	1.00			0.50	1.00	1.00
Lane Grp Cap(c), veh/h	166	880	414	392	413	368
V/C Ratio(X)	0.69	0.42	0.58	0.59	0.79	0.08
Avail Cap(c_a), veh/h	687	1263	1200	1137	859	765
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.6	8.9	17.4	17.5	18.5	15.4
Incr Delay (d2), s/veh	3.7	0.4	1.5	1.7	4.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	1.7	2.1	2.1	3.4	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	26.3	9.3	19.0	19.2	22.6	15.5
LnGrp LOS	C	A	B	B	C	B
Approach Vol, veh/h		488	472		358	
Approach Delay, s/veh		13.3	19.1		22.0	
Approach LOS		B	B		C	

Timer - Assigned Phs	4	6	7	8
Phs Duration (G+Y+Rc), s	31.9	19.5	12.3	19.6
Change Period (Y+Rc), s	7.5	7.5	7.5	7.5
Max Green Setting (Gmax), s	35.0	25.0	20.0	35.0
Max Q Clear Time (g_c+I1), s	8.8	10.9	5.2	8.4
Green Ext Time (p_c), s	2.4	1.2	0.1	3.0

Intersection Summary	
HCM 6th Ctrl Delay	17.7
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.



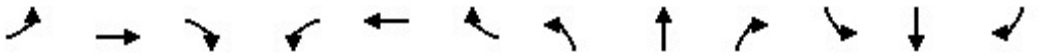
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	13	676	21	23	522	6	18	0	30	3	0	15
Future Volume (veh/h)	13	676	21	23	522	6	18	0	30	3	0	15
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	0.98		1.00	0.98		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	14	727	22	25	561	6	19	0	0	3	0	0
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	45	1244	38	77	1337	14	310	0	0	314	0	0
Arrive On Green	0.03	0.36	0.36	0.04	0.37	0.37	0.07	0.00	0.00	0.07	0.00	0.00
Sat Flow, veh/h	1767	3490	106	1767	3572	38	1385	0	0	1442	0	0
Grp Volume(v), veh/h	14	367	382	25	277	290	19	0	0	3	0	0
Grp Sat Flow(s),veh/h/ln	1767	1763	1833	1767	1763	1847	1385	0	0	1442	0	0
Q Serve(g_s), s	0.3	5.8	5.8	0.5	4.0	4.0	0.4	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.3	5.8	5.8	0.5	4.0	4.0	0.4	0.0	0.0	0.1	0.0	0.0
Prop In Lane	1.00		0.06	1.00		0.02	1.00		0.00	1.00		0.00
Lane Grp Cap(c), veh/h	45	628	653	77	660	691	310	0	0	314	0	0
V/C Ratio(X)	0.31	0.58	0.58	0.33	0.42	0.42	0.06	0.00	0.00	0.01	0.00	0.00
Avail Cap(c_a), veh/h	1038	1813	1885	1038	1813	1900	1224	0	0	1229	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	16.3	8.9	8.9	15.8	7.9	7.9	14.9	0.0	0.0	14.7	0.0	0.0
Incr Delay (d2), s/veh	3.8	0.9	0.8	2.4	0.4	0.4	0.1	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	1.1	1.2	0.2	0.8	0.8	0.1	0.0	0.0	0.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	20.1	9.8	9.7	18.2	8.3	8.3	14.9	0.0	0.0	14.7	0.0	0.0
LnGrp LOS	C	A	A	B	A	A	B	A	A	B	A	A
Approach Vol, veh/h		763			592			19			3	
Approach Delay, s/veh		9.9			8.7			14.9			14.7	
Approach LOS		A			A			B			B	

Timer - Assigned Phs	2	3	4	6	7	8
Phs Duration (G+Y+Rc), s	8.4	6.5	19.1	8.4	5.9	19.7
Change Period (Y+Rc), s	6.0	5.0	7.0	6.0	5.0	7.0
Max Green Setting (Gmax), s	25.0	20.0	35.0	25.0	20.0	35.0
Max Q Clear Time (g_c+I1), s	2.4	2.5	7.8	2.1	2.3	6.0
Green Ext Time (p_c), s	0.0	0.0	4.1	0.0	0.0	3.0

Intersection Summary	
HCM 6th Ctrl Delay	9.5
HCM 6th LOS	A

Notes

User approved pedestrian interval to be less than phase max green.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	154	319	225	142	261	154	198	578	30	145	263	119
Future Volume (veh/h)	154	319	225	142	261	154	198	578	30	145	263	119
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.97	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781
Adj Flow Rate, veh/h	162	336	159	149	275	108	208	608	29	153	277	71
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	8	8	8	8	8	8	8	8	8	8	8	8
Cap, veh/h	220	585	271	204	601	229	276	1255	60	209	872	211
Arrive On Green	0.13	0.26	0.26	0.12	0.25	0.25	0.16	0.26	0.26	0.12	0.22	0.22
Sat Flow, veh/h	1697	2227	1030	1697	2374	906	1697	4750	225	1697	3881	940
Grp Volume(v), veh/h	162	253	242	149	194	189	208	414	223	153	229	119
Grp Sat Flow(s),veh/h/ln	1697	1692	1565	1697	1692	1588	1697	1621	1733	1697	1621	1578
Q Serve(g_s), s	6.4	9.0	9.4	5.9	6.7	7.0	8.1	7.5	7.6	6.0	4.1	4.4
Cycle Q Clear(g_c), s	6.4	9.0	9.4	5.9	6.7	7.0	8.1	7.5	7.6	6.0	4.1	4.4
Prop In Lane	1.00		0.66	1.00		0.57	1.00		0.13	1.00		0.60
Lane Grp Cap(c), veh/h	220	445	411	204	428	402	276	857	458	209	728	355
V/C Ratio(X)	0.74	0.57	0.59	0.73	0.45	0.47	0.75	0.48	0.49	0.73	0.31	0.34
Avail Cap(c_a), veh/h	854	851	787	854	851	799	854	1631	872	854	1631	794
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.1	22.2	22.4	29.5	21.9	22.0	27.8	21.6	21.6	29.4	22.5	22.6
Incr Delay (d2), s/veh	9.8	2.4	2.8	10.3	1.6	1.8	8.6	0.9	1.7	10.1	0.5	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.9	3.4	3.3	2.7	2.5	2.5	3.6	2.6	2.9	2.8	1.4	1.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	38.9	24.7	25.2	39.8	23.5	23.9	36.4	22.5	23.3	39.5	23.0	23.8
LnGrp LOS	D	C	C	D	C	C	D	C	C	D	C	C
Approach Vol, veh/h		657			532			845			501	
Approach Delay, s/veh		28.4			28.2			26.1			28.2	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.6	22.4	12.3	22.3	15.3	19.6	13.0	21.6
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0
Max Q Clear Time (g_c+I1), s	8.0	9.6	7.9	11.4	10.1	6.4	8.4	9.0
Green Ext Time (p_c), s	1.0	7.2	0.9	5.2	1.4	3.9	1.0	4.0

Intersection Summary	
HCM 6th Ctrl Delay	27.6
HCM 6th LOS	C

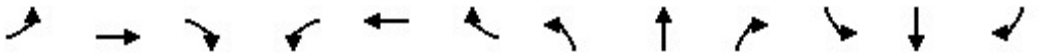
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	175	153	28	31	193	50	29	263	19	44	316	299
Future Volume (veh/h)	175	153	28	31	193	50	29	263	19	44	316	299
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.97	1.00		0.97	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	182	159	25	32	201	33	30	274	19	46	329	72
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	223	317	50	91	390	63	36	331	23	384	403	334
Arrive On Green	0.13	0.20	0.20	0.05	0.13	0.13	0.21	0.21	0.21	0.22	0.22	0.22
Sat Flow, veh/h	1767	1556	245	1767	3027	488	169	1547	107	1767	1856	1540
Grp Volume(v), veh/h	182	0	184	32	115	119	323	0	0	46	329	72
Grp Sat Flow(s),veh/h/ln	1767	0	1801	1767	1763	1752	1823	0	0	1767	1856	1540
Q Serve(g_s), s	7.7	0.0	6.9	1.3	4.7	4.8	12.9	0.0	0.0	1.6	12.9	2.9
Cycle Q Clear(g_c), s	7.7	0.0	6.9	1.3	4.7	4.8	12.9	0.0	0.0	1.6	12.9	2.9
Prop In Lane	1.00		0.14	1.00		0.28	0.09		0.06	1.00		1.00
Lane Grp Cap(c), veh/h	223	0	366	91	227	226	390	0	0	384	403	334
V/C Ratio(X)	0.82	0.00	0.50	0.35	0.51	0.53	0.83	0.00	0.00	0.12	0.82	0.22
Avail Cap(c_a), veh/h	578	0	706	462	691	687	596	0	0	578	607	503
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.5	0.0	27.0	35.0	31.1	31.1	28.7	0.0	0.0	24.1	28.5	24.6
Incr Delay (d2), s/veh	2.8	0.0	1.1	0.9	1.8	1.9	4.8	0.0	0.0	0.1	4.4	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.2	0.0	2.8	0.6	1.9	2.0	5.7	0.0	0.0	0.6	5.7	1.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	35.3	0.0	28.1	35.9	32.8	33.0	33.5	0.0	0.0	24.2	32.9	24.8
LnGrp LOS	D	A	C	D	C	C	C	A	A	C	C	C
Approach Vol, veh/h		366			266			323			447	
Approach Delay, s/veh		31.7			33.3			33.5			30.7	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	2	3	4	6	7	8
Phs Duration (G+Y+Rc), s	21.4	10.9	22.6	21.6	16.7	16.8
Change Period (Y+Rc), s	5.0	7.0	7.0	5.0	7.0	7.0
Max Green Setting (Gmax), s	25.0	20.0	30.0	25.0	25.0	30.0
Max Q Clear Time (g_c+I1), s	14.9	3.3	8.9	14.9	9.7	6.8
Green Ext Time (p_c), s	1.0	0.0	0.8	1.2	0.2	1.1

Intersection Summary	
HCM 6th Ctrl Delay	32.1
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.



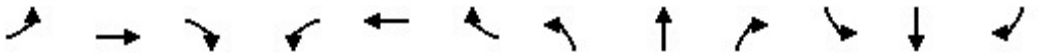
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	45	55	18	20	26	13	30	651	77	8	492	53
Future Volume (veh/h)	45	55	18	20	26	13	30	651	77	8	492	53
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.98	0.99		0.98	1.00		0.97	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	51	62	4	22	29	4	34	731	40	9	553	25
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	478	420	349	217	242	27	135	1172	507	41	985	437
Arrive On Green	0.23	0.23	0.23	0.23	0.23	0.23	0.08	0.34	0.34	0.02	0.28	0.28
Sat Flow, veh/h	1346	1841	1528	455	1059	119	1753	3497	1514	1753	3497	1552
Grp Volume(v), veh/h	51	62	4	55	0	0	34	731	40	9	553	25
Grp Sat Flow(s),veh/h/ln	1346	1841	1528	1633	0	0	1753	1749	1514	1753	1749	1552
Q Serve(g_s), s	0.0	1.2	0.1	0.0	0.0	0.0	0.8	7.8	0.8	0.2	6.0	0.5
Cycle Q Clear(g_c), s	1.0	1.2	0.1	1.1	0.0	0.0	0.8	7.8	0.8	0.2	6.0	0.5
Prop In Lane	1.00		1.00	0.40		0.07	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	478	420	349	486	0	0	135	1172	507	41	985	437
V/C Ratio(X)	0.11	0.15	0.01	0.11	0.00	0.00	0.25	0.62	0.08	0.22	0.56	0.06
Avail Cap(c_a), veh/h	1229	1446	1200	1358	0	0	590	2747	1189	590	2747	1219
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	13.7	13.7	13.3	13.7	0.0	0.0	19.4	12.4	10.1	21.3	13.7	11.7
Incr Delay (d2), s/veh	0.1	0.2	0.0	0.1	0.0	0.0	0.4	0.5	0.1	1.0	0.5	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.4	0.0	0.3	0.0	0.0	0.3	2.1	0.2	0.1	1.7	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.8	13.9	13.3	13.8	0.0	0.0	19.7	13.0	10.2	22.3	14.2	11.7
LnGrp LOS	B	B	B	B	A	A	B	B	B	C	B	B
Approach Vol, veh/h		117			55			805			587	
Approach Delay, s/veh		13.8			13.8			13.1			14.2	
Approach LOS		B			B			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.8	21.4		17.4	8.1	19.1		17.4				
Change Period (Y+Rc), s	* 4.7	6.5		7.2	* 4.7	6.5		7.2				
Max Green Setting (Gmax), s	* 15	35.0		35.0	* 15	35.0		35.0				
Max Q Clear Time (g_c+I1), s	2.2	9.8		3.2	2.8	8.0		3.1				
Green Ext Time (p_c), s	0.0	4.8		0.4	0.0	3.5		0.2				

Intersection Summary			
HCM 6th Ctrl Delay		13.6	
HCM 6th LOS		B	

Notes

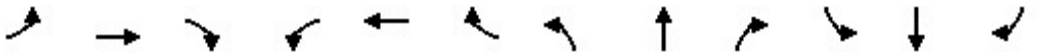
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	49	30	24	6	33	73	38	633	15	55	466	25
Future Volume (veh/h)	49	30	24	6	33	73	38	633	15	55	466	25
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781
Adj Flow Rate, veh/h	52	32	7	6	35	12	40	673	16	59	496	26
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	8	8	8	8	8	8	8	8	8	8	8	8
Cap, veh/h	102	187	41	16	147	123	85	1363	32	110	961	50
Arrive On Green	0.06	0.13	0.13	0.01	0.08	0.08	0.05	0.28	0.28	0.07	0.29	0.29
Sat Flow, veh/h	1697	1408	308	1697	1781	1485	1697	4884	116	1697	3267	171
Grp Volume(v), veh/h	52	0	39	6	35	12	40	446	243	59	256	266
Grp Sat Flow(s),veh/h/ln	1697	0	1716	1697	1781	1485	1697	1621	1758	1697	1692	1746
Q Serve(g_s), s	1.6	0.0	1.1	0.2	1.0	0.4	1.3	6.3	6.3	1.8	6.9	6.9
Cycle Q Clear(g_c), s	1.6	0.0	1.1	0.2	1.0	0.4	1.3	6.3	6.3	1.8	6.9	6.9
Prop In Lane	1.00		0.18	1.00		1.00	1.00		0.07	1.00		0.10
Lane Grp Cap(c), veh/h	102	0	228	16	147	123	85	904	490	110	497	513
V/C Ratio(X)	0.51	0.00	0.17	0.37	0.24	0.10	0.47	0.49	0.50	0.53	0.52	0.52
Avail Cap(c_a), veh/h	622	0	1101	622	1143	953	778	2675	1450	778	1396	1441
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.9	0.0	21.0	26.8	23.4	23.1	25.2	16.4	16.5	24.7	16.0	16.0
Incr Delay (d2), s/veh	1.5	0.0	0.5	5.1	1.2	0.5	1.5	0.6	1.1	1.5	1.2	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.0	0.4	0.1	0.4	0.1	0.5	1.9	2.2	0.7	2.2	2.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.3	0.0	21.5	32.0	24.6	23.6	26.7	17.0	17.6	26.2	17.2	17.2
LnGrp LOS	C	A	C	C	C	C	C	B	B	C	B	B
Approach Vol, veh/h		91			53			729			581	
Approach Delay, s/veh		24.2			25.2			17.7			18.1	
Approach LOS		C			C			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.0	22.7	7.0	13.8	10.2	23.5	9.8	11.0
Change Period (Y+Rc), s	7.5	7.5	6.5	6.5	7.5	7.5	6.5	6.5
Max Green Setting (Gmax), s	25.0	45.0	20.0	35.0	25.0	45.0	20.0	35.0
Max Q Clear Time (g_c+I1), s	3.8	8.3	2.2	3.1	3.3	8.9	3.6	3.0
Green Ext Time (p_c), s	0.1	6.4	0.0	0.2	0.0	4.4	0.0	0.2

Intersection Summary	
HCM 6th Ctrl Delay	18.6
HCM 6th LOS	B



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	96	204	59	40	183	27	41	526	27	34	410	69
Future Volume (veh/h)	96	204	59	40	183	27	41	526	27	34	410	69
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.97	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	107	227	19	44	203	27	46	584	10	38	456	25
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	346	523	435	348	451	60	321	933	403	144	890	389
Arrive On Green	0.28	0.28	0.28	0.28	0.28	0.28	0.09	0.27	0.27	0.08	0.25	0.25
Sat Flow, veh/h	1129	1841	1531	1112	1587	211	3401	3497	1510	1753	3497	1530
Grp Volume(v), veh/h	107	227	19	44	0	230	46	584	10	38	456	25
Grp Sat Flow(s),veh/h/ln	1129	1841	1531	1112	0	1798	1700	1749	1510	1753	1749	1530
Q Serve(g_s), s	4.3	5.0	0.5	1.7	0.0	5.3	0.6	7.4	0.2	1.0	5.6	0.6
Cycle Q Clear(g_c), s	9.6	5.0	0.5	6.7	0.0	5.3	0.6	7.4	0.2	1.0	5.6	0.6
Prop In Lane	1.00		1.00	1.00		0.12	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	346	523	435	348	0	511	321	933	403	144	890	389
V/C Ratio(X)	0.31	0.43	0.04	0.13	0.00	0.45	0.14	0.63	0.02	0.26	0.51	0.06
Avail Cap(c_a), veh/h	701	1102	917	809	0	1256	1697	3141	1356	875	3141	1374
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	18.7	14.7	13.0	17.4	0.0	14.7	20.8	16.2	13.6	21.6	16.0	14.2
Incr Delay (d2), s/veh	0.5	0.6	0.0	0.2	0.0	0.6	0.1	0.7	0.0	0.4	0.5	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	1.7	0.1	0.4	0.0	1.8	0.2	2.3	0.1	0.4	1.7	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	19.2	15.2	13.0	17.6	0.0	15.4	20.9	16.9	13.6	21.9	16.5	14.2
LnGrp LOS	B	B	B	B	A	B	C	B	B	C	B	B
Approach Vol, veh/h		353			274			640			519	
Approach Delay, s/veh		16.3			15.7			17.1			16.8	
Approach LOS		B			B			B			B	

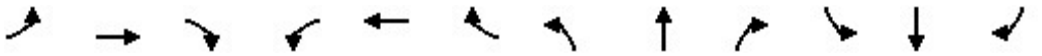
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.8	19.9		21.4	9.4	19.2		21.4				
Change Period (Y+Rc), s	* 4.7	6.5		7.2	* 4.7	6.5		7.2				
Max Green Setting (Gmax), s	* 25	45.0		30.0	* 25	45.0		35.0				
Max Q Clear Time (g_c+I1), s	3.0	9.4		11.6	2.6	7.6		8.7				
Green Ext Time (p_c), s	0.0	3.7		1.5	0.0	2.8		1.4				

Intersection Summary		
HCM 6th Ctrl Delay		16.6
HCM 6th LOS		B

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



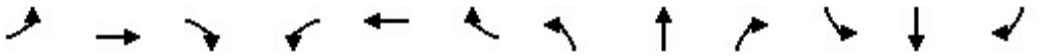
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	203	111	144	153	82	59	449	140	60	377	34
Future Volume (veh/h)	40	203	111	144	153	82	59	449	140	60	377	34
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	42	214	0	152	161	28	62	473	0	63	397	11
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	158	517		344	373	309	109	1025		110	1028	444
Arrive On Green	0.05	0.15	0.00	0.10	0.20	0.20	0.06	0.29	0.00	0.06	0.29	0.29
Sat Flow, veh/h	3401	3497	1560	3401	1841	1527	1753	3497	1560	1753	3497	1512
Grp Volume(v), veh/h	42	214	0	152	161	28	62	473	0	63	397	11
Grp Sat Flow(s),veh/h/ln	1700	1749	1560	1700	1841	1527	1753	1749	1560	1753	1749	1512
Q Serve(g_s), s	0.5	2.2	0.0	1.7	3.1	0.6	1.4	4.5	0.0	1.4	3.7	0.2
Cycle Q Clear(g_c), s	0.5	2.2	0.0	1.7	3.1	0.6	1.4	4.5	0.0	1.4	3.7	0.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	158	517		344	373	309	109	1025		110	1028	444
V/C Ratio(X)	0.27	0.41		0.44	0.43	0.09	0.57	0.46		0.57	0.39	0.02
Avail Cap(c_a), veh/h	2940	3023		2940	1591	1320	1515	3023		1515	3023	1307
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	18.6	15.7	0.0	17.1	14.1	13.1	18.5	11.7	0.0	18.4	11.4	10.2
Incr Delay (d2), s/veh	1.9	1.1	0.0	1.9	1.7	0.3	9.7	0.7	0.0	9.7	0.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.7	0.0	0.6	1.1	0.2	0.7	1.2	0.0	0.7	1.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	20.5	16.8	0.0	19.0	15.8	13.4	28.2	12.4	0.0	28.1	11.9	10.2
LnGrp LOS	C	B		B	B	B	C	B		C	B	B
Approach Vol, veh/h		256	A		341			535	A		471	
Approach Delay, s/veh		17.4			17.0			14.2			14.0	
Approach LOS		B			B			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.5	15.9	8.1	10.0	6.5	15.9	5.9	12.2
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0
Max Q Clear Time (g_c+I1), s	3.4	6.5	3.7	4.2	3.4	5.7	2.5	5.1
Green Ext Time (p_c), s	0.3	5.5	1.1	2.3	0.3	4.6	0.2	1.8

Intersection Summary	
HCM 6th Ctrl Delay	15.3
HCM 6th LOS	B

Notes

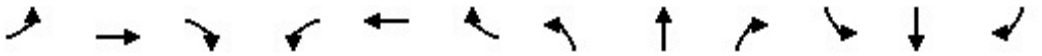
Unsignalized Delay for [NBR, EBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	112	447	29	155	417	172	6	126	65	122	241	40
Future Volume (veh/h)	112	447	29	155	417	172	6	126	65	122	241	40
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.97	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	115	461	6	160	430	33	6	130	18	126	248	34
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	171	1038	315	360	1361	324	19	308	255	176	791	107
Arrive On Green	0.10	0.21	0.21	0.11	0.22	0.22	0.01	0.17	0.17	0.10	0.26	0.26
Sat Flow, veh/h	1753	5025	1527	3401	6332	1506	1753	1841	1523	1753	3087	418
Grp Volume(v), veh/h	115	461	6	160	430	33	6	130	18	126	139	143
Grp Sat Flow(s),veh/h/ln	1753	1675	1527	1700	1583	1506	1753	1841	1523	1753	1749	1756
Q Serve(g_s), s	3.9	5.0	0.2	2.7	3.5	1.1	0.2	3.9	0.6	4.3	4.0	4.1
Cycle Q Clear(g_c), s	3.9	5.0	0.2	2.7	3.5	1.1	0.2	3.9	0.6	4.3	4.0	4.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.24
Lane Grp Cap(c), veh/h	171	1038	315	360	1361	324	19	308	255	176	448	450
V/C Ratio(X)	0.67	0.44	0.02	0.44	0.32	0.10	0.31	0.42	0.07	0.72	0.31	0.32
Avail Cap(c_a), veh/h	567	3248	987	1099	4093	973	567	1398	1157	567	1328	1333
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.0	21.4	19.6	26.0	20.5	19.5	30.4	23.1	21.7	27.0	18.6	18.6
Incr Delay (d2), s/veh	1.7	0.4	0.0	0.3	0.2	0.2	3.3	0.3	0.0	2.1	0.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	1.7	0.1	1.0	1.1	0.3	0.1	1.5	0.2	1.7	1.4	1.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	28.7	21.9	19.6	26.3	20.6	19.7	33.7	23.4	21.8	29.1	18.7	18.8
LnGrp LOS	C	C	B	C	C	B	C	C	C	C	B	B
Approach Vol, veh/h		582			623			154			408	
Approach Delay, s/veh		23.2			22.0			23.6			21.9	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.7	16.9	13.1	19.3	7.2	22.4	12.5	19.8
Change Period (Y+Rc), s	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
Max Green Setting (Gmax), s	20.0	47.0	20.0	40.0	20.0	47.0	20.0	40.0
Max Q Clear Time (g_c+I1), s	6.3	5.9	4.7	7.0	2.2	6.1	5.9	5.5
Green Ext Time (p_c), s	0.1	0.4	0.2	4.2	0.0	0.9	0.1	4.0

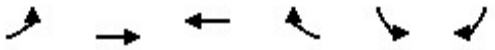
Intersection Summary	
HCM 6th Ctrl Delay	22.5
HCM 6th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	48	422	245	230	410	43	333	414	358	110	308	47
Future Volume (veh/h)	48	422	245	230	410	43	333	414	358	110	308	47
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	55	480	59	261	466	15	378	470	107	125	350	11
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	213	913	277	366	792	346	488	1318	401	206	627	273
Arrive On Green	0.06	0.18	0.18	0.11	0.23	0.23	0.14	0.26	0.26	0.06	0.18	0.18
Sat Flow, veh/h	3401	5025	1525	3401	3497	1528	3401	5025	1530	3401	3497	1525
Grp Volume(v), veh/h	55	480	59	261	466	15	378	470	107	125	350	11
Grp Sat Flow(s),veh/h/ln	1700	1675	1525	1700	1749	1528	1700	1675	1530	1700	1749	1525
Q Serve(g_s), s	1.2	6.7	2.5	5.7	9.2	0.6	8.3	5.9	4.3	2.8	7.1	0.5
Cycle Q Clear(g_c), s	1.2	6.7	2.5	5.7	9.2	0.6	8.3	5.9	4.3	2.8	7.1	0.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	213	913	277	366	792	346	488	1318	401	206	627	273
V/C Ratio(X)	0.26	0.53	0.21	0.71	0.59	0.04	0.77	0.36	0.27	0.61	0.56	0.04
Avail Cap(c_a), veh/h	1540	2275	690	1540	1583	692	1100	1625	495	1100	1583	690
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.5	28.6	26.9	33.3	26.7	23.4	31.9	23.2	22.6	35.4	28.9	26.2
Incr Delay (d2), s/veh	0.5	0.6	0.5	1.9	0.8	0.1	2.0	0.2	0.4	2.2	0.9	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	2.4	0.9	2.2	3.5	0.2	3.2	2.1	1.4	1.1	2.8	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	35.0	29.2	27.4	35.3	27.5	23.4	33.9	23.4	23.0	37.6	29.9	26.3
LnGrp LOS	C	C	C	D	C	C	C	C	C	D	C	C
Approach Vol, veh/h		594			742			955			486	
Approach Delay, s/veh		29.6			30.2			27.5			31.8	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.8	21.5	18.6	21.4	12.4	25.0	12.2	27.8
Change Period (Y+Rc), s	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5
Max Green Setting (Gmax), s	35.0	35.0	25.0	35.0	35.0	35.0	25.0	25.0
Max Q Clear Time (g_c+I1), s	7.7	8.7	10.3	9.1	3.2	11.2	4.8	7.9
Green Ext Time (p_c), s	0.6	3.0	0.8	2.5	0.1	3.2	0.2	3.1

Intersection Summary	
HCM 6th Ctrl Delay	29.4
HCM 6th LOS	C



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑	↑↑		↰↰	↱
Traffic Volume (veh/h)	0	701	386	0	192	729
Future Volume (veh/h)	0	701	386	0	192	729
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	0	1841	1841	0	1841	1841
Adj Flow Rate, veh/h	0	746	411	0	188	378
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	4	4	0	4	4
Cap, veh/h	0	1710	1190	0	420	747
Arrive On Green	0.00	0.34	0.34	0.00	0.24	0.24
Sat Flow, veh/h	0	5356	3681	0	1753	3120
Grp Volume(v), veh/h	0	746	411	0	188	378
Grp Sat Flow(s),veh/h/ln	0	1675	1749	0	1753	1560
Q Serve(g_s), s	0.0	3.4	2.6	0.0	2.7	3.1
Cycle Q Clear(g_c), s	0.0	3.4	2.6	0.0	2.7	3.1
Prop In Lane	0.00			0.00	1.00	1.00
Lane Grp Cap(c), veh/h	0	1710	1190	0	420	747
V/C Ratio(X)	0.00	0.44	0.35	0.00	0.45	0.51
Avail Cap(c_a), veh/h	0	5150	3584	0	1797	3197
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	7.5	7.2	0.0	9.5	9.6
Incr Delay (d2), s/veh	0.0	0.2	0.2	0.0	0.7	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.4	0.3	0.0	0.6	0.6
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.0	7.7	7.4	0.0	10.2	10.2
LnGrp LOS	A	A	A	A	B	B
Approach Vol, veh/h		746	411		566	
Approach Delay, s/veh		7.7	7.4		10.2	
Approach LOS		A	A		B	

Timer - Assigned Phs	2	4	6
Phs Duration (G+Y+Rc), s	16.8	12.5	16.8
Change Period (Y+Rc), s	6.8	5.5	6.8
Max Green Setting (Gmax), s	30.0	30.0	30.0
Max Q Clear Time (g_c+I1), s	5.4	5.1	4.6
Green Ext Time (p_c), s	4.6	2.0	2.3

Intersection Summary	
HCM 6th Ctrl Delay	8.4
HCM 6th LOS	A

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	346	591	169	188	228	56
Future Volume (veh/h)	346	591	169	188	228	56
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		0.97	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	353	353	172	192	233	15
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	4	4	4	4	4	4
Cap, veh/h	1555	661	352	2800	433	193
Arrive On Green	0.31	0.31	0.10	0.56	0.12	0.12
Sat Flow, veh/h	5191	1513	3401	5191	3506	1560
Grp Volume(v), veh/h	353	353	172	192	233	15
Grp Sat Flow(s),veh/h/ln	1675	1513	1700	1675	1753	1560
Q Serve(g_s), s	2.2	7.2	2.0	0.7	2.6	0.4
Cycle Q Clear(g_c), s	2.2	7.2	2.0	0.7	2.6	0.4
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1555	661	352	2800	433	193
V/C Ratio(X)	0.23	0.53	0.49	0.07	0.54	0.08
Avail Cap(c_a), veh/h	3619	1282	2449	3619	2525	1123
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	10.7	8.7	17.6	4.2	17.1	16.2
Incr Delay (d2), s/veh	0.1	0.7	1.0	0.0	1.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	1.9	0.6	0.1	1.0	0.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	10.8	9.4	18.7	4.3	18.2	16.3
LnGrp LOS	B	A	B	A	B	B
Approach Vol, veh/h	706			364	248	
Approach Delay, s/veh	10.1			11.1	18.1	
Approach LOS	B			B	B	

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	10.3	20.2				30.5	11.1
Change Period (Y+Rc), s	6.0	7.3				7.3	6.0
Max Green Setting (Gmax), s	30.0	30.0				30.0	30.0
Max Q Clear Time (g_c+I1), s	4.0	9.2				2.7	4.6
Green Ext Time (p_c), s	0.5	3.2				1.0	0.9

Intersection Summary	
HCM 6th Ctrl Delay	11.9
HCM 6th LOS	B

Notes
User approved pedestrian interval to be less than phase max green.
User approved volume balancing among the lanes for turning movement.

Intersection	
Intersection Delay, s/veh	0
Intersection LOS	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	8	8	8	8	8	8	8	8	8	8	8	8
Mvmt Flow	0	0	0	0	0	0	0	0	0	0	0	0
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	0	0	0	0
HCM LOS	-	-	-	-

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	0%	0%	0%	0%
Vol Thru, %	100%	100%	100%	100%
Vol Right, %	0%	0%	0%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	0	0	0	0
LT Vol	0	0	0	0
Through Vol	0	0	0	0
RT Vol	0	0	0	0
Lane Flow Rate	0	0	0	0
Geometry Grp	1	1	1	1
Degree of Util (X)	0	0	0	0
Departure Headway (Hd)	4.036	4.036	4.036	4.036
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	0	0	0	0
Service Time	2.036	2.036	2.036	2.036
HCM Lane V/C Ratio	0	0	0	0
HCM Control Delay	7	7	7	7
HCM Lane LOS	N	N	N	N
HCM 95th-tile Q	0	0	0	0

Intersection	
Intersection Delay, s/veh	8.2
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	43	15	12	22	28	17	4	71	43	5	71	38
Future Vol, veh/h	43	15	12	22	28	17	4	71	43	5	71	38
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles, %	8	8	8	8	8	8	8	8	8	8	8	8
Mvmt Flow	48	17	13	25	31	19	4	80	48	6	80	43
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8.3	8.2	8.2	8.2
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	3%	61%	33%	4%
Vol Thru, %	60%	21%	42%	62%
Vol Right, %	36%	17%	25%	33%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	118	70	67	114
LT Vol	4	43	22	5
Through Vol	71	15	28	71
RT Vol	43	12	17	38
Lane Flow Rate	133	79	75	128
Geometry Grp	1	1	1	1
Degree of Util (X)	0.16	0.103	0.097	0.155
Departure Headway (Hd)	4.334	4.729	4.628	4.359
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	829	758	775	824
Service Time	2.353	2.754	2.652	2.378
HCM Lane V/C Ratio	0.16	0.104	0.097	0.155
HCM Control Delay	8.2	8.3	8.2	8.2
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.6	0.3	0.3	0.5

Intersection	
Intersection Delay, s/veh	9.7
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	16	281	3	4	228	21	2	10	1	10	2	10
Future Vol, veh/h	16	281	3	4	228	21	2	10	1	10	2	10
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles, %	4	4	4	4	4	4	4	4	4	4	4	4
Mvmt Flow	17	302	3	4	245	23	2	11	1	11	2	11
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	10.1	9.5	8.4	8.3
HCM LOS	B	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	15%	5%	2%	45%
Vol Thru, %	77%	94%	90%	9%
Vol Right, %	8%	1%	8%	45%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	13	300	253	22
LT Vol	2	16	4	10
Through Vol	10	281	228	2
RT Vol	1	3	21	10
Lane Flow Rate	14	323	272	24
Geometry Grp	1	1	1	1
Degree of Util (X)	0.021	0.389	0.328	0.033
Departure Headway (Hd)	5.28	4.344	4.344	5.097
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	678	832	830	702
Service Time	3.312	2.359	2.36	3.129
HCM Lane V/C Ratio	0.021	0.388	0.328	0.034
HCM Control Delay	8.4	10.1	9.5	8.3
HCM Lane LOS	A	B	A	A
HCM 95th-tile Q	0.1	1.9	1.4	0.1

Intersection	
Int Delay, s/veh	3.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	29	380	12	45	376	13	21	18	81	7	7	19
Future Vol, veh/h	29	380	12	45	376	13	21	18	81	7	7	19
Conflicting Peds, #/hr	5	0	5	5	0	5	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	127	-	-	143	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	31	409	13	48	404	14	23	19	87	8	8	20

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	423	0	0	427	0	0	785	1002	421	1043	1001	214
Stage 1	-	-	-	-	-	-	483	483	-	512	512	-
Stage 2	-	-	-	-	-	-	302	519	-	531	489	-
Critical Hdwy	4.145	-	-	4.145	-	-	7.345	6.545	6.245	7.345	6.545	6.945
Critical Hdwy Stg 1	-	-	-	-	-	-	6.145	5.545	-	6.545	5.545	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.545	5.545	-	6.145	5.545	-
Follow-up Hdwy	2.2285	-	-	2.2285	-	-	3.5285	4.0285	3.3285	3.5285	4.0285	3.3285
Pot Cap-1 Maneuver	1128	-	-	1124	-	-	295	240	629	194	241	789
Stage 1	-	-	-	-	-	-	562	550	-	512	534	-
Stage 2	-	-	-	-	-	-	681	530	-	529	546	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1123	-	-	1119	-	-	264	221	626	147	222	785
Mov Cap-2 Maneuver	-	-	-	-	-	-	264	221	-	147	222	-
Stage 1	-	-	-	-	-	-	544	532	-	496	508	-
Stage 2	-	-	-	-	-	-	625	505	-	427	528	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.6	0.9	17.6	17.7
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	413	1123	-	-	1119	-	-	319
HCM Lane V/C Ratio	0.312	0.028	-	-	0.043	-	-	0.111
HCM Control Delay (s)	17.6	8.3	-	-	8.4	-	-	17.7
HCM Lane LOS	C	A	-	-	A	-	-	C
HCM 95th %tile Q(veh)	1.3	0.1	-	-	0.1	-	-	0.4

Intersection	
Int Delay, s/veh	3.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	18	433	58	19	392	12	68	9	40	14	3	15
Future Vol, veh/h	18	433	58	19	392	12	68	9	40	14	3	15
Conflicting Peds, #/hr	5	0	5	5	0	5	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	69	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	19	446	60	20	404	12	70	9	41	14	3	15

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	421	0	0	511	0	0	763	980	481	994	1004	213
Stage 1	-	-	-	-	-	-	519	519	-	455	455	-
Stage 2	-	-	-	-	-	-	244	461	-	539	549	-
Critical Hdwy	4.145	-	-	4.145	-	-	7.345	6.545	6.245	7.345	6.545	6.945
Critical Hdwy Stg 1	-	-	-	-	-	-	6.145	5.545	-	6.545	5.545	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.545	5.545	-	6.145	5.545	-
Follow-up Hdwy	2.2285	-	-	2.2285	-	-	3.5285	4.0285	3.3285	3.5285	4.0285	3.3285
Pot Cap-1 Maneuver	1130	-	-	1046	-	-	305	248	582	210	240	790
Stage 1	-	-	-	-	-	-	537	530	-	553	566	-
Stage 2	-	-	-	-	-	-	736	562	-	523	513	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1125	-	-	1041	-	-	286	237	579	183	229	786
Mov Cap-2 Maneuver	-	-	-	-	-	-	286	237	-	183	229	-
Stage 1	-	-	-	-	-	-	525	518	-	541	552	-
Stage 2	-	-	-	-	-	-	704	549	-	469	502	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.3	0.4	21.4	18.8
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	339	1125	-	-	1041	-	-	294
HCM Lane V/C Ratio	0.356	0.016	-	-	0.019	-	-	0.112
HCM Control Delay (s)	21.4	8.3	-	-	8.5	-	-	18.8
HCM Lane LOS	C	A	-	-	A	-	-	C
HCM 95th %tile Q(veh)	1.6	0.1	-	-	0.1	-	-	0.4

Intersection	
Int Delay, s/veh	1.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	14	463	6	10	416	21	4	1	6	19	6	6
Future Vol, veh/h	14	463	6	10	416	21	4	1	6	19	6	6
Conflicting Peds, #/hr	5	0	5	5	0	5	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	98	-	-	47	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	15	493	6	11	443	22	4	1	6	20	6	6

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	470	0	0	504	0	0	778	1023	501	1011	1015	238
Stage 1	-	-	-	-	-	-	531	531	-	481	481	-
Stage 2	-	-	-	-	-	-	247	492	-	530	534	-
Critical Hdwy	4.145	-	-	4.145	-	-	7.345	6.545	6.245	7.345	6.545	6.945
Critical Hdwy Stg 1	-	-	-	-	-	-	6.145	5.545	-	6.545	5.545	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.545	5.545	-	6.145	5.545	-
Follow-up Hdwy	2.2285	-	-	2.2285	-	-	3.5285	4.0285	3.3285	3.5285	4.0285	3.3285
Pot Cap-1 Maneuver	1084	-	-	1053	-	-	298	234	567	204	236	761
Stage 1	-	-	-	-	-	-	529	523	-	534	551	-
Stage 2	-	-	-	-	-	-	733	545	-	529	522	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1079	-	-	1048	-	-	283	226	564	196	228	757
Mov Cap-2 Maneuver	-	-	-	-	-	-	283	226	-	196	228	-
Stage 1	-	-	-	-	-	-	519	513	-	524	543	-
Stage 2	-	-	-	-	-	-	711	537	-	515	512	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.2	0.2	14.9	22.7
HCM LOS			B	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	377	1079	-	-	1048	-	-	236
HCM Lane V/C Ratio	0.031	0.014	-	-	0.01	-	-	0.14
HCM Control Delay (s)	14.9	8.4	-	-	8.5	-	-	22.7
HCM Lane LOS	B	A	-	-	A	-	-	C
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.5

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	1	678	542	36	8	17
Future Vol, veh/h	1	678	542	36	8	17
Conflicting Peds, #/hr	5	0	0	5	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	25	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	1	729	583	39	9	18

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	627	0	-	0	1339	316
Stage 1	-	-	-	-	608	-
Stage 2	-	-	-	-	731	-
Critical Hdwy	4.145	-	-	-	6.645	6.945
Critical Hdwy Stg 1	-	-	-	-	5.845	-
Critical Hdwy Stg 2	-	-	-	-	5.445	-
Follow-up Hdwy	2.2285	-	-	-	3.5285	3.3285
Pot Cap-1 Maneuver	947	-	-	-	155	678
Stage 1	-	-	-	-	505	-
Stage 2	-	-	-	-	473	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	942	-	-	-	153	675
Mov Cap-2 Maneuver	-	-	-	-	292	-
Stage 1	-	-	-	-	502	-
Stage 2	-	-	-	-	471	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	13
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	942	-	-	-	475
HCM Lane V/C Ratio	0.001	-	-	-	0.057
HCM Control Delay (s)	8.8	-	-	-	13
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.2

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	5	680	566	12	7	12
Future Vol, veh/h	5	680	566	12	7	12
Conflicting Peds, #/hr	5	0	0	5	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	25	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	5	723	602	13	7	13

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	620	0	-	0	1347	313
Stage 1	-	-	-	-	614	-
Stage 2	-	-	-	-	733	-
Critical Hdwy	4.145	-	-	-	6.645	6.945
Critical Hdwy Stg 1	-	-	-	-	5.845	-
Critical Hdwy Stg 2	-	-	-	-	5.445	-
Follow-up Hdwy	2.2285	-	-	-	3.5285	3.3285
Pot Cap-1 Maneuver	953	-	-	-	153	681
Stage 1	-	-	-	-	501	-
Stage 2	-	-	-	-	472	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	948	-	-	-	151	678
Mov Cap-2 Maneuver	-	-	-	-	289	-
Stage 1	-	-	-	-	496	-
Stage 2	-	-	-	-	470	-

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	13.3
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	948	-	-	-	453
HCM Lane V/C Ratio	0.006	-	-	-	0.045
HCM Control Delay (s)	8.8	-	-	-	13.3
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.1

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	3	672	567	18	34	4
Future Vol, veh/h	3	672	567	18	34	4
Conflicting Peds, #/hr	5	0	0	5	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	3	723	610	19	37	4

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	634	0	-	0	1354	320
Stage 1	-	-	-	-	625	-
Stage 2	-	-	-	-	729	-
Critical Hdwy	4.145	-	-	-	6.645	6.945
Critical Hdwy Stg 1	-	-	-	-	5.845	-
Critical Hdwy Stg 2	-	-	-	-	5.445	-
Follow-up Hdwy	2.2285	-	-	-	3.5285	3.3285
Pot Cap-1 Maneuver	941	-	-	-	151	674
Stage 1	-	-	-	-	495	-
Stage 2	-	-	-	-	474	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	937	-	-	-	149	671
Mov Cap-2 Maneuver	-	-	-	-	288	-
Stage 1	-	-	-	-	491	-
Stage 2	-	-	-	-	472	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	18.6
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	937	-	-	-	306
HCM Lane V/C Ratio	0.003	-	-	-	0.134
HCM Control Delay (s)	8.9	-	-	-	18.6
HCM Lane LOS	A	-	-	-	C
HCM 95th %tile Q(veh)	0	-	-	-	0.5

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	7	695	571	17	14	9
Future Vol, veh/h	7	695	571	17	14	9
Conflicting Peds, #/hr	5	0	0	5	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	350	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	8	747	614	18	15	10

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	637	0	-	0	1391	321
Stage 1	-	-	-	-	628	-
Stage 2	-	-	-	-	763	-
Critical Hdwy	4.145	-	-	-	6.645	6.945
Critical Hdwy Stg 1	-	-	-	-	5.845	-
Critical Hdwy Stg 2	-	-	-	-	5.445	-
Follow-up Hdwy	2.2285	-	-	-	3.5285	3.3285
Pot Cap-1 Maneuver	939	-	-	-	143	673
Stage 1	-	-	-	-	493	-
Stage 2	-	-	-	-	457	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	935	-	-	-	140	670
Mov Cap-2 Maneuver	-	-	-	-	278	-
Stage 1	-	-	-	-	486	-
Stage 2	-	-	-	-	455	-

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	15.7
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	935	-	-	-	361
HCM Lane V/C Ratio	0.008	-	-	-	0.069
HCM Control Delay (s)	8.9	-	-	-	15.7
HCM Lane LOS	A	-	-	-	C
HCM 95th %tile Q(veh)	0	-	-	-	0.2

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	7	710	588	1	7	12
Future Vol, veh/h	7	710	588	1	7	12
Conflicting Peds, #/hr	5	0	0	5	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	175	-	-	-	0	76
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	8	780	646	1	8	13

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	652	0	-	0	1448	329
Stage 1	-	-	-	-	652	-
Stage 2	-	-	-	-	796	-
Critical Hdwy	4.145	-	-	-	6.645	6.945
Critical Hdwy Stg 1	-	-	-	-	5.845	-
Critical Hdwy Stg 2	-	-	-	-	5.445	-
Follow-up Hdwy	2.2285	-	-	-	3.5285	3.3285
Pot Cap-1 Maneuver	927	-	-	-	132	665
Stage 1	-	-	-	-	479	-
Stage 2	-	-	-	-	441	-
Platoon blocked, %			-	-	-	
Mov Cap-1 Maneuver	923	-	-	-	129	662
Mov Cap-2 Maneuver	-	-	-	-	129	-
Stage 1	-	-	-	-	472	-
Stage 2	-	-	-	-	439	-

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	19.4
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	923	-	-	-	129	662
HCM Lane V/C Ratio	0.008	-	-	-	0.06	0.02
HCM Control Delay (s)	8.9	-	-	-	34.7	10.5
HCM Lane LOS	A	-	-	-	D	B
HCM 95th %tile Q(veh)	0	-	-	-	0.2	0.1

Intersection	
Int Delay, s/veh	0.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	685	33	4	571	18	3
Future Vol, veh/h	685	33	4	571	18	3
Conflicting Peds, #/hr	0	5	5	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	200	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	745	36	4	621	20	3

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	786	0	1087	768
Stage 1	-	-	-	-	768	-
Stage 2	-	-	-	-	319	-
Critical Hdwy	-	-	4.145	-	6.645	6.245
Critical Hdwy Stg 1	-	-	-	-	5.445	-
Critical Hdwy Stg 2	-	-	-	-	5.845	-
Follow-up Hdwy	-	-	2.2285	-	3.5285	3.3285
Pot Cap-1 Maneuver	-	-	825	-	223	399
Stage 1	-	-	-	-	454	-
Stage 2	-	-	-	-	708	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	821	-	221	397
Mov Cap-2 Maneuver	-	-	-	-	221	-
Stage 1	-	-	-	-	452	-
Stage 2	-	-	-	-	704	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	21.9
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	236	-	-	821	-
HCM Lane V/C Ratio	0.097	-	-	0.005	-
HCM Control Delay (s)	21.9	-	-	9.4	-
HCM Lane LOS	C	-	-	A	-
HCM 95th %tile Q(veh)	0.3	-	-	0	-

Intersection	
Int Delay, s/veh	0.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	56	2	2	67	4	4
Future Vol, veh/h	56	2	2	67	4	4
Conflicting Peds, #/hr	0	5	5	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	79	79	79	79	79	79
Heavy Vehicles, %	8	8	8	8	8	8
Mvmt Flow	71	3	3	85	5	5

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	79	0	169	78
Stage 1	-	-	-	-	78	-
Stage 2	-	-	-	-	91	-
Critical Hdwy	-	-	4.18	-	6.48	6.28
Critical Hdwy Stg 1	-	-	-	-	5.48	-
Critical Hdwy Stg 2	-	-	-	-	5.48	-
Follow-up Hdwy	-	-	2.272	-	3.572	3.372
Pot Cap-1 Maneuver	-	-	1482	-	808	966
Stage 1	-	-	-	-	930	-
Stage 2	-	-	-	-	918	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1475	-	802	961
Mov Cap-2 Maneuver	-	-	-	-	802	-
Stage 1	-	-	-	-	925	-
Stage 2	-	-	-	-	916	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.2	9.2
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	874	-	-	1475	-
HCM Lane V/C Ratio	0.012	-	-	0.002	-
HCM Control Delay (s)	9.2	-	-	7.4	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0	-

Intersection	
Int Delay, s/veh	0.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	63	0	0	69	1	4
Future Vol, veh/h	63	0	0	69	1	4
Conflicting Peds, #/hr	0	5	5	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	76	76	76	76	76	76
Heavy Vehicles, %	8	8	8	8	8	8
Mvmt Flow	83	0	0	91	1	5

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	88	0	179	88
Stage 1	-	-	-	-	88	-
Stage 2	-	-	-	-	91	-
Critical Hdwy	-	-	4.18	-	6.48	6.28
Critical Hdwy Stg 1	-	-	-	-	5.48	-
Critical Hdwy Stg 2	-	-	-	-	5.48	-
Follow-up Hdwy	-	-	2.272	-	3.572	3.372
Pot Cap-1 Maneuver	-	-	1471	-	797	954
Stage 1	-	-	-	-	921	-
Stage 2	-	-	-	-	918	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1464	-	793	949
Mov Cap-2 Maneuver	-	-	-	-	793	-
Stage 1	-	-	-	-	916	-
Stage 2	-	-	-	-	918	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	9
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	913	-	-	1464	-
HCM Lane V/C Ratio	0.007	-	-	-	-
HCM Control Delay (s)	9	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0	-

Intersection	
Int Delay, s/veh	1.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	5	59	1	0	62	13	3	2	3	14	4	4
Future Vol, veh/h	5	59	1	0	62	13	3	2	3	14	4	4
Conflicting Peds, #/hr	5	0	5	5	0	5	5	0	5	5	0	5
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	83	83	83	83	83	83	83	83	83	83	83	83
Heavy Vehicles, %	8	8	8	8	8	8	8	8	8	8	8	8
Mvmt Flow	6	71	1	0	75	16	4	2	4	17	5	5

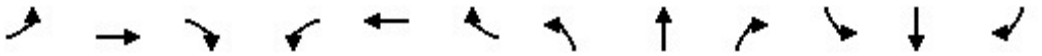
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	96	0	0	77	0	0	182	185	82	180	177	93
Stage 1	-	-	-	-	-	-	89	89	-	88	88	-
Stage 2	-	-	-	-	-	-	93	96	-	92	89	-
Critical Hdwy	4.18	-	-	4.18	-	-	7.18	6.58	6.28	7.18	6.58	6.28
Critical Hdwy Stg 1	-	-	-	-	-	-	6.18	5.58	-	6.18	5.58	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.18	5.58	-	6.18	5.58	-
Follow-up Hdwy	2.272	-	-	2.272	-	-	3.572	4.072	3.372	3.572	4.072	3.372
Pot Cap-1 Maneuver	1461	-	-	1484	-	-	766	699	961	769	706	948
Stage 1	-	-	-	-	-	-	904	810	-	905	810	-
Stage 2	-	-	-	-	-	-	899	804	-	900	810	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1454	-	-	1477	-	-	748	689	952	754	696	939
Mov Cap-2 Maneuver	-	-	-	-	-	-	748	689	-	754	696	-
Stage 1	-	-	-	-	-	-	896	803	-	897	806	-
Stage 2	-	-	-	-	-	-	885	800	-	886	803	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.6	0	9.6	9.8
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	795	1454	-	-	1477	-	-	770
HCM Lane V/C Ratio	0.012	0.004	-	-	-	-	-	0.034
HCM Control Delay (s)	9.6	7.5	0	-	0	-	-	9.8
HCM Lane LOS	A	A	A	-	A	-	-	A
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0.1

HCM 6th Signalized Intersection Summary
1: Grove Ave & Mission Blvd

02/22/2024



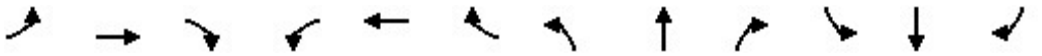
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	276	599	167	48	711	481	117	676	28	540	1005	241
Future Volume (veh/h)	276	599	167	48	711	481	117	676	28	540	1005	241
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	303	658	76	53	781	220	129	743	30	593	1104	120
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	352	921	408	167	732	324	149	918	37	576	2156	658
Arrive On Green	0.10	0.26	0.26	0.05	0.21	0.21	0.09	0.19	0.19	0.33	0.43	0.43
Sat Flow, veh/h	3401	3497	1551	3401	3497	1549	1753	4950	199	1753	5025	1534
Grp Volume(v), veh/h	303	658	76	53	781	220	129	502	271	593	1104	120
Grp Sat Flow(s),veh/h/ln	1700	1749	1551	1700	1749	1549	1753	1675	1800	1753	1675	1534
Q Serve(g_s), s	14.7	28.6	6.4	2.5	35.0	21.9	12.2	24.0	24.2	55.0	26.9	8.1
Cycle Q Clear(g_c), s	14.7	28.6	6.4	2.5	35.0	21.9	12.2	24.0	24.2	55.0	26.9	8.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.11	1.00		1.00
Lane Grp Cap(c), veh/h	352	921	408	167	732	324	149	621	334	576	2156	658
V/C Ratio(X)	0.86	0.71	0.19	0.32	1.07	0.68	0.87	0.81	0.81	1.03	0.51	0.18
Avail Cap(c_a), veh/h	610	921	408	407	732	324	210	701	376	576	2156	658
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	73.8	55.9	47.7	76.8	66.2	61.0	75.6	65.3	65.4	56.2	34.9	29.6
Incr Delay (d2), s/veh	4.8	2.8	0.3	0.8	52.8	5.9	20.6	6.9	12.5	45.1	0.3	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.6	12.8	2.4	1.1	20.5	8.9	6.2	10.6	12.0	30.9	10.9	3.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	78.6	58.7	48.0	77.6	119.0	66.9	96.2	72.2	77.8	101.3	35.2	29.8
LnGrp LOS	E	E	D	E	F	E	F	E	E	F	D	C
Approach Vol, veh/h		1037			1054			902			1817	
Approach Delay, s/veh		63.7			106.0			77.3			56.4	
Approach LOS		E			F			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	62.0	38.0	15.7	51.6	21.2	78.8	24.8	42.5
Change Period (Y+Rc), s	7.0	7.0	7.5	7.5	7.0	7.0	7.5	7.5
Max Green Setting (Gmax), s	55.0	35.0	20.0	35.0	20.0	35.0	30.0	35.0
Max Q Clear Time (g_c+I1), s	57.0	26.2	4.5	30.6	14.2	28.9	16.7	37.0
Green Ext Time (p_c), s	0.0	3.8	0.1	2.0	0.1	4.2	0.6	0.0

Intersection Summary	
HCM 6th Ctrl Delay	72.8
HCM 6th LOS	E

Notes

User approved pedestrian interval to be less than phase max green.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	744	245	64	1019	7	249	23	23	7	30	47
Future Volume (veh/h)	20	744	245	64	1019	7	249	23	23	7	30	47
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	22	836	110	72	1145	8	280	26	8	8	34	0
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	62	1248	549	136	1422	10	433	863	380	436	863	
Arrive On Green	0.04	0.36	0.36	0.08	0.40	0.40	0.25	0.25	0.25	0.25	0.25	0.00
Sat Flow, veh/h	1753	3497	1539	1753	3560	25	1353	3497	1538	1353	3589	0
Grp Volume(v), veh/h	22	836	110	72	562	591	280	26	8	8	34	0
Grp Sat Flow(s),veh/h/ln	1753	1749	1539	1753	1749	1836	1353	1749	1538	1353	1749	0
Q Serve(g_s), s	0.8	13.3	3.3	2.6	18.8	18.8	13.1	0.4	0.3	0.3	0.5	0.0
Cycle Q Clear(g_c), s	0.8	13.3	3.3	2.6	18.8	18.8	13.6	0.4	0.3	0.7	0.5	0.0
Prop In Lane	1.00		1.00	1.00		0.01	1.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	62	1248	549	136	698	733	433	863	380	436	863	
V/C Ratio(X)	0.36	0.67	0.20	0.53	0.81	0.81	0.65	0.03	0.02	0.02	0.04	
Avail Cap(c_a), veh/h	532	1592	701	532	796	836	510	1061	467	512	1061	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	31.1	17.9	14.7	29.2	17.5	17.5	24.0	18.8	18.8	19.1	18.9	0.0
Incr Delay (d2), s/veh	1.3	1.0	0.3	1.2	5.9	5.7	3.2	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	4.4	1.0	1.0	6.9	7.2	4.0	0.1	0.1	0.1	0.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	32.4	18.9	14.9	30.4	23.5	23.2	27.3	18.9	18.8	19.1	18.9	0.0
LnGrp LOS	C	B	B	C	C	C	C	B	B	B	B	
Approach Vol, veh/h		968			1225			314			42	A
Approach Delay, s/veh		18.8			23.7			26.4			19.0	
Approach LOS		B			C			C			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	12.1	30.5		23.3	9.3	33.3		23.3				
Change Period (Y+Rc), s	7.0	7.0		7.0	7.0	7.0		7.0				
Max Green Setting (Gmax), s	20.0	30.0		20.0	20.0	30.0		20.0				
Max Q Clear Time (g_c+I1), s	4.6	15.3		15.6	2.8	20.8		2.7				
Green Ext Time (p_c), s	0.1	6.3		0.7	0.0	5.6		0.2				

Intersection Summary		
HCM 6th Ctrl Delay		22.1
HCM 6th LOS		C

Notes

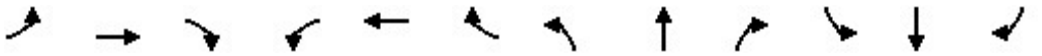
Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	14	107	60	24	132	12	108	367	105	16	320	13
Future Volume (veh/h)	14	107	60	24	132	12	108	367	105	16	320	13
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.97	0.99		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	15	118	12	26	145	8	119	403	99	18	352	13
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	320	456	46	336	526	29	421	766	186	318	714	26
Arrive On Green	0.02	0.14	0.14	0.04	0.16	0.16	0.09	0.28	0.28	0.03	0.21	0.21
Sat Flow, veh/h	1753	3201	321	1753	3367	184	1753	2778	675	1753	3437	127
Grp Volume(v), veh/h	15	64	66	26	75	78	119	252	250	18	179	186
Grp Sat Flow(s),veh/h/ln	1753	1749	1773	1753	1749	1802	1753	1749	1704	1753	1749	1815
Q Serve(g_s), s	0.4	1.7	1.7	0.6	2.0	2.0	2.6	6.3	6.5	0.4	4.7	4.7
Cycle Q Clear(g_c), s	0.4	1.7	1.7	0.6	2.0	2.0	2.6	6.3	6.5	0.4	4.7	4.7
Prop In Lane	1.00		0.18	1.00		0.10	1.00		0.40	1.00		0.07
Lane Grp Cap(c), veh/h	320	249	253	336	273	282	421	482	470	318	363	377
V/C Ratio(X)	0.05	0.26	0.26	0.08	0.27	0.28	0.28	0.52	0.53	0.06	0.49	0.49
Avail Cap(c_a), veh/h	803	1193	1210	795	1193	1230	760	1176	1146	777	1176	1221
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	18.3	19.8	19.9	17.8	19.3	19.4	13.8	15.9	16.0	15.5	18.2	18.2
Incr Delay (d2), s/veh	0.1	0.8	0.8	0.1	0.8	0.8	0.4	1.2	1.3	0.1	1.5	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.6	0.6	0.2	0.7	0.7	0.9	2.2	2.2	0.1	1.7	1.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	18.4	20.6	20.6	17.9	20.1	20.1	14.3	17.2	17.3	15.6	19.7	19.6
LnGrp LOS	B	C	C	B	C	C	B	B	B	B	B	B
Approach Vol, veh/h		145			179			621			383	
Approach Delay, s/veh		20.4			19.8			16.7			19.5	
Approach LOS		C			B			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.4	21.4	8.4	13.9	11.9	17.8	7.7	14.6
Change Period (Y+Rc), s	7.0	7.0	6.5	6.5	7.0	7.0	6.5	6.5
Max Green Setting (Gmax), s	15.0	35.0	15.5	35.5	15.0	35.0	15.5	35.5
Max Q Clear Time (g_c+I1), s	2.4	8.5	2.6	3.7	4.6	6.7	2.4	4.0
Green Ext Time (p_c), s	0.0	4.1	0.0	0.9	0.2	2.8	0.0	1.1

Intersection Summary	
HCM 6th Ctrl Delay	18.3
HCM 6th LOS	B

Min green cannot be greater than Max Green.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	348	1	288	326	874	0	0	919	381
Future Volume (veh/h)	0	0	0	348	1	288	326	874	0	0	919	381
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		0.99
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1841	1841	1841	1841	1841	0	0	1841	1841
Adj Flow Rate, veh/h				405	0	75	347	930	0	0	978	165
Peak Hour Factor				0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %				4	4	4	4	4	0	0	4	4
Cap, veh/h				483	0	215	392	2511	0	0	1527	677
Arrive On Green				0.14	0.00	0.14	0.15	0.48	0.00	0.00	0.44	0.44
Sat Flow, veh/h				3506	0	1560	1753	3589	0	0	3589	1551
Grp Volume(v), veh/h				405	0	75	347	930	0	0	978	165
Grp Sat Flow(s),veh/h/ln				1753	0	1560	1753	1749	0	0	1749	1551
Q Serve(g_s), s				10.1	0.0	3.9	17.5	15.1	0.0	0.0	19.7	6.0
Cycle Q Clear(g_c), s				10.1	0.0	3.9	17.5	15.1	0.0	0.0	19.7	6.0
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				483	0	215	392	2511	0	0	1527	677
V/C Ratio(X)				0.84	0.00	0.35	0.89	0.37	0.00	0.00	0.64	0.24
Avail Cap(c_a), veh/h				506	0	225	526	2511	0	0	1527	677
HCM Platoon Ratio				1.00	1.00	1.00	0.67	0.67	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.52	0.52	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				37.8	0.0	35.2	37.1	10.5	0.0	0.0	19.8	16.0
Incr Delay (d2), s/veh				12.0	0.0	1.4	7.6	0.2	0.0	0.0	2.1	0.9
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				5.1	0.0	1.6	8.4	6.2	0.0	0.0	7.7	2.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				49.9	0.0	36.5	44.7	10.7	0.0	0.0	21.9	16.8
LnGrp LOS				D	A	D	D	B	A	A	C	B
Approach Vol, veh/h					480			1277			1143	
Approach Delay, s/veh					47.8			20.0			21.2	
Approach LOS					D			B			C	

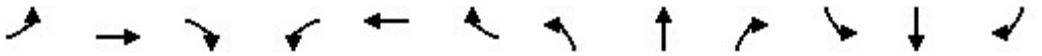
Timer - Assigned Phs	2		5	6		8						
Phs Duration (G+Y+Rc), s	70.6		25.3	45.3		19.4						
Change Period (Y+Rc), s	6.0		* 5.2	6.0		7.0						
Max Green Setting (Gmax), s	64.0		* 27	31.0		13.0						
Max Q Clear Time (g_c+I1), s	17.1		19.5	21.7		12.1						
Green Ext Time (p_c), s	11.4		0.6	5.8		0.3						

Intersection Summary	
HCM 6th Ctrl Delay	25.0
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



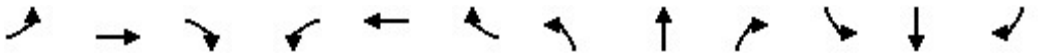
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	327	2	455	0	0	0	0	827	386	293	1041	0
Future Volume (veh/h)	327	2	455	0	0	0	0	827	386	293	1041	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841				0	1841	1841	1841	1841	0
Adj Flow Rate, veh/h	344	2	413				0	871	126	308	1096	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4				0	4	4	4	4	0
Cap, veh/h	487	0	433				0	1163	515	338	2021	0
Arrive On Green	0.28	0.28	0.28				0.00	0.33	0.33	0.39	1.00	0.00
Sat Flow, veh/h	1753	0	1560				0	3589	1548	1753	3589	0
Grp Volume(v), veh/h	344	0	413				0	871	126	308	1096	0
Grp Sat Flow(s),veh/h/ln	1753	0	1560				0	1749	1548	1753	1749	0
Q Serve(g_s), s	15.9	0.0	23.4				0.0	19.9	5.3	15.0	0.0	0.0
Cycle Q Clear(g_c), s	15.9	0.0	23.4				0.0	19.9	5.3	15.0	0.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	487	0	433				0	1163	515	338	2021	0
V/C Ratio(X)	0.71	0.00	0.95				0.00	0.75	0.24	0.91	0.54	0.00
Avail Cap(c_a), veh/h	487	0	433				0	1163	515	429	2021	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.57	0.57	0.00
Uniform Delay (d), s/veh	29.2	0.0	31.9				0.0	26.7	21.8	26.9	0.0	0.0
Incr Delay (d2), s/veh	5.1	0.0	31.6				0.0	4.4	1.1	13.0	0.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.2	0.0	12.3				0.0	8.5	2.0	5.8	0.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	34.3	0.0	63.5				0.0	31.1	23.0	39.8	0.6	0.0
LnGrp LOS	C	A	E				A	C	C	D	A	A
Approach Vol, veh/h		757						997			1404	
Approach Delay, s/veh		50.2						30.1			9.2	
Approach LOS		D						C			A	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	22.1	35.9		32.0		58.0
Change Period (Y+Rc), s	* 4.7	6.0		7.0		6.0
Max Green Setting (Gmax), s	* 22	25.0		25.0		52.0
Max Q Clear Time (g_c+I1), s	17.0	21.9		25.4		2.0
Green Ext Time (p_c), s	0.4	2.2		0.0		14.7

Intersection Summary		
HCM 6th Ctrl Delay		25.6
HCM 6th LOS		C

Notes

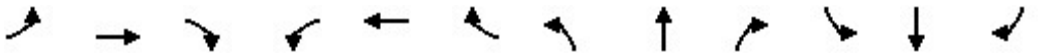
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	222	2	253	267	1051	0	0	418	141
Future Volume (veh/h)	0	0	0	222	2	253	267	1051	0	0	418	141
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		0.97
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1841	1841	1841	1841	1841	0	0	1841	1841
Adj Flow Rate, veh/h				224	2	170	270	1062	0	0	422	107
Peak Hour Factor				0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %				4	4	4	4	4	0	0	4	4
Cap, veh/h				281	3	252	302	2425	0	0	1262	317
Arrive On Green				0.16	0.16	0.16	0.34	1.00	0.00	0.00	0.46	0.46
Sat Flow, veh/h				1738	16	1560	1753	3589	0	0	2844	690
Grp Volume(v), veh/h				226	0	170	270	1062	0	0	266	263
Grp Sat Flow(s),veh/h/ln				1754	0	1560	1753	1749	0	0	1749	1694
Q Serve(g_s), s				9.9	0.0	8.2	11.7	0.0	0.0	0.0	7.8	7.9
Cycle Q Clear(g_c), s				9.9	0.0	8.2	11.7	0.0	0.0	0.0	7.8	7.9
Prop In Lane				0.99		1.00	1.00		0.00	0.00		0.41
Lane Grp Cap(c), veh/h				284	0	252	302	2425	0	0	802	777
V/C Ratio(X)				0.80	0.00	0.67	0.89	0.44	0.00	0.00	0.33	0.34
Avail Cap(c_a), veh/h				447	0	398	351	2425	0	0	802	777
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.17	0.17	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				32.3	0.0	31.5	25.5	0.0	0.0	0.0	13.8	13.9
Incr Delay (d2), s/veh				4.0	0.0	2.3	4.8	0.1	0.0	0.0	1.1	1.2
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				4.4	0.0	3.2	4.0	0.0	0.0	0.0	2.9	2.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				36.3	0.0	33.9	30.3	0.1	0.0	0.0	14.9	15.1
LnGrp LOS				D	A	C	C	A	A	A	B	B
Approach Vol, veh/h					396			1332			529	
Approach Delay, s/veh					35.3			6.2			15.0	
Approach LOS					D			A			B	

Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		61.3			18.8	42.5		18.7				
Change Period (Y+Rc), s		5.8			5.0	5.8		5.8				
Max Green Setting (Gmax), s		48.0			16.0	27.0		20.4				
Max Q Clear Time (g_c+I1), s		2.0			13.7	9.9		11.9				
Green Ext Time (p_c), s		6.8			0.1	2.1		1.0				

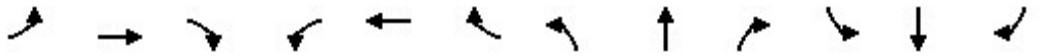
Intersection Summary												
HCM 6th Ctrl Delay			13.4									
HCM 6th LOS			B									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	501	1	337	0	0	0	0	824	277	137	517	0
Future Volume (veh/h)	501	1	337	0	0	0	0	824	277	137	517	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		0.97	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841				0	1841	1841	1841	1841	0
Adj Flow Rate, veh/h	516	1	141				0	849	247	141	533	0
Peak Hour Factor	0.97	0.97	0.97				0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	4	4	4				0	4	4	4	4	0
Cap, veh/h	550	1	490				0	952	277	210	1892	0
Arrive On Green	0.31	0.31	0.31				0.00	0.36	0.36	0.04	0.18	0.00
Sat Flow, veh/h	1750	3	1560				0	2745	771	1753	3589	0
Grp Volume(v), veh/h	517	0	141				0	559	537	141	533	0
Grp Sat Flow(s),veh/h/ln	1753	0	1560				0	1749	1675	1753	1749	0
Q Serve(g_s), s	22.9	0.0	5.5				0.0	24.1	24.2	6.3	10.5	0.0
Cycle Q Clear(g_c), s	22.9	0.0	5.5				0.0	24.1	24.2	6.3	10.5	0.0
Prop In Lane	1.00		1.00				0.00		0.46	1.00		0.00
Lane Grp Cap(c), veh/h	551	0	490				0	628	601	210	1892	0
V/C Ratio(X)	0.94	0.00	0.29				0.00	0.89	0.89	0.67	0.28	0.00
Avail Cap(c_a), veh/h	557	0	495				0	628	601	263	1892	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	0.33	0.33	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.92	0.92	0.00
Uniform Delay (d), s/veh	26.7	0.0	20.7				0.0	24.2	24.2	36.9	19.4	0.0
Incr Delay (d2), s/veh	23.8	0.0	0.2				0.0	17.4	18.1	2.3	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.7	0.0	1.9				0.0	11.8	11.4	2.8	4.5	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	50.4	0.0	20.9				0.0	41.5	42.3	39.2	19.8	0.0
LnGrp LOS	D	A	C				A	D	D	D	B	A
Approach Vol, veh/h		658						1096			674	
Approach Delay, s/veh		44.1						41.9			23.8	
Approach LOS		D						D			C	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	14.6	34.5		30.9		49.1
Change Period (Y+Rc), s	5.0	5.8		5.8		5.8
Max Green Setting (Gmax), s	12.0	26.0		25.4		43.0
Max Q Clear Time (g_c+I1), s	8.3	26.2		24.9		12.5
Green Ext Time (p_c), s	0.1	0.0		0.2		2.8

Intersection Summary	
HCM 6th Ctrl Delay	37.5
HCM 6th LOS	D

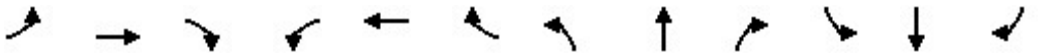


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	501	2	416	557	794	0	0	533	83
Future Volume (veh/h)	0	0	0	501	2	416	557	794	0	0	533	83
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		0.97
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1781	1781	1781	1781	1781	0	0	1781	1781
Adj Flow Rate, veh/h				614	0	186	586	836	0	0	561	20
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				8	8	8	8	8	0	0	8	8
Cap, veh/h				882	0	393	1097	2972	0	0	1362	324
Arrive On Green				0.26	0.00	0.26	0.11	0.20	0.00	0.00	0.22	0.22
Sat Flow, veh/h				3393	0	1510	3291	5024	0	0	6378	1458
Grp Volume(v), veh/h				614	0	186	586	836	0	0	561	20
Grp Sat Flow(s),veh/h/ln				1697	0	1510	1646	1621	0	0	1532	1458
Q Serve(g_s), s				14.7	0.0	9.4	15.2	13.1	0.0	0.0	7.1	1.0
Cycle Q Clear(g_c), s				14.7	0.0	9.4	15.2	13.1	0.0	0.0	7.1	1.0
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				882	0	393	1097	2972	0	0	1362	324
V/C Ratio(X)				0.70	0.00	0.47	0.53	0.28	0.00	0.00	0.41	0.06
Avail Cap(c_a), veh/h				882	0	393	1097	2972	0	0	1362	324
HCM Platoon Ratio				1.00	1.00	1.00	0.33	0.33	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.65	0.65	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				30.1	0.0	28.1	33.4	19.2	0.0	0.0	30.0	27.6
Incr Delay (d2), s/veh				4.5	0.0	4.1	1.2	0.2	0.0	0.0	0.9	0.4
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				6.4	0.0	8.5	6.7	5.5	0.0	0.0	2.5	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				34.6	0.0	32.2	34.7	19.4	0.0	0.0	30.9	28.0
LnGrp LOS				C	A	C	C	B	A	A	C	C
Approach Vol, veh/h					800			1422			581	
Approach Delay, s/veh					34.0			25.7			30.8	
Approach LOS					C			C			C	

Timer - Assigned Phs	2	4	5	6
Phs Duration (G+Y+Rc), s	60.8	29.2	35.0	25.8
Change Period (Y+Rc), s	5.8	5.8	5.0	5.8
Max Green Setting (Gmax), s	55.0	23.4	30.0	20.0
Max Q Clear Time (g_c+I1), s	15.1	16.7	17.2	9.1
Green Ext Time (p_c), s	6.2	1.9	1.0	2.6

Intersection Summary	
HCM 6th Ctrl Delay	29.1
HCM 6th LOS	C

Notes
User approved pedestrian interval to be less than phase max green.
User approved volume balancing among the lanes for turning movement.



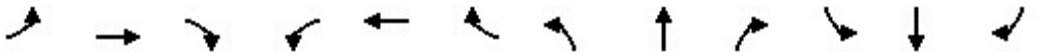
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	270	5	503	0	0	0	0	1358	702	142	870	0
Future Volume (veh/h)	270	5	503	0	0	0	0	1358	702	142	870	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		0.97	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1781	1781	1781				0	1781	1781	1781	1781	0
Adj Flow Rate, veh/h	428	0	246				0	1445	242	151	926	0
Peak Hour Factor	0.94	0.94	0.94				0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	8	8	8				0	8	8	8	8	0
Cap, veh/h	1146	0	510				0	1975	472	512	2594	0
Arrive On Green	0.34	0.00	0.34				0.00	0.32	0.32	0.31	1.00	0.00
Sat Flow, veh/h	3393	0	1510				0	6378	1465	3291	5024	0
Grp Volume(v), veh/h	428	0	246				0	1445	242	151	926	0
Grp Sat Flow(s),veh/h/ln	1697	0	1510				0	1532	1465	1646	1621	0
Q Serve(g_s), s	8.6	0.0	11.6				0.0	18.8	12.1	3.1	0.0	0.0
Cycle Q Clear(g_c), s	8.6	0.0	11.6				0.0	18.8	12.1	3.1	0.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	1146	0	510				0	1975	472	512	2594	0
V/C Ratio(X)	0.37	0.00	0.48				0.00	0.73	0.51	0.29	0.36	0.00
Avail Cap(c_a), veh/h	1146	0	510				0	1975	472	512	2594	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.80	0.80	0.00
Uniform Delay (d), s/veh	22.6	0.0	23.6				0.0	27.1	24.8	27.3	0.0	0.0
Incr Delay (d2), s/veh	0.9	0.0	3.2				0.0	2.4	3.9	1.2	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.5	0.0	4.5				0.0	6.6	4.4	1.2	0.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.5	0.0	26.8				0.0	29.5	28.7	28.4	0.3	0.0
LnGrp LOS	C	A	C				A	C	C	C	A	A
Approach Vol, veh/h		674						1687			1077	
Approach Delay, s/veh		24.7						29.4			4.3	
Approach LOS		C						C			A	

Timer - Assigned Phs	1	2				6		8				
Phs Duration (G+Y+Rc), s	19.0	34.8				53.8		36.2				
Change Period (Y+Rc), s	5.0	5.8				5.8		5.8				
Max Green Setting (Gmax), s	14.0	29.0				48.0		30.4				
Max Q Clear Time (g_c+I1), s	5.1	20.8				2.0		13.6				
Green Ext Time (p_c), s	0.2	5.7				7.1		2.3				

Intersection Summary			
HCM 6th Ctrl Delay			20.6
HCM 6th LOS			C

Notes

User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	14	12	39	116	35	194	135	1682	53	68	753	12
Future Volume (veh/h)	14	12	39	116	35	194	135	1682	53	68	753	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.98		0.96	0.98		0.96	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781
Adj Flow Rate, veh/h	15	13	7	126	38	35	147	1828	56	74	818	13
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	8	8	8	8	8	8	8	8	8	8	8	8
Cap, veh/h	223	167	90	269	130	120	177	2719	83	94	2525	40
Arrive On Green	0.16	0.16	0.16	0.16	0.16	0.16	0.10	0.56	0.56	0.06	0.51	0.51
Sat Flow, veh/h	1245	1073	578	1302	837	770	1697	4843	148	1697	4928	78
Grp Volume(v), veh/h	15	0	20	126	0	73	147	1223	661	74	538	293
Grp Sat Flow(s),veh/h/ln	1245	0	1651	1302	0	1607	1697	1621	1749	1697	1621	1764
Q Serve(g_s), s	1.0	0.0	0.9	8.2	0.0	3.6	7.6	23.9	24.0	3.9	8.7	8.7
Cycle Q Clear(g_c), s	4.6	0.0	0.9	9.2	0.0	3.6	7.6	23.9	24.0	3.9	8.7	8.7
Prop In Lane	1.00		0.35	1.00		0.48	1.00		0.08	1.00		0.04
Lane Grp Cap(c), veh/h	223	0	257	269	0	250	177	1820	982	94	1661	904
V/C Ratio(X)	0.07	0.00	0.08	0.47	0.00	0.29	0.83	0.67	0.67	0.79	0.32	0.32
Avail Cap(c_a), veh/h	337	0	407	388	0	396	183	1820	982	268	1661	904
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.7	0.0	32.5	36.4	0.0	33.6	39.5	13.9	13.9	42.0	12.8	12.8
Incr Delay (d2), s/veh	0.1	0.0	0.1	0.9	0.0	0.5	24.0	2.0	3.7	5.4	0.5	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	0.4	2.7	0.0	1.4	4.2	7.6	8.6	1.7	2.9	3.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	35.7	0.0	32.6	37.4	0.0	34.1	63.5	15.9	17.6	47.4	13.3	13.8
LnGrp LOS	D	A	C	D	A	C	E	B	B	D	B	B
Approach Vol, veh/h		35			199			2031			905	
Approach Delay, s/veh		33.9			36.2			19.9			16.3	
Approach LOS		C			D			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.5	57.0		21.5	15.9	52.6		21.5				
Change Period (Y+Rc), s	6.5	6.5		7.5	6.5	6.5		7.5				
Max Green Setting (Gmax), s	14.2	32.2		22.2	9.7	37.6		22.2				
Max Q Clear Time (g_c+I1), s	5.9	26.0		6.6	9.6	10.7		11.2				
Green Ext Time (p_c), s	0.0	5.2		0.1	0.0	6.4		0.5				

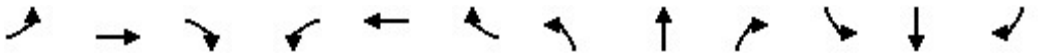
Intersection Summary		
HCM 6th Ctrl Delay		20.0
HCM 6th LOS		C

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary
12: Euclid Ave & Riverside Dr

02/22/2024



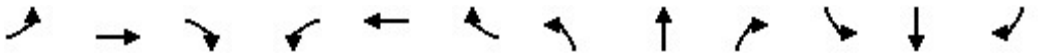
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	132	444	52	259	790	80	57	801	131	141	1056	137
Future Volume (veh/h)	132	444	52	259	790	80	57	801	131	141	1056	137
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	1.00		0.96	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	143	483	17	282	859	32	62	871	40	153	1148	96
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	167	521	430	306	1269	553	116	958	408	178	1082	619
Arrive On Green	0.10	0.28	0.28	0.17	0.36	0.36	0.07	0.27	0.27	0.10	0.31	0.31
Sat Flow, veh/h	1753	1841	1519	1753	3497	1524	1753	3497	1490	1753	3497	1521
Grp Volume(v), veh/h	143	483	17	282	859	32	62	871	40	153	1148	96
Grp Sat Flow(s),veh/h/ln	1753	1841	1519	1753	1749	1524	1753	1749	1490	1753	1749	1521
Q Serve(g_s), s	11.0	35.0	1.1	21.7	28.5	1.9	4.7	33.1	2.8	11.8	42.5	5.5
Cycle Q Clear(g_c), s	11.0	35.0	1.1	21.7	28.5	1.9	4.7	33.1	2.8	11.8	42.5	5.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	167	521	430	306	1269	553	116	958	408	178	1082	619
V/C Ratio(X)	0.86	0.93	0.04	0.92	0.68	0.06	0.54	0.91	0.10	0.86	1.06	0.16
Avail Cap(c_a), veh/h	257	576	475	412	1405	612	128	1018	434	240	1082	619
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	61.2	47.8	35.7	55.8	37.0	28.5	62.1	48.2	37.2	60.8	47.4	26.0
Incr Delay (d2), s/veh	10.4	20.7	0.1	18.8	1.4	0.1	3.8	11.3	0.1	20.5	45.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.3	18.6	0.4	10.9	11.9	0.7	2.2	15.6	1.0	6.2	24.8	2.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	71.6	68.5	35.7	74.5	38.3	28.6	65.9	59.5	37.3	81.3	92.5	26.1
LnGrp LOS	E	E	D	E	D	C	E	E	D	F	F	C
Approach Vol, veh/h		643			1173			973			1397	
Approach Delay, s/veh		68.4			46.8			59.0			86.7	
Approach LOS		E			D			E			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	19.1	43.6	28.7	45.9	14.3	48.5	17.8	56.8
Change Period (Y+Rc), s	* 5.2	6.0	* 4.7	7.0	* 5.2	6.0	* 4.7	7.0
Max Green Setting (Gmax), s	* 19	40.0	* 32	43.0	* 10	42.5	* 20	55.2
Max Q Clear Time (g_c+I1), s	13.8	35.1	23.7	37.0	6.7	44.5	13.0	30.5
Green Ext Time (p_c), s	0.2	2.4	0.3	1.9	0.0	0.0	0.1	8.2

Intersection Summary	
HCM 6th Ctrl Delay	66.3
HCM 6th LOS	E

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



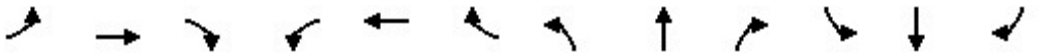
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	86	597	34	84	928	226	24	295	87	104	262	179
Future Volume (veh/h)	86	597	34	84	928	226	24	295	87	104	262	179
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	1.00		0.97	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	93	649	13	91	1009	225	26	321	85	113	285	60
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	150	667	549	149	1025	228	272	420	111	175	555	462
Arrive On Green	0.08	0.36	0.36	0.08	0.36	0.36	0.30	0.30	0.30	0.30	0.30	0.30
Sat Flow, veh/h	1767	1856	1527	1767	2856	635	1083	1403	372	969	1856	1544
Grp Volume(v), veh/h	93	649	13	91	622	612	26	0	406	113	285	60
Grp Sat Flow(s),veh/h/ln	1767	1856	1527	1767	1763	1728	1083	0	1775	969	1856	1544
Q Serve(g_s), s	4.2	28.8	0.5	4.2	29.2	29.4	1.7	0.0	17.4	7.6	10.6	2.4
Cycle Q Clear(g_c), s	4.2	28.8	0.5	4.2	29.2	29.4	12.3	0.0	17.4	25.0	10.6	2.4
Prop In Lane	1.00		1.00	1.00		0.37	1.00		0.21	1.00		1.00
Lane Grp Cap(c), veh/h	150	667	549	149	633	620	272	0	531	175	555	462
V/C Ratio(X)	0.62	0.97	0.02	0.61	0.98	0.99	0.10	0.00	0.76	0.65	0.51	0.13
Avail Cap(c_a), veh/h	423	667	549	423	633	620	272	0	531	175	555	462
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.0	26.4	17.3	37.0	26.5	26.6	29.4	0.0	26.6	38.8	24.3	21.4
Incr Delay (d2), s/veh	1.6	28.1	0.0	1.5	31.3	32.8	0.2	0.0	6.8	8.1	0.8	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	16.3	0.1	1.7	16.1	16.2	0.4	0.0	7.8	2.6	4.5	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	38.5	54.5	17.3	38.5	57.8	59.4	29.5	0.0	33.4	46.9	25.1	21.5
LnGrp LOS	D	D	B	D	E	E	C	A	C	D	C	C
Approach Vol, veh/h		755			1325			432			458	
Approach Delay, s/veh		51.9			57.2			33.1			30.0	
Approach LOS		D			E			C			C	

Timer - Assigned Phs	2	3	4	6	7	8
Phs Duration (G+Y+Rc), s	31.5	14.5	37.5	31.5	14.6	37.5
Change Period (Y+Rc), s	6.5	7.5	7.5	6.5	7.5	7.5
Max Green Setting (Gmax), s	25.0	20.0	30.0	25.0	20.0	30.0
Max Q Clear Time (g_c+I1), s	19.4	6.2	30.8	27.0	6.2	31.4
Green Ext Time (p_c), s	1.4	0.1	0.0	0.0	0.1	0.0

Intersection Summary	
HCM 6th Ctrl Delay	48.2
HCM 6th LOS	D

Notes

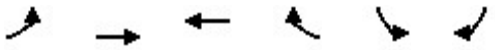
User approved pedestrian interval to be less than phase max green.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	195	697	3	3	1107	238	4	10	8	157	50	180
Future Volume (veh/h)	195	697	3	3	1107	238	4	10	8	157	50	180
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.97	1.00		0.96	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	217	774	3	3	1230	253	4	11	1	174	56	50
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	252	920	4	7	1044	212	11	119	11	208	339	281
Arrive On Green	0.14	0.50	0.50	0.00	0.36	0.36	0.01	0.07	0.07	0.12	0.18	0.18
Sat Flow, veh/h	1767	1847	7	1767	2901	590	1767	1669	152	1767	1856	1535
Grp Volume(v), veh/h	217	0	777	3	742	741	4	0	12	174	56	50
Grp Sat Flow(s),veh/h/ln	1767	0	1854	1767	1763	1729	1767	0	1821	1767	1856	1535
Q Serve(g_s), s	11.7	0.0	35.2	0.2	35.0	35.0	0.2	0.0	0.6	9.4	2.5	2.7
Cycle Q Clear(g_c), s	11.7	0.0	35.2	0.2	35.0	35.0	0.2	0.0	0.6	9.4	2.5	2.7
Prop In Lane	1.00		0.00	1.00		0.34	1.00		0.08	1.00		1.00
Lane Grp Cap(c), veh/h	252	0	924	7	634	622	11	0	130	208	339	281
V/C Ratio(X)	0.86	0.00	0.84	0.42	1.17	1.19	0.36	0.00	0.09	0.84	0.17	0.18
Avail Cap(c_a), veh/h	363	0	924	363	634	622	363	0	562	363	572	473
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.8	0.0	21.1	48.3	31.1	31.1	48.1	0.0	42.2	42.0	33.5	33.6
Incr Delay (d2), s/veh	12.1	0.0	7.2	27.2	92.3	101.5	13.8	0.0	0.4	6.5	0.3	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.6	0.0	14.9	0.1	29.6	30.7	0.1	0.0	0.3	4.3	1.1	1.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	52.9	0.0	28.2	75.5	123.4	132.6	61.9	0.0	42.6	48.4	33.8	33.9
LnGrp LOS	D	A	C	E	F	F	E	A	D	D	C	C
Approach Vol, veh/h		994			1486			16			280	
Approach Delay, s/veh		33.6			127.9			47.4			42.9	
Approach LOS		C			F			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	21.4	42.5	8.1	25.3	7.9	56.0	19.0	14.4
Change Period (Y+Rc), s	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5
Max Green Setting (Gmax), s	20.0	35.0	20.0	30.0	20.0	35.0	20.0	30.0
Max Q Clear Time (g_c+I1), s	13.7	37.0	2.2	4.7	2.2	37.2	11.4	2.6
Green Ext Time (p_c), s	0.2	0.0	0.0	0.5	0.0	0.0	0.2	0.0

Intersection Summary	
HCM 6th Ctrl Delay	85.1
HCM 6th LOS	F



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	267	534	880	310	295	266
Future Volume (veh/h)	267	534	880	310	295	266
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			0.97	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	284	568	936	297	314	64
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	319	1180	981	310	359	319
Arrive On Green	0.18	0.64	0.38	0.38	0.20	0.20
Sat Flow, veh/h	1767	1856	2708	826	1767	1572
Grp Volume(v), veh/h	284	568	630	603	314	64
Grp Sat Flow(s),veh/h/ln	1767	1856	1763	1678	1767	1572
Q Serve(g_s), s	14.6	15.0	32.3	32.7	16.0	3.1
Cycle Q Clear(g_c), s	14.6	15.0	32.3	32.7	16.0	3.1
Prop In Lane	1.00			0.49	1.00	1.00
Lane Grp Cap(c), veh/h	319	1180	661	629	359	319
V/C Ratio(X)	0.89	0.48	0.95	0.96	0.88	0.20
Avail Cap(c_a), veh/h	380	1180	663	631	474	422
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.3	8.9	28.3	28.4	36.0	30.8
Incr Delay (d2), s/veh	19.1	0.4	23.8	25.9	14.1	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.5	4.5	16.3	16.0	7.9	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	56.4	9.3	52.1	54.3	50.1	31.2
LnGrp LOS	E	A	D	D	D	C
Approach Vol, veh/h		852	1233		378	
Approach Delay, s/veh		25.0	53.2		46.9	
Approach LOS		C	D		D	

Timer - Assigned Phs		4		6	7	8
Phs Duration (G+Y+Rc), s		66.7		26.4	24.3	42.4
Change Period (Y+Rc), s		7.5		7.5	7.5	7.5
Max Green Setting (Gmax), s		35.0		25.0	20.0	35.0
Max Q Clear Time (g_c+I1), s		17.0		18.0	16.6	34.7
Green Ext Time (p_c), s		3.6		0.9	0.2	0.2

Intersection Summary	
HCM 6th Ctrl Delay	42.5
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

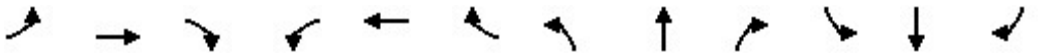
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	8	775	10	25	1166	5	36	3	66	6	1	28
Future Volume (veh/h)	8	775	10	25	1166	5	36	3	66	6	1	28
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	0.99		0.98	0.99		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	9	833	11	27	1254	5	39	3	11	6	1	4
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	29	1621	21	78	1739	7	238	29	35	185	45	63
Arrive On Green	0.02	0.46	0.46	0.04	0.48	0.48	0.11	0.11	0.11	0.11	0.11	0.11
Sat Flow, veh/h	1767	3561	47	1767	3601	14	915	256	307	578	399	558
Grp Volume(v), veh/h	9	412	432	27	614	645	53	0	0	11	0	0
Grp Sat Flow(s),veh/h/ln	1767	1763	1846	1767	1763	1852	1478	0	0	1535	0	0
Q Serve(g_s), s	0.2	7.7	7.7	0.7	12.8	12.9	0.7	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.2	7.7	7.7	0.7	12.8	12.9	1.4	0.0	0.0	0.3	0.0	0.0
Prop In Lane	1.00		0.03	1.00		0.01	0.74		0.21	0.55		0.36
Lane Grp Cap(c), veh/h	29	802	840	78	851	895	302	0	0	294	0	0
V/C Ratio(X)	0.31	0.51	0.51	0.34	0.72	0.72	0.18	0.00	0.00	0.04	0.00	0.00
Avail Cap(c_a), veh/h	760	1326	1389	760	1326	1394	909	0	0	914	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	22.6	9.0	9.0	21.6	9.5	9.5	18.9	0.0	0.0	18.4	0.0	0.0
Incr Delay (d2), s/veh	5.8	0.5	0.5	2.6	1.2	1.1	0.2	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	1.7	1.8	0.3	3.0	3.1	0.5	0.0	0.0	0.1	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	28.4	9.5	9.5	24.2	10.7	10.7	19.1	0.0	0.0	18.4	0.0	0.0
LnGrp LOS	C	A	A	C	B	B	B	A	A	B	A	A
Approach Vol, veh/h		853			1286			53			11	
Approach Delay, s/veh		9.7			11.0			19.1			18.4	
Approach LOS		A			B			B			B	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		11.3	7.1	28.2		11.3	5.8	29.5				
Change Period (Y+Rc), s		6.0	5.0	7.0		6.0	5.0	7.0				
Max Green Setting (Gmax), s		25.0	20.0	35.0		25.0	20.0	35.0				
Max Q Clear Time (g_c+I1), s		3.4	2.7	9.7		2.3	2.2	14.9				
Green Ext Time (p_c), s		0.2	0.0	4.7		0.0	0.0	7.6				

Intersection Summary	
HCM 6th Ctrl Delay	10.7
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	230	429	228	107	641	237	329	1440	75	133	600	202
Future Volume (veh/h)	230	429	228	107	641	237	329	1440	75	133	600	202
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.97	1.00		0.98	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781
Adj Flow Rate, veh/h	250	466	209	116	697	234	358	1565	80	145	652	182
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	8	8	8	8	8	8	8	8	8	8	8	8
Cap, veh/h	286	774	345	145	642	215	389	1649	84	177	843	231
Arrive On Green	0.17	0.34	0.34	0.09	0.26	0.26	0.23	0.35	0.35	0.10	0.22	0.22
Sat Flow, veh/h	1697	2261	1006	1697	2468	829	1697	4731	242	1697	3769	1031
Grp Volume(v), veh/h	250	348	327	116	478	453	358	1072	573	145	559	275
Grp Sat Flow(s),veh/h/ln	1697	1692	1574	1697	1692	1605	1697	1621	1731	1697	1621	1558
Q Serve(g_s), s	19.4	22.9	23.2	9.0	35.0	35.0	27.8	43.3	43.4	11.3	21.8	22.4
Cycle Q Clear(g_c), s	19.4	22.9	23.2	9.0	35.0	35.0	27.8	43.3	43.4	11.3	21.8	22.4
Prop In Lane	1.00		0.64	1.00		0.52	1.00		0.14	1.00		0.66
Lane Grp Cap(c), veh/h	286	580	539	145	440	417	389	1130	603	177	725	349
V/C Ratio(X)	0.88	0.60	0.61	0.80	1.09	1.09	0.92	0.95	0.95	0.82	0.77	0.79
Avail Cap(c_a), veh/h	441	580	539	441	440	417	441	1130	603	441	843	405
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	54.6	36.6	36.7	60.4	49.8	49.8	50.7	42.7	42.7	59.1	49.0	49.3
Incr Delay (d2), s/veh	17.9	2.6	2.9	18.7	68.2	69.3	25.2	16.3	25.1	17.5	5.1	11.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.4	9.5	9.0	4.5	22.5	21.5	14.1	19.0	21.8	5.6	9.0	9.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	72.5	39.2	39.7	79.1	118.0	119.2	75.9	59.0	67.8	76.6	54.1	60.5
LnGrp LOS	E	D	D	E	F	F	E	E	E	E	D	E
Approach Vol, veh/h		925			1047			2003			979	
Approach Delay, s/veh		48.4			114.2			64.6			59.2	
Approach LOS		D			F			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.0	50.9	15.5	50.1	34.9	34.1	26.7	39.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0
Max Q Clear Time (g_c+I1), s	13.3	45.4	11.0	25.2	29.8	24.4	21.4	37.0
Green Ext Time (p_c), s	0.8	0.0	0.7	4.4	1.1	5.7	1.3	0.0

Intersection Summary	
HCM 6th Ctrl Delay	71.0
HCM 6th LOS	E

HCM 6th Signalized Intersection Summary
27: Haven Ave & Riverside Dr

02/22/2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	309	421	16	103	482	152	11	490	133	263	329	293
Future Volume (veh/h)	309	421	16	103	482	152	11	490	133	263	329	293
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	1.00		0.96	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	322	439	17	107	502	134	11	510	133	274	343	62
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	346	586	23	132	573	152	6	279	73	352	370	307
Arrive On Green	0.20	0.33	0.33	0.07	0.21	0.21	0.20	0.20	0.20	0.20	0.20	0.20
Sat Flow, veh/h	1767	1772	69	1767	2742	727	30	1383	361	1767	1856	1539
Grp Volume(v), veh/h	322	0	456	107	322	314	654	0	0	274	343	62
Grp Sat Flow(s),veh/h/ln	1767	0	1841	1767	1763	1706	1773	0	0	1767	1856	1539
Q Serve(g_s), s	22.2	0.0	27.3	7.4	21.9	22.1	25.0	0.0	0.0	18.2	22.5	4.2
Cycle Q Clear(g_c), s	22.2	0.0	27.3	7.4	21.9	22.1	25.0	0.0	0.0	18.2	22.5	4.2
Prop In Lane	1.00		0.04	1.00		0.43	0.02		0.20	1.00		1.00
Lane Grp Cap(c), veh/h	346	0	608	132	369	357	358	0	0	352	370	307
V/C Ratio(X)	0.93	0.00	0.75	0.81	0.87	0.88	1.83	0.00	0.00	0.78	0.93	0.20
Avail Cap(c_a), veh/h	357	0	608	286	427	413	358	0	0	357	375	311
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	49.0	0.0	36.9	56.4	47.4	47.5	49.4	0.0	0.0	47.0	48.7	41.4
Incr Delay (d2), s/veh	29.5	0.0	5.2	4.5	16.0	17.5	382.6	0.0	0.0	9.9	28.5	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.2	0.0	12.5	3.4	10.9	10.8	48.8	0.0	0.0	8.8	13.0	1.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	78.4	0.0	42.0	61.0	63.3	65.0	432.0	0.0	0.0	56.9	77.2	41.6
LnGrp LOS	E	A	D	E	E	E	F	A	A	E	E	D
Approach Vol, veh/h		778			743			654			679	
Approach Delay, s/veh		57.1			63.7			432.0			65.8	
Approach LOS		E			E			F			E	

Timer - Assigned Phs	2	3	4	6	7	8
Phs Duration (G+Y+Rc), s	30.0	16.2	47.9	29.7	31.2	32.9
Change Period (Y+Rc), s	5.0	7.0	7.0	5.0	7.0	7.0
Max Green Setting (Gmax), s	25.0	20.0	30.0	25.0	25.0	30.0
Max Q Clear Time (g_c+I1), s	27.0	9.4	29.3	24.5	24.2	24.1
Green Ext Time (p_c), s	0.0	0.1	0.2	0.2	0.0	1.8

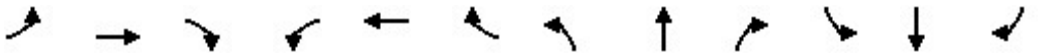
Intersection Summary	
HCM 6th Ctrl Delay	146.8
HCM 6th LOS	F

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary
28: Euclid Ave & Chino Ave

02/22/2024



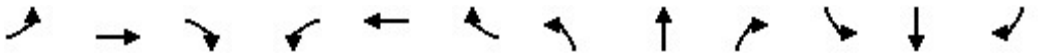
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	60	233	54	101	200	30	57	907	157	45	1234	94
Future Volume (veh/h)	60	233	54	101	200	30	57	907	157	45	1234	94
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.97	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	69	268	19	116	230	32	66	1043	111	52	1418	47
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	255	571	475	136	228	29	147	1175	509	266	1476	656
Arrive On Green	0.31	0.31	0.31	0.31	0.31	0.31	0.08	0.34	0.34	0.15	0.42	0.42
Sat Flow, veh/h	1098	1841	1532	286	734	94	1753	3497	1514	1753	3497	1554
Grp Volume(v), veh/h	69	268	19	378	0	0	66	1043	111	52	1418	47
Grp Sat Flow(s),veh/h/ln	1098	1841	1532	1114	0	0	1753	1749	1514	1753	1749	1554
Q Serve(g_s), s	0.0	11.8	0.9	19.2	0.0	0.0	3.6	28.2	5.3	2.6	39.4	1.8
Cycle Q Clear(g_c), s	9.2	11.8	0.9	31.0	0.0	0.0	3.6	28.2	5.3	2.6	39.4	1.8
Prop In Lane	1.00		1.00	0.31		0.08	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	255	571	475	392	0	0	147	1175	509	266	1476	656
V/C Ratio(X)	0.27	0.47	0.04	0.96	0.00	0.00	0.45	0.89	0.22	0.20	0.96	0.07
Avail Cap(c_a), veh/h	255	571	475	392	0	0	245	1175	509	266	1476	656
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.0	27.9	24.1	38.2	0.0	0.0	43.6	31.4	23.8	37.1	28.1	17.2
Incr Delay (d2), s/veh	0.6	0.6	0.0	35.8	0.0	0.0	0.8	10.1	1.0	0.1	15.8	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	5.1	0.3	12.8	0.0	0.0	1.5	12.5	1.9	1.1	17.9	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	27.5	28.5	24.1	74.0	0.0	0.0	44.4	41.5	24.8	37.2	43.9	17.4
LnGrp LOS	C	C	C	E	A	A	D	D	C	D	D	B
Approach Vol, veh/h		356			378			1220			1517	
Approach Delay, s/veh		28.1			74.0			40.1			42.8	
Approach LOS		C			E			D			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	21.7	40.1		38.2	13.1	48.7		38.2				
Change Period (Y+Rc), s	6.5	* 6.5		7.2	* 4.7	6.5		7.2				
Max Green Setting (Gmax), s	14.0	* 34		31.0	* 14	36.6		31.0				
Max Q Clear Time (g_c+I1), s	4.6	30.2		13.8	5.6	41.4		33.0				
Green Ext Time (p_c), s	0.0	2.1		1.6	0.0	0.0		0.0				

Intersection Summary	
HCM 6th Ctrl Delay	43.8
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	84	45	35	40	133	215	104	1565	34	92	772	69
Future Volume (veh/h)	84	45	35	40	133	215	104	1565	34	92	772	69
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781
Adj Flow Rate, veh/h	91	49	20	43	145	37	113	1701	37	100	839	72
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	8	8	8	8	8	8	8	8	8	8	8	8
Cap, veh/h	115	164	67	73	202	168	141	2169	47	126	1367	117
Arrive On Green	0.07	0.14	0.14	0.04	0.11	0.11	0.08	0.44	0.44	0.07	0.43	0.43
Sat Flow, veh/h	1697	1192	487	1697	1781	1486	1697	4896	106	1697	3148	270
Grp Volume(v), veh/h	91	0	69	43	145	37	113	1126	612	100	451	460
Grp Sat Flow(s),veh/h/ln	1697	0	1679	1697	1781	1486	1697	1621	1760	1697	1692	1726
Q Serve(g_s), s	4.9	0.0	3.4	2.3	7.3	2.1	6.1	27.5	27.6	5.4	19.1	19.1
Cycle Q Clear(g_c), s	4.9	0.0	3.4	2.3	7.3	2.1	6.1	27.5	27.6	5.4	19.1	19.1
Prop In Lane	1.00		0.29	1.00		1.00	1.00		0.06	1.00		0.16
Lane Grp Cap(c), veh/h	115	0	231	73	202	168	141	1437	780	126	735	749
V/C Ratio(X)	0.79	0.00	0.30	0.59	0.72	0.22	0.80	0.78	0.78	0.79	0.61	0.61
Avail Cap(c_a), veh/h	365	0	632	365	671	560	457	1570	853	457	820	836
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.6	0.0	36.0	43.6	39.8	37.5	41.8	22.1	22.1	42.3	20.3	20.3
Incr Delay (d2), s/veh	4.5	0.0	1.0	2.7	6.7	0.9	3.9	2.7	4.9	4.2	1.5	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	0.0	1.4	1.0	3.5	0.8	2.6	9.7	11.0	2.3	6.9	7.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	47.1	0.0	37.0	46.4	46.5	38.4	45.7	24.8	27.0	46.5	21.7	21.7
LnGrp LOS	D	A	D	D	D	D	D	C	C	D	C	C
Approach Vol, veh/h		160			225			1851			1011	
Approach Delay, s/veh		42.8			45.1			26.8			24.2	
Approach LOS		D			D			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.4	48.7	10.5	19.3	15.2	47.8	12.8	17.0
Change Period (Y+Rc), s	7.5	7.5	6.5	6.5	7.5	7.5	6.5	6.5
Max Green Setting (Gmax), s	25.0	45.0	20.0	35.0	25.0	45.0	20.0	35.0
Max Q Clear Time (g_c+I1), s	7.4	29.6	4.3	5.4	8.1	21.1	6.9	9.3
Green Ext Time (p_c), s	0.1	11.6	0.0	0.4	0.1	7.8	0.1	1.2

Intersection Summary	
HCM 6th Ctrl Delay	28.0
HCM 6th LOS	C

HCM 6th Signalized Intersection Summary
35: Euclid Ave & Edison Ave

02/22/2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	71	331	196	98	487	79	286	918	70	141	1089	133
Future Volume (veh/h)	71	331	196	98	487	79	286	918	70	141	1089	133
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.97	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	77	360	70	107	529	82	311	998	29	153	1184	78
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	68	609	507	226	513	80	382	1366	592	184	1339	587
Arrive On Green	0.33	0.33	0.33	0.33	0.33	0.33	0.11	0.39	0.39	0.10	0.38	0.38
Sat Flow, veh/h	798	1841	1532	941	1552	241	3401	3497	1516	1753	3497	1533
Grp Volume(v), veh/h	77	360	70	107	0	611	311	998	29	153	1184	78
Grp Sat Flow(s),veh/h/ln	798	1841	1532	941	0	1792	1700	1749	1516	1753	1749	1533
Q Serve(g_s), s	0.0	17.2	3.4	11.3	0.0	35.0	9.5	25.7	1.3	9.1	33.4	3.5
Cycle Q Clear(g_c), s	35.0	17.2	3.4	28.5	0.0	35.0	9.5	25.7	1.3	9.1	33.4	3.5
Prop In Lane	1.00		1.00	1.00		0.13	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	68	609	507	226	0	593	382	1366	592	184	1339	587
V/C Ratio(X)	1.13	0.59	0.14	0.47	0.00	1.03	0.81	0.73	0.05	0.83	0.88	0.13
Avail Cap(c_a), veh/h	68	609	507	226	0	593	803	1487	645	414	1487	652
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.9	29.5	24.8	41.3	0.0	35.4	45.9	27.5	20.0	46.5	30.5	21.2
Incr Delay (d2), s/veh	149.4	1.5	0.1	1.5	0.0	45.1	1.6	1.7	0.0	3.8	6.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.6	7.5	1.2	2.6	0.0	21.7	3.9	10.0	0.4	3.9	13.8	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	202.3	31.0	25.0	42.8	0.0	80.5	47.5	29.2	20.1	50.2	36.7	21.3
LnGrp LOS	F	C	C	D	A	F	D	C	C	D	D	C
Approach Vol, veh/h		507			718			1338			1415	
Approach Delay, s/veh		56.2			74.9			33.2			37.3	
Approach LOS		E			E			C			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	15.8	47.8		42.2	16.6	47.0		42.2				
Change Period (Y+Rc), s	* 4.7	6.5		7.2	* 4.7	6.5		7.2				
Max Green Setting (Gmax), s	* 25	45.0		30.0	* 25	45.0		35.0				
Max Q Clear Time (g_c+I1), s	11.1	27.7		37.0	11.5	35.4		37.0				
Green Ext Time (p_c), s	0.1	5.8		0.0	0.4	5.1		0.0				

Intersection Summary	
HCM 6th Ctrl Delay	45.1
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

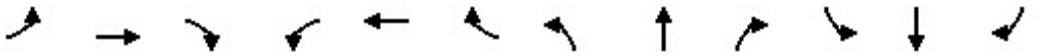
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	75	298	91	328	704	134	136	1251	185	78	712	93
Future Volume (veh/h)	75	298	91	328	704	134	136	1251	185	78	712	93
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	78	310	0	342	733	97	142	1303	0	81	742	54
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	155	927		488	668	556	186	1269		110	1118	484
Arrive On Green	0.05	0.26	0.00	0.14	0.36	0.36	0.11	0.36	0.00	0.06	0.32	0.32
Sat Flow, veh/h	3401	3497	1560	3401	1841	1533	1753	3497	1560	1753	3497	1513
Grp Volume(v), veh/h	78	310	0	342	733	97	142	1303	0	81	742	54
Grp Sat Flow(s),veh/h/ln	1700	1749	1560	1700	1841	1533	1753	1749	1560	1753	1749	1513
Q Serve(g_s), s	2.2	6.9	0.0	9.2	35.0	4.1	7.6	35.0	0.0	4.4	17.7	2.4
Cycle Q Clear(g_c), s	2.2	6.9	0.0	9.2	35.0	4.1	7.6	35.0	0.0	4.4	17.7	2.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	155	927		488	668	556	186	1269		110	1118	484
V/C Ratio(X)	0.50	0.33		0.70	1.10	0.17	0.76	1.03		0.74	0.66	0.11
Avail Cap(c_a), veh/h	1234	1269		1234	668	556	636	1269		636	1269	549
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.0	28.6	0.0	39.3	30.7	20.9	41.9	30.7	0.0	44.4	28.3	23.1
Incr Delay (d2), s/veh	5.4	0.5	0.0	3.9	64.4	0.3	12.9	32.2	0.0	18.4	1.7	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	2.8	0.0	3.9	25.9	1.4	3.7	18.7	0.0	2.3	7.0	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	50.3	29.0	0.0	43.2	95.1	21.2	54.8	62.9	0.0	62.8	30.1	23.4
LnGrp LOS	D	C		D	F	C	D	F		E	C	C
Approach Vol, veh/h		388	A		1172			1445	A		877	
Approach Delay, s/veh		33.3			73.8			62.1			32.7	
Approach LOS		C			E			E			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.0	39.0	17.8	29.5	14.2	34.8	8.4	39.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0
Max Q Clear Time (g_c+I1), s	6.4	37.0	11.2	8.9	9.6	19.7	4.2	37.0
Green Ext Time (p_c), s	0.4	0.0	2.6	3.4	0.9	7.0	0.5	0.0

Intersection Summary	
HCM 6th Ctrl Delay	56.1
HCM 6th LOS	E

Notes

Unsignalized Delay for [NBR, EBR] is excluded from calculations of the approach delay and intersection delay.



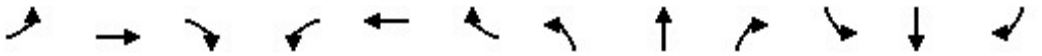
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	144	583	21	244	930	204	33	459	315	169	307	104
Future Volume (veh/h)	144	583	21	244	930	204	33	459	315	169	307	104
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.97	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	153	620	6	260	989	53	35	488	161	180	327	94
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	182	1256	382	324	1530	364	73	561	466	209	1025	290
Arrive On Green	0.10	0.25	0.25	0.10	0.24	0.24	0.04	0.30	0.30	0.12	0.38	0.38
Sat Flow, veh/h	1753	5025	1529	3401	6332	1508	1753	1841	1531	1753	2680	757
Grp Volume(v), veh/h	153	620	6	260	989	53	35	488	161	180	211	210
Grp Sat Flow(s),veh/h/ln	1753	1675	1529	1700	1583	1508	1753	1841	1531	1753	1749	1689
Q Serve(g_s), s	9.6	11.9	0.3	8.4	15.8	3.1	2.2	28.2	9.2	11.3	9.6	9.9
Cycle Q Clear(g_c), s	9.6	11.9	0.3	8.4	15.8	3.1	2.2	28.2	9.2	11.3	9.6	9.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.45
Lane Grp Cap(c), veh/h	182	1256	382	324	1530	364	73	561	466	209	669	646
V/C Ratio(X)	0.84	0.49	0.02	0.80	0.65	0.15	0.48	0.87	0.35	0.86	0.32	0.32
Avail Cap(c_a), veh/h	312	1786	544	604	2250	536	312	769	640	312	730	705
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	49.5	36.1	31.8	49.9	38.4	33.5	52.8	37.0	30.4	48.7	24.4	24.5
Incr Delay (d2), s/veh	4.0	0.4	0.0	1.8	0.7	0.3	1.8	6.4	0.2	10.3	0.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.3	4.7	0.1	3.5	5.8	1.1	1.0	13.1	3.2	5.4	3.8	3.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	53.6	36.6	31.8	51.6	39.0	33.8	54.6	43.4	30.6	58.9	24.5	24.6
LnGrp LOS	D	D	C	D	D	C	D	D	C	E	C	C
Approach Vol, veh/h		779			1302			684			601	
Approach Delay, s/veh		39.9			41.3			41.0			34.9	
Approach LOS		D			D			D			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	19.9	40.8	17.2	34.6	11.2	49.5	18.2	33.7
Change Period (Y+Rc), s	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
Max Green Setting (Gmax), s	20.0	47.0	20.0	40.0	20.0	47.0	20.0	40.0
Max Q Clear Time (g_c+I1), s	13.3	30.2	10.4	13.9	4.2	11.9	11.6	17.8
Green Ext Time (p_c), s	0.1	1.8	0.3	5.6	0.0	1.4	0.1	8.9

Intersection Summary	
HCM 6th Ctrl Delay	39.8
HCM 6th LOS	D

HCM 6th Signalized Intersection Summary
39: Hamner Ave & Ontario Ranch Rd

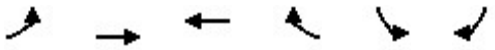
02/22/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	150	825	144	375	1129	331	165	659	499	145	214	51
Future Volume (veh/h)	150	825	144	375	1129	331	165	659	499	145	214	51
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	156	859	41	391	1176	228	172	686	142	151	223	11
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	242	1444	440	482	1252	549	248	980	298	224	658	287
Arrive On Green	0.07	0.29	0.29	0.14	0.36	0.36	0.07	0.20	0.20	0.07	0.19	0.19
Sat Flow, veh/h	3401	5025	1531	3401	3497	1533	3401	5025	1526	3401	3497	1525
Grp Volume(v), veh/h	156	859	41	391	1176	228	172	686	142	151	223	11
Grp Sat Flow(s),veh/h/ln	1700	1675	1531	1700	1749	1533	1700	1675	1526	1700	1749	1525
Q Serve(g_s), s	4.3	14.2	1.9	10.8	31.5	10.9	4.8	12.3	8.0	4.2	5.4	0.6
Cycle Q Clear(g_c), s	4.3	14.2	1.9	10.8	31.5	10.9	4.8	12.3	8.0	4.2	5.4	0.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	242	1444	440	482	1252	549	248	980	298	224	658	287
V/C Ratio(X)	0.64	0.59	0.09	0.81	0.94	0.42	0.69	0.70	0.48	0.67	0.34	0.04
Avail Cap(c_a), veh/h	1229	1816	553	1229	1264	554	878	1297	394	878	1264	551
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.8	29.7	25.3	40.3	30.1	23.4	43.8	36.3	34.6	44.2	34.1	32.1
Incr Delay (d2), s/veh	2.1	0.5	0.1	2.5	13.4	0.6	2.6	1.2	1.3	2.6	0.4	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	5.3	0.7	4.4	14.1	3.7	2.0	4.8	2.9	1.8	2.2	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	45.9	30.1	25.4	42.8	43.5	24.1	46.4	37.5	35.9	46.8	34.5	32.2
LnGrp LOS	D	C	C	D	D	C	D	D	D	D	C	C
Approach Vol, veh/h		1056			1795			1000			385	
Approach Delay, s/veh		32.3			40.9			38.8			39.2	
Approach LOS		C			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	21.2	35.3	14.6	25.7	14.4	42.2	13.9	26.4
Change Period (Y+Rc), s	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5
Max Green Setting (Gmax), s	35.0	35.0	25.0	35.0	35.0	35.0	25.0	25.0
Max Q Clear Time (g_c+I1), s	12.8	16.2	6.8	7.4	6.3	33.5	6.2	14.3
Green Ext Time (p_c), s	0.9	5.7	0.3	1.5	0.3	1.2	0.3	3.7

Intersection Summary	
HCM 6th Ctrl Delay	38.1
HCM 6th LOS	D



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	928	921	0	235	1457
Future Volume (veh/h)	0	928	921	0	235	1457
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	0	1841	1841	0	1841	1841
Adj Flow Rate, veh/h	0	1009	1001	0	255	1538
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	4	4	0	4	4
Cap, veh/h	0	1796	1250	0	799	1422
Arrive On Green	0.00	0.36	0.36	0.00	0.46	0.46
Sat Flow, veh/h	0	5356	3681	0	1753	3120
Grp Volume(v), veh/h	0	1009	1001	0	255	1538
Grp Sat Flow(s),veh/h/ln	0	1675	1749	0	1753	1560
Q Serve(g_s), s	0.0	10.6	17.0	0.0	6.1	30.0
Cycle Q Clear(g_c), s	0.0	10.6	17.0	0.0	6.1	30.0
Prop In Lane	0.00			0.00	1.00	1.00
Lane Grp Cap(c), veh/h	0	1796	1250	0	799	1422
V/C Ratio(X)	0.00	0.56	0.80	0.00	0.32	1.08
Avail Cap(c_a), veh/h	0	2290	1594	0	799	1422
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	17.0	19.0	0.0	11.4	17.9
Incr Delay (d2), s/veh	0.0	0.3	2.4	0.0	0.2	49.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	3.3	5.8	0.0	2.0	18.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.0	17.3	21.4	0.0	11.6	67.1
LnGrp LOS	A	B	C	A	B	F
Approach Vol, veh/h		1009	1001		1793	
Approach Delay, s/veh		17.3	21.4		59.3	
Approach LOS		B	C		E	

Timer - Assigned Phs	2	4	6
Phs Duration (G+Y+Rc), s	30.3	35.5	30.3
Change Period (Y+Rc), s	6.8	5.5	6.8
Max Green Setting (Gmax), s	30.0	30.0	30.0
Max Q Clear Time (g_c+I1), s	12.6	32.0	19.0
Green Ext Time (p_c), s	5.8	0.0	4.6

Intersection Summary	
HCM 6th Ctrl Delay	38.2
HCM 6th LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	327	836	177	300	743	328
Future Volume (veh/h)	327	836	177	300	743	328
Initial Q (Qb), veh	0	216	0	0	0	182
Ped-Bike Adj(A_pbT)		0.97	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	334	663	181	306	758	143
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	4	4	4	4	4	4
Cap, veh/h	1749	1070	272	2501	1220	543
Arrive On Green	0.36	0.36	0.09	0.53	0.27	0.27
Sat Flow, veh/h	5191	1515	3401	5191	3506	1560
Grp Volume(v), veh/h	334	663	181	306	758	143
Grp Sat Flow(s),veh/h/ln	1675	1515	1700	1675	1753	1560
Q Serve(g_s), s	3.1	19.6	3.6	2.1	13.8	5.1
Cycle Q Clear(g_c), s	3.1	19.6	3.6	2.1	13.8	5.1
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1749	1070	272	2501	1220	543
V/C Ratio(X)	0.19	0.62	0.67	0.12	0.62	0.26
Avail Cap(c_a), veh/h	2181	1086	1476	2677	1522	677
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.6	8.5	38.5	11.6	23.4	28.1
Incr Delay (d2), s/veh	0.1	1.1	2.8	0.0	0.5	0.3
Initial Q Delay(d3),s/veh	0.0	555.5	0.0	0.0	0.0	875.3
%ile BackOfQ(50%),veh/ln	1.4	186.7	1.8	0.9	6.3	142.8
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	19.7	565.1	41.3	11.6	23.9	903.7
LnGrp LOS	B	F	D	B	C	F
Approach Vol, veh/h	997			487	901	
Approach Delay, s/veh	382.4			22.6	163.5	
Approach LOS	F			C	F	

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	11.9	32.2				44.1	25.0
Change Period (Y+Rc), s	6.0	7.3				7.3	6.0
Max Green Setting (Gmax), s	30.0	30.0				30.0	30.0
Max Q Clear Time (g_c+I1), s	5.6	21.6				4.1	15.8
Green Ext Time (p_c), s	0.5	3.1				1.7	3.2

Intersection Summary			
HCM 6th Ctrl Delay		226.3	
HCM 6th LOS		F	

Notes

User approved pedestrian interval to be less than phase max green.
User approved volume balancing among the lanes for turning movement.

Intersection	
Intersection Delay, s/veh	7.2
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	5	0	0	7	0	0	9	0	0	36	0
Future Vol, veh/h	0	5	0	0	7	0	0	9	0	0	36	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	8	8	8	8	8	8	8	8	8	8	8	8
Mvmt Flow	0	5	0	0	8	0	0	10	0	0	39	0
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	7.2	7.2	7.1	7.3
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	0%	0%	0%	0%
Vol Thru, %	100%	100%	100%	100%
Vol Right, %	0%	0%	0%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	9	5	7	36
LT Vol	0	0	0	0
Through Vol	9	5	7	36
RT Vol	0	0	0	0
Lane Flow Rate	10	5	8	39
Geometry Grp	1	1	1	1
Degree of Util (X)	0.011	0.006	0.009	0.044
Departure Headway (Hd)	4.089	4.128	4.126	4.067
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	878	867	868	884
Service Time	2.102	2.151	2.149	2.075
HCM Lane V/C Ratio	0.011	0.006	0.009	0.044
HCM Control Delay	7.1	7.2	7.2	7.3
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0	0	0	0.1

Intersection	
Intersection Delay, s/veh	11.3
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	33	16	23	168	63	38	11	134	75	23	142	29
Future Vol, veh/h	33	16	23	168	63	38	11	134	75	23	142	29
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles, %	8	8	8	8	8	8	8	8	8	8	8	8
Mvmt Flow	35	17	25	181	68	41	12	144	81	25	153	31
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	9.5	12.5	10.9	10.8
HCM LOS	A	B	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	5%	46%	62%	12%
Vol Thru, %	61%	22%	23%	73%
Vol Right, %	34%	32%	14%	15%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	220	72	269	194
LT Vol	11	33	168	23
Through Vol	134	16	63	142
RT Vol	75	23	38	29
Lane Flow Rate	237	77	289	209
Geometry Grp	1	1	1	1
Degree of Util (X)	0.342	0.121	0.434	0.311
Departure Headway (Hd)	5.21	5.633	5.403	5.375
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	691	636	668	670
Service Time	3.242	3.672	3.432	3.407
HCM Lane V/C Ratio	0.343	0.121	0.433	0.312
HCM Control Delay	10.9	9.5	12.5	10.8
HCM Lane LOS	B	A	B	B
HCM 95th-tile Q	1.5	0.4	2.2	1.3

Intersection	
Intersection Delay, s/veh	68
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	15	359	84	152	597	25	34	35	26	6	28	24
Future Vol, veh/h	15	359	84	152	597	25	34	35	26	6	28	24
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles, %	4	4	4	4	4	4	4	4	4	4	4	4
Mvmt Flow	15	370	87	157	615	26	35	36	27	6	29	25
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	20.1	107.4	11.9	11.2
HCM LOS	C	F	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	36%	3%	20%	10%
Vol Thru, %	37%	78%	77%	48%
Vol Right, %	27%	18%	3%	41%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	95	458	774	58
LT Vol	34	15	152	6
Through Vol	35	359	597	28
RT Vol	26	84	25	24
Lane Flow Rate	98	472	798	60
Geometry Grp	1	1	1	1
Degree of Util (X)	0.186	0.69	1.159	0.114
Departure Headway (Hd)	7.221	5.578	5.23	7.255
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	500	652	702	497
Service Time	5.221	3.578	3.241	5.255
HCM Lane V/C Ratio	0.196	0.724	1.137	0.121
HCM Control Delay	11.9	20.1	107.4	11.2
HCM Lane LOS	B	C	F	B
HCM 95th-tile Q	0.7	5.5	25.4	0.4

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	86	675	25	193	1126	50	14	22	151	11	22	93
Future Vol, veh/h	86	675	25	193	1126	50	14	22	151	11	22	93
Conflicting Peds, #/hr	5	0	5	5	0	5	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	127	-	-	143	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	98	767	28	219	1280	57	16	25	172	13	25	106

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1342	0	0	800	0	0	2073	2762	786	2828	2748	674
Stage 1	-	-	-	-	-	-	982	982	-	1752	1752	-
Stage 2	-	-	-	-	-	-	1091	1780	-	1076	996	-
Critical Hdwy	4.145	-	-	4.145	-	-	7.345	6.545	6.245	7.345	6.545	6.945
Critical Hdwy Stg 1	-	-	-	-	-	-	6.145	5.545	-	6.545	5.545	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.545	5.545	-	6.145	5.545	-
Follow-up Hdwy	2.2285	-	-	2.2285	-	-	3.5285	4.0285	3.3285	3.5285	4.0285	3.3285
Pot Cap-1 Maneuver	507	-	-	815	-	-	35	~ 19	389	~ 9	~ 19	396
Stage 1	-	-	-	-	-	-	297	325	-	88	137	-
Stage 2	-	-	-	-	-	-	229	133	-	263	320	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	505	-	-	811	-	-	-	~ 11	387	-	~ 11	394
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	~ 11	-	-	~ 11	-
Stage 1	-	-	-	-	-	-	238	261	-	71	99	-
Stage 2	-	-	-	-	-	-	91	97	-	107	257	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.5	1.6		
HCM LOS			-	-

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	505	-	-	811	-	-	-
HCM Lane V/C Ratio	-	0.194	-	-	0.27	-	-	-
HCM Control Delay (s)	-	13.8	-	-	11.1	-	-	-
HCM Lane LOS	-	B	-	-	B	-	-	-
HCM 95th %tile Q(veh)	-	0.7	-	-	1.1	-	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	137.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	11	710	125	59	1150	18	108	13	87	21	11	45
Future Vol, veh/h	11	710	125	59	1150	18	108	13	87	21	11	45
Conflicting Peds, #/hr	5	0	5	5	0	5	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	69	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	12	772	136	64	1250	20	117	14	95	23	12	49

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1275	0	0	913	0	0	1628	2272	845	2312	2330	640
Stage 1	-	-	-	-	-	-	869	869	-	1393	1393	-
Stage 2	-	-	-	-	-	-	759	1403	-	919	937	-
Critical Hdwy	4.145	-	-	4.145	-	-	7.345	6.545	6.245	7.345	6.545	6.945
Critical Hdwy Stg 1	-	-	-	-	-	-	6.145	5.545	-	6.545	5.545	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.545	5.545	-	6.145	5.545	-
Follow-up Hdwy	2.2285	-	-	2.2285	-	-	3.5285	4.0285	3.3285	3.5285	4.0285	3.3285
Pot Cap-1 Maneuver	538	-	-	739	-	-	~ 74	40	360	23	36	417
Stage 1	-	-	-	-	-	-	344	366	-	149	206	-
Stage 2	-	-	-	-	-	-	364	204	-	322	341	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	535	-	-	735	-	-	~ 43	35	358	~ 11	32	415
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 43	35	-	~ 11	32	-
Stage 1	-	-	-	-	-	-	335	356	-	145	187	-
Stage 2	-	-	-	-	-	-	274	185	-	222	332	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.2	0.5	$ 1198.8	$ 953.7
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	67	535	-	-	735	-	-	33
HCM Lane V/C Ratio	3.374	0.022	-	-	0.087	-	-	2.536
HCM Control Delay (s)	$ 1198.8	11.9	-	-	10.4	-	-	$ 953.7
HCM Lane LOS	F	B	-	-	B	-	-	F
HCM 95th %tile Q(veh)	23.5	0.1	-	-	0.3	-	-	9.6

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	15.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	29	769	16	6	1125	12	58	4	21	14	3	42
Future Vol, veh/h	29	769	16	6	1125	12	58	4	21	14	3	42
Conflicting Peds, #/hr	5	0	5	5	0	5	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	98	-	-	47	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	32	854	18	7	1250	13	64	4	23	16	3	47

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1268	0	0	877	0	0	1573	2214	868	2217	2217	637
Stage 1	-	-	-	-	-	-	932	932	-	1276	1276	-
Stage 2	-	-	-	-	-	-	641	1282	-	941	941	-
Critical Hdwy	4.145	-	-	4.145	-	-	7.345	6.545	6.245	7.345	6.545	6.945
Critical Hdwy Stg 1	-	-	-	-	-	-	6.145	5.545	-	6.545	5.545	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.545	5.545	-	6.145	5.545	-
Follow-up Hdwy	2.2285	-	-	2.2285	-	-	3.5285	4.0285	3.3285	3.5285	4.0285	3.3285
Pot Cap-1 Maneuver	541	-	-	763	-	-	81	43	349	27	43	419
Stage 1	-	-	-	-	-	-	317	343	-	176	235	-
Stage 2	-	-	-	-	-	-	428	234	-	313	339	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	538	-	-	759	-	-	~ 64	40	347	22	40	417
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 64	40	-	22	40	-
Stage 1	-	-	-	-	-	-	297	321	-	165	232	-
Stage 2	-	-	-	-	-	-	371	231	-	271	317	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.4	0.1	254.2	174.4
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	78	538	-	-	759	-	-	73
HCM Lane V/C Ratio	1.182	0.06	-	-	0.009	-	-	0.898
HCM Control Delay (s)	254.2	12.1	-	-	9.8	-	-	174.4
HCM Lane LOS	F	B	-	-	A	-	-	F
HCM 95th %tile Q(veh)	6.8	0.2	-	-	0	-	-	4.5

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	828	1179	23	1	12
Future Vol, veh/h	0	828	1179	23	1	12
Conflicting Peds, #/hr	5	0	0	5	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	25	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	0	900	1282	25	1	13

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1312	0	-	0	2200	659
Stage 1	-	-	-	-	1300	-
Stage 2	-	-	-	-	900	-
Critical Hdwy	4.145	-	-	-	6.645	6.945
Critical Hdwy Stg 1	-	-	-	-	5.845	-
Critical Hdwy Stg 2	-	-	-	-	5.445	-
Follow-up Hdwy	2.2285	-	-	-	3.5285	3.3285
Pot Cap-1 Maneuver	521	-	-	-	43	405
Stage 1	-	-	-	-	219	-
Stage 2	-	-	-	-	394	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	519	-	-	-	43	403
Mov Cap-2 Maneuver	-	-	-	-	146	-
Stage 1	-	-	-	-	218	-
Stage 2	-	-	-	-	392	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	15.6
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	519	-	-	-	355
HCM Lane V/C Ratio	-	-	-	-	0.04
HCM Control Delay (s)	0	-	-	-	15.6
HCM Lane LOS	A	-	-	-	C
HCM 95th %tile Q(veh)	0	-	-	-	0.1

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	828	1200	7	0	3
Future Vol, veh/h	0	828	1200	7	0	3
Conflicting Peds, #/hr	5	0	0	5	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	25	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	0	900	1304	8	0	3

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1317	0	-	0	2213	661
Stage 1	-	-	-	-	1313	-
Stage 2	-	-	-	-	900	-
Critical Hdwy	4.145	-	-	-	6.645	6.945
Critical Hdwy Stg 1	-	-	-	-	5.845	-
Critical Hdwy Stg 2	-	-	-	-	5.445	-
Follow-up Hdwy	2.2285	-	-	-	3.5285	3.3285
Pot Cap-1 Maneuver	519	-	-	-	42	404
Stage 1	-	-	-	-	215	-
Stage 2	-	-	-	-	394	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	517	-	-	-	42	402
Mov Cap-2 Maneuver	-	-	-	-	144	-
Stage 1	-	-	-	-	214	-
Stage 2	-	-	-	-	392	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	14
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	517	-	-	-	402
HCM Lane V/C Ratio	-	-	-	-	0.008
HCM Control Delay (s)	0	-	-	-	14
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	2	847	1185	16	8	2
Future Vol, veh/h	2	847	1185	16	8	2
Conflicting Peds, #/hr	5	0	0	5	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	2	921	1288	17	9	2

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1310	0	-	0	2227	658
Stage 1	-	-	-	-	1302	-
Stage 2	-	-	-	-	925	-
Critical Hdwy	4.145	-	-	-	6.645	6.945
Critical Hdwy Stg 1	-	-	-	-	5.845	-
Critical Hdwy Stg 2	-	-	-	-	5.445	-
Follow-up Hdwy	2.2285	-	-	-	3.5285	3.3285
Pot Cap-1 Maneuver	522	-	-	-	41	406
Stage 1	-	-	-	-	218	-
Stage 2	-	-	-	-	383	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	520	-	-	-	40	404
Mov Cap-2 Maneuver	-	-	-	-	142	-
Stage 1	-	-	-	-	216	-
Stage 2	-	-	-	-	381	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	28.7
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	520	-	-	-	163
HCM Lane V/C Ratio	0.004	-	-	-	0.067
HCM Control Delay (s)	12	-	-	-	28.7
HCM Lane LOS	B	-	-	-	D
HCM 95th %tile Q(veh)	0	-	-	-	0.2

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	14	842	1188	18	17	18
Future Vol, veh/h	14	842	1188	18	17	18
Conflicting Peds, #/hr	5	0	0	5	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	350	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	15	925	1305	20	19	20

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1330	0	-	0	2275	668
Stage 1	-	-	-	-	1320	-
Stage 2	-	-	-	-	955	-
Critical Hdwy	4.145	-	-	-	6.645	6.945
Critical Hdwy Stg 1	-	-	-	-	5.845	-
Critical Hdwy Stg 2	-	-	-	-	5.445	-
Follow-up Hdwy	2.2285	-	-	-	3.5285	3.3285
Pot Cap-1 Maneuver	513	-	-	-	38	400
Stage 1	-	-	-	-	213	-
Stage 2	-	-	-	-	371	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	511	-	-	-	37	398
Mov Cap-2 Maneuver	-	-	-	-	136	-
Stage 1	-	-	-	-	206	-
Stage 2	-	-	-	-	369	-

Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	26.4
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	511	-	-	-	206
HCM Lane V/C Ratio	0.03	-	-	-	0.187
HCM Control Delay (s)	12.3	-	-	-	26.4
HCM Lane LOS	B	-	-	-	D
HCM 95th %tile Q(veh)	0.1	-	-	-	0.7

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	29	804	1215	15	2	2
Future Vol, veh/h	29	804	1215	15	2	2
Conflicting Peds, #/hr	5	0	0	5	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	175	-	-	-	0	76
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	32	884	1335	16	2	2

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1356	0	-	0	2296	681
Stage 1	-	-	-	-	1348	-
Stage 2	-	-	-	-	948	-
Critical Hdwy	4.145	-	-	-	6.645	6.945
Critical Hdwy Stg 1	-	-	-	-	5.845	-
Critical Hdwy Stg 2	-	-	-	-	5.445	-
Follow-up Hdwy	2.2285	-	-	-	3.5285	3.3285
Pot Cap-1 Maneuver	501	-	-	-	37	392
Stage 1	-	-	-	-	206	-
Stage 2	-	-	-	-	373	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	499	-	-	-	34	390
Mov Cap-2 Maneuver	-	-	-	-	34	-
Stage 1	-	-	-	-	192	-
Stage 2	-	-	-	-	371	-

Approach	EB	WB	SB
HCM Control Delay, s	0.4	0	66.2
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	499	-	-	-	34	390
HCM Lane V/C Ratio	0.064	-	-	-	0.065	0.006
HCM Control Delay (s)	12.7	-	-	-	118.1	14.3
HCM Lane LOS	B	-	-	-	F	B
HCM 95th %tile Q(veh)	0.2	-	-	-	0.2	0

Intersection	
Int Delay, s/veh	1.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	802	29	17	1178	35	19
Future Vol, veh/h	802	29	17	1178	35	19
Conflicting Peds, #/hr	0	5	5	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	200	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	862	31	18	1267	38	20

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	898	0	1553	883
Stage 1	-	-	-	-	883	-
Stage 2	-	-	-	-	670	-
Critical Hdwy	-	-	4.145	-	6.645	6.245
Critical Hdwy Stg 1	-	-	-	-	5.445	-
Critical Hdwy Stg 2	-	-	-	-	5.845	-
Follow-up Hdwy	-	-	2.2285	-	3.5285	3.3285
Pot Cap-1 Maneuver	-	-	749	-	113	342
Stage 1	-	-	-	-	401	-
Stage 2	-	-	-	-	469	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	745	-	110	340
Mov Cap-2 Maneuver	-	-	-	-	110	-
Stage 1	-	-	-	-	399	-
Stage 2	-	-	-	-	458	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	45.9
HCM LOS			E

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	144	-	-	745	-
HCM Lane V/C Ratio	0.403	-	-	0.025	-
HCM Control Delay (s)	45.9	-	-	10	-
HCM Lane LOS	E	-	-	A	-
HCM 95th %tile Q(veh)	1.7	-	-	0.1	-

Intersection	
Int Delay, s/veh	0.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	109	3	3	276	1	3
Future Vol, veh/h	109	3	3	276	1	3
Conflicting Peds, #/hr	0	5	5	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	8	8	8	8	8	8
Mvmt Flow	121	3	3	307	1	3

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	129	0	441	128
Stage 1	-	-	-	-	128	-
Stage 2	-	-	-	-	313	-
Critical Hdwy	-	-	4.18	-	6.48	6.28
Critical Hdwy Stg 1	-	-	-	-	5.48	-
Critical Hdwy Stg 2	-	-	-	-	5.48	-
Follow-up Hdwy	-	-	2.272	-	3.572	3.372
Pot Cap-1 Maneuver	-	-	1420	-	563	906
Stage 1	-	-	-	-	883	-
Stage 2	-	-	-	-	728	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1413	-	558	902
Mov Cap-2 Maneuver	-	-	-	-	558	-
Stage 1	-	-	-	-	879	-
Stage 2	-	-	-	-	726	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	9.6
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	782	-	-	1413	-
HCM Lane V/C Ratio	0.006	-	-	0.002	-
HCM Control Delay (s)	9.6	-	-	7.6	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0	-

Intersection	
Int Delay, s/veh	0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	112	2	0	273	2	0
Future Vol, veh/h	112	2	0	273	2	0
Conflicting Peds, #/hr	0	5	5	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	8	8	8	8	8	8
Mvmt Flow	119	2	0	290	2	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	126	0	415	125
Stage 1	-	-	-	-	125	-
Stage 2	-	-	-	-	290	-
Critical Hdwy	-	-	4.18	-	6.48	6.28
Critical Hdwy Stg 1	-	-	-	-	5.48	-
Critical Hdwy Stg 2	-	-	-	-	5.48	-
Follow-up Hdwy	-	-	2.272	-	3.572	3.372
Pot Cap-1 Maneuver	-	-	1424	-	583	910
Stage 1	-	-	-	-	886	-
Stage 2	-	-	-	-	746	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1417	-	580	906
Mov Cap-2 Maneuver	-	-	-	-	580	-
Stage 1	-	-	-	-	882	-
Stage 2	-	-	-	-	746	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	11.2
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	580	-	-	1417	-
HCM Lane V/C Ratio	0.004	-	-	-	-
HCM Control Delay (s)	11.2	-	-	0	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0	-

Intersection	
Int Delay, s/veh	1.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	8	103	4	6	260	36	4	5	8	12	5	8
Future Vol, veh/h	8	103	4	6	260	36	4	5	8	12	5	8
Conflicting Peds, #/hr	5	0	5	5	0	5	5	0	5	5	0	5
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	8	8	8	8	8	8	8	8	8	8	8	8
Mvmt Flow	8	106	4	6	268	37	4	5	8	12	5	8

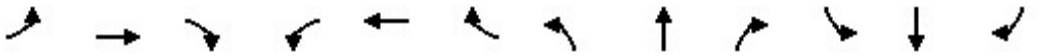
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	310	0	0	115	0	0	439	451	118	440	435	297
Stage 1	-	-	-	-	-	-	129	129	-	304	304	-
Stage 2	-	-	-	-	-	-	310	322	-	136	131	-
Critical Hdwy	4.18	-	-	4.18	-	-	7.18	6.58	6.28	7.18	6.58	6.28
Critical Hdwy Stg 1	-	-	-	-	-	-	6.18	5.58	-	6.18	5.58	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.18	5.58	-	6.18	5.58	-
Follow-up Hdwy	2.272	-	-	2.272	-	-	3.572	4.072	3.372	3.572	4.072	3.372
Pot Cap-1 Maneuver	1217	-	-	1437	-	-	518	495	918	517	505	728
Stage 1	-	-	-	-	-	-	860	778	-	693	652	-
Stage 2	-	-	-	-	-	-	688	640	-	853	776	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1211	-	-	1430	-	-	499	484	909	499	494	721
Mov Cap-2 Maneuver	-	-	-	-	-	-	499	484	-	499	494	-
Stage 1	-	-	-	-	-	-	850	769	-	685	645	-
Stage 2	-	-	-	-	-	-	668	634	-	830	767	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.6	0.1	10.9	11.8
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	626	1211	-	-	1430	-	-	552
HCM Lane V/C Ratio	0.028	0.007	-	-	0.004	-	-	0.047
HCM Control Delay (s)	10.9	8	0	-	7.5	0	-	11.8
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.1

HCM 6th Signalized Intersection Summary
1: Grove Ave & Mission Blvd

02/22/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	255	770	113	29	748	607	205	1012	55	502	856	208
Future Volume (veh/h)	255	770	113	29	748	607	205	1012	55	502	856	208
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	258	778	32	29	756	244	207	1022	54	507	865	85
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	307	927	411	137	752	333	216	1050	55	528	1977	603
Arrive On Green	0.09	0.27	0.27	0.04	0.22	0.22	0.12	0.22	0.22	0.30	0.39	0.39
Sat Flow, veh/h	3401	3497	1551	3401	3497	1549	1753	4880	258	1753	5025	1534
Grp Volume(v), veh/h	258	778	32	29	756	244	207	701	375	507	865	85
Grp Sat Flow(s),veh/h/ln	1700	1749	1551	1700	1749	1549	1753	1675	1788	1753	1675	1534
Q Serve(g_s), s	12.1	34.2	2.5	1.3	35.0	23.9	19.1	33.8	33.9	46.3	20.5	5.8
Cycle Q Clear(g_c), s	12.1	34.2	2.5	1.3	35.0	23.9	19.1	33.8	33.9	46.3	20.5	5.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.14	1.00		1.00
Lane Grp Cap(c), veh/h	307	927	411	137	752	333	216	721	385	528	1977	603
V/C Ratio(X)	0.84	0.84	0.08	0.21	1.00	0.73	0.96	0.97	0.97	0.96	0.44	0.14
Avail Cap(c_a), veh/h	627	927	411	418	752	333	216	721	385	593	1977	603
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	72.8	56.5	44.9	75.6	63.8	59.5	71.0	63.4	63.4	55.9	36.2	31.7
Incr Delay (d2), s/veh	4.6	7.0	0.1	0.6	34.0	8.3	49.9	26.9	39.2	25.6	0.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.4	15.7	1.0	0.6	18.6	9.9	11.4	16.7	19.2	23.7	8.3	2.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	77.5	63.5	45.0	76.1	97.8	67.8	120.8	90.3	102.6	81.5	36.4	31.8
LnGrp LOS	E	E	D	E	F	E	F	F	F	F	D	C
Approach Vol, veh/h		1068			1029			1283			1457	
Approach Delay, s/veh		66.4			90.1			98.8			51.8	
Approach LOS		E			F			F			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	56.0	42.0	14.1	50.6	27.0	71.0	22.2	42.5
Change Period (Y+Rc), s	7.0	7.0	7.5	7.5	7.0	7.0	7.5	7.5
Max Green Setting (Gmax), s	55.0	35.0	20.0	35.0	20.0	35.0	30.0	35.0
Max Q Clear Time (g_c+I1), s	48.3	35.9	3.3	36.2	21.1	22.5	14.1	37.0
Green Ext Time (p_c), s	0.7	0.0	0.0	0.0	0.0	6.0	0.5	0.0

Intersection Summary	
HCM 6th Ctrl Delay	75.6
HCM 6th LOS	E

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary
2: Vineyard Ave & Mission Blvd

02/22/2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	48	1077	292	49	823	4	354	42	86	4	30	43
Future Volume (veh/h)	48	1077	292	49	823	4	354	42	86	4	30	43
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	50	1122	165	51	857	4	369	44	24	4	31	0
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	107	1333	587	108	1363	6	458	951	418	442	951	
Arrive On Green	0.06	0.38	0.38	0.06	0.38	0.38	0.27	0.27	0.27	0.27	0.27	0.00
Sat Flow, veh/h	1753	3497	1539	1753	3569	17	1357	3497	1539	1312	3589	0
Grp Volume(v), veh/h	50	1122	165	51	420	441	369	44	24	4	31	0
Grp Sat Flow(s),veh/h/ln	1753	1749	1539	1753	1749	1837	1357	1749	1539	1312	1749	0
Q Serve(g_s), s	2.0	21.5	5.5	2.1	14.4	14.4	19.5	0.7	0.8	0.2	0.5	0.0
Cycle Q Clear(g_c), s	2.0	21.5	5.5	2.1	14.4	14.4	20.0	0.7	0.8	0.8	0.5	0.0
Prop In Lane	1.00		1.00	1.00		0.01	1.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	107	1333	587	108	668	702	458	951	418	442	951	
V/C Ratio(X)	0.47	0.84	0.28	0.47	0.63	0.63	0.81	0.05	0.06	0.01	0.03	
Avail Cap(c_a), veh/h	476	1426	628	476	713	749	458	951	418	442	951	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	33.4	20.7	15.8	33.4	18.5	18.5	27.3	19.8	19.8	20.1	19.7	0.0
Incr Delay (d2), s/veh	1.2	4.7	0.4	1.2	1.9	1.9	11.0	0.0	0.1	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	8.0	1.7	0.8	5.1	5.4	7.1	0.3	0.3	0.0	0.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	34.6	25.5	16.1	34.6	20.4	20.3	38.3	19.8	19.9	20.1	19.7	0.0
LnGrp LOS	C	C	B	C	C	C	D	B	B	C	B	
Approach Vol, veh/h		1337			912			437			35	A
Approach Delay, s/veh		24.7			21.2			35.4			19.8	
Approach LOS		C			C			D			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.5	35.1		27.0	11.5	35.1		27.0				
Change Period (Y+Rc), s	7.0	7.0		7.0	7.0	7.0		7.0				
Max Green Setting (Gmax), s	20.0	30.0		20.0	20.0	30.0		20.0				
Max Q Clear Time (g_c+I1), s	4.1	23.5		22.0	4.0	16.4		2.8				
Green Ext Time (p_c), s	0.0	4.5		0.0	0.0	5.4		0.1				

Intersection Summary	
HCM 6th Ctrl Delay	25.2
HCM 6th LOS	C

Notes

Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	22	262	86	118	188	41	33	360	38	19	434	9
Future Volume (veh/h)	22	262	86	118	188	41	33	360	38	19	434	9
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	26	305	76	137	219	35	38	419	37	22	505	10
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	387	554	136	363	760	120	293	834	73	301	845	17
Arrive On Green	0.03	0.20	0.20	0.09	0.25	0.25	0.05	0.26	0.26	0.03	0.24	0.24
Sat Flow, veh/h	1753	2771	678	1753	3018	474	1753	3246	285	1753	3506	69
Grp Volume(v), veh/h	26	190	191	137	125	129	38	225	231	22	252	263
Grp Sat Flow(s),veh/h/ln	1753	1749	1701	1753	1749	1744	1753	1749	1783	1753	1749	1827
Q Serve(g_s), s	0.7	6.2	6.4	3.8	3.7	3.8	1.0	6.9	7.0	0.6	8.1	8.1
Cycle Q Clear(g_c), s	0.7	6.2	6.4	3.8	3.7	3.8	1.0	6.9	7.0	0.6	8.1	8.1
Prop In Lane	1.00		0.40	1.00		0.27	1.00		0.16	1.00		0.04
Lane Grp Cap(c), veh/h	387	350	340	363	441	439	293	449	458	301	422	440
V/C Ratio(X)	0.07	0.54	0.56	0.38	0.28	0.29	0.13	0.50	0.50	0.07	0.60	0.60
Avail Cap(c_a), veh/h	754	979	953	640	979	977	627	966	984	663	966	1009
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	18.8	22.8	22.8	17.9	19.1	19.1	17.0	20.1	20.1	17.3	21.3	21.3
Incr Delay (d2), s/veh	0.1	1.9	2.1	0.6	0.5	0.5	0.2	1.2	1.2	0.1	1.9	1.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	2.4	2.4	1.4	1.3	1.4	0.4	2.6	2.7	0.2	3.1	3.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	18.9	24.6	24.9	18.5	19.6	19.7	17.2	21.3	21.3	17.4	23.2	23.2
LnGrp LOS	B	C	C	B	B	B	B	C	C	B	C	C
Approach Vol, veh/h		407			391			494			537	
Approach Delay, s/veh		24.4			19.2			21.0			23.0	
Approach LOS		C			B			C			C	

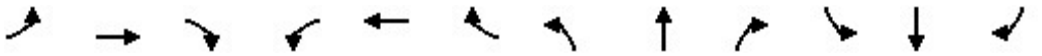
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.9	23.3	12.0	19.2	9.9	22.3	8.7	22.5
Change Period (Y+Rc), s	7.0	7.0	6.5	6.5	7.0	7.0	6.5	6.5
Max Green Setting (Gmax), s	15.0	35.0	15.5	35.5	15.0	35.0	15.5	35.5
Max Q Clear Time (g_c+I1), s	2.6	9.0	5.8	8.4	3.0	10.1	2.7	5.8
Green Ext Time (p_c), s	0.0	3.6	0.2	2.9	0.0	4.1	0.0	1.9

Intersection Summary	
HCM 6th Ctrl Delay	22.0
HCM 6th LOS	C

Min green cannot be greater than Max Green.

HCM 6th Signalized Intersection Summary
5: Euclid Ave & SR-60 WB Ramps

02/22/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	505	2	429	435	911	0	0	894	589
Future Volume (veh/h)	0	0	0	505	2	429	435	911	0	0	894	589
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		0.99
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1841	1841	1841	1841	1841	0	0	1841	1841
Adj Flow Rate, veh/h				635	0	232	453	949	0	0	931	173
Peak Hour Factor				0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %				4	4	4	4	4	0	0	4	4
Cap, veh/h				832	0	370	390	2162	0	0	1183	524
Arrive On Green				0.24	0.00	0.24	0.30	0.82	0.00	0.00	0.34	0.34
Sat Flow, veh/h				3506	0	1560	1753	3589	0	0	3589	1548
Grp Volume(v), veh/h				635	0	232	453	949	0	0	931	173
Grp Sat Flow(s),veh/h/ln				1753	0	1560	1753	1749	0	0	1749	1548
Q Serve(g_s), s				15.2	0.0	12.0	20.0	6.8	0.0	0.0	21.6	7.5
Cycle Q Clear(g_c), s				15.2	0.0	12.0	20.0	6.8	0.0	0.0	21.6	7.5
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				832	0	370	390	2162	0	0	1183	524
V/C Ratio(X)				0.76	0.00	0.63	1.16	0.44	0.00	0.00	0.79	0.33
Avail Cap(c_a), veh/h				1169	0	520	390	2162	0	0	1183	524
HCM Platoon Ratio				1.00	1.00	1.00	1.33	1.33	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.37	0.37	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				32.0	0.0	30.7	31.7	3.7	0.0	0.0	26.9	22.2
Incr Delay (d2), s/veh				2.5	0.0	2.5	83.9	0.2	0.0	0.0	5.3	1.7
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				6.6	0.0	4.7	16.4	1.6	0.0	0.0	9.3	2.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				34.5	0.0	33.2	115.6	3.9	0.0	0.0	32.2	23.9
LnGrp LOS				C	A	C	F	A	A	A	C	C
Approach Vol, veh/h					867			1402			1104	
Approach Delay, s/veh					34.1			40.0			30.9	
Approach LOS					C			D			C	

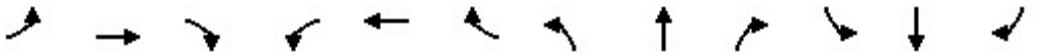
Timer - Assigned Phs	2		5	6		8						
Phs Duration (G+Y+Rc), s	61.6		25.2	36.4		28.4						
Change Period (Y+Rc), s	6.0		* 5.2	6.0		7.0						
Max Green Setting (Gmax), s	47.0		* 20	21.0		30.0						
Max Q Clear Time (g_c+I1), s	8.8		22.0	23.6		17.2						
Green Ext Time (p_c), s	11.2		0.0	0.0		4.2						

Intersection Summary	
HCM 6th Ctrl Delay	35.5
HCM 6th LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



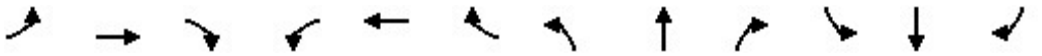
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	266	0	373	0	0	0	0	1115	419	261	1101	0
Future Volume (veh/h)	266	0	373	0	0	0	0	1115	419	261	1101	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1841	0	1841				0	1841	1841	1841	1841	0
Adj Flow Rate, veh/h	271	0	312				0	1138	152	266	1123	0
Peak Hour Factor	0.98	0.98	0.98				0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	4	0	4				0	4	4	4	4	0
Cap, veh/h	407	0	362				0	1383	613	309	2181	0
Arrive On Green	0.23	0.00	0.23				0.00	0.40	0.40	0.12	0.42	0.00
Sat Flow, veh/h	1753	0	1560				0	3589	1550	1753	3589	0
Grp Volume(v), veh/h	271	0	312				0	1138	152	266	1123	0
Grp Sat Flow(s),veh/h/ln	1753	0	1560				0	1749	1550	1753	1749	0
Q Serve(g_s), s	12.6	0.0	17.3				0.0	26.2	5.9	13.4	21.4	0.0
Cycle Q Clear(g_c), s	12.6	0.0	17.3				0.0	26.2	5.9	13.4	21.4	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	407	0	362				0	1383	613	309	2181	0
V/C Ratio(X)	0.67	0.00	0.86				0.00	0.82	0.25	0.86	0.51	0.00
Avail Cap(c_a), veh/h	487	0	433				0	1383	613	448	2181	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	0.67	0.67	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.34	0.34	0.00
Uniform Delay (d), s/veh	31.4	0.0	33.2				0.0	24.4	18.2	38.6	16.1	0.0
Incr Delay (d2), s/veh	3.3	0.0	15.3				0.0	5.7	1.0	4.2	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.6	0.0	7.9				0.0	11.0	2.1	6.2	8.9	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	34.7	0.0	48.5				0.0	30.0	19.2	42.8	16.4	0.0
LnGrp LOS	C	A	D				A	C	B	D	B	A
Approach Vol, veh/h		583						1290			1389	
Approach Delay, s/veh		42.1						28.8			21.5	
Approach LOS		D						C			C	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	20.5	41.6		27.9		62.1
Change Period (Y+Rc), s	* 4.7	6.0		7.0		6.0
Max Green Setting (Gmax), s	* 23	24.0		25.0		52.0
Max Q Clear Time (g_c+I1), s	15.4	28.2		19.3		23.4
Green Ext Time (p_c), s	0.5	0.0		1.6		12.5

Intersection Summary	
HCM 6th Ctrl Delay	28.0
HCM 6th LOS	C

Notes

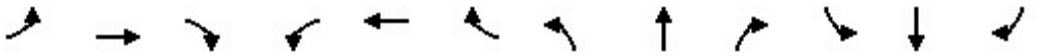
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	245	4	140	293	550	0	0	815	519
Future Volume (veh/h)	0	0	0	245	4	140	293	550	0	0	815	519
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		0.97
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1841	1841	1841	1841	1841	0	0	1841	1841
Adj Flow Rate, veh/h				261	4	31	312	585	0	0	867	436
Peak Hour Factor				0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %				4	4	4	4	4	0	0	4	4
Cap, veh/h				311	5	281	341	2361	0	0	937	466
Arrive On Green				0.18	0.18	0.18	0.39	1.00	0.00	0.00	0.42	0.42
Sat Flow, veh/h				1728	26	1560	1753	3589	0	0	2331	1113
Grp Volume(v), veh/h				265	0	31	312	585	0	0	675	628
Grp Sat Flow(s),veh/h/ln				1754	0	1560	1753	1749	0	0	1749	1603
Q Serve(g_s), s				11.7	0.0	1.3	13.5	0.0	0.0	0.0	29.3	30.0
Cycle Q Clear(g_c), s				11.7	0.0	1.3	13.5	0.0	0.0	0.0	29.3	30.0
Prop In Lane				0.98		1.00	1.00		0.00	0.00		0.69
Lane Grp Cap(c), veh/h				316	0	281	341	2361	0	0	731	671
V/C Ratio(X)				0.84	0.00	0.11	0.92	0.25	0.00	0.00	0.92	0.94
Avail Cap(c_a), veh/h				447	0	398	351	2361	0	0	731	671
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.55	0.55	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				31.7	0.0	27.4	23.8	0.0	0.0	0.0	22.0	22.3
Incr Delay (d2), s/veh				8.4	0.0	0.1	17.6	0.1	0.0	0.0	19.0	22.3
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				5.5	0.0	0.5	5.6	0.0	0.0	0.0	14.2	13.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				40.1	0.0	27.6	41.5	0.1	0.0	0.0	41.0	44.5
LnGrp LOS				D	A	C	D	A	A	A	D	D
Approach Vol, veh/h					296			897			1303	
Approach Delay, s/veh					38.8			14.5			42.7	
Approach LOS					D			B			D	

Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		59.8			20.5	39.3		20.2				
Change Period (Y+Rc), s		5.8			5.0	5.8		5.8				
Max Green Setting (Gmax), s		48.0			16.0	27.0		20.4				
Max Q Clear Time (g_c+I1), s		2.0			15.5	32.0		13.7				
Green Ext Time (p_c), s		3.2			0.0	0.0		0.7				

Intersection Summary												
HCM 6th Ctrl Delay			32.1									
HCM 6th LOS			C									



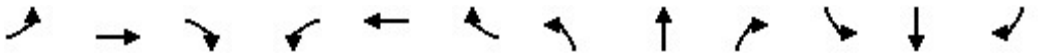
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	138	1	298	0	0	0	0	700	373	262	805	0
Future Volume (veh/h)	138	1	298	0	0	0	0	700	373	262	805	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		0.97	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841				0	1841	1841	1841	1841	0
Adj Flow Rate, veh/h	142	1	141				0	722	319	270	830	0
Peak Hour Factor	0.97	0.97	0.97				0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	4	4	4				0	4	4	4	4	0
Cap, veh/h	217	2	195				0	1138	503	317	2554	0
Arrive On Green	0.12	0.12	0.12				0.00	0.49	0.49	0.06	0.24	0.00
Sat Flow, veh/h	1741	12	1560				0	2430	1032	1753	3589	0
Grp Volume(v), veh/h	143	0	141				0	540	501	270	830	0
Grp Sat Flow(s),veh/h/ln	1754	0	1560				0	1749	1622	1753	1749	0
Q Serve(g_s), s	6.2	0.0	7.0				0.0	18.3	18.4	12.2	15.6	0.0
Cycle Q Clear(g_c), s	6.2	0.0	7.0				0.0	18.3	18.4	12.2	15.6	0.0
Prop In Lane	0.99		1.00				0.00		0.64	1.00		0.00
Lane Grp Cap(c), veh/h	219	0	195				0	851	790	317	2554	0
V/C Ratio(X)	0.65	0.00	0.72				0.00	0.63	0.63	0.85	0.32	0.00
Avail Cap(c_a), veh/h	381	0	339				0	851	790	592	2554	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	0.33	0.33	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.09	0.09	0.00
Uniform Delay (d), s/veh	33.4	0.0	33.7				0.0	15.2	15.2	36.5	14.1	0.0
Incr Delay (d2), s/veh	2.4	0.0	3.8				0.0	3.6	3.9	0.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.7	0.0	2.8				0.0	7.0	6.5	5.5	7.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	35.8	0.0	37.5				0.0	18.8	19.1	36.8	14.2	0.0
LnGrp LOS	D	A	D				A	B	B	D	B	A
Approach Vol, veh/h		284						1041			1100	
Approach Delay, s/veh		36.6						19.0			19.7	
Approach LOS		D						B			B	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	19.5	44.8		15.8		64.2
Change Period (Y+Rc), s	5.0	5.8		5.8		5.8
Max Green Setting (Gmax), s	27.0	19.0		17.4		51.0
Max Q Clear Time (g_c+I1), s	14.2	20.4		9.0		17.6
Green Ext Time (p_c), s	0.3	0.0		0.6		4.8

Intersection Summary	
HCM 6th Ctrl Delay	21.4
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.



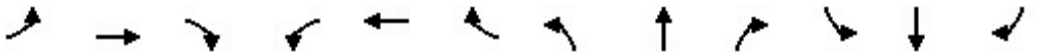
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	710	5	250	539	437	0	0	1095	252
Future Volume (veh/h)	0	0	0	710	5	250	539	437	0	0	1095	252
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		0.97
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1781	1781	1781	1781	1781	0	0	1781	1781
Adj Flow Rate, veh/h				783	0	58	573	465	0	0	1165	78
Peak Hour Factor				0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %				8	8	8	8	8	0	0	8	8
Cap, veh/h				845	0	376	951	3026	0	0	1702	406
Arrive On Green				0.25	0.00	0.25	0.48	1.00	0.00	0.00	0.28	0.28
Sat Flow, veh/h				3393	0	1510	3291	5024	0	0	6378	1462
Grp Volume(v), veh/h				783	0	58	573	465	0	0	1165	78
Grp Sat Flow(s),veh/h/ln				1697	0	1510	1646	1621	0	0	1532	1462
Q Serve(g_s), s				20.3	0.0	2.7	11.4	0.0	0.0	0.0	15.3	3.7
Cycle Q Clear(g_c), s				20.3	0.0	2.7	11.4	0.0	0.0	0.0	15.3	3.7
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				845	0	376	951	3026	0	0	1702	406
V/C Ratio(X)				0.93	0.00	0.15	0.60	0.15	0.00	0.00	0.68	0.19
Avail Cap(c_a), veh/h				845	0	376	951	3026	0	0	1702	406
HCM Platoon Ratio				1.00	1.00	1.00	1.67	1.67	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.76	0.76	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				33.0	0.0	26.4	19.5	0.0	0.0	0.0	29.0	24.8
Incr Delay (d2), s/veh				17.6	0.0	0.9	2.2	0.1	0.0	0.0	2.3	1.1
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				10.1	0.0	2.6	3.7	0.0	0.0	0.0	5.5	1.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				50.6	0.0	27.3	21.7	0.1	0.0	0.0	31.2	25.8
LnGrp LOS				D	A	C	C	A	A	A	C	C
Approach Vol, veh/h					841			1038			1243	
Approach Delay, s/veh					49.0			12.0			30.9	
Approach LOS					D			B			C	

Timer - Assigned Phs	2	4	5	6
Phs Duration (G+Y+Rc), s	61.8	28.2	31.0	30.8
Change Period (Y+Rc), s	5.8	5.8	5.0	5.8
Max Green Setting (Gmax), s	56.0	22.4	26.0	25.0
Max Q Clear Time (g_c+I1), s	2.0	22.3	13.4	17.3
Green Ext Time (p_c), s	3.2	0.1	0.9	4.4

Intersection Summary	
HCM 6th Ctrl Delay	29.5
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.
User approved volume balancing among the lanes for turning movement.

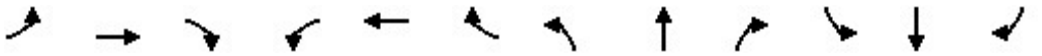


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	84	5	494	0	0	0	0	959	768	448	1353	0
Future Volume (veh/h)	84	5	494	0	0	0	0	959	768	448	1353	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		0.97	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1781	1781	1781				0	1781	1781	1781	1781	0
Adj Flow Rate, veh/h	60	0	453				0	999	347	467	1409	0
Peak Hour Factor	0.96	0.96	0.96				0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	8	8	8				0	8	8	8	8	0
Cap, veh/h	498	0	886				0	1566	373	878	2810	0
Arrive On Green	0.29	0.00	0.29				0.00	0.26	0.26	0.09	0.19	0.00
Sat Flow, veh/h	1697	0	3019				0	6378	1461	3291	5024	0
Grp Volume(v), veh/h	60	0	453				0	999	347	467	1409	0
Grp Sat Flow(s),veh/h/ln	1697	0	1510				0	1532	1461	1646	1621	0
Q Serve(g_s), s	2.3	0.0	11.2				0.0	13.0	20.9	12.2	23.3	0.0
Cycle Q Clear(g_c), s	2.3	0.0	11.2				0.0	13.0	20.9	12.2	23.3	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	498	0	886				0	1566	373	878	2810	0
V/C Ratio(X)	0.12	0.00	0.51				0.00	0.64	0.93	0.53	0.50	0.00
Avail Cap(c_a), veh/h	498	0	886				0	1566	373	878	2810	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	0.33	0.33	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.55	0.55	0.00
Uniform Delay (d), s/veh	23.3	0.0	26.4				0.0	29.8	32.7	35.7	24.8	0.0
Incr Delay (d2), s/veh	0.5	0.0	2.1				0.0	2.0	31.8	1.3	0.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	0.0	4.2				0.0	4.7	10.1	5.4	10.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.8	0.0	28.5				0.0	31.8	64.5	36.9	25.2	0.0
LnGrp LOS	C	A	C				A	C	E	D	C	A
Approach Vol, veh/h		513						1346			1876	
Approach Delay, s/veh		28.0						40.2			28.1	
Approach LOS		C						D			C	

Timer - Assigned Phs	1	2				6		8				
Phs Duration (G+Y+Rc), s	29.0	28.8				57.8		32.2				
Change Period (Y+Rc), s	5.0	5.8				5.8		5.8				
Max Green Setting (Gmax), s	24.0	23.0				52.0		26.4				
Max Q Clear Time (g_c+I1), s	14.2	22.9				25.3		13.2				
Green Ext Time (p_c), s	0.7	0.1				11.0		1.8				

Intersection Summary			
HCM 6th Ctrl Delay			32.5
HCM 6th LOS			C

Notes
User approved pedestrian interval to be less than phase max green.
User approved volume balancing among the lanes for turning movement.



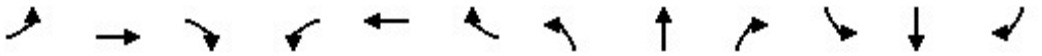
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	18	10	44	26	26	77	107	1391	41	91	1329	21
Future Volume (veh/h)	18	10	44	26	26	77	107	1391	41	91	1329	21
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.98		0.95	0.98		0.95	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781
Adj Flow Rate, veh/h	19	11	6	28	28	10	114	1480	43	97	1414	22
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	8	8	8	8	8	8	8	8	8	8	8	8
Cap, veh/h	206	127	69	223	147	53	141	2821	82	122	2809	44
Arrive On Green	0.12	0.12	0.12	0.12	0.12	0.12	0.08	0.58	0.58	0.07	0.57	0.57
Sat Flow, veh/h	1276	1064	580	1298	1236	441	1697	4852	141	1697	4930	77
Grp Volume(v), veh/h	19	0	17	28	0	38	114	989	534	97	930	506
Grp Sat Flow(s),veh/h/ln	1276	0	1644	1298	0	1677	1697	1621	1751	1697	1621	1765
Q Serve(g_s), s	1.2	0.0	0.8	1.8	0.0	1.8	5.9	16.5	16.5	5.1	15.6	15.6
Cycle Q Clear(g_c), s	3.1	0.0	0.8	2.6	0.0	1.8	5.9	16.5	16.5	5.1	15.6	15.6
Prop In Lane	1.00		0.35	1.00		0.26	1.00		0.08	1.00		0.04
Lane Grp Cap(c), veh/h	206	0	196	223	0	200	141	1885	1018	122	1848	1006
V/C Ratio(X)	0.09	0.00	0.09	0.13	0.00	0.19	0.81	0.52	0.52	0.80	0.50	0.50
Avail Cap(c_a), veh/h	369	0	406	388	0	414	183	1885	1018	183	1848	1006
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.1	0.0	35.3	36.4	0.0	35.7	40.5	11.3	11.3	41.1	11.7	11.7
Incr Delay (d2), s/veh	0.1	0.0	0.1	0.2	0.0	0.3	14.0	1.0	1.9	7.3	1.0	1.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.0	0.3	0.6	0.0	0.8	2.9	5.0	5.7	2.3	4.9	5.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	37.3	0.0	35.4	36.6	0.0	36.1	54.5	12.4	13.3	48.4	12.7	13.5
LnGrp LOS	D	A	D	D	A	D	D	B	B	D	B	B
Approach Vol, veh/h		36			66			1637			1533	
Approach Delay, s/veh		36.4			36.3			15.6			15.2	
Approach LOS		D			D			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	13.0	58.8		18.2	14.0	57.8		18.2				
Change Period (Y+Rc), s	6.5	6.5		7.5	6.5	6.5		7.5				
Max Green Setting (Gmax), s	9.7	37.6		22.2	9.7	37.6		22.2				
Max Q Clear Time (g_c+I1), s	7.1	18.5		5.1	7.9	17.6		4.6				
Green Ext Time (p_c), s	0.0	10.8		0.1	0.0	10.7		0.2				

Intersection Summary		
HCM 6th Ctrl Delay		16.1
HCM 6th LOS		B

Notes

User approved pedestrian interval to be less than phase max green.



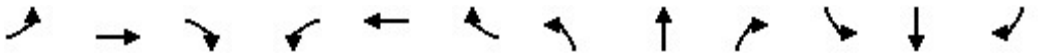
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	140	531	71	141	440	65	66	1146	260	108	991	163
Future Volume (veh/h)	140	531	71	141	440	65	66	1146	260	108	991	163
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.96	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	146	553	24	147	458	22	69	1194	155	112	1032	91
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	172	591	489	174	1127	490	127	1115	477	137	1135	647
Arrive On Green	0.10	0.32	0.32	0.10	0.32	0.32	0.07	0.32	0.32	0.08	0.32	0.32
Sat Flow, veh/h	1753	1841	1522	1753	3497	1522	1753	3497	1496	1753	3497	1522
Grp Volume(v), veh/h	146	553	24	147	458	22	69	1194	155	112	1032	91
Grp Sat Flow(s),veh/h/ln	1753	1841	1522	1753	1749	1522	1753	1749	1496	1753	1749	1522
Q Serve(g_s), s	10.3	36.6	1.4	10.3	12.8	1.2	4.8	40.0	9.9	7.9	35.5	4.6
Cycle Q Clear(g_c), s	10.3	36.6	1.4	10.3	12.8	1.2	4.8	40.0	9.9	7.9	35.5	4.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	172	591	489	174	1127	490	127	1115	477	137	1135	647
V/C Ratio(X)	0.85	0.94	0.05	0.85	0.41	0.04	0.54	1.07	0.33	0.81	0.91	0.14
Avail Cap(c_a), veh/h	281	631	521	451	1538	669	140	1115	477	263	1184	668
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	55.7	41.3	29.4	55.6	33.2	29.2	56.2	42.7	32.5	56.9	40.6	22.2
Incr Delay (d2), s/veh	6.3	21.1	0.1	4.3	0.3	0.1	3.6	48.2	0.4	11.0	10.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.7	19.3	0.5	4.6	5.3	0.4	2.2	24.1	3.5	3.9	16.4	1.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	62.0	62.4	29.4	59.9	33.5	29.3	59.8	90.9	32.9	67.9	50.7	22.3
LnGrp LOS	E	E	C	E	C	C	E	F	C	E	D	C
Approach Vol, veh/h		723			627			1418			1235	
Approach Delay, s/veh		61.2			39.5			83.0			50.2	
Approach LOS		E			D			F			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.0	46.0	17.1	47.3	14.3	46.7	17.0	47.4
Change Period (Y+Rc), s	* 5.2	6.0	* 4.7	7.0	* 5.2	6.0	* 4.7	7.0
Max Green Setting (Gmax), s	* 19	40.0	* 32	43.0	* 10	42.5	* 20	55.2
Max Q Clear Time (g_c+I1), s	9.9	42.0	12.3	38.6	6.8	37.5	12.3	14.8
Green Ext Time (p_c), s	0.2	0.0	0.2	1.7	0.0	2.9	0.1	4.4

Intersection Summary	
HCM 6th Ctrl Delay	62.2
HCM 6th LOS	E

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



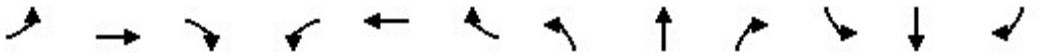
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	132	761	39	33	529	92	20	409	84	99	141	116
Future Volume (veh/h)	132	761	39	33	529	92	20	409	84	99	141	116
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	1.00		0.97	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	140	810	17	35	563	83	21	435	83	105	150	39
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	175	688	567	95	1002	147	393	466	89	114	574	477
Arrive On Green	0.10	0.37	0.37	0.05	0.33	0.33	0.31	0.31	0.31	0.31	0.31	0.31
Sat Flow, veh/h	1767	1856	1528	1767	3075	452	1223	1506	287	874	1856	1544
Grp Volume(v), veh/h	140	810	17	35	322	324	21	0	518	105	150	39
Grp Sat Flow(s),veh/h/ln	1767	1856	1528	1767	1763	1764	1223	0	1793	874	1856	1544
Q Serve(g_s), s	6.3	30.0	0.6	1.5	12.2	12.3	1.1	0.0	22.7	2.3	4.9	1.4
Cycle Q Clear(g_c), s	6.3	30.0	0.6	1.5	12.2	12.3	6.0	0.0	22.7	25.0	4.9	1.4
Prop In Lane	1.00		1.00	1.00		0.26	1.00		0.16	1.00		1.00
Lane Grp Cap(c), veh/h	175	688	567	95	574	575	393	0	554	114	574	477
V/C Ratio(X)	0.80	1.18	0.03	0.37	0.56	0.56	0.05	0.00	0.93	0.92	0.26	0.08
Avail Cap(c_a), veh/h	437	688	567	437	654	655	393	0	554	114	574	477
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.6	25.4	16.2	36.9	22.5	22.5	23.2	0.0	27.1	40.2	21.0	19.8
Incr Delay (d2), s/veh	3.2	94.1	0.0	0.9	1.0	1.1	0.1	0.0	23.3	59.9	0.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.7	29.3	0.2	0.6	4.6	4.7	0.3	0.0	12.5	3.9	2.0	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	38.8	119.6	16.2	37.8	23.5	23.6	23.3	0.0	50.4	100.0	21.2	19.9
LnGrp LOS	D	F	B	D	C	C	C	A	D	F	C	B
Approach Vol, veh/h		967			681			539			294	
Approach Delay, s/veh		106.1			24.3			49.4			49.2	
Approach LOS		F			C			D			D	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		31.5	11.9	37.5		31.5	15.5	33.8				
Change Period (Y+Rc), s		6.5	7.5	7.5		6.5	7.5	7.5				
Max Green Setting (Gmax), s		25.0	20.0	30.0		25.0	20.0	30.0				
Max Q Clear Time (g_c+I1), s		24.7	3.5	32.0		27.0	8.3	14.3				
Green Ext Time (p_c), s		0.1	0.0	0.0		0.0	0.1	3.7				

Intersection Summary		
HCM 6th Ctrl Delay		64.6
HCM 6th LOS		E

Notes

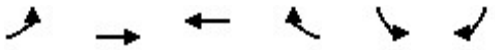
User approved pedestrian interval to be less than phase max green.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	242	850	1	2	539	172	10	42	23	237	43	196
Future Volume (veh/h)	242	850	1	2	539	172	10	42	23	237	43	196
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.97	1.00		0.96	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	249	876	1	2	556	156	10	43	9	244	44	59
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	287	786	1	5	714	199	26	114	24	282	411	341
Arrive On Green	0.16	0.42	0.42	0.00	0.26	0.26	0.01	0.08	0.08	0.16	0.22	0.22
Sat Flow, veh/h	1767	1853	2	1767	2699	754	1767	1477	309	1767	1856	1536
Grp Volume(v), veh/h	249	0	877	2	362	350	10	0	52	244	44	59
Grp Sat Flow(s),veh/h/ln	1767	0	1855	1767	1763	1690	1767	0	1786	1767	1856	1536
Q Serve(g_s), s	12.2	0.0	37.8	0.1	17.0	17.1	0.5	0.0	2.5	12.0	1.7	2.8
Cycle Q Clear(g_c), s	12.2	0.0	37.8	0.1	17.0	17.1	0.5	0.0	2.5	12.0	1.7	2.8
Prop In Lane	1.00		0.00	1.00		0.45	1.00		0.17	1.00		1.00
Lane Grp Cap(c), veh/h	287	0	787	5	466	447	26	0	137	282	411	341
V/C Ratio(X)	0.87	0.00	1.11	0.42	0.78	0.78	0.38	0.00	0.38	0.87	0.11	0.17
Avail Cap(c_a), veh/h	397	0	787	397	693	664	397	0	601	397	625	517
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.4	0.0	25.7	44.4	30.3	30.4	43.5	0.0	39.1	36.5	27.6	28.1
Incr Delay (d2), s/veh	12.7	0.0	68.4	37.8	3.8	4.2	6.7	0.0	2.1	12.1	0.1	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.9	0.0	29.3	0.1	7.1	6.9	0.3	0.0	1.1	5.8	0.7	1.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	49.1	0.0	94.1	82.1	34.2	34.5	50.2	0.0	41.2	48.6	27.8	28.3
LnGrp LOS	D	A	F	F	C	C	D	A	D	D	C	C
Approach Vol, veh/h		1126			714			62			347	
Approach Delay, s/veh		84.2			34.5			42.6			42.5	
Approach LOS		F			C			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	22.0	31.1	8.8	27.3	7.7	45.3	21.7	14.4
Change Period (Y+Rc), s	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5
Max Green Setting (Gmax), s	20.0	35.0	20.0	30.0	20.0	35.0	20.0	30.0
Max Q Clear Time (g_c+I1), s	14.2	19.1	2.5	4.8	2.1	39.8	14.0	4.5
Green Ext Time (p_c), s	0.2	4.2	0.0	0.4	0.0	0.0	0.3	0.2

Intersection Summary	
HCM 6th Ctrl Delay	60.8
HCM 6th LOS	E



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	216	819	518	261	527	139
Future Volume (veh/h)	216	819	518	261	527	139
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			0.97	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	225	853	540	206	549	48
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	265	969	699	266	528	469
Arrive On Green	0.15	0.52	0.28	0.28	0.30	0.30
Sat Flow, veh/h	1767	1856	2567	940	1767	1572
Grp Volume(v), veh/h	225	853	384	362	549	48
Grp Sat Flow(s),veh/h/ln	1767	1856	1763	1651	1767	1572
Q Serve(g_s), s	10.4	34.0	16.7	16.9	25.0	1.8
Cycle Q Clear(g_c), s	10.4	34.0	16.7	16.9	25.0	1.8
Prop In Lane	1.00			0.57	1.00	1.00
Lane Grp Cap(c), veh/h	265	969	498	467	528	469
V/C Ratio(X)	0.85	0.88	0.77	0.78	1.04	0.10
Avail Cap(c_a), veh/h	422	969	737	690	528	469
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.7	17.7	27.5	27.6	29.4	21.3
Incr Delay (d2), s/veh	7.4	9.5	3.4	3.8	50.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.6	13.7	6.7	6.4	16.9	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	42.0	27.2	31.0	31.4	79.5	21.4
LnGrp LOS	D	C	C	C	F	C
Approach Vol, veh/h		1078	746		597	
Approach Delay, s/veh		30.3	31.2		74.9	
Approach LOS		C	C		E	

Timer - Assigned Phs			4		6	7	8
Phs Duration (G+Y+Rc), s			51.2		32.5	20.1	31.2
Change Period (Y+Rc), s			7.5		7.5	7.5	7.5
Max Green Setting (Gmax), s			35.0		25.0	20.0	35.0
Max Q Clear Time (g_c+I1), s			36.0		27.0	12.4	18.9
Green Ext Time (p_c), s			0.0		0.0	0.3	4.4

Intersection Summary	
HCM 6th Ctrl Delay	41.6
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	38	1297	33	38	783	18	15	0	33	3	3	23
Future Volume (veh/h)	38	1297	33	38	783	18	15	0	33	3	3	23
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	0.98		1.00	0.98		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	39	1337	34	39	807	19	15	0	0	3	3	2
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	104	1773	45	104	1777	42	244	0	0	129	57	29
Arrive On Green	0.06	0.51	0.51	0.06	0.51	0.51	0.07	0.00	0.00	0.07	0.07	0.07
Sat Flow, veh/h	1767	3510	89	1767	3518	83	1393	0	0	406	816	407
Grp Volume(v), veh/h	39	671	700	39	404	422	15	0	0	8	0	0
Grp Sat Flow(s),veh/h/ln	1767	1763	1837	1767	1763	1838	1393	0	0	1629	0	0
Q Serve(g_s), s	1.0	15.0	15.0	1.0	7.2	7.2	0.2	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	1.0	15.0	15.0	1.0	7.2	7.2	0.5	0.0	0.0	0.2	0.0	0.0
Prop In Lane	1.00		0.05	1.00		0.05	1.00		0.00	0.37		0.25
Lane Grp Cap(c), veh/h	104	891	928	104	891	929	244	0	0	215	0	0
V/C Ratio(X)	0.38	0.75	0.75	0.38	0.45	0.45	0.06	0.00	0.00	0.04	0.00	0.00
Avail Cap(c_a), veh/h	719	1254	1307	719	1254	1308	845	0	0	902	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	22.3	9.7	9.7	22.3	7.8	7.8	21.5	0.0	0.0	21.4	0.0	0.0
Incr Delay (d2), s/veh	2.2	1.6	1.6	2.2	0.4	0.3	0.1	0.0	0.0	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	3.4	3.5	0.4	1.7	1.7	0.2	0.0	0.0	0.1	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	24.5	11.4	11.3	24.5	8.2	8.2	21.5	0.0	0.0	21.4	0.0	0.0
LnGrp LOS	C	B	B	C	A	A	C	A	A	C	A	A
Approach Vol, veh/h		1410			865			15			8	
Approach Delay, s/veh		11.7			8.9			21.5			21.4	
Approach LOS		B			A			C			C	

Timer - Assigned Phs	2	3	4	6	7	8
Phs Duration (G+Y+Rc), s	9.4	7.9	31.8	9.4	7.9	31.8
Change Period (Y+Rc), s	6.0	5.0	7.0	6.0	5.0	7.0
Max Green Setting (Gmax), s	25.0	20.0	35.0	25.0	20.0	35.0
Max Q Clear Time (g_c+I1), s	2.5	3.0	17.0	2.2	3.0	9.2
Green Ext Time (p_c), s	0.0	0.0	7.9	0.0	0.0	4.7

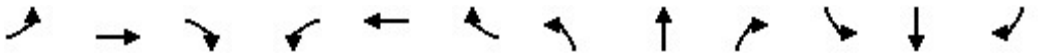
Intersection Summary	
HCM 6th Ctrl Delay	10.8
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary
26: Archibald Ave & Riverside Ave

02/22/2024



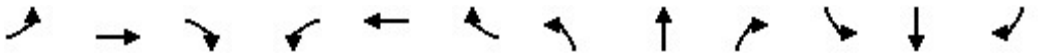
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	254	673	386	158	446	202	245	1106	65	219	1001	150
Future Volume (veh/h)	254	673	386	158	446	202	245	1106	65	219	1001	150
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.97	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781
Adj Flow Rate, veh/h	257	680	343	160	451	172	247	1117	63	221	1011	140
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	8	8	8	8	8	8	8	8	8	8	8	8
Cap, veh/h	299	640	323	198	563	213	289	1397	79	262	1211	167
Arrive On Green	0.18	0.30	0.30	0.12	0.24	0.24	0.17	0.30	0.30	0.15	0.28	0.28
Sat Flow, veh/h	1697	2159	1089	1697	2381	899	1697	4703	265	1697	4303	594
Grp Volume(v), veh/h	257	533	490	160	319	304	247	770	410	221	761	390
Grp Sat Flow(s),veh/h/ln	1697	1692	1555	1697	1692	1588	1697	1621	1726	1697	1621	1655
Q Serve(g_s), s	17.4	35.0	35.0	10.9	21.0	21.3	16.7	25.9	25.9	15.0	26.0	26.2
Cycle Q Clear(g_c), s	17.4	35.0	35.0	10.9	21.0	21.3	16.7	25.9	25.9	15.0	26.0	26.2
Prop In Lane	1.00		0.70	1.00		0.57	1.00		0.15	1.00		0.36
Lane Grp Cap(c), veh/h	299	502	461	198	400	376	289	963	513	262	912	466
V/C Ratio(X)	0.86	1.06	1.06	0.81	0.80	0.81	0.85	0.80	0.80	0.84	0.83	0.84
Avail Cap(c_a), veh/h	503	502	461	503	501	470	503	963	513	503	961	490
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.2	41.6	41.6	50.9	42.4	42.6	47.6	38.3	38.3	48.5	39.9	39.9
Incr Delay (d2), s/veh	14.2	57.8	59.6	15.3	9.7	11.1	14.0	5.5	9.9	14.2	7.1	13.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.2	21.8	20.3	5.3	9.4	9.1	7.9	10.5	11.8	7.1	10.7	11.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	61.4	99.3	101.1	66.2	52.2	53.7	61.5	43.8	48.2	62.8	46.9	53.0
LnGrp LOS	E	F	F	E	D	D	E	D	D	E	D	D
Approach Vol, veh/h		1280			783			1427			1372	
Approach Delay, s/veh		92.4			55.6			48.1			51.2	
Approach LOS		F			E			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	22.3	39.1	17.8	39.0	24.1	37.2	24.8	31.9
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0
Max Q Clear Time (g_c+I1), s	17.0	27.9	12.9	37.0	18.7	28.2	19.4	23.3
Green Ext Time (p_c), s	1.3	5.3	1.0	0.0	1.4	5.1	1.5	4.6

Intersection Summary	
HCM 6th Ctrl Delay	61.9
HCM 6th LOS	E

HCM 6th Signalized Intersection Summary
27: Haven Ave & Riverside Dr

02/22/2024



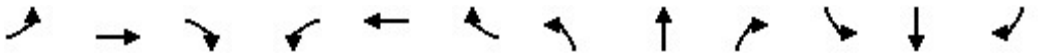
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	235	343	52	86	351	79	23	445	54	116	611	403
Future Volume (veh/h)	235	343	52	86	351	79	23	445	54	116	611	403
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	1.00		0.97	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	245	357	51	90	366	66	24	464	54	121	636	225
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	276	401	57	121	495	88	18	355	41	405	425	353
Arrive On Green	0.16	0.25	0.25	0.07	0.17	0.17	0.23	0.23	0.23	0.23	0.23	0.23
Sat Flow, veh/h	1767	1580	226	1767	2977	531	80	1551	180	1767	1856	1541
Grp Volume(v), veh/h	245	0	408	90	215	217	542	0	0	121	636	225
Grp Sat Flow(s),veh/h/ln	1767	0	1806	1767	1763	1745	1812	0	0	1767	1856	1541
Q Serve(g_s), s	14.8	0.0	23.8	5.5	12.7	12.9	25.0	0.0	0.0	6.2	25.0	14.4
Cycle Q Clear(g_c), s	14.8	0.0	23.8	5.5	12.7	12.9	25.0	0.0	0.0	6.2	25.0	14.4
Prop In Lane	1.00		0.13	1.00		0.30	0.04		0.10	1.00		1.00
Lane Grp Cap(c), veh/h	276	0	458	121	293	290	415	0	0	405	425	353
V/C Ratio(X)	0.89	0.00	0.89	0.74	0.73	0.75	1.31	0.00	0.00	0.30	1.50	0.64
Avail Cap(c_a), veh/h	405	0	496	324	484	479	415	0	0	405	425	353
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.1	0.0	39.3	49.9	43.2	43.3	42.1	0.0	0.0	34.8	42.1	38.0
Incr Delay (d2), s/veh	11.6	0.0	17.1	3.4	3.6	3.8	154.5	0.0	0.0	0.3	235.7	3.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.1	0.0	12.1	2.4	5.6	5.6	28.5	0.0	0.0	2.6	38.7	5.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	56.8	0.0	56.4	53.3	46.8	47.2	196.6	0.0	0.0	35.1	277.8	41.5
LnGrp LOS	E	A	E	D	D	D	F	A	A	D	F	D
Approach Vol, veh/h		653			522			542			982	
Approach Delay, s/veh		56.5			48.1			196.6			193.7	
Approach LOS		E			D			F			F	

Timer - Assigned Phs	2	3	4	6	7	8
Phs Duration (G+Y+Rc), s	30.0	14.5	34.7	30.0	24.0	25.1
Change Period (Y+Rc), s	5.0	7.0	7.0	5.0	7.0	7.0
Max Green Setting (Gmax), s	25.0	20.0	30.0	25.0	25.0	30.0
Max Q Clear Time (g_c+I1), s	27.0	7.5	25.8	27.0	16.8	14.9
Green Ext Time (p_c), s	0.0	0.1	0.8	0.0	0.2	1.9

Intersection Summary	
HCM 6th Ctrl Delay	132.9
HCM 6th LOS	F

Notes

User approved pedestrian interval to be less than phase max green.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	122	369	58	74	72	20	45	1336	257	13	1121	74
Future Volume (veh/h)	122	369	58	74	72	20	45	1336	257	13	1121	74
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.97	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	123	373	16	75	73	16	45	1349	204	13	1132	39
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	332	541	450	121	105	19	125	1077	466	344	1577	701
Arrive On Green	0.29	0.29	0.29	0.29	0.29	0.29	0.07	0.31	0.31	0.20	0.45	0.45
Sat Flow, veh/h	1284	1841	1531	232	357	64	1753	3497	1513	1753	3497	1555
Grp Volume(v), veh/h	123	373	16	164	0	0	45	1349	204	13	1132	39
Grp Sat Flow(s),veh/h/ln	1284	1841	1531	653	0	0	1753	1749	1513	1753	1749	1555
Q Serve(g_s), s	0.0	17.9	0.7	9.0	0.0	0.0	2.4	30.8	10.8	0.6	26.3	1.4
Cycle Q Clear(g_c), s	12.0	17.9	0.7	26.9	0.0	0.0	2.4	30.8	10.8	0.6	26.3	1.4
Prop In Lane	1.00		1.00	0.46		0.10	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	332	541	450	244	0	0	125	1077	466	344	1577	701
V/C Ratio(X)	0.37	0.69	0.04	0.67	0.00	0.00	0.36	1.25	0.44	0.04	0.72	0.06
Avail Cap(c_a), veh/h	363	585	487	276	0	0	280	1077	466	344	1577	701
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.2	31.3	25.2	37.6	0.0	0.0	44.3	34.6	27.7	32.5	22.3	15.5
Incr Delay (d2), s/veh	0.7	3.1	0.0	5.3	0.0	0.0	0.6	121.3	3.0	0.0	2.8	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	8.1	0.3	4.1	0.0	0.0	1.0	30.2	4.0	0.2	10.2	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	29.9	34.4	25.2	42.9	0.0	0.0	44.9	155.9	30.7	32.6	25.1	15.6
LnGrp LOS	C	C	C	D	A	A	D	F	C	C	C	B
Approach Vol, veh/h		512			164			1598			1184	
Approach Delay, s/veh		33.0			42.9			136.8			24.9	
Approach LOS		C			D			F			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	26.1	37.3		36.6	11.8	51.6		36.6				
Change Period (Y+Rc), s	6.5	* 6.5		7.2	* 4.7	6.5		7.2				
Max Green Setting (Gmax), s	16.0	* 31		31.8	* 16	33.8		31.8				
Max Q Clear Time (g_c+I1), s	2.6	32.8		19.9	4.4	28.3		28.9				
Green Ext Time (p_c), s	0.0	0.0		2.0	0.0	3.2		0.2				

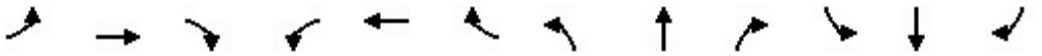
Intersection Summary			
HCM 6th Ctrl Delay		78.7	
HCM 6th LOS		E	

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th Signalized Intersection Summary
34: Archibald Ave & Chino Ave

02/22/2024



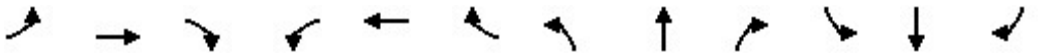
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	99	85	42	20	20	102	24	1158	29	106	1318	54
Future Volume (veh/h)	99	85	42	20	20	102	24	1158	29	106	1318	54
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781
Adj Flow Rate, veh/h	102	88	32	21	21	15	25	1194	30	109	1359	55
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	8	8	8	8	8	8	8	8	8	8	8	8
Cap, veh/h	129	147	53	47	126	104	54	2135	54	138	1615	65
Arrive On Green	0.08	0.12	0.12	0.03	0.07	0.07	0.03	0.44	0.44	0.08	0.49	0.49
Sat Flow, veh/h	1697	1236	449	1697	1781	1482	1697	4877	123	1697	3312	134
Grp Volume(v), veh/h	102	0	120	21	21	15	25	794	430	109	693	721
Grp Sat Flow(s),veh/h/ln	1697	0	1685	1697	1781	1482	1697	1621	1757	1697	1692	1754
Q Serve(g_s), s	4.9	0.0	5.7	1.0	0.9	0.8	1.2	15.3	15.3	5.3	29.8	29.9
Cycle Q Clear(g_c), s	4.9	0.0	5.7	1.0	0.9	0.8	1.2	15.3	15.3	5.3	29.8	29.9
Prop In Lane	1.00		0.27	1.00		1.00	1.00		0.07	1.00		0.08
Lane Grp Cap(c), veh/h	129	0	200	47	126	104	54	1420	769	138	825	855
V/C Ratio(X)	0.79	0.00	0.60	0.45	0.17	0.14	0.47	0.56	0.56	0.79	0.84	0.84
Avail Cap(c_a), veh/h	405	0	704	405	744	619	506	1742	944	506	909	942
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.0	0.0	35.0	40.1	36.6	36.6	39.9	17.5	17.5	37.8	18.6	18.7
Incr Delay (d2), s/veh	4.0	0.0	4.0	2.5	0.9	0.9	2.3	0.5	0.9	3.8	7.0	6.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	0.0	2.4	0.4	0.4	0.3	0.5	5.0	5.5	2.2	11.2	11.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	42.0	0.0	39.0	42.6	37.5	37.4	42.2	18.0	18.4	41.6	25.7	25.6
LnGrp LOS	D	A	D	D	D	D	D	B	B	D	C	C
Approach Vol, veh/h		222			57			1249			1523	
Approach Delay, s/veh		40.4			39.4			18.6			26.8	
Approach LOS		D			D			B			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.3	44.2	8.8	16.5	10.1	48.3	12.9	12.4
Change Period (Y+Rc), s	7.5	7.5	6.5	6.5	7.5	7.5	6.5	6.5
Max Green Setting (Gmax), s	25.0	45.0	20.0	35.0	25.0	45.0	20.0	35.0
Max Q Clear Time (g_c+I1), s	7.3	17.3	3.0	7.7	3.2	31.9	6.9	2.9
Green Ext Time (p_c), s	0.1	11.9	0.0	0.8	0.0	8.9	0.1	0.2

Intersection Summary	
HCM 6th Ctrl Delay	24.7
HCM 6th LOS	C

HCM 6th Signalized Intersection Summary
35: Euclid Ave & Edison Ave

02/22/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	173	513	304	54	355	157	249	1144	88	123	1007	132
Future Volume (veh/h)	173	513	304	54	355	157	249	1144	88	123	1007	132
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.97	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	180	534	139	56	370	153	259	1192	44	128	1049	54
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	117	625	520	122	417	173	331	1356	588	166	1346	590
Arrive On Green	0.34	0.34	0.34	0.34	0.34	0.34	0.10	0.39	0.39	0.09	0.38	0.38
Sat Flow, veh/h	864	1841	1532	753	1230	509	3401	3497	1516	1753	3497	1533
Grp Volume(v), veh/h	180	534	139	56	0	523	259	1192	44	128	1049	54
Grp Sat Flow(s),veh/h/ln	864	1841	1532	753	0	1738	1700	1749	1516	1753	1749	1533
Q Serve(g_s), s	5.7	27.8	6.8	7.2	0.0	29.3	7.7	32.6	1.9	7.4	27.2	2.3
Cycle Q Clear(g_c), s	35.0	27.8	6.8	35.0	0.0	29.3	7.7	32.6	1.9	7.4	27.2	2.3
Prop In Lane	1.00		1.00	1.00		0.29	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	117	625	520	122	0	590	331	1356	588	166	1346	590
V/C Ratio(X)	1.53	0.85	0.27	0.46	0.00	0.89	0.78	0.88	0.07	0.77	0.78	0.09
Avail Cap(c_a), veh/h	117	625	520	122	0	590	824	1526	661	425	1526	669
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.4	31.7	24.8	48.2	0.0	32.2	45.5	29.3	19.9	45.6	27.9	20.2
Incr Delay (d2), s/veh	277.9	11.2	0.3	2.7	0.0	15.1	1.5	5.7	0.1	2.9	2.4	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.0	13.5	2.4	1.5	0.0	14.0	3.1	13.3	0.6	3.2	10.6	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	328.3	42.9	25.0	50.9	0.0	47.3	47.0	35.1	20.0	48.5	30.2	20.3
LnGrp LOS	F	D	C	D	A	D	D	D	B	D	C	C
Approach Vol, veh/h		853			579			1495			1231	
Approach Delay, s/veh		100.2			47.7			36.7			31.7	
Approach LOS		F			D			D			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	14.4	46.5		42.2	14.7	46.2		42.2				
Change Period (Y+Rc), s	* 4.7	6.5		7.2	* 4.7	6.5		7.2				
Max Green Setting (Gmax), s	* 25	45.0		30.0	* 25	45.0		35.0				
Max Q Clear Time (g_c+I1), s	9.4	34.6		37.0	9.7	29.2		37.0				
Green Ext Time (p_c), s	0.1	5.3		0.0	0.4	6.0		0.0				

Intersection Summary	
HCM 6th Ctrl Delay	49.8
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	118	853	177	196	355	85	78	955	295	122	1042	72
Future Volume (veh/h)	118	853	177	196	355	85	78	955	295	122	1042	72
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	128	927	0	213	386	40	85	1038	0	133	1133	37
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	215	1105		324	640	533	115	1163		174	1281	555
Arrive On Green	0.06	0.32	0.00	0.10	0.35	0.35	0.07	0.33	0.00	0.10	0.37	0.37
Sat Flow, veh/h	3401	3497	1560	3401	1841	1533	1753	3497	1560	1753	3497	1515
Grp Volume(v), veh/h	128	927	0	213	386	40	85	1038	0	133	1133	37
Grp Sat Flow(s),veh/h/ln	1700	1749	1560	1700	1841	1533	1753	1749	1560	1753	1749	1515
Q Serve(g_s), s	3.7	25.1	0.0	6.2	17.6	1.8	4.9	28.7	0.0	7.5	30.9	1.6
Cycle Q Clear(g_c), s	3.7	25.1	0.0	6.2	17.6	1.8	4.9	28.7	0.0	7.5	30.9	1.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	215	1105		324	640	533	115	1163		174	1281	555
V/C Ratio(X)	0.59	0.84		0.66	0.60	0.08	0.74	0.89		0.77	0.88	0.07
Avail Cap(c_a), veh/h	1168	1202		1168	640	533	602	1202		602	1281	555
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.4	32.4	0.0	44.5	27.4	22.2	46.8	32.3	0.0	44.7	30.3	21.0
Incr Delay (d2), s/veh	5.5	5.9	0.0	4.8	2.4	0.1	18.0	9.2	0.0	13.9	8.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	10.7	0.0	2.7	7.6	0.6	2.6	12.5	0.0	3.8	13.1	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	51.9	38.3	0.0	49.3	29.8	22.4	64.8	41.5	0.0	58.6	38.4	21.1
LnGrp LOS	D	D		D	C	C	E	D		E	D	C
Approach Vol, veh/h		1055	A		639			1123	A		1303	
Approach Delay, s/veh		40.0			35.8			43.2			40.0	
Approach LOS		D			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.1	37.9	13.7	36.2	10.7	41.3	10.4	39.4
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0
Max Q Clear Time (g_c+I1), s	9.5	30.7	8.2	27.1	6.9	32.9	5.7	19.6
Green Ext Time (p_c), s	0.8	3.2	1.6	5.1	0.5	1.7	0.9	3.6

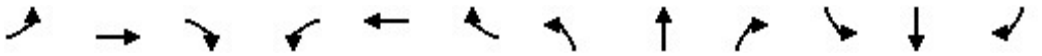
Intersection Summary	
HCM 6th Ctrl Delay	40.2
HCM 6th LOS	D

Notes

Unsignalized Delay for [NBR, EBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary
38: Haven Ave & Ontario Ranch Rd

02/22/2024



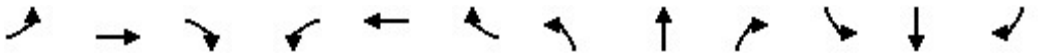
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	223	1081	37	366	734	218	18	270	195	200	500	75
Future Volume (veh/h)	223	1081	37	366	734	218	18	270	195	200	500	75
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.97	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	232	1126	12	381	765	60	19	281	48	208	521	72
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	261	1481	451	445	1755	419	49	380	315	237	966	133
Arrive On Green	0.15	0.29	0.29	0.13	0.28	0.28	0.03	0.21	0.21	0.14	0.31	0.31
Sat Flow, veh/h	1753	5025	1531	3401	6332	1511	1753	1841	1527	1753	3080	424
Grp Volume(v), veh/h	232	1126	12	381	765	60	19	281	48	208	295	298
Grp Sat Flow(s),veh/h/ln	1753	1675	1531	1700	1583	1511	1753	1841	1527	1753	1749	1755
Q Serve(g_s), s	14.5	22.8	0.6	12.2	11.1	3.3	1.2	16.0	2.9	13.0	15.6	15.7
Cycle Q Clear(g_c), s	14.5	22.8	0.6	12.2	11.1	3.3	1.2	16.0	2.9	13.0	15.6	15.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.24
Lane Grp Cap(c), veh/h	261	1481	451	445	1755	419	49	380	315	237	548	551
V/C Ratio(X)	0.89	0.76	0.03	0.86	0.44	0.14	0.39	0.74	0.15	0.88	0.54	0.54
Avail Cap(c_a), veh/h	314	1799	548	609	2267	541	314	774	642	314	736	738
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.7	35.8	28.0	47.5	33.2	30.4	53.4	41.5	36.3	47.4	31.7	31.7
Incr Delay (d2), s/veh	20.6	1.8	0.0	6.8	0.2	0.2	1.9	1.1	0.1	16.0	0.3	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.5	9.0	0.2	5.3	4.0	1.2	0.5	7.1	1.0	6.5	6.3	6.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	67.3	37.6	28.0	54.3	33.4	30.6	55.2	42.6	36.4	63.4	32.0	32.0
LnGrp LOS	E	D	C	D	C	C	E	D	D	E	C	C
Approach Vol, veh/h		1370			1206			348			801	
Approach Delay, s/veh		42.6			39.9			42.4			40.1	
Approach LOS		D			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	21.6	29.6	21.1	39.4	9.6	41.5	23.1	37.5
Change Period (Y+Rc), s	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
Max Green Setting (Gmax), s	20.0	47.0	20.0	40.0	20.0	47.0	20.0	40.0
Max Q Clear Time (g_c+I1), s	15.0	18.0	14.2	24.8	3.2	17.7	16.5	13.1
Green Ext Time (p_c), s	0.1	1.0	0.4	8.2	0.0	2.0	0.1	7.3

Intersection Summary	
HCM 6th Ctrl Delay	41.2
HCM 6th LOS	D

HCM 6th Signalized Intersection Summary
39: Hamner Ave & Ontario Ranch Rd

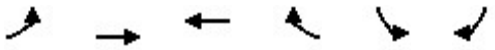
02/22/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	122	1076	274	675	859	203	374	486	437	334	663	141
Future Volume (veh/h)	122	1076	274	675	859	203	374	486	437	334	663	141
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	127	1121	79	703	895	124	390	506	133	348	691	44
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	175	1166	355	749	1402	615	441	1161	353	400	766	335
Arrive On Green	0.05	0.23	0.23	0.22	0.40	0.40	0.13	0.23	0.23	0.12	0.22	0.22
Sat Flow, veh/h	3401	5025	1528	3401	3497	1534	3401	5025	1528	3401	3497	1528
Grp Volume(v), veh/h	127	1121	79	703	895	124	390	506	133	348	691	44
Grp Sat Flow(s),veh/h/ln	1700	1675	1528	1700	1749	1534	1700	1675	1528	1700	1749	1528
Q Serve(g_s), s	5.5	33.2	6.3	30.6	31.1	7.9	17.0	13.0	11.1	15.2	29.0	3.5
Cycle Q Clear(g_c), s	5.5	33.2	6.3	30.6	31.1	7.9	17.0	13.0	11.1	15.2	29.0	3.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	175	1166	355	749	1402	615	441	1161	353	400	766	335
V/C Ratio(X)	0.72	0.96	0.22	0.94	0.64	0.20	0.88	0.44	0.38	0.87	0.90	0.13
Avail Cap(c_a), veh/h	789	1166	355	789	1402	615	564	1161	353	564	812	355
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	70.4	57.2	46.9	57.8	36.4	29.5	64.5	49.6	48.8	65.4	57.3	47.4
Incr Delay (d2), s/veh	4.2	17.8	0.4	18.1	1.0	0.2	12.2	0.3	0.7	9.3	13.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	15.5	2.4	14.6	12.9	2.9	7.9	5.4	4.2	6.9	13.8	1.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	74.6	75.0	47.3	75.9	37.4	29.6	76.7	49.8	49.5	74.7	70.4	47.6
LnGrp LOS	E	E	D	E	D	C	E	D	D	E	E	D
Approach Vol, veh/h		1327			1722			1029			1083	
Approach Delay, s/veh		73.3			52.6			60.0			70.8	
Approach LOS		E			D			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	40.7	42.5	27.1	40.5	15.3	67.9	25.2	42.3
Change Period (Y+Rc), s	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5
Max Green Setting (Gmax), s	35.0	35.0	25.0	35.0	35.0	35.0	25.0	25.0
Max Q Clear Time (g_c+I1), s	32.6	35.2	19.0	31.0	7.5	33.1	17.2	15.0
Green Ext Time (p_c), s	0.6	0.0	0.6	1.8	0.3	1.2	0.6	2.7

Intersection Summary	
HCM 6th Ctrl Delay	63.2
HCM 6th LOS	E



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	1376	768	0	291	1646
Future Volume (veh/h)	0	1376	768	0	291	1646
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	0	1841	1841	0	1841	1841
Adj Flow Rate, veh/h	0	1619	904	0	342	1870
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	0	4	4	0	4	4
Cap, veh/h	0	1983	1380	0	753	1339
Arrive On Green	0.00	0.39	0.39	0.00	0.43	0.43
Sat Flow, veh/h	0	5356	3681	0	1753	3120
Grp Volume(v), veh/h	0	1619	904	0	342	1870
Grp Sat Flow(s),veh/h/ln	0	1675	1749	0	1753	1560
Q Serve(g_s), s	0.0	20.1	14.7	0.0	9.7	30.0
Cycle Q Clear(g_c), s	0.0	20.1	14.7	0.0	9.7	30.0
Prop In Lane	0.00			0.00	1.00	1.00
Lane Grp Cap(c), veh/h	0	1983	1380	0	753	1339
V/C Ratio(X)	0.00	0.82	0.65	0.00	0.45	1.40
Avail Cap(c_a), veh/h	0	2157	1501	0	753	1339
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	18.9	17.3	0.0	14.1	19.9
Incr Delay (d2), s/veh	0.0	2.4	0.9	0.0	0.4	182.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	6.6	4.9	0.0	3.3	42.8
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.0	21.3	18.2	0.0	14.6	202.9
LnGrp LOS	A	C	B	A	B	F
Approach Vol, veh/h		1619	904		2212	
Approach Delay, s/veh		21.3	18.2		173.8	
Approach LOS		C	B		F	

Timer - Assigned Phs	2	4	6
Phs Duration (G+Y+Rc), s	34.4	35.5	34.4
Change Period (Y+Rc), s	6.8	5.5	6.8
Max Green Setting (Gmax), s	30.0	30.0	30.0
Max Q Clear Time (g_c+I1), s	22.1	32.0	16.7
Green Ext Time (p_c), s	5.5	0.0	4.5

Intersection Summary	
HCM 6th Ctrl Delay	91.9
HCM 6th LOS	F

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	599	1095	265	364	540	118
Future Volume (veh/h)	599	1095	265	364	540	118
Initial Q (Qb), veh	0	105	0	0	0	76
Ped-Bike Adj(A_pbT)		0.97	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	681	1144	301	414	614	58
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	4	4	4	4	4	4
Cap, veh/h	1732	1026	405	2676	1103	461
Arrive On Green	0.40	0.40	0.12	0.60	0.22	0.22
Sat Flow, veh/h	5191	1516	3401	5191	3506	1560
Grp Volume(v), veh/h	681	1144	301	414	614	58
Grp Sat Flow(s),veh/h/ln	1675	1516	1700	1675	1753	1560
Q Serve(g_s), s	7.1	30.0	6.4	2.7	12.4	2.3
Cycle Q Clear(g_c), s	7.1	30.0	6.4	2.7	12.4	2.3
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1732	1026	405	2676	1103	461
V/C Ratio(X)	0.39	1.12	0.74	0.15	0.56	0.13
Avail Cap(c_a), veh/h	1998	951	1352	3020	1394	620
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.8	10.0	37.2	10.5	24.8	27.8
Incr Delay (d2), s/veh	0.1	65.4	2.7	0.0	0.4	0.1
Initial Q Delay(d3),s/veh	0.0	368.6	0.0	0.0	0.0	223.6
%ile BackOfQ(50%),veh/ln	3.2	145.1	3.0	1.1	5.3	36.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	22.0	443.9	40.0	10.6	25.2	251.5
LnGrp LOS	C	F	D	B	C	F
Approach Vol, veh/h	1825			715	672	
Approach Delay, s/veh	286.5			22.9	44.8	
Approach LOS	F			C	D	

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	15.3	37.3				52.6	22.8
Change Period (Y+Rc), s	6.0	7.3				7.3	6.0
Max Green Setting (Gmax), s	30.0	30.0				30.0	30.0
Max Q Clear Time (g_c+I1), s	8.4	32.0				4.7	14.4
Green Ext Time (p_c), s	0.9	0.0				2.4	2.4

Intersection Summary	
HCM 6th Ctrl Delay	177.2
HCM 6th LOS	F

Notes

User approved pedestrian interval to be less than phase max green.
User approved volume balancing among the lanes for turning movement.

Intersection	
Intersection Delay, s/veh	7.2
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	15	0	0	15	0	0	38	0	0	13	0
Future Vol, veh/h	0	15	0	0	15	0	0	38	0	0	13	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles, %	8	8	8	8	8	8	8	8	8	8	8	8
Mvmt Flow	0	16	0	0	16	0	0	40	0	0	14	0
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	7.2	7.2	7.3	7.2
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	0%	0%	0%	0%
Vol Thru, %	100%	100%	100%	100%
Vol Right, %	0%	0%	0%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	38	15	15	13
LT Vol	0	0	0	0
Through Vol	38	15	15	13
RT Vol	0	0	0	0
Lane Flow Rate	40	16	16	14
Geometry Grp	1	1	1	1
Degree of Util (X)	0.046	0.018	0.018	0.016
Departure Headway (Hd)	4.101	4.142	4.142	4.121
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	874	863	863	869
Service Time	2.12	2.173	2.173	2.145
HCM Lane V/C Ratio	0.046	0.019	0.019	0.016
HCM Control Delay	7.3	7.2	7.2	7.2
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.1	0.1	0.1	0

Intersection	
Intersection Delay, s/veh	10.3
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	35	23	22	32	49	21	7	146	159	49	129	24
Future Vol, veh/h	35	23	22	32	49	21	7	146	159	49	129	24
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	8	8	8	8	8	8	8	8	8	8	8	8
Mvmt Flow	38	25	24	35	53	23	8	159	173	53	140	26
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	9.3	9.6	11	10.1
HCM LOS	A	A	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	2%	44%	31%	24%
Vol Thru, %	47%	29%	48%	64%
Vol Right, %	51%	28%	21%	12%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	312	80	102	202
LT Vol	7	35	32	49
Through Vol	146	23	49	129
RT Vol	159	22	21	24
Lane Flow Rate	339	87	111	220
Geometry Grp	1	1	1	1
Degree of Util (X)	0.427	0.131	0.166	0.301
Departure Headway (Hd)	4.533	5.411	5.387	4.93
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	787	655	659	722
Service Time	2.596	3.509	3.481	3.001
HCM Lane V/C Ratio	0.431	0.133	0.168	0.305
HCM Control Delay	11	9.3	9.6	10.1
HCM Lane LOS	B	A	A	B
HCM 95th-tile Q	2.2	0.4	0.6	1.3

Intersection	
Intersection Delay, s/veh	145.5
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	38	716	33	57	407	17	85	32	83	20	14	13
Future Vol, veh/h	38	716	33	57	407	17	85	32	83	20	14	13
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles, %	4	4	4	4	4	4	4	4	4	4	4	4
Mvmt Flow	43	814	38	65	463	19	97	36	94	23	16	15
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	246.2	47.1	17.2	13.3
HCM LOS	F	E	C	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	42%	5%	12%	43%
Vol Thru, %	16%	91%	85%	30%
Vol Right, %	41%	4%	4%	28%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	200	787	481	47
LT Vol	85	38	57	20
Through Vol	32	716	407	14
RT Vol	83	33	17	13
Lane Flow Rate	227	894	547	53
Geometry Grp	1	1	1	1
Degree of Util (X)	0.445	1.489	0.918	0.118
Departure Headway (Hd)	7.951	5.993	6.721	9.081
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	457	608	541	397
Service Time	5.951	4.057	4.721	7.081
HCM Lane V/C Ratio	0.497	1.47	1.011	0.134
HCM Control Delay	17.2	246.2	47.1	13.3
HCM Lane LOS	C	F	E	B
HCM 95th-tile Q	2.2	43.9	11.1	0.4

Intersection	
Int Delay, s/veh	50.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	40	872	32	100	623	14	24	21	213	3	14	32
Future Vol, veh/h	40	872	32	100	623	14	24	21	213	3	14	32
Conflicting Peds, #/hr	5	0	5	5	0	5	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	127	-	-	143	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	42	918	34	105	656	15	25	22	224	3	15	34

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	676	0	0	957	0	0	1570	1910	940	2021	1920	341
Stage 1	-	-	-	-	-	-	1024	1024	-	879	879	-
Stage 2	-	-	-	-	-	-	546	886	-	1142	1041	-
Critical Hdwy	4.145	-	-	4.145	-	-	7.345	6.545	6.245	7.345	6.545	6.945
Critical Hdwy Stg 1	-	-	-	-	-	-	6.145	5.545	-	6.545	5.545	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.545	5.545	-	6.145	5.545	-
Follow-up Hdwy	2.2285	-	-	2.2285	-	-	3.5285	4.0285	3.3285	3.5285	4.0285	3.3285
Pot Cap-1 Maneuver	908	-	-	711	-	-	81	67	317	38	66	653
Stage 1	-	-	-	-	-	-	281	310	-	308	363	-
Stage 2	-	-	-	-	-	-	488	360	-	241	304	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	904	-	-	708	-	-	52	54	315	6	53	650
Mov Cap-2 Maneuver	-	-	-	-	-	-	52	54	-	6	53	-
Stage 1	-	-	-	-	-	-	267	294	-	292	308	-
Stage 2	-	-	-	-	-	-	375	305	-	61	288	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.4	1.5	$ 347.4	189
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	169	904	-	-	708	-	-	60
HCM Lane V/C Ratio	1.607	0.047	-	-	0.149	-	-	0.86
HCM Control Delay (s)	$ 347.4	9.2	-	-	11	-	-	189
HCM Lane LOS	F	A	-	-	B	-	-	F
HCM 95th %tile Q(veh)	18.4	0.1	-	-	0.5	-	-	3.9

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	45.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	23	927	164	50	592	21	94	16	87	10	2	23
Future Vol, veh/h	23	927	164	50	592	21	94	16	87	10	2	23
Conflicting Peds, #/hr	5	0	5	5	0	5	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	69	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	98	98	98	98	98	98	98	98	98	98	98	98
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	23	946	167	51	604	21	96	16	89	10	2	23

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	630	0	0	1118	0	0	1486	1813	1035	1850	1886	318
Stage 1	-	-	-	-	-	-	1081	1081	-	722	722	-
Stage 2	-	-	-	-	-	-	405	732	-	1128	1164	-
Critical Hdwy	4.145	-	-	4.145	-	-	7.345	6.545	6.245	7.345	6.545	6.945
Critical Hdwy Stg 1	-	-	-	-	-	-	6.145	5.545	-	6.545	5.545	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.545	5.545	-	6.145	5.545	-
Follow-up Hdwy	2.2285	-	-	2.2285	-	-	3.5285	4.0285	3.3285	3.5285	4.0285	3.3285
Pot Cap-1 Maneuver	944	-	-	618	-	-	~ 93	77	279	51	70	676
Stage 1	-	-	-	-	-	-	261	291	-	383	428	-
Stage 2	-	-	-	-	-	-	592	424	-	246	266	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	940	-	-	615	-	-	~ 80	68	278	26	62	673
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 80	68	-	26	62	-
Stage 1	-	-	-	-	-	-	253	283	-	372	390	-
Stage 2	-	-	-	-	-	-	521	387	-	154	258	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.2	0.9	$ 441.9	85.3
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	114	940	-	-	615	-	-	78
HCM Lane V/C Ratio	1.763	0.025	-	-	0.083	-	-	0.458
HCM Control Delay (s)	$ 441.9	8.9	-	-	11.4	-	-	85.3
HCM Lane LOS	F	A	-	-	B	-	-	F
HCM 95th %tile Q(veh)	15.7	0.1	-	-	0.3	-	-	1.9

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	2.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	18	988	16	15	632	38	15	3	22	8	3	18
Future Vol, veh/h	18	988	16	15	632	38	15	3	22	8	3	18
Conflicting Peds, #/hr	5	0	5	5	0	5	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	98	-	-	47	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	20	1074	17	16	687	41	16	3	24	9	3	20

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	733	0	0	1096	0	0	1505	1893	1088	1881	1881	369
Stage 1	-	-	-	-	-	-	1128	1128	-	745	745	-
Stage 2	-	-	-	-	-	-	377	765	-	1136	1136	-
Critical Hdwy	4.145	-	-	4.145	-	-	7.345	6.545	6.245	7.345	6.545	6.945
Critical Hdwy Stg 1	-	-	-	-	-	-	6.145	5.545	-	6.545	5.545	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.545	5.545	-	6.145	5.545	-
Follow-up Hdwy	2.2285	-	-	2.2285	-	-	3.5285	4.0285	3.3285	3.5285	4.0285	3.3285
Pot Cap-1 Maneuver	864	-	-	630	-	-	91	69	260	48	70	626
Stage 1	-	-	-	-	-	-	246	277	-	371	418	-
Stage 2	-	-	-	-	-	-	615	409	-	243	274	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	860	-	-	627	-	-	81	65	259	40	66	623
Mov Cap-2 Maneuver	-	-	-	-	-	-	81	65	-	40	66	-
Stage 1	-	-	-	-	-	-	239	269	-	361	405	-
Stage 2	-	-	-	-	-	-	576	396	-	213	266	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.2	0.2	47.9	52.7
HCM LOS			E	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	126	860	-	-	627	-	-	106
HCM Lane V/C Ratio	0.345	0.023	-	-	0.026	-	-	0.297
HCM Control Delay (s)	47.9	9.3	-	-	10.9	-	-	52.7
HCM Lane LOS	E	A	-	-	B	-	-	F
HCM 95th %tile Q(veh)	1.4	0.1	-	-	0.1	-	-	1.1

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	1346	767	22	5	12
Future Vol, veh/h	0	1346	767	22	5	12
Conflicting Peds, #/hr	5	0	0	5	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	25	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	0	1417	807	23	5	13

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	835	0	-	0	2241	420
Stage 1	-	-	-	-	824	-
Stage 2	-	-	-	-	1417	-
Critical Hdwy	4.145	-	-	-	6.645	6.945
Critical Hdwy Stg 1	-	-	-	-	5.845	-
Critical Hdwy Stg 2	-	-	-	-	5.445	-
Follow-up Hdwy	2.2285	-	-	-	3.5285	3.3285
Pot Cap-1 Maneuver	791	-	-	-	40	580
Stage 1	-	-	-	-	390	-
Stage 2	-	-	-	-	221	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	787	-	-	-	40	577
Mov Cap-2 Maneuver	-	-	-	-	145	-
Stage 1	-	-	-	-	388	-
Stage 2	-	-	-	-	220	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	17.4
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	787	-	-	-	308
HCM Lane V/C Ratio	-	-	-	-	0.058
HCM Control Delay (s)	0	-	-	-	17.4
HCM Lane LOS	A	-	-	-	C
HCM 95th %tile Q(veh)	0	-	-	-	0.2

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	4	1346	772	16	2	18
Future Vol, veh/h	4	1346	772	16	2	18
Conflicting Peds, #/hr	5	0	0	5	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	25	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	4	1417	813	17	2	19

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	835	0	-	0	2252	420
Stage 1	-	-	-	-	827	-
Stage 2	-	-	-	-	1425	-
Critical Hdwy	4.145	-	-	-	6.645	6.945
Critical Hdwy Stg 1	-	-	-	-	5.845	-
Critical Hdwy Stg 2	-	-	-	-	5.445	-
Follow-up Hdwy	2.2285	-	-	-	3.5285	3.3285
Pot Cap-1 Maneuver	791	-	-	-	40	580
Stage 1	-	-	-	-	389	-
Stage 2	-	-	-	-	219	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	787	-	-	-	39	577
Mov Cap-2 Maneuver	-	-	-	-	143	-
Stage 1	-	-	-	-	385	-
Stage 2	-	-	-	-	218	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	13.5
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	787	-	-	-	443
HCM Lane V/C Ratio	0.005	-	-	-	0.048
HCM Control Delay (s)	9.6	-	-	-	13.5
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.1

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	2	1352	787	16	25	1
Future Vol, veh/h	2	1352	787	16	25	1
Conflicting Peds, #/hr	5	0	0	5	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	2	1394	811	16	26	1

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	832	0	-	0	2222	419
Stage 1	-	-	-	-	824	-
Stage 2	-	-	-	-	1398	-
Critical Hdwy	4.145	-	-	-	6.645	6.945
Critical Hdwy Stg 1	-	-	-	-	5.845	-
Critical Hdwy Stg 2	-	-	-	-	5.445	-
Follow-up Hdwy	2.2285	-	-	-	3.5285	3.3285
Pot Cap-1 Maneuver	793	-	-	-	41	581
Stage 1	-	-	-	-	390	-
Stage 2	-	-	-	-	226	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	789	-	-	-	40	578
Mov Cap-2 Maneuver	-	-	-	-	147	-
Stage 1	-	-	-	-	387	-
Stage 2	-	-	-	-	225	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	33.9
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	789	-	-	-	151
HCM Lane V/C Ratio	0.003	-	-	-	0.178
HCM Control Delay (s)	9.6	-	-	-	33.9
HCM Lane LOS	A	-	-	-	D
HCM 95th %tile Q(veh)	0	-	-	-	0.6

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	14	1366	793	28	32	11
Future Vol, veh/h	14	1366	793	28	32	11
Conflicting Peds, #/hr	5	0	0	5	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	350	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	15	1423	826	29	33	11

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	860	0	-	0	2299	433
Stage 1	-	-	-	-	846	-
Stage 2	-	-	-	-	1453	-
Critical Hdwy	4.145	-	-	-	6.645	6.945
Critical Hdwy Stg 1	-	-	-	-	5.845	-
Critical Hdwy Stg 2	-	-	-	-	5.445	-
Follow-up Hdwy	2.2285	-	-	-	3.5285	3.3285
Pot Cap-1 Maneuver	774	-	-	-	37	569
Stage 1	-	-	-	-	380	-
Stage 2	-	-	-	-	213	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	770	-	-	-	36	566
Mov Cap-2 Maneuver	-	-	-	-	138	-
Stage 1	-	-	-	-	371	-
Stage 2	-	-	-	-	212	-

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	33.4
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	770	-	-	-	171
HCM Lane V/C Ratio	0.019	-	-	-	0.262
HCM Control Delay (s)	9.8	-	-	-	33.4
HCM Lane LOS	A	-	-	-	D
HCM 95th %tile Q(veh)	0.1	-	-	-	1

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	6	1394	802	11	12	18
Future Vol, veh/h	6	1394	802	11	12	18
Conflicting Peds, #/hr	5	0	0	5	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	175	-	-	-	0	76
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	99	99	99	99	99	99
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	6	1408	810	11	12	18

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	826	0	-	0	2241	416
Stage 1	-	-	-	-	821	-
Stage 2	-	-	-	-	1420	-
Critical Hdwy	4.145	-	-	-	6.645	6.945
Critical Hdwy Stg 1	-	-	-	-	5.845	-
Critical Hdwy Stg 2	-	-	-	-	5.445	-
Follow-up Hdwy	2.2285	-	-	-	3.5285	3.3285
Pot Cap-1 Maneuver	797	-	-	-	40	584
Stage 1	-	-	-	-	392	-
Stage 2	-	-	-	-	221	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	793	-	-	-	39	581
Mov Cap-2 Maneuver	-	-	-	-	39	-
Stage 1	-	-	-	-	387	-
Stage 2	-	-	-	-	220	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	60.6
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	793	-	-	-	39	581
HCM Lane V/C Ratio	0.008	-	-	-	0.311	0.031
HCM Control Delay (s)	9.6	-	-	-	134.5	11.4
HCM Lane LOS	A	-	-	-	F	B
HCM 95th %tile Q(veh)	0	-	-	-	1	0.1

Intersection	
Int Delay, s/veh	1.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1358	48	12	786	27	13
Future Vol, veh/h	1358	48	12	786	27	13
Conflicting Peds, #/hr	0	5	5	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	200	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	1460	52	13	845	29	14

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1517	0	1940	1491
Stage 1	-	-	-	-	1491	-
Stage 2	-	-	-	-	449	-
Critical Hdwy	-	-	4.145	-	6.645	6.245
Critical Hdwy Stg 1	-	-	-	-	5.445	-
Critical Hdwy Stg 2	-	-	-	-	5.845	-
Follow-up Hdwy	-	-	2.2285	-	3.5285	3.3285
Pot Cap-1 Maneuver	-	-	434	-	64	150
Stage 1	-	-	-	-	204	-
Stage 2	-	-	-	-	608	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	432	-	62	149
Mov Cap-2 Maneuver	-	-	-	-	62	-
Stage 1	-	-	-	-	203	-
Stage 2	-	-	-	-	590	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.2	99.5
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	77	-	-	432	-
HCM Lane V/C Ratio	0.559	-	-	0.03	-
HCM Control Delay (s)	99.5	-	-	13.6	-
HCM Lane LOS	F	-	-	B	-
HCM 95th %tile Q(veh)	2.4	-	-	0.1	-

Intersection	
Int Delay, s/veh	0.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	246	0	2	95	1	19
Future Vol, veh/h	246	0	2	95	1	19
Conflicting Peds, #/hr	0	5	5	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	8	8	8	8	8	8
Mvmt Flow	265	0	2	102	1	20

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	270	0	376	270
Stage 1	-	-	-	-	270	-
Stage 2	-	-	-	-	106	-
Critical Hdwy	-	-	4.18	-	6.48	6.28
Critical Hdwy Stg 1	-	-	-	-	5.48	-
Critical Hdwy Stg 2	-	-	-	-	5.48	-
Follow-up Hdwy	-	-	2.272	-	3.572	3.372
Pot Cap-1 Maneuver	-	-	1260	-	614	754
Stage 1	-	-	-	-	762	-
Stage 2	-	-	-	-	904	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1254	-	610	750
Mov Cap-2 Maneuver	-	-	-	-	610	-
Stage 1	-	-	-	-	758	-
Stage 2	-	-	-	-	902	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.2	10
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	741	-	-	1254	-
HCM Lane V/C Ratio	0.029	-	-	0.002	-
HCM Control Delay (s)	10	-	-	7.9	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Intersection	
Int Delay, s/veh	0.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	265	0	2	92	2	2
Future Vol, veh/h	265	0	2	92	2	2
Conflicting Peds, #/hr	0	5	5	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	8	8	8	8	8	8
Mvmt Flow	273	0	2	95	2	2

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	278	0	377	278
Stage 1	-	-	-	-	278	-
Stage 2	-	-	-	-	99	-
Critical Hdwy	-	-	4.18	-	6.48	6.28
Critical Hdwy Stg 1	-	-	-	-	5.48	-
Critical Hdwy Stg 2	-	-	-	-	5.48	-
Follow-up Hdwy	-	-	2.272	-	3.572	3.372
Pot Cap-1 Maneuver	-	-	1251	-	613	747
Stage 1	-	-	-	-	755	-
Stage 2	-	-	-	-	910	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1245	-	609	743
Mov Cap-2 Maneuver	-	-	-	-	609	-
Stage 1	-	-	-	-	751	-
Stage 2	-	-	-	-	908	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.2	10.4
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	669	-	-	1245	-
HCM Lane V/C Ratio	0.006	-	-	0.002	-
HCM Control Delay (s)	10.4	-	-	7.9	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0	-

Intersection	
Int Delay, s/veh	1.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	4	253	4	2	86	12	2	13	10	21	7	7
Future Vol, veh/h	4	253	4	2	86	12	2	13	10	21	7	7
Conflicting Peds, #/hr	5	0	5	5	0	5	5	0	5	5	0	5
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	8	8	8	8	8	8	8	8	8	8	8	8
Mvmt Flow	4	261	4	2	89	12	2	13	10	22	7	7

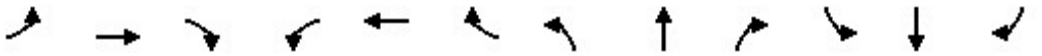
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	106	0	0	270	0	0	387	386	273	392	382	105
Stage 1	-	-	-	-	-	-	276	276	-	104	104	-
Stage 2	-	-	-	-	-	-	111	110	-	288	278	-
Critical Hdwy	4.18	-	-	4.18	-	-	7.18	6.58	6.28	7.18	6.58	6.28
Critical Hdwy Stg 1	-	-	-	-	-	-	6.18	5.58	-	6.18	5.58	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.18	5.58	-	6.18	5.58	-
Follow-up Hdwy	2.272	-	-	2.272	-	-	3.572	4.072	3.372	3.572	4.072	3.372
Pot Cap-1 Maneuver	1448	-	-	1260	-	-	561	539	752	557	542	933
Stage 1	-	-	-	-	-	-	717	671	-	887	798	-
Stage 2	-	-	-	-	-	-	880	793	-	707	670	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1441	-	-	1254	-	-	544	531	745	531	534	924
Mov Cap-2 Maneuver	-	-	-	-	-	-	544	531	-	531	534	-
Stage 1	-	-	-	-	-	-	711	666	-	880	792	-
Stage 2	-	-	-	-	-	-	859	787	-	678	665	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.2	11.3	11.6
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	601	1441	-	-	1254	-	-	581
HCM Lane V/C Ratio	0.043	0.003	-	-	0.002	-	-	0.062
HCM Control Delay (s)	11.3	7.5	0	-	7.9	0	-	11.6
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.2

HCM 6th Signalized Intersection Summary
1: Grove Ave & Mission Blvd

02/22/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	230	690	100	30	670	550	180	910	50	450	770	190
Future Volume (veh/h)	230	690	100	30	670	550	180	910	50	450	770	190
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	250	750	32	33	728	227	196	989	52	489	837	82
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	300	924	410	148	767	340	216	1065	56	512	1944	593
Arrive On Green	0.09	0.26	0.26	0.04	0.22	0.22	0.12	0.22	0.22	0.29	0.39	0.39
Sat Flow, veh/h	3401	3497	1551	3401	3497	1549	1753	4882	256	1753	5025	1534
Grp Volume(v), veh/h	250	750	32	33	728	227	196	678	363	489	837	82
Grp Sat Flow(s),veh/h/ln	1700	1749	1551	1700	1749	1549	1753	1675	1788	1753	1675	1534
Q Serve(g_s), s	11.5	31.9	2.5	1.5	32.6	21.3	17.5	31.6	31.6	43.6	19.5	5.5
Cycle Q Clear(g_c), s	11.5	31.9	2.5	1.5	32.6	21.3	17.5	31.6	31.6	43.6	19.5	5.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.14	1.00		1.00
Lane Grp Cap(c), veh/h	300	924	410	148	767	340	216	731	390	512	1944	593
V/C Ratio(X)	0.83	0.81	0.08	0.22	0.95	0.67	0.91	0.93	0.93	0.96	0.43	0.14
Avail Cap(c_a), veh/h	642	924	410	428	770	341	221	738	394	606	1944	593
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	71.3	54.8	43.9	73.4	61.2	56.8	68.8	60.9	61.0	55.3	35.9	31.6
Incr Delay (d2), s/veh	4.5	5.7	0.1	0.6	20.9	5.2	36.0	18.1	28.7	23.6	0.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.1	14.5	0.9	0.6	16.2	8.6	9.9	14.9	17.1	22.1	7.9	2.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	75.8	60.4	44.0	74.0	82.1	62.0	104.8	79.0	89.7	78.9	36.1	31.7
LnGrp LOS	E	E	D	E	F	E	F	E	F	E	D	C
Approach Vol, veh/h		1032			988			1237			1408	
Approach Delay, s/veh		63.7			77.2			86.2			50.7	
Approach LOS		E			E			F			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	53.4	41.7	14.4	49.5	26.6	68.5	21.5	42.4
Change Period (Y+Rc), s	7.0	7.0	7.5	7.5	7.0	7.0	7.5	7.5
Max Green Setting (Gmax), s	55.0	35.0	20.0	35.0	20.0	35.0	30.0	35.0
Max Q Clear Time (g_c+I1), s	45.6	33.6	3.5	33.9	19.5	21.5	13.5	34.6
Green Ext Time (p_c), s	0.8	0.9	0.0	0.6	0.0	6.1	0.5	0.2

Intersection Summary	
HCM 6th Ctrl Delay	68.6
HCM 6th LOS	E

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary
2: Vineyard Ave & Mission Blvd

02/22/2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	970	260	40	740	0	320	40	80	0	30	40
Future Volume (veh/h)	40	970	260	40	740	0	320	40	80	0	30	40
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	43	1054	143	43	804	0	348	43	25	0	33	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	98	1306	575	98	1306	0	468	973	428	100	973	
Arrive On Green	0.06	0.37	0.37	0.06	0.37	0.00	0.28	0.28	0.28	0.00	0.28	0.00
Sat Flow, veh/h	1753	3497	1539	1753	3589	0	1354	3497	1539	1312	3589	0
Grp Volume(v), veh/h	43	1054	143	43	804	0	348	43	25	0	33	0
Grp Sat Flow(s),veh/h/ln	1753	1749	1539	1753	1749	0	1354	1749	1539	1312	1749	0
Q Serve(g_s), s	1.7	19.4	4.6	1.7	13.4	0.0	18.1	0.6	0.9	0.0	0.5	0.0
Cycle Q Clear(g_c), s	1.7	19.4	4.6	1.7	13.4	0.0	18.6	0.6	0.9	0.0	0.5	0.0
Prop In Lane	1.00		1.00	1.00		0.00	1.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	98	1306	575	98	1306	0	468	973	428	100	973	
V/C Ratio(X)	0.44	0.81	0.25	0.44	0.62	0.00	0.74	0.04	0.06	0.00	0.03	
Avail Cap(c_a), veh/h	488	1460	642	488	1460	0	468	973	428	100	973	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	0.00	1.00	0.00
Uniform Delay (d), s/veh	32.8	20.2	15.6	32.8	18.3	0.0	25.7	19.0	19.0	0.0	18.9	0.0
Incr Delay (d2), s/veh	1.1	3.4	0.3	1.1	0.8	0.0	7.2	0.0	0.1	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	7.0	1.4	0.7	4.6	0.0	6.0	0.2	0.3	0.0	0.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	34.0	23.6	15.9	34.0	19.1	0.0	32.8	19.0	19.1	0.0	18.9	0.0
LnGrp LOS	C	C	B	C	B	A	C	B	B	A	B	
Approach Vol, veh/h		1240			847			416			33	A
Approach Delay, s/veh		23.1			19.9			30.6			18.9	
Approach LOS		C			B			C			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.0	33.9		27.0	11.0	33.9		27.0				
Change Period (Y+Rc), s	7.0	7.0		7.0	7.0	7.0		7.0				
Max Green Setting (Gmax), s	20.0	30.0		20.0	20.0	30.0		20.0				
Max Q Clear Time (g_c+I1), s	3.7	21.4		20.6	3.7	15.4		2.5				
Green Ext Time (p_c), s	0.0	5.4		0.0	0.0	5.6		0.1				

Intersection Summary		
HCM 6th Ctrl Delay		23.2
HCM 6th LOS		C

Notes

Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary
3: Vineyard Ave & Francis St

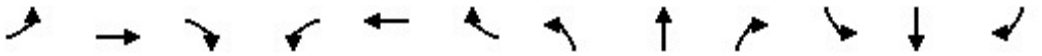
02/22/2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	240	80	110	170	40	30	320	30	20	390	10
Future Volume (veh/h)	20	240	80	110	170	40	30	320	30	20	390	10
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	22	261	62	120	185	29	33	348	28	22	424	10
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	389	520	121	381	736	113	304	763	61	317	773	18
Arrive On Green	0.03	0.19	0.19	0.09	0.24	0.24	0.04	0.23	0.23	0.03	0.22	0.22
Sat Flow, veh/h	1753	2802	652	1753	3028	466	1753	3274	262	1753	3490	82
Grp Volume(v), veh/h	22	161	162	120	105	109	33	185	191	22	212	222
Grp Sat Flow(s),veh/h/ln	1753	1749	1706	1753	1749	1746	1753	1749	1787	1753	1749	1824
Q Serve(g_s), s	0.6	4.8	5.0	3.1	2.8	2.9	0.8	5.3	5.4	0.6	6.3	6.3
Cycle Q Clear(g_c), s	0.6	4.8	5.0	3.1	2.8	2.9	0.8	5.3	5.4	0.6	6.3	6.3
Prop In Lane	1.00		0.38	1.00		0.27	1.00		0.15	1.00		0.05
Lane Grp Cap(c), veh/h	389	325	317	381	425	424	304	408	417	317	387	404
V/C Ratio(X)	0.06	0.50	0.51	0.31	0.25	0.26	0.11	0.45	0.46	0.07	0.55	0.55
Avail Cap(c_a), veh/h	801	1063	1037	692	1063	1061	680	1048	1071	713	1048	1093
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	18.2	21.3	21.4	16.8	17.8	17.8	16.5	19.2	19.2	16.7	20.1	20.2
Incr Delay (d2), s/veh	0.1	1.7	1.8	0.5	0.4	0.4	0.2	1.1	1.1	0.1	1.7	1.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	1.8	1.8	1.1	1.0	1.0	0.3	2.0	2.0	0.2	2.4	2.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	18.2	23.0	23.2	17.2	18.2	18.3	16.7	20.3	20.4	16.8	21.9	21.8
LnGrp LOS	B	C	C	B	B	B	B	C	C	B	C	C
Approach Vol, veh/h		345			334			409			456	
Approach Delay, s/veh		22.8			17.9			20.0			21.6	
Approach LOS		C			B			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.8	20.6	11.6	17.3	9.5	19.9	8.3	20.7
Change Period (Y+Rc), s	7.0	7.0	6.5	6.5	7.0	7.0	6.5	6.5
Max Green Setting (Gmax), s	15.0	35.0	15.5	35.5	15.0	35.0	15.5	35.5
Max Q Clear Time (g_c+I1), s	2.6	7.4	5.1	7.0	2.8	8.3	2.6	4.9
Green Ext Time (p_c), s	0.0	2.9	0.2	2.5	0.0	3.4	0.0	1.6

Intersection Summary	
HCM 6th Ctrl Delay	20.7
HCM 6th LOS	C

Min green cannot be greater than Max Green.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	450	0	390	390	820	0	0	800	530
Future Volume (veh/h)	0	0	0	450	0	390	390	820	0	0	800	530
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		0.99
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1841	1841	1841	1841	1841	0	0	1841	1841
Adj Flow Rate, veh/h				527	0	124	406	854	0	0	833	184
Peak Hour Factor				0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %				4	4	4	4	4	0	0	4	4
Cap, veh/h				686	0	305	442	2225	0	0	1108	490
Arrive On Green				0.20	0.00	0.20	0.25	0.64	0.00	0.00	0.32	0.32
Sat Flow, veh/h				3506	0	1560	1753	3589	0	0	3589	1548
Grp Volume(v), veh/h				527	0	124	406	854	0	0	833	184
Grp Sat Flow(s),veh/h/ln				1753	0	1560	1753	1749	0	0	1749	1548
Q Serve(g_s), s				11.0	0.0	5.4	17.5	9.1	0.0	0.0	16.5	7.1
Cycle Q Clear(g_c), s				11.0	0.0	5.4	17.5	9.1	0.0	0.0	16.5	7.1
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				686	0	305	442	2225	0	0	1108	490
V/C Ratio(X)				0.77	0.00	0.41	0.92	0.38	0.00	0.00	0.75	0.38
Avail Cap(c_a), veh/h				906	0	403	453	2225	0	0	1355	600
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				29.5	0.0	27.2	28.2	6.8	0.0	0.0	23.7	20.5
Incr Delay (d2), s/veh				3.5	0.0	1.2	23.4	0.2	0.0	0.0	2.2	0.7
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				4.8	0.0	2.0	9.6	2.6	0.0	0.0	6.5	2.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				33.0	0.0	28.4	51.5	6.9	0.0	0.0	26.0	21.2
LnGrp LOS				C	A	C	D	A	A	A	C	C
Approach Vol, veh/h					651			1260			1017	
Approach Delay, s/veh					32.1			21.3			25.1	
Approach LOS					C			C			C	

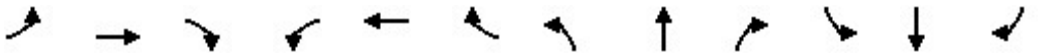
Timer - Assigned Phs	2		5	6		8						
Phs Duration (G+Y+Rc), s	55.3		24.7	30.5		22.2						
Change Period (Y+Rc), s	6.0		* 5.2	6.0		7.0						
Max Green Setting (Gmax), s	30.0		* 20	30.0		20.0						
Max Q Clear Time (g_c+I1), s	11.1		19.5	18.5		13.0						
Green Ext Time (p_c), s	7.4		0.1	6.0		2.1						

Intersection Summary	
HCM 6th Ctrl Delay	25.0
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	240	0	340	0	0	0	0	1000	380	230	990	0
Future Volume (veh/h)	240	0	340	0	0	0	0	1000	380	230	990	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1841	0	1841				0	1841	1841	1841	1841	0
Adj Flow Rate, veh/h	242	0	241				0	1010	143	232	1000	0
Peak Hour Factor	0.99	0.99	0.99				0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	4	0	4				0	4	4	4	4	0
Cap, veh/h	348	0	310				0	1339	593	283	2142	0
Arrive On Green	0.20	0.00	0.20				0.00	0.38	0.38	0.16	0.61	0.00
Sat Flow, veh/h	1753	0	1560				0	3589	1550	1753	3589	0
Grp Volume(v), veh/h	242	0	241				0	1010	143	232	1000	0
Grp Sat Flow(s),veh/h/ln	1753	0	1560				0	1749	1550	1753	1749	0
Q Serve(g_s), s	8.8	0.0	10.1				0.0	17.2	4.3	8.8	10.7	0.0
Cycle Q Clear(g_c), s	8.8	0.0	10.1				0.0	17.2	4.3	8.8	10.7	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	348	0	310				0	1339	593	283	2142	0
V/C Ratio(X)	0.70	0.00	0.78				0.00	0.75	0.24	0.82	0.47	0.00
Avail Cap(c_a), veh/h	509	0	453				0	1525	676	509	2142	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	25.6	0.0	26.1				0.0	18.4	14.4	27.9	7.2	0.0
Incr Delay (d2), s/veh	3.5	0.0	6.7				0.0	2.3	0.4	5.9	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.8	0.0	4.1				0.0	6.4	1.4	3.9	2.9	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	29.2	0.0	32.8				0.0	20.7	14.8	33.8	7.5	0.0
LnGrp LOS	C	A	C				A	C	B	C	A	A
Approach Vol, veh/h		483						1153			1232	
Approach Delay, s/veh		31.0						20.0			12.4	
Approach LOS		C						C			B	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	15.8	32.4		20.7		48.1
Change Period (Y+Rc), s	* 4.7	6.0		7.0		6.0
Max Green Setting (Gmax), s	* 20	30.0		20.0		30.0
Max Q Clear Time (g_c+I1), s	10.8	19.2		12.1		12.7
Green Ext Time (p_c), s	0.4	7.1		1.6		8.4

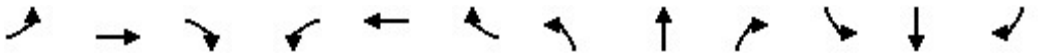
Intersection Summary		
HCM 6th Ctrl Delay		18.6
HCM 6th LOS		B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th Signalized Intersection Summary
7: Vineyard Ave & SR-60 WB Ramps

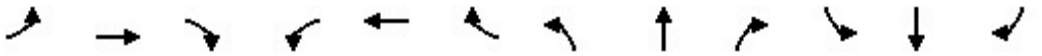
02/22/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	220	0	130	260	500	0	0	730	470
Future Volume (veh/h)	0	0	0	220	0	130	260	500	0	0	730	470
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		0.97
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1841	1841	1841	1841	1841	0	0	1841	1841
Adj Flow Rate, veh/h				229	0	26	271	521	0	0	760	373
Peak Hour Factor				0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %				4	4	4	4	4	0	0	4	4
Cap, veh/h				277	0	247	316	2437	0	0	1022	500
Arrive On Green				0.16	0.00	0.16	0.06	0.23	0.00	0.00	0.45	0.45
Sat Flow, veh/h				1753	0	1560	1753	3589	0	0	2344	1102
Grp Volume(v), veh/h				229	0	26	271	521	0	0	590	543
Grp Sat Flow(s),veh/h/ln				1753	0	1560	1753	1749	0	0	1749	1606
Q Serve(g_s), s				10.1	0.0	1.1	12.3	9.7	0.0	0.0	22.2	22.3
Cycle Q Clear(g_c), s				10.1	0.0	1.1	12.3	9.7	0.0	0.0	22.2	22.3
Prop In Lane				1.00		1.00	1.00		0.00	0.00		0.69
Lane Grp Cap(c), veh/h				277	0	247	316	2437	0	0	794	729
V/C Ratio(X)				0.83	0.00	0.11	0.86	0.21	0.00	0.00	0.74	0.75
Avail Cap(c_a), veh/h				403	0	359	394	2437	0	0	794	729
HCM Platoon Ratio				1.00	1.00	1.00	0.33	0.33	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.73	0.73	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				32.6	0.0	28.8	36.6	13.1	0.0	0.0	18.0	18.0
Incr Delay (d2), s/veh				7.7	0.0	0.1	10.2	0.1	0.0	0.0	6.2	6.8
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				4.8	0.0	0.4	6.4	3.4	0.0	0.0	9.0	8.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				40.3	0.0	29.0	46.8	13.2	0.0	0.0	24.2	24.8
LnGrp LOS				D	A	C	D	B	A	A	C	C
Approach Vol, veh/h					255			792			1133	
Approach Delay, s/veh					39.1			24.7			24.5	
Approach LOS					D			C			C	

Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		61.5			19.4	42.1		18.5				
Change Period (Y+Rc), s		5.8			5.0	5.8		5.8				
Max Green Setting (Gmax), s		50.0			18.0	27.0		18.4				
Max Q Clear Time (g_c+I1), s		11.7			14.3	24.3		12.1				
Green Ext Time (p_c), s		2.7			0.2	1.5		0.6				

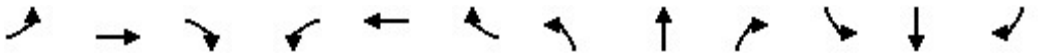
Intersection Summary												
HCM 6th Ctrl Delay			26.3									
HCM 6th LOS			C									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	120	0	270	0	0	0	0	630	340	240	720	0
Future Volume (veh/h)	120	0	270	0	0	0	0	630	340	240	720	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		0.97	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841				0	1841	1841	1841	1841	0
Adj Flow Rate, veh/h	124	0	94				0	649	279	247	742	0
Peak Hour Factor	0.97	0.97	0.97				0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	4	4	4				0	4	4	4	4	0
Cap, veh/h	217	0	193				0	1201	516	280	2557	0
Arrive On Green	0.12	0.00	0.12				0.00	0.51	0.51	0.32	1.00	0.00
Sat Flow, veh/h	1753	0	1560				0	2452	1014	1753	3589	0
Grp Volume(v), veh/h	124	0	94				0	481	447	247	742	0
Grp Sat Flow(s),veh/h/ln	1753	0	1560				0	1749	1626	1753	1749	0
Q Serve(g_s), s	5.3	0.0	4.5				0.0	14.9	14.9	10.7	0.0	0.0
Cycle Q Clear(g_c), s	5.3	0.0	4.5				0.0	14.9	14.9	10.7	0.0	0.0
Prop In Lane	1.00		1.00				0.00		0.62	1.00		0.00
Lane Grp Cap(c), veh/h	217	0	193				0	890	827	280	2557	0
V/C Ratio(X)	0.57	0.00	0.49				0.00	0.54	0.54	0.88	0.29	0.00
Avail Cap(c_a), veh/h	447	0	398				0	890	827	373	2557	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.37	0.37	0.00
Uniform Delay (d), s/veh	33.0	0.0	32.7				0.0	13.3	13.3	26.5	0.0	0.0
Incr Delay (d2), s/veh	1.7	0.0	1.4				0.0	2.4	2.5	6.1	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.3	0.0	1.7				0.0	5.4	5.1	3.9	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	34.8	0.0	34.1				0.0	15.7	15.8	32.6	0.1	0.0
LnGrp LOS	C	A	C				A	B	B	C	A	A
Approach Vol, veh/h		218						928			989	
Approach Delay, s/veh		34.5						15.7			8.2	
Approach LOS		C						B			A	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	17.8	46.5		15.7		64.3
Change Period (Y+Rc), s	5.0	5.8		5.8		5.8
Max Green Setting (Gmax), s	17.0	26.0		20.4		48.0
Max Q Clear Time (g_c+I1), s	12.7	16.9		7.3		2.0
Green Ext Time (p_c), s	0.1	3.2		0.6		4.2

Intersection Summary	
HCM 6th Ctrl Delay	14.2
HCM 6th LOS	B



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	640	0	230	490	390	0	0	990	230
Future Volume (veh/h)	0	0	0	640	0	230	490	390	0	0	990	230
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		0.97
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1781	1781	1781	1781	1781	0	0	1781	1781
Adj Flow Rate, veh/h				657	0	9	500	398	0	0	1010	57
Peak Hour Factor				0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %				8	8	8	8	8	0	0	8	8
Cap, veh/h				920	0	409	987	2918	0	0	1498	357
Arrive On Green				0.27	0.00	0.27	0.40	0.80	0.00	0.00	0.24	0.24
Sat Flow, veh/h				3393	0	1510	3291	5024	0	0	6378	1460
Grp Volume(v), veh/h				657	0	9	500	398	0	0	1010	57
Grp Sat Flow(s),veh/h/ln				1697	0	1510	1646	1621	0	0	1532	1460
Q Serve(g_s), s				15.8	0.0	0.4	10.3	1.7	0.0	0.0	13.4	2.8
Cycle Q Clear(g_c), s				15.8	0.0	0.4	10.3	1.7	0.0	0.0	13.4	2.8
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				920	0	409	987	2918	0	0	1498	357
V/C Ratio(X)				0.71	0.00	0.02	0.51	0.14	0.00	0.00	0.67	0.16
Avail Cap(c_a), veh/h				920	0	409	987	2918	0	0	1498	357
HCM Platoon Ratio				1.00	1.00	1.00	1.33	1.33	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.92	0.92	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				29.6	0.0	24.1	22.0	3.8	0.0	0.0	30.8	26.7
Incr Delay (d2), s/veh				4.7	0.0	0.1	1.7	0.1	0.0	0.0	2.4	1.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				6.8	0.0	0.4	3.7	0.5	0.0	0.0	4.9	1.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				34.4	0.0	24.1	23.7	3.9	0.0	0.0	33.2	27.7
LnGrp LOS				C	A	C	C	A	A	A	C	C
Approach Vol, veh/h					666			898			1067	
Approach Delay, s/veh					34.2			14.9			32.9	
Approach LOS					C			B			C	

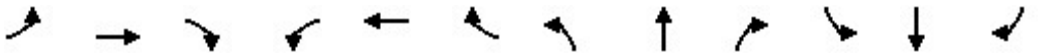
Timer - Assigned Phs	2	4	5	6
Phs Duration (G+Y+Rc), s	59.8	30.2	32.0	27.8
Change Period (Y+Rc), s	5.8	5.8	5.0	5.8
Max Green Setting (Gmax), s	54.0	24.4	27.0	22.0
Max Q Clear Time (g_c+I1), s	3.7	17.8	12.3	15.4
Green Ext Time (p_c), s	2.7	1.6	0.8	3.4

Intersection Summary	
HCM 6th Ctrl Delay	27.1
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	80	0	440	0	0	0	0	860	690	400	1220	0
Future Volume (veh/h)	80	0	440	0	0	0	0	860	690	400	1220	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		0.97	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1781	1781	1781				0	1781	1781	1781	1781	0
Adj Flow Rate, veh/h	55	0	351				0	887	253	412	1258	0
Peak Hour Factor	0.97	0.97	0.97				0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	8	8	8				0	8	8	8	8	0
Cap, veh/h	498	0	886				0	2111	505	585	2810	0
Arrive On Green	0.29	0.00	0.29				0.00	0.34	0.34	0.06	0.19	0.00
Sat Flow, veh/h	1697	0	3019				0	6378	1466	3291	5024	0
Grp Volume(v), veh/h	55	0	351				0	887	253	412	1258	0
Grp Sat Flow(s),veh/h/ln	1697	0	1510				0	1532	1466	1646	1621	0
Q Serve(g_s), s	2.1	0.0	8.4				0.0	10.0	12.3	11.1	20.6	0.0
Cycle Q Clear(g_c), s	2.1	0.0	8.4				0.0	10.0	12.3	11.1	20.6	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	498	0	886				0	2111	505	585	2810	0
V/C Ratio(X)	0.11	0.00	0.40				0.00	0.42	0.50	0.70	0.45	0.00
Avail Cap(c_a), veh/h	498	0	886				0	2111	505	585	2810	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	0.33	0.33	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.64	0.64	0.00
Uniform Delay (d), s/veh	23.2	0.0	25.4				0.0	22.6	23.4	40.0	23.7	0.0
Incr Delay (d2), s/veh	0.4	0.0	1.3				0.0	0.6	3.5	4.5	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	0.0	3.1				0.0	3.4	4.4	5.0	8.8	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.7	0.0	26.8				0.0	23.2	26.9	44.6	24.0	0.0
LnGrp LOS	C	A	C				A	C	C	D	C	A
Approach Vol, veh/h		406						1140			1670	
Approach Delay, s/veh		26.3						24.0			29.1	
Approach LOS		C						C			C	

Timer - Assigned Phs	1	2				6		8				
Phs Duration (G+Y+Rc), s	21.0	36.8				57.8		32.2				
Change Period (Y+Rc), s	5.0	5.8				5.8		5.8				
Max Green Setting (Gmax), s	16.0	31.0				52.0		26.4				
Max Q Clear Time (g_c+I1), s	13.1	14.3				22.6		10.4				
Green Ext Time (p_c), s	0.3	6.1				9.8		1.4				

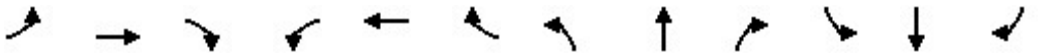
Intersection Summary			
HCM 6th Ctrl Delay			27.0
HCM 6th LOS			C

Notes

User approved volume balancing among the lanes for turning movement.

HCM 6th Signalized Intersection Summary
11: Archibald Ave & Walnut St

02/22/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	10	40	20	20	70	100	1250	40	80	1200	20
Future Volume (veh/h)	20	10	40	20	20	70	100	1250	40	80	1200	20
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.98		0.96	0.98		0.96	1.00		0.96	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781
Adj Flow Rate, veh/h	21	11	7	21	21	10	106	1330	41	85	1277	20
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	8	8	8	8	8	8	8	8	8	8	8	8
Cap, veh/h	286	142	90	296	160	76	135	2139	66	108	2097	33
Arrive On Green	0.14	0.14	0.14	0.14	0.14	0.14	0.08	0.44	0.44	0.06	0.43	0.43
Sat Flow, veh/h	1288	999	636	1302	1124	535	1697	4841	149	1697	4929	77
Grp Volume(v), veh/h	21	0	18	21	0	31	106	891	480	85	840	457
Grp Sat Flow(s),veh/h/ln	1288	0	1635	1302	0	1659	1697	1621	1748	1697	1621	1764
Q Serve(g_s), s	0.8	0.0	0.6	0.8	0.0	0.9	3.6	12.3	12.3	2.9	11.7	11.7
Cycle Q Clear(g_c), s	1.8	0.0	0.6	1.4	0.0	0.9	3.6	12.3	12.3	2.9	11.7	11.7
Prop In Lane	1.00		0.39	1.00		0.32	1.00		0.09	1.00		0.04
Lane Grp Cap(c), veh/h	286	0	232	296	0	236	135	1432	772	108	1379	751
V/C Ratio(X)	0.07	0.00	0.08	0.07	0.00	0.13	0.78	0.62	0.62	0.79	0.61	0.61
Avail Cap(c_a), veh/h	546	0	563	559	0	571	584	2231	1203	584	2231	1214
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.6	0.0	21.6	22.2	0.0	21.8	26.3	12.5	12.5	26.8	12.9	12.9
Incr Delay (d2), s/veh	0.1	0.0	0.1	0.1	0.0	0.2	3.7	0.5	1.0	4.8	0.5	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	0.2	0.2	0.0	0.4	1.4	3.3	3.7	1.2	3.3	3.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	22.7	0.0	21.7	22.3	0.0	22.0	30.0	13.0	13.5	31.6	13.5	13.9
LnGrp LOS	C	A	C	C	A	C	C	B	B	C	B	B
Approach Vol, veh/h		39			52			1477			1382	
Approach Delay, s/veh		22.2			22.1			14.4			14.7	
Approach LOS		C			C			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.2	32.2		15.8	11.1	31.2		15.8				
Change Period (Y+Rc), s	6.5	6.5		7.5	6.5	6.5		7.5				
Max Green Setting (Gmax), s	20.0	40.0		20.0	20.0	40.0		20.0				
Max Q Clear Time (g_c+I1), s	4.9	14.3		3.8	5.6	13.7		3.4				
Green Ext Time (p_c), s	0.1	11.3		0.1	0.1	11.0		0.1				

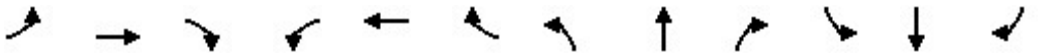
Intersection Summary			
HCM 6th Ctrl Delay		14.8	
HCM 6th LOS		B	

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary
12: Euclid Ave & Riverside Dr

02/22/2024



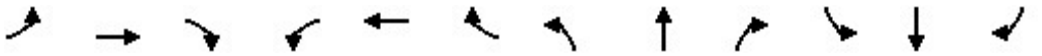
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	130	480	60	130	400	60	60	1030	230	100	890	150
Future Volume (veh/h)	130	480	60	130	400	60	60	1030	230	100	890	150
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	1.00		0.96	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	140	516	21	140	430	22	65	1108	133	108	957	83
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	171	566	467	171	1075	467	128	1146	491	140	1171	662
Arrive On Green	0.10	0.31	0.31	0.10	0.31	0.31	0.07	0.33	0.33	0.08	0.33	0.33
Sat Flow, veh/h	1753	1841	1521	1753	3497	1521	1753	3497	1497	1753	3497	1522
Grp Volume(v), veh/h	140	516	21	140	430	22	65	1108	133	108	957	83
Grp Sat Flow(s),veh/h/ln	1753	1841	1521	1753	1749	1521	1753	1749	1497	1753	1749	1522
Q Serve(g_s), s	9.6	32.9	1.2	9.6	11.9	1.2	4.4	38.0	8.0	7.4	30.6	4.0
Cycle Q Clear(g_c), s	9.6	32.9	1.2	9.6	11.9	1.2	4.4	38.0	8.0	7.4	30.6	4.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	171	566	467	171	1075	467	128	1146	491	140	1171	662
V/C Ratio(X)	0.82	0.91	0.04	0.82	0.40	0.05	0.51	0.97	0.27	0.77	0.82	0.13
Avail Cap(c_a), veh/h	289	649	536	464	1582	688	144	1146	491	270	1218	682
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	54.0	40.7	29.7	54.0	33.4	29.7	54.5	40.4	30.3	55.1	37.2	20.8
Incr Delay (d2), s/veh	3.7	16.7	0.1	3.7	0.3	0.1	3.1	19.0	0.3	8.7	4.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.3	16.9	0.4	4.2	4.9	0.4	2.0	18.8	2.8	3.5	13.3	1.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	57.7	57.4	29.7	57.7	33.7	29.8	57.6	59.4	30.6	63.7	41.5	20.9
LnGrp LOS	E	E	C	E	C	C	E	E	C	E	D	C
Approach Vol, veh/h		677			592			1306			1148	
Approach Delay, s/veh		56.6			39.2			56.3			42.1	
Approach LOS		E			D			E			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.9	46.0	16.6	44.5	14.1	46.8	16.6	44.5
Change Period (Y+Rc), s	* 5.2	6.0	* 4.7	7.0	* 5.2	6.0	* 4.7	7.0
Max Green Setting (Gmax), s	* 19	40.0	* 32	43.0	* 10	42.5	* 20	55.2
Max Q Clear Time (g_c+I1), s	9.4	40.0	11.6	34.9	6.4	32.6	11.6	13.9
Green Ext Time (p_c), s	0.1	0.0	0.2	2.6	0.0	4.6	0.1	4.1

Intersection Summary	
HCM 6th Ctrl Delay	49.3
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



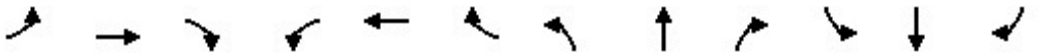
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	120	680	40	30	480	80	20	370	80	90	130	100
Future Volume (veh/h)	120	680	40	30	480	80	20	370	80	90	130	100
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	1.00		0.97	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	126	716	18	32	505	71	21	389	77	95	137	33
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	165	691	569	90	1021	143	405	464	92	151	576	479
Arrive On Green	0.09	0.37	0.37	0.05	0.33	0.33	0.31	0.31	0.31	0.31	0.31	0.31
Sat Flow, veh/h	1767	1856	1528	1767	3097	434	1238	1495	296	917	1856	1544
Grp Volume(v), veh/h	126	716	18	32	286	290	21	0	466	95	137	33
Grp Sat Flow(s),veh/h/ln	1767	1856	1528	1767	1763	1768	1238	0	1791	917	1856	1544
Q Serve(g_s), s	5.6	30.0	0.6	1.4	10.5	10.6	1.0	0.0	19.5	5.5	4.4	1.2
Cycle Q Clear(g_c), s	5.6	30.0	0.6	1.4	10.5	10.6	5.5	0.0	19.5	25.0	4.4	1.2
Prop In Lane	1.00		1.00	1.00		0.25	1.00		0.17	1.00		1.00
Lane Grp Cap(c), veh/h	165	691	569	90	581	583	405	0	556	151	576	479
V/C Ratio(X)	0.76	1.04	0.03	0.36	0.49	0.50	0.05	0.00	0.84	0.63	0.24	0.07
Avail Cap(c_a), veh/h	439	691	569	439	656	658	405	0	556	151	576	479
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.7	25.3	16.1	37.0	21.6	21.7	22.7	0.0	25.9	38.5	20.7	19.6
Incr Delay (d2), s/veh	2.8	44.1	0.0	0.9	0.8	0.8	0.1	0.0	11.1	8.0	0.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	19.8	0.2	0.6	4.0	4.0	0.3	0.0	9.3	2.1	1.8	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	38.4	69.4	16.1	37.9	22.4	22.4	22.8	0.0	37.0	46.5	20.9	19.7
LnGrp LOS	D	F	B	D	C	C	C	A	D	D	C	B
Approach Vol, veh/h		860			608			487			265	
Approach Delay, s/veh		63.7			23.2			36.4			29.9	
Approach LOS		E			C			D			C	

Timer - Assigned Phs	2	3	4	6	7	8
Phs Duration (G+Y+Rc), s	31.5	11.6	37.5	31.5	15.0	34.1
Change Period (Y+Rc), s	6.5	7.5	7.5	6.5	7.5	7.5
Max Green Setting (Gmax), s	25.0	20.0	30.0	25.0	20.0	30.0
Max Q Clear Time (g_c+I1), s	21.5	3.4	32.0	27.0	7.6	12.6
Green Ext Time (p_c), s	1.1	0.0	0.0	0.0	0.1	3.4

Intersection Summary	
HCM 6th Ctrl Delay	42.6
HCM 6th LOS	D

Notes

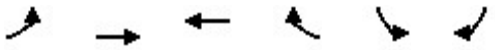
User approved pedestrian interval to be less than phase max green.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	220	770	0	0	490	150	10	40	20	210	40	180
Future Volume (veh/h)	220	770	0	0	490	150	10	40	20	210	40	180
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.97	1.00		0.96	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	232	811	0	0	516	137	11	42	7	221	42	57
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	273	924	0	2	692	183	29	127	21	262	397	329
Arrive On Green	0.15	0.50	0.00	0.00	0.25	0.25	0.02	0.08	0.08	0.15	0.21	0.21
Sat Flow, veh/h	1767	1856	0	1767	2737	722	1767	1541	257	1767	1856	1536
Grp Volume(v), veh/h	232	811	0	0	331	322	11	0	49	221	42	57
Grp Sat Flow(s),veh/h/ln	1767	1856	0	1767	1763	1697	1767	0	1798	1767	1856	1536
Q Serve(g_s), s	10.6	32.3	0.0	0.0	14.3	14.5	0.5	0.0	2.1	10.1	1.5	2.5
Cycle Q Clear(g_c), s	10.6	32.3	0.0	0.0	14.3	14.5	0.5	0.0	2.1	10.1	1.5	2.5
Prop In Lane	1.00		0.00	1.00		0.43	1.00		0.14	1.00		1.00
Lane Grp Cap(c), veh/h	273	924	0	2	446	429	29	0	148	262	397	329
V/C Ratio(X)	0.85	0.88	0.00	0.00	0.74	0.75	0.38	0.00	0.33	0.84	0.11	0.17
Avail Cap(c_a), veh/h	427	924	0	427	745	718	427	0	652	427	673	557
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.1	18.5	0.0	0.0	28.4	28.5	40.3	0.0	35.8	34.3	26.2	26.5
Incr Delay (d2), s/veh	7.8	9.8	0.0	0.0	3.0	3.2	6.2	0.0	1.6	6.5	0.1	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.8	13.7	0.0	0.0	5.8	5.7	0.3	0.0	0.9	4.5	0.6	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	41.9	28.3	0.0	0.0	31.4	31.7	46.5	0.0	37.4	40.8	26.3	26.8
LnGrp LOS	D	C	A	A	C	C	D	A	D	D	C	C
Approach Vol, veh/h		1043			653			60			320	
Approach Delay, s/veh		31.3			31.6			39.1			36.4	
Approach LOS		C			C			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	20.3	28.4	8.8	25.2	0.0	48.7	19.8	14.3
Change Period (Y+Rc), s	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5
Max Green Setting (Gmax), s	20.0	35.0	20.0	30.0	20.0	35.0	20.0	30.0
Max Q Clear Time (g_c+I1), s	12.6	16.5	2.5	4.5	0.0	34.3	12.1	4.1
Green Ext Time (p_c), s	0.3	4.1	0.0	0.4	0.0	0.4	0.3	0.2

Intersection Summary	
HCM 6th Ctrl Delay	32.4
HCM 6th LOS	C



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	190	740	470	230	470	130
Future Volume (veh/h)	190	740	470	230	470	130
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			0.97	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	198	771	490	176	490	40
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	241	930	672	240	534	475
Arrive On Green	0.14	0.50	0.27	0.27	0.30	0.30
Sat Flow, veh/h	1767	1856	2615	899	1767	1572
Grp Volume(v), veh/h	198	771	341	325	490	40
Grp Sat Flow(s),veh/h/ln	1767	1856	1763	1659	1767	1572
Q Serve(g_s), s	8.3	27.0	13.4	13.6	20.4	1.4
Cycle Q Clear(g_c), s	8.3	27.0	13.4	13.6	20.4	1.4
Prop In Lane	1.00			0.54	1.00	1.00
Lane Grp Cap(c), veh/h	241	930	470	442	534	475
V/C Ratio(X)	0.82	0.83	0.73	0.73	0.92	0.08
Avail Cap(c_a), veh/h	464	930	809	761	579	516
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.0	16.2	25.4	25.5	25.7	19.0
Incr Delay (d2), s/veh	5.2	6.5	2.6	2.9	19.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.5	10.3	5.2	5.0	10.4	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	37.2	22.7	28.1	28.4	44.8	19.1
LnGrp LOS	D	C	C	C	D	B
Approach Vol, veh/h		969	666		530	
Approach Delay, s/veh		25.7	28.2		42.9	
Approach LOS		C	C		D	

Timer - Assigned Phs			4		6	7	8
Phs Duration (G+Y+Rc), s			45.7		30.5	17.9	27.8
Change Period (Y+Rc), s			7.5		7.5	7.5	7.5
Max Green Setting (Gmax), s			35.0		25.0	20.0	35.0
Max Q Clear Time (g_c+I1), s			29.0		22.4	10.3	15.6
Green Ext Time (p_c), s			2.7		0.6	0.2	4.2

Intersection Summary	
HCM 6th Ctrl Delay	30.7
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	1170	30	30	700	20	10	0	30	0	0	20
Future Volume (veh/h)	30	1170	30	30	700	20	10	0	30	0	0	20
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	0.97		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	34	1315	34	34	787	22	11	0	0	0	0	3
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	94	1778	46	94	1773	50	229	0	0	0	0	88
Arrive On Green	0.05	0.51	0.51	0.05	0.51	0.51	0.06	0.00	0.00	0.00	0.00	0.06
Sat Flow, veh/h	1767	3508	91	1767	3500	98	1323	0	0	0	0	1533
Grp Volume(v), veh/h	34	660	689	34	396	413	11	0	0	0	0	3
Grp Sat Flow(s),veh/h/ln	1767	1763	1836	1767	1763	1835	1323	0	0	0	0	1533
Q Serve(g_s), s	0.9	13.9	13.9	0.9	6.7	6.7	0.4	0.0	0.0	0.0	0.0	0.1
Cycle Q Clear(g_c), s	0.9	13.9	13.9	0.9	6.7	6.7	0.4	0.0	0.0	0.0	0.0	0.1
Prop In Lane	1.00		0.05	1.00		0.05	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h	94	893	930	94	893	930	229	0	0	0	0	88
V/C Ratio(X)	0.36	0.74	0.74	0.36	0.44	0.44	0.05	0.00	0.00	0.00	0.00	0.03
Avail Cap(c_a), veh/h	751	1311	1366	751	1311	1364	876	0	0	0	0	815
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	21.5	9.2	9.2	21.5	7.4	7.4	21.2	0.0	0.0	0.0	0.0	20.9
Incr Delay (d2), s/veh	2.3	1.3	1.2	2.3	0.3	0.3	0.1	0.0	0.0	0.0	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	2.9	3.0	0.4	1.5	1.5	0.1	0.0	0.0	0.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.8	10.4	10.4	23.8	7.7	7.7	21.2	0.0	0.0	0.0	0.0	21.1
LnGrp LOS	C	B	B	C	A	A	C	A	A	A	A	C
Approach Vol, veh/h		1383			843			11			3	
Approach Delay, s/veh		10.7			8.4			21.2			21.1	
Approach LOS		B			A			C			C	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		8.7	7.5	30.8		8.7	7.5	30.8				
Change Period (Y+Rc), s		6.0	5.0	7.0		6.0	5.0	7.0				
Max Green Setting (Gmax), s		25.0	20.0	35.0		25.0	20.0	35.0				
Max Q Clear Time (g_c+I1), s		2.4	2.9	15.9		2.1	2.9	8.7				
Green Ext Time (p_c), s		0.0	0.0	7.9		0.0	0.0	4.6				

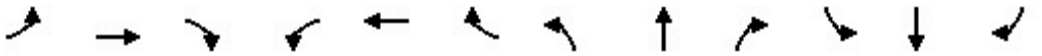
Intersection Summary	
HCM 6th Ctrl Delay	9.9
HCM 6th LOS	A

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary
26: Archibald Ave & Riverside Ave

02/22/2024



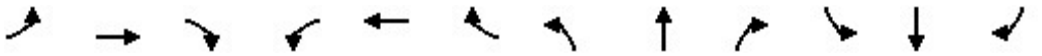
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	230	610	350	140	400	180	220	1000	60	200	900	140
Future Volume (veh/h)	230	610	350	140	400	180	220	1000	60	200	900	140
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.97	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781
Adj Flow Rate, veh/h	235	622	310	143	408	151	224	1020	58	204	918	131
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	8	8	8	8	8	8	8	8	8	8	8	8
Cap, veh/h	280	673	335	181	607	222	268	1375	78	247	1200	171
Arrive On Green	0.16	0.31	0.31	0.11	0.25	0.25	0.16	0.29	0.29	0.15	0.28	0.28
Sat Flow, veh/h	1697	2169	1081	1697	2407	879	1697	4700	267	1697	4286	609
Grp Volume(v), veh/h	235	485	447	143	285	274	224	703	375	204	694	355
Grp Sat Flow(s),veh/h/ln	1697	1692	1557	1697	1692	1593	1697	1621	1725	1697	1621	1652
Q Serve(g_s), s	14.9	30.7	30.7	9.1	16.8	17.2	14.2	21.7	21.7	12.9	21.7	21.8
Cycle Q Clear(g_c), s	14.9	30.7	30.7	9.1	16.8	17.2	14.2	21.7	21.7	12.9	21.7	21.8
Prop In Lane	1.00		0.69	1.00		0.55	1.00		0.15	1.00		0.37
Lane Grp Cap(c), veh/h	280	525	483	181	427	402	268	948	505	247	908	463
V/C Ratio(X)	0.84	0.92	0.92	0.79	0.67	0.68	0.83	0.74	0.74	0.83	0.76	0.77
Avail Cap(c_a), veh/h	537	535	492	537	535	504	537	1025	546	537	1025	523
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.8	36.9	36.9	48.2	37.2	37.4	45.2	35.4	35.4	45.9	36.5	36.5
Incr Delay (d2), s/veh	13.2	22.5	24.0	14.9	4.1	4.7	13.3	3.5	6.5	13.5	4.0	7.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.0	15.1	14.1	4.4	7.1	6.9	6.7	8.5	9.5	6.1	8.6	9.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	58.0	59.4	60.9	63.1	41.3	42.1	58.5	38.9	41.9	59.4	40.5	44.4
LnGrp LOS	E	E	E	E	D	D	E	D	D	E	D	D
Approach Vol, veh/h		1167			702			1302			1253	
Approach Delay, s/veh		59.7			46.1			43.1			44.7	
Approach LOS		E			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	20.1	36.4	15.8	38.4	21.5	35.0	22.3	31.9
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0
Max Q Clear Time (g_c+I1), s	14.9	23.7	11.1	32.7	16.2	23.8	16.9	19.2
Green Ext Time (p_c), s	1.2	7.3	0.9	1.7	1.4	7.2	1.4	4.9

Intersection Summary	
HCM 6th Ctrl Delay	48.4
HCM 6th LOS	D

HCM 6th Signalized Intersection Summary
27: Haven Ave & Riverside Dr

02/22/2024



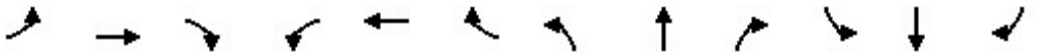
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	210	310	50	80	320	70	20	400	50	100	550	360
Future Volume (veh/h)	210	310	50	80	320	70	20	400	50	100	550	360
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	1.00		0.97	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	221	326	50	84	337	58	21	421	51	105	579	187
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	253	364	56	122	478	81	18	364	44	417	437	363
Arrive On Green	0.14	0.23	0.23	0.07	0.16	0.16	0.24	0.24	0.24	0.24	0.24	0.24
Sat Flow, veh/h	1767	1563	240	1767	3001	510	77	1546	187	1767	1856	1541
Grp Volume(v), veh/h	221	0	376	84	196	199	493	0	0	105	579	187
Grp Sat Flow(s),veh/h/ln	1767	0	1803	1767	1763	1749	1810	0	0	1767	1856	1541
Q Serve(g_s), s	13.0	0.0	21.4	4.9	11.2	11.4	25.0	0.0	0.0	5.1	25.0	11.2
Cycle Q Clear(g_c), s	13.0	0.0	21.4	4.9	11.2	11.4	25.0	0.0	0.0	5.1	25.0	11.2
Prop In Lane	1.00		0.13	1.00		0.29	0.04		0.10	1.00		1.00
Lane Grp Cap(c), veh/h	253	0	420	122	280	278	427	0	0	417	437	363
V/C Ratio(X)	0.87	0.00	0.90	0.69	0.70	0.71	1.16	0.00	0.00	0.25	1.32	0.51
Avail Cap(c_a), veh/h	417	0	510	333	499	495	427	0	0	417	437	363
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.5	0.0	39.4	48.2	42.2	42.3	40.5	0.0	0.0	32.9	40.5	35.2
Incr Delay (d2), s/veh	6.1	0.0	16.0	2.6	3.2	3.4	93.3	0.0	0.0	0.2	160.8	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.8	0.0	10.8	2.2	4.9	5.0	21.6	0.0	0.0	2.1	30.4	4.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	50.6	0.0	55.5	50.8	45.3	45.7	133.8	0.0	0.0	33.2	201.3	36.2
LnGrp LOS	D	A	E	D	D	D	F	A	A	C	F	D
Approach Vol, veh/h		597			479			493			871	
Approach Delay, s/veh		53.7			46.4			133.8			145.6	
Approach LOS		D			D			F			F	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		30.0	14.3	31.7		30.0	22.2	23.9				
Change Period (Y+Rc), s		5.0	7.0	7.0		5.0	7.0	7.0				
Max Green Setting (Gmax), s		25.0	20.0	30.0		25.0	25.0	30.0				
Max Q Clear Time (g_c+I1), s		27.0	6.9	23.4		27.0	15.0	13.4				
Green Ext Time (p_c), s		0.0	0.1	1.1		0.0	0.2	1.8				

Intersection Summary												
HCM 6th Ctrl Delay			101.3									
HCM 6th LOS			F									

Notes

User approved pedestrian interval to be less than phase max green.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	110	330	50	70	60	20	40	1200	230	10	1010	70
Future Volume (veh/h)	110	330	50	70	60	20	40	1200	230	10	1010	70
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.97	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	115	344	13	73	62	16	42	1250	194	10	1052	34
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	386	526	437	151	113	22	139	1511	656	44	1323	588
Arrive On Green	0.29	0.29	0.29	0.29	0.29	0.29	0.08	0.43	0.43	0.03	0.38	0.38
Sat Flow, veh/h	1296	1841	1531	268	396	79	1753	3497	1517	1753	3497	1554
Grp Volume(v), veh/h	115	344	13	151	0	0	42	1250	194	10	1052	34
Grp Sat Flow(s),veh/h/ln	1296	1841	1531	742	0	0	1753	1749	1517	1753	1749	1554
Q Serve(g_s), s	0.0	11.8	0.4	4.9	0.0	0.0	1.6	22.6	6.0	0.4	19.2	1.0
Cycle Q Clear(g_c), s	7.2	11.8	0.4	16.7	0.0	0.0	1.6	22.6	6.0	0.4	19.2	1.0
Prop In Lane	1.00		1.00	0.48		0.11	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	386	526	437	287	0	0	139	1511	656	44	1323	588
V/C Ratio(X)	0.30	0.65	0.03	0.53	0.00	0.00	0.30	0.83	0.30	0.23	0.80	0.06
Avail Cap(c_a), veh/h	649	900	748	551	0	0	367	1710	742	367	1710	760
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.8	22.5	18.4	25.1	0.0	0.0	31.1	18.0	13.2	34.2	19.8	14.1
Incr Delay (d2), s/veh	0.4	1.4	0.0	1.5	0.0	0.0	0.5	3.2	0.2	1.0	2.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	4.8	0.1	2.3	0.0	0.0	0.6	8.0	1.7	0.2	6.8	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	21.3	23.9	18.4	26.6	0.0	0.0	31.6	21.1	13.5	35.2	21.8	14.2
LnGrp LOS	C	C	B	C	A	A	C	C	B	D	C	B
Approach Vol, veh/h		472			151			1486			1096	
Approach Delay, s/veh		23.1			26.6			20.4			21.7	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.5	37.4		27.7	10.4	33.6		27.7				
Change Period (Y+Rc), s	* 4.7	6.5		7.2	* 4.7	6.5		7.2				
Max Green Setting (Gmax), s	* 15	35.0		35.0	* 15	35.0		35.0				
Max Q Clear Time (g_c+I1), s	2.4	24.6		13.8	3.6	21.2		18.7				
Green Ext Time (p_c), s	0.0	6.0		2.3	0.0	5.7		0.7				

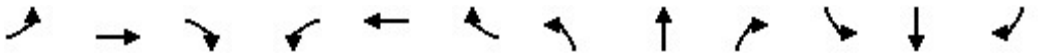
Intersection Summary			
HCM 6th Ctrl Delay		21.6	
HCM 6th LOS		C	

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th Signalized Intersection Summary
34: Archibald Ave & Chino Ave

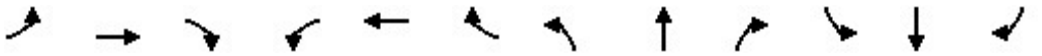
02/22/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	90	80	40	20	20	90	20	1040	30	100	1190	50
Future Volume (veh/h)	90	80	40	20	20	90	20	1040	30	100	1190	50
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781
Adj Flow Rate, veh/h	99	88	33	22	22	14	22	1143	32	110	1308	54
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	8	8	8	8	8	8	8	8	8	8	8	8
Cap, veh/h	126	146	55	49	133	110	49	2080	58	139	1592	66
Arrive On Green	0.07	0.12	0.12	0.03	0.07	0.07	0.03	0.43	0.43	0.08	0.48	0.48
Sat Flow, veh/h	1697	1224	459	1697	1781	1483	1697	4860	136	1697	3309	136
Grp Volume(v), veh/h	99	0	121	22	22	14	22	762	413	110	668	694
Grp Sat Flow(s),veh/h/ln	1697	0	1683	1697	1781	1483	1697	1621	1754	1697	1692	1753
Q Serve(g_s), s	4.7	0.0	5.6	1.0	0.9	0.7	1.0	14.4	14.4	5.2	27.7	27.9
Cycle Q Clear(g_c), s	4.7	0.0	5.6	1.0	0.9	0.7	1.0	14.4	14.4	5.2	27.7	27.9
Prop In Lane	1.00		0.27	1.00		1.00	1.00		0.08	1.00		0.08
Lane Grp Cap(c), veh/h	126	0	201	49	133	110	49	1387	751	139	814	844
V/C Ratio(X)	0.79	0.00	0.60	0.45	0.17	0.13	0.45	0.55	0.55	0.79	0.82	0.82
Avail Cap(c_a), veh/h	414	0	719	414	760	633	517	1780	963	517	929	962
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.3	0.0	34.2	39.2	35.6	35.5	39.2	17.5	17.5	36.9	18.2	18.3
Incr Delay (d2), s/veh	4.1	0.0	4.0	2.4	0.8	0.7	2.4	0.5	0.9	3.8	5.8	5.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	0.0	2.4	0.5	0.4	0.3	0.4	4.7	5.2	2.2	10.2	10.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	41.4	0.0	38.3	41.6	36.4	36.2	41.6	18.0	18.4	40.7	24.0	23.9
LnGrp LOS	D	A	D	D	D	D	D	B	B	D	C	C
Approach Vol, veh/h		220			58			1197			1472	
Approach Delay, s/veh		39.7			38.3			18.6			25.2	
Approach LOS		D			D			B			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.2	42.6	8.9	16.3	9.9	46.9	12.6	12.6
Change Period (Y+Rc), s	7.5	7.5	6.5	6.5	7.5	7.5	6.5	6.5
Max Green Setting (Gmax), s	25.0	45.0	20.0	35.0	25.0	45.0	20.0	35.0
Max Q Clear Time (g_c+I1), s	7.2	16.4	3.0	7.6	3.0	29.9	6.7	2.9
Green Ext Time (p_c), s	0.1	11.5	0.0	0.9	0.0	9.6	0.1	0.2

Intersection Summary	
HCM 6th Ctrl Delay	23.9
HCM 6th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	160	460	270	50	320	140	220	1030	80	110	910	120
Future Volume (veh/h)	160	460	270	50	320	140	220	1030	80	110	910	120
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.97	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	168	484	109	53	337	135	232	1084	35	116	958	47
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	158	622	517	158	420	168	356	1292	560	175	1276	559
Arrive On Green	0.34	0.34	0.34	0.34	0.34	0.34	0.10	0.37	0.37	0.10	0.36	0.36
Sat Flow, veh/h	906	1841	1532	810	1243	498	3401	3497	1515	1753	3497	1533
Grp Volume(v), veh/h	168	484	109	53	0	472	232	1084	35	116	958	47
Grp Sat Flow(s),veh/h/ln	906	1841	1532	810	0	1741	1700	1749	1515	1753	1749	1533
Q Serve(g_s), s	8.7	22.5	4.8	6.0	0.0	23.5	6.3	27.0	1.4	6.1	22.9	1.9
Cycle Q Clear(g_c), s	32.2	22.5	4.8	28.5	0.0	23.5	6.3	27.0	1.4	6.1	22.9	1.9
Prop In Lane	1.00		1.00	1.00		0.29	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	158	622	517	158	0	588	356	1292	560	175	1276	559
V/C Ratio(X)	1.06	0.78	0.21	0.34	0.00	0.80	0.65	0.84	0.06	0.66	0.75	0.08
Avail Cap(c_a), veh/h	158	622	517	181	0	639	891	1650	715	460	1650	723
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.4	28.4	22.5	41.2	0.0	28.7	41.0	27.5	19.4	41.4	26.5	19.8
Incr Delay (d2), s/veh	89.2	6.3	0.2	1.2	0.0	6.9	0.8	3.2	0.0	1.6	1.4	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.5	10.3	1.7	1.2	0.0	10.2	2.5	10.5	0.5	2.5	8.7	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	134.6	34.6	22.7	42.5	0.0	35.6	41.8	30.7	19.5	43.0	27.9	19.9
LnGrp LOS	F	C	C	D	A	D	D	C	B	D	C	B
Approach Vol, veh/h		761			525			1351			1121	
Approach Delay, s/veh		55.0			36.3			32.3			29.2	
Approach LOS		E			D			C			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	14.2	41.7		39.4	14.7	41.3		39.4				
Change Period (Y+Rc), s	* 4.7	6.5		7.2	* 4.7	6.5		7.2				
Max Green Setting (Gmax), s	* 25	45.0		30.0	* 25	45.0		35.0				
Max Q Clear Time (g_c+I1), s	8.1	29.0		34.2	8.3	24.9		30.5				
Green Ext Time (p_c), s	0.1	6.2		0.0	0.3	6.0		1.3				

Intersection Summary			
HCM 6th Ctrl Delay		36.5	
HCM 6th LOS		D	

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	110	770	160	180	320	80	70	860	270	110	940	60
Future Volume (veh/h)	110	770	160	180	320	80	70	860	270	110	940	60
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	115	802	0	188	333	29	73	896	0	115	979	21
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	206	1080		308	624	519	99	1160		155	1272	551
Arrive On Green	0.06	0.31	0.00	0.09	0.34	0.34	0.06	0.33	0.00	0.09	0.36	0.36
Sat Flow, veh/h	3401	3497	1560	3401	1841	1532	1753	3497	1560	1753	3497	1515
Grp Volume(v), veh/h	115	802	0	188	333	29	73	896	0	115	979	21
Grp Sat Flow(s),veh/h/ln	1700	1749	1560	1700	1841	1532	1753	1749	1560	1753	1749	1515
Q Serve(g_s), s	2.9	18.2	0.0	4.7	13.0	1.1	3.6	20.4	0.0	5.7	21.9	0.8
Cycle Q Clear(g_c), s	2.9	18.2	0.0	4.7	13.0	1.1	3.6	20.4	0.0	5.7	21.9	0.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	206	1080		308	624	519	99	1160		155	1272	551
V/C Ratio(X)	0.56	0.74		0.61	0.53	0.06	0.73	0.77		0.74	0.77	0.04
Avail Cap(c_a), veh/h	1342	1380		1342	726	605	692	1380		692	1380	598
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.5	27.5	0.0	38.8	23.7	19.8	41.2	26.6	0.0	39.4	25.0	18.2
Incr Delay (d2), s/veh	5.0	2.6	0.0	4.1	1.5	0.1	19.8	3.2	0.0	13.6	3.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	7.3	0.0	2.0	5.3	0.4	2.0	8.0	0.0	2.9	8.5	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	45.5	30.1	0.0	43.0	25.2	19.9	61.0	29.8	0.0	53.1	28.1	18.3
LnGrp LOS	D	C		D	C	B	E	C		D	C	B
Approach Vol, veh/h		917	A		550			969	A		1115	
Approach Delay, s/veh		32.0			31.0			32.2			30.5	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.9	33.4	12.0	31.4	9.0	36.3	9.4	34.1
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0
Max Q Clear Time (g_c+I1), s	7.7	22.4	6.7	20.2	5.6	23.9	4.9	15.0
Green Ext Time (p_c), s	0.7	7.0	1.4	7.2	0.4	6.9	0.8	3.4

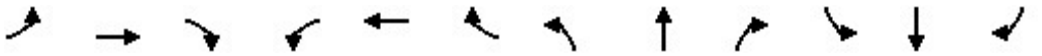
Intersection Summary	
HCM 6th Ctrl Delay	31.4
HCM 6th LOS	C

Notes

Unsignalized Delay for [NBR, EBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary
38: Haven Ave & Ontario Ranch Rd

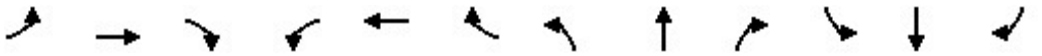
02/22/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	200	970	30	330	660	200	20	240	180	180	450	70
Future Volume (veh/h)	200	970	30	330	660	200	20	240	180	180	450	70
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.97	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	206	1000	9	340	680	53	21	247	43	186	464	65
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	239	1453	443	416	1741	415	55	361	299	219	892	124
Arrive On Green	0.14	0.29	0.29	0.12	0.27	0.27	0.03	0.20	0.20	0.13	0.29	0.29
Sat Flow, veh/h	1753	5025	1531	3401	6332	1511	1753	1841	1526	1753	3074	428
Grp Volume(v), veh/h	206	1000	9	340	680	53	21	247	43	186	263	266
Grp Sat Flow(s),veh/h/ln	1753	1675	1531	1700	1583	1511	1753	1841	1526	1753	1749	1754
Q Serve(g_s), s	11.2	17.2	0.4	9.5	8.5	2.6	1.1	12.1	2.3	10.1	12.2	12.4
Cycle Q Clear(g_c), s	11.2	17.2	0.4	9.5	8.5	2.6	1.1	12.1	2.3	10.1	12.2	12.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.24
Lane Grp Cap(c), veh/h	239	1453	443	416	1741	415	55	361	299	219	507	509
V/C Ratio(X)	0.86	0.69	0.02	0.82	0.39	0.13	0.38	0.68	0.14	0.85	0.52	0.52
Avail Cap(c_a), veh/h	360	2066	629	699	2603	621	360	889	737	360	845	847
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.1	30.7	24.7	41.6	28.7	26.5	46.2	36.3	32.3	41.7	28.9	28.9
Incr Delay (d2), s/veh	8.7	0.8	0.0	1.5	0.2	0.2	1.6	0.9	0.1	4.7	0.3	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.1	6.5	0.1	3.8	3.0	0.9	0.5	5.3	0.8	4.5	4.9	4.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	49.8	31.5	24.8	43.2	28.9	26.7	47.9	37.2	32.4	46.4	29.2	29.2
LnGrp LOS	D	C	C	D	C	C	D	D	C	D	C	C
Approach Vol, veh/h		1215			1073			311			715	
Approach Delay, s/veh		34.6			33.3			37.2			33.7	
Approach LOS		C			C			D			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.7	25.6	18.4	34.6	9.5	34.7	19.8	33.3
Change Period (Y+Rc), s	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
Max Green Setting (Gmax), s	20.0	47.0	20.0	40.0	20.0	47.0	20.0	40.0
Max Q Clear Time (g_c+I1), s	12.1	14.1	11.5	19.2	3.1	14.4	13.2	10.5
Green Ext Time (p_c), s	0.1	0.9	0.4	8.7	0.0	1.8	0.1	6.5

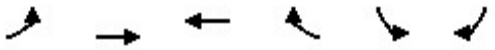
Intersection Summary	
HCM 6th Ctrl Delay	34.2
HCM 6th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	110	970	250	610	770	180	340	440	390	300	600	130
Future Volume (veh/h)	110	970	250	610	770	180	340	440	390	300	600	130
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	115	1010	60	635	802	101	354	458	91	312	625	32
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	173	1188	361	700	1369	600	413	1146	349	371	754	329
Arrive On Green	0.05	0.24	0.24	0.21	0.39	0.39	0.12	0.23	0.23	0.11	0.22	0.22
Sat Flow, veh/h	3401	5025	1529	3401	3497	1534	3401	5025	1528	3401	3497	1527
Grp Volume(v), veh/h	115	1010	60	635	802	101	354	458	91	312	625	32
Grp Sat Flow(s),veh/h/ln	1700	1675	1529	1700	1749	1534	1700	1675	1528	1700	1749	1527
Q Serve(g_s), s	4.5	26.1	4.2	24.8	24.6	5.8	13.9	10.5	6.6	12.2	23.2	2.3
Cycle Q Clear(g_c), s	4.5	26.1	4.2	24.8	24.6	5.8	13.9	10.5	6.6	12.2	23.2	2.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	173	1188	361	700	1369	600	413	1146	349	371	754	329
V/C Ratio(X)	0.67	0.85	0.17	0.91	0.59	0.17	0.86	0.40	0.26	0.84	0.83	0.10
Avail Cap(c_a), veh/h	876	1294	394	876	1369	600	625	1146	349	625	900	393
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	63.4	49.6	41.3	52.7	32.7	27.0	58.6	44.6	43.1	59.4	50.9	42.7
Incr Delay (d2), s/veh	3.2	5.4	0.3	10.8	0.7	0.2	6.5	0.2	0.4	3.9	5.9	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	11.1	1.6	11.2	10.0	2.1	6.2	4.3	2.5	5.3	10.4	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	66.6	55.0	41.5	63.5	33.4	27.1	65.0	44.8	43.5	63.3	56.8	42.9
LnGrp LOS	E	D	D	E	C	C	E	D	D	E	E	D
Approach Vol, veh/h		1185			1538			903			969	
Approach Delay, s/veh		55.4			45.4			52.6			58.4	
Approach LOS		E			D			D			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	35.5	39.6	24.0	36.8	14.4	60.7	22.3	38.5
Change Period (Y+Rc), s	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5
Max Green Setting (Gmax), s	35.0	35.0	25.0	35.0	35.0	35.0	25.0	25.0
Max Q Clear Time (g_c+I1), s	26.8	28.1	15.9	25.2	6.5	26.6	14.2	12.5
Green Ext Time (p_c), s	1.2	3.6	0.6	3.1	0.2	3.7	0.6	2.6

Intersection Summary	
HCM 6th Ctrl Delay	52.2
HCM 6th LOS	D



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	1240	690	0	260	1480
Future Volume (veh/h)	0	1240	690	0	260	1480
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	0	1841	1841	0	1841	1841
Adj Flow Rate, veh/h	0	1333	742	0	280	1477
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	4	4	0	4	4
Cap, veh/h	0	1811	1260	0	795	1415
Arrive On Green	0.00	0.36	0.36	0.00	0.45	0.45
Sat Flow, veh/h	0	5356	3681	0	1753	3120
Grp Volume(v), veh/h	0	1333	742	0	280	1477
Grp Sat Flow(s),veh/h/ln	0	1675	1749	0	1753	1560
Q Serve(g_s), s	0.0	15.3	11.4	0.0	6.9	30.0
Cycle Q Clear(g_c), s	0.0	15.3	11.4	0.0	6.9	30.0
Prop In Lane	0.00			0.00	1.00	1.00
Lane Grp Cap(c), veh/h	0	1811	1260	0	795	1415
V/C Ratio(X)	0.00	0.74	0.59	0.00	0.35	1.04
Avail Cap(c_a), veh/h	0	2280	1587	0	795	1415
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	18.4	17.2	0.0	11.7	18.1
Incr Delay (d2), s/veh	0.0	1.0	0.4	0.0	0.3	36.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	4.8	3.7	0.0	2.2	15.5
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.0	19.4	17.6	0.0	12.0	54.2
LnGrp LOS	A	B	B	A	B	F
Approach Vol, veh/h		1333	742		1757	
Approach Delay, s/veh		19.4	17.6		47.5	
Approach LOS		B	B		D	

Timer - Assigned Phs	2	4	6
Phs Duration (G+Y+Rc), s	30.6	35.5	30.6
Change Period (Y+Rc), s	6.8	5.5	6.8
Max Green Setting (Gmax), s	30.0	30.0	30.0
Max Q Clear Time (g_c+I1), s	17.3	32.0	13.4
Green Ext Time (p_c), s	6.6	0.0	4.0

Intersection Summary	
HCM 6th Ctrl Delay	31.9
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	540	990	240	330	490	110
Future Volume (veh/h)	540	990	240	330	490	110
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		0.97	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	568	918	253	347	516	53
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	4	4	4
Cap, veh/h	2124	946	374	3101	686	305
Arrive On Green	0.42	0.42	0.11	0.62	0.20	0.20
Sat Flow, veh/h	5191	1517	3401	5191	3506	1560
Grp Volume(v), veh/h	568	918	253	347	516	53
Grp Sat Flow(s),veh/h/ln	1675	1517	1700	1675	1753	1560
Q Serve(g_s), s	5.2	30.0	5.1	2.0	9.9	2.0
Cycle Q Clear(g_c), s	5.2	30.0	5.1	2.0	9.9	2.0
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	2124	946	374	3101	686	305
V/C Ratio(X)	0.27	0.97	0.68	0.11	0.75	0.17
Avail Cap(c_a), veh/h	2124	946	1437	3101	1482	659
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	13.3	10.9	30.4	5.6	26.9	23.8
Incr Delay (d2), s/veh	0.1	22.2	2.2	0.0	1.7	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	20.2	2.0	0.4	4.1	0.7
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	13.4	33.1	32.5	5.6	28.6	24.0
LnGrp LOS	B	C	C	A	C	C
Approach Vol, veh/h	1486			600	569	
Approach Delay, s/veh	25.6			17.0	28.2	
Approach LOS	C			B	C	

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	13.8	37.3				51.1	19.9
Change Period (Y+Rc), s	6.0	7.3				7.3	6.0
Max Green Setting (Gmax), s	30.0	30.0				30.0	30.0
Max Q Clear Time (g_c+I1), s	7.1	32.0				4.0	11.9
Green Ext Time (p_c), s	0.8	0.0				2.0	2.0

Intersection Summary	
HCM 6th Ctrl Delay	24.2
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.
User approved volume balancing among the lanes for turning movement.

Intersection	
Intersection Delay, s/veh	7.2
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	10	0	0	10	0	0	30	0	0	10	0
Future Vol, veh/h	0	10	0	0	10	0	0	30	0	0	10	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	8	8	8	8	8	8	8	8	8	8	8	8
Mvmt Flow	0	11	0	0	11	0	0	33	0	0	11	0
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	7.2	7.2	7.3	7.2
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	0%	0%	0%	0%
Vol Thru, %	100%	100%	100%	100%
Vol Right, %	0%	0%	0%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	30	10	10	10
LT Vol	0	0	0	0
Through Vol	30	10	10	10
RT Vol	0	0	0	0
Lane Flow Rate	33	11	11	11
Geometry Grp	1	1	1	1
Degree of Util (X)	0.037	0.012	0.012	0.012
Departure Headway (Hd)	4.084	4.121	4.121	4.1
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	880	869	869	875
Service Time	2.093	2.142	2.142	2.114
HCM Lane V/C Ratio	0.037	0.013	0.013	0.013
HCM Control Delay	7.3	7.2	7.2	7.2
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.1	0	0	0

Intersection	
Intersection Delay, s/veh	9.6
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	30	20	20	30	40	20	10	130	140	40	120	20
Future Vol, veh/h	30	20	20	30	40	20	10	130	140	40	120	20
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles, %	8	8	8	8	8	8	8	8	8	8	8	8
Mvmt Flow	32	22	22	32	43	22	11	140	151	43	129	22
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8.9	9.1	10.1	9.5
HCM LOS	A	A	B	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	4%	43%	33%	22%
Vol Thru, %	46%	29%	44%	67%
Vol Right, %	50%	29%	22%	11%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	280	70	90	180
LT Vol	10	30	30	40
Through Vol	130	20	40	120
RT Vol	140	20	20	20
Lane Flow Rate	301	75	97	194
Geometry Grp	1	1	1	1
Degree of Util (X)	0.37	0.109	0.14	0.258
Departure Headway (Hd)	4.422	5.214	5.199	4.794
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	810	683	685	745
Service Time	2.466	3.284	3.266	2.846
HCM Lane V/C Ratio	0.372	0.11	0.142	0.26
HCM Control Delay	10.1	8.9	9.1	9.5
HCM Lane LOS	B	A	A	A
HCM 95th-tile Q	1.7	0.4	0.5	1

Intersection	
Intersection Delay, s/veh	110.6
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	30	640	30	50	370	20	80	30	70	20	10	10
Future Vol, veh/h	30	640	30	50	370	20	80	30	70	20	10	10
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Heavy Vehicles, %	4	4	4	4	4	4	4	4	4	4	4	4
Mvmt Flow	36	762	36	60	440	24	95	36	83	24	12	12
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	186.5	37.5	16	12.7
HCM LOS	F	E	C	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	44%	4%	11%	50%
Vol Thru, %	17%	91%	84%	25%
Vol Right, %	39%	4%	5%	25%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	180	700	440	40
LT Vol	80	30	50	20
Through Vol	30	640	370	10
RT Vol	70	30	20	10
Lane Flow Rate	214	833	524	48
Geometry Grp	1	1	1	1
Degree of Util (X)	0.415	1.35	0.864	0.103
Departure Headway (Hd)	7.656	5.831	6.436	8.663
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	474	625	566	416
Service Time	5.656	3.888	4.436	6.663
HCM Lane V/C Ratio	0.451	1.333	0.926	0.115
HCM Control Delay	16	186.5	37.5	12.7
HCM Lane LOS	C	F	E	B
HCM 95th-tile Q	2	35.5	9.5	0.3

Intersection	
Int Delay, s/veh	27.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	40	780	30	90	560	10	20	20	190	0	10	30
Future Vol, veh/h	40	780	30	90	560	10	20	20	190	0	10	30
Conflicting Peds, #/hr	5	0	5	5	0	5	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	127	-	-	143	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	44	857	33	99	615	11	22	22	209	0	11	33

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	631	0	0	895	0	0	1478	1796	879	1901	1807	318
Stage 1	-	-	-	-	-	-	967	967	-	824	824	-
Stage 2	-	-	-	-	-	-	511	829	-	1077	983	-
Critical Hdwy	4.145	-	-	4.145	-	-	7.345	6.545	6.245	7.345	6.545	6.945
Critical Hdwy Stg 1	-	-	-	-	-	-	6.145	5.545	-	6.545	5.545	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.545	5.545	-	6.145	5.545	-
Follow-up Hdwy	2.2285	-	-	2.2285	-	-	3.5285	4.0285	3.3285	3.5285	4.0285	3.3285
Pot Cap-1 Maneuver	944	-	-	751	-	-	95	79	344	47	78	676
Stage 1	-	-	-	-	-	-	303	330	-	332	385	-
Stage 2	-	-	-	-	-	-	512	382	-	263	324	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	940	-	-	747	-	-	68	65	342	12	64	673
Mov Cap-2 Maneuver	-	-	-	-	-	-	68	65	-	12	64	-
Stage 1	-	-	-	-	-	-	288	313	-	315	332	-
Stage 2	-	-	-	-	-	-	408	330	-	91	307	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.4	1.4	202.3	28.1
HCM LOS			F	D

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	199	940	-	-	747	-	-	199
HCM Lane V/C Ratio	1.27	0.047	-	-	0.132	-	-	0.221
HCM Control Delay (s)	202.3	9	-	-	10.6	-	-	28.1
HCM Lane LOS	F	A	-	-	B	-	-	D
HCM 95th %tile Q(veh)	13.7	0.1	-	-	0.5	-	-	0.8

Intersection	
Int Delay, s/veh	19.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	20	830	150	50	530	20	80	10	80	10	0	20
Future Vol, veh/h	20	830	150	50	530	20	80	10	80	10	0	20
Conflicting Peds, #/hr	5	0	5	5	0	5	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	69	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	21	856	155	52	546	21	82	10	82	10	0	21

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	572	0	0	1016	0	0	1358	1657	939	1688	1724	289
Stage 1	-	-	-	-	-	-	981	981	-	666	666	-
Stage 2	-	-	-	-	-	-	377	676	-	1022	1058	-
Critical Hdwy	4.145	-	-	4.145	-	-	7.345	6.545	6.245	7.345	6.545	6.945
Critical Hdwy Stg 1	-	-	-	-	-	-	6.145	5.545	-	6.545	5.545	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.545	5.545	-	6.145	5.545	-
Follow-up Hdwy	2.2285	-	-	2.2285	-	-	3.5285	4.0285	3.3285	3.5285	4.0285	3.3285
Pot Cap-1 Maneuver	993	-	-	676	-	-	116	97	317	67	88	706
Stage 1	-	-	-	-	-	-	298	325	-	414	454	-
Stage 2	-	-	-	-	-	-	615	450	-	282	299	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	988	-	-	673	-	-	104	87	315	41	79	703
Mov Cap-2 Maneuver	-	-	-	-	-	-	104	87	-	41	79	-
Stage 1	-	-	-	-	-	-	290	317	-	403	417	-
Stage 2	-	-	-	-	-	-	551	413	-	197	291	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.2	0.9	188.6	50.1
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	149	988	-	-	673	-	-	110
HCM Lane V/C Ratio	1.176	0.021	-	-	0.077	-	-	0.281
HCM Control Delay (s)	188.6	8.7	-	-	10.8	-	-	50.1
HCM Lane LOS	F	A	-	-	B	-	-	F
HCM 95th %tile Q(veh)	9.9	0.1	-	-	0.2	-	-	1.1

Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	20	890	10	10	570	30	10	0	20	10	0	20
Future Vol, veh/h	20	890	10	10	570	30	10	0	20	10	0	20
Conflicting Peds, #/hr	5	0	5	5	0	5	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	98	-	-	47	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	21	918	10	10	588	31	10	0	21	10	0	21

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	624	0	0	933	0	0	1284	1614	928	1605	1604	315
Stage 1	-	-	-	-	-	-	970	970	-	629	629	-
Stage 2	-	-	-	-	-	-	314	644	-	976	975	-
Critical Hdwy	4.145	-	-	4.145	-	-	7.345	6.545	6.245	7.345	6.545	6.945
Critical Hdwy Stg 1	-	-	-	-	-	-	6.145	5.545	-	6.545	5.545	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.545	5.545	-	6.145	5.545	-
Follow-up Hdwy	2.2285	-	-	2.2285	-	-	3.5285	4.0285	3.3285	3.5285	4.0285	3.3285
Pot Cap-1 Maneuver	949	-	-	726	-	-	131	103	322	77	104	679
Stage 1	-	-	-	-	-	-	302	329	-	436	472	-
Stage 2	-	-	-	-	-	-	670	465	-	300	327	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	944	-	-	723	-	-	123	98	320	70	99	676
Mov Cap-2 Maneuver	-	-	-	-	-	-	123	98	-	70	99	-
Stage 1	-	-	-	-	-	-	294	320	-	424	463	-
Stage 2	-	-	-	-	-	-	641	456	-	274	318	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.2	0.2	25.2	30.1
HCM LOS			D	D

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	209	944	-	-	723	-	-	174
HCM Lane V/C Ratio	0.148	0.022	-	-	0.014	-	-	0.178
HCM Control Delay (s)	25.2	8.9	-	-	10.1	-	-	30.1
HCM Lane LOS	D	A	-	-	B	-	-	D
HCM 95th %tile Q(veh)	0.5	0.1	-	-	0	-	-	0.6

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	1210	690	20	0	10
Future Vol, veh/h	0	1210	690	20	0	10
Conflicting Peds, #/hr	5	0	0	5	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	25	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	0	1274	726	21	0	11

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	752	0	-	0	2016	379
Stage 1	-	-	-	-	742	-
Stage 2	-	-	-	-	1274	-
Critical Hdwy	4.145	-	-	-	6.645	6.945
Critical Hdwy Stg 1	-	-	-	-	5.845	-
Critical Hdwy Stg 2	-	-	-	-	5.445	-
Follow-up Hdwy	2.2285	-	-	-	3.5285	3.3285
Pot Cap-1 Maneuver	850	-	-	-	57	617
Stage 1	-	-	-	-	430	-
Stage 2	-	-	-	-	260	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	846	-	-	-	56	614
Mov Cap-2 Maneuver	-	-	-	-	171	-
Stage 1	-	-	-	-	428	-
Stage 2	-	-	-	-	259	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	11
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	846	-	-	-	614
HCM Lane V/C Ratio	-	-	-	-	0.017
HCM Control Delay (s)	0	-	-	-	11
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.1

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	1210	690	10	0	20
Future Vol, veh/h	0	1210	690	10	0	20
Conflicting Peds, #/hr	5	0	0	5	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	25	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	0	1287	734	11	0	21

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	750	0	-	0	2032	378
Stage 1	-	-	-	-	745	-
Stage 2	-	-	-	-	1287	-
Critical Hdwy	4.145	-	-	-	6.645	6.945
Critical Hdwy Stg 1	-	-	-	-	5.845	-
Critical Hdwy Stg 2	-	-	-	-	5.445	-
Follow-up Hdwy	2.2285	-	-	-	3.5285	3.3285
Pot Cap-1 Maneuver	851	-	-	-	55	618
Stage 1	-	-	-	-	429	-
Stage 2	-	-	-	-	256	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	847	-	-	-	54	615
Mov Cap-2 Maneuver	-	-	-	-	169	-
Stage 1	-	-	-	-	427	-
Stage 2	-	-	-	-	255	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	11.1
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	847	-	-	-	615
HCM Lane V/C Ratio	-	-	-	-	0.035
HCM Control Delay (s)	0	-	-	-	11.1
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.1

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	1220	710	10	20	0
Future Vol, veh/h	0	1220	710	10	20	0
Conflicting Peds, #/hr	5	0	0	5	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	0	1258	732	10	21	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	747	0	-	0	2000	376
Stage 1	-	-	-	-	742	-
Stage 2	-	-	-	-	1258	-
Critical Hdwy	4.145	-	-	-	6.645	6.945
Critical Hdwy Stg 1	-	-	-	-	5.845	-
Critical Hdwy Stg 2	-	-	-	-	5.445	-
Follow-up Hdwy	2.2285	-	-	-	3.5285	3.3285
Pot Cap-1 Maneuver	854	-	-	-	58	620
Stage 1	-	-	-	-	430	-
Stage 2	-	-	-	-	265	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	850	-	-	-	57	617
Mov Cap-2 Maneuver	-	-	-	-	173	-
Stage 1	-	-	-	-	428	-
Stage 2	-	-	-	-	264	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	28.6
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	850	-	-	-	173
HCM Lane V/C Ratio	-	-	-	-	0.119
HCM Control Delay (s)	0	-	-	-	28.6
HCM Lane LOS	A	-	-	-	D
HCM 95th %tile Q(veh)	0	-	-	-	0.4

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	10	1230	710	30	30	10
Future Vol, veh/h	10	1230	710	30	30	10
Conflicting Peds, #/hr	5	0	0	5	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	350	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	98	98	98	98	98	98
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	10	1255	724	31	31	10

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	760	0	-	0	2020	383
Stage 1	-	-	-	-	745	-
Stage 2	-	-	-	-	1275	-
Critical Hdwy	4.145	-	-	-	6.645	6.945
Critical Hdwy Stg 1	-	-	-	-	5.845	-
Critical Hdwy Stg 2	-	-	-	-	5.445	-
Follow-up Hdwy	2.2285	-	-	-	3.5285	3.3285
Pot Cap-1 Maneuver	844	-	-	-	56	613
Stage 1	-	-	-	-	429	-
Stage 2	-	-	-	-	260	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	840	-	-	-	55	610
Mov Cap-2 Maneuver	-	-	-	-	170	-
Stage 1	-	-	-	-	422	-
Stage 2	-	-	-	-	259	-

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	26.6
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	840	-	-	-	207
HCM Lane V/C Ratio	0.012	-	-	-	0.197
HCM Control Delay (s)	9.3	-	-	-	26.6
HCM Lane LOS	A	-	-	-	D
HCM 95th %tile Q(veh)	0	-	-	-	0.7

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	10	1250	720	10	10	20
Future Vol, veh/h	10	1250	720	10	10	20
Conflicting Peds, #/hr	5	0	0	5	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	175	-	-	-	0	76
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	10	1302	750	10	10	21

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	765	0	-	0	2082	385
Stage 1	-	-	-	-	760	-
Stage 2	-	-	-	-	1322	-
Critical Hdwy	4.145	-	-	-	6.645	6.945
Critical Hdwy Stg 1	-	-	-	-	5.845	-
Critical Hdwy Stg 2	-	-	-	-	5.445	-
Follow-up Hdwy	2.2285	-	-	-	3.5285	3.3285
Pot Cap-1 Maneuver	841	-	-	-	51	612
Stage 1	-	-	-	-	421	-
Stage 2	-	-	-	-	246	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	837	-	-	-	50	609
Mov Cap-2 Maneuver	-	-	-	-	50	-
Stage 1	-	-	-	-	414	-
Stage 2	-	-	-	-	245	-

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	39.1
HCM LOS			E

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	837	-	-	-	50	609
HCM Lane V/C Ratio	0.012	-	-	-	0.208	0.034
HCM Control Delay (s)	9.4	-	-	-	95	11.1
HCM Lane LOS	A	-	-	-	F	B
HCM 95th %tile Q(veh)	0	-	-	-	0.7	0.1

Intersection	
Int Delay, s/veh	0.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1220	40	10	710	20	10
Future Vol, veh/h	1220	40	10	710	20	10
Conflicting Peds, #/hr	0	5	5	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	200	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	1271	42	10	740	21	10

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1318	0	1687	1297
Stage 1	-	-	-	-	1297	-
Stage 2	-	-	-	-	390	-
Critical Hdwy	-	-	4.145	-	6.645	6.245
Critical Hdwy Stg 1	-	-	-	-	5.445	-
Critical Hdwy Stg 2	-	-	-	-	5.845	-
Follow-up Hdwy	-	-	2.2285	-	3.5285	3.3285
Pot Cap-1 Maneuver	-	-	518	-	93	196
Stage 1	-	-	-	-	253	-
Stage 2	-	-	-	-	652	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	516	-	91	195
Mov Cap-2 Maneuver	-	-	-	-	91	-
Stage 1	-	-	-	-	252	-
Stage 2	-	-	-	-	640	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.2	49.7
HCM LOS			E

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	111	-	-	516	-
HCM Lane V/C Ratio	0.282	-	-	0.02	-
HCM Control Delay (s)	49.7	-	-	12.1	-
HCM Lane LOS	E	-	-	B	-
HCM 95th %tile Q(veh)	1.1	-	-	0.1	-

Intersection	
Int Delay, s/veh	0.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	220	0	0	90	0	20
Future Vol, veh/h	220	0	0	90	0	20
Conflicting Peds, #/hr	0	5	5	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	83	83	83	83	83	83
Heavy Vehicles, %	8	8	8	8	8	8
Mvmt Flow	265	0	0	108	0	24

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	270	0	378	270
Stage 1	-	-	-	-	270	-
Stage 2	-	-	-	-	108	-
Critical Hdwy	-	-	4.18	-	6.48	6.28
Critical Hdwy Stg 1	-	-	-	-	5.48	-
Critical Hdwy Stg 2	-	-	-	-	5.48	-
Follow-up Hdwy	-	-	2.272	-	3.572	3.372
Pot Cap-1 Maneuver	-	-	1260	-	612	754
Stage 1	-	-	-	-	762	-
Stage 2	-	-	-	-	902	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1254	-	609	750
Mov Cap-2 Maneuver	-	-	-	-	609	-
Stage 1	-	-	-	-	758	-
Stage 2	-	-	-	-	902	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	10
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	750	-	-	1254	-
HCM Lane V/C Ratio	0.032	-	-	-	-
HCM Control Delay (s)	10	-	-	0	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Intersection	
Int Delay, s/veh	0.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	240	1	2	80	1	3
Future Vol, veh/h	240	1	2	80	1	3
Conflicting Peds, #/hr	0	5	5	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	8	8	8	8	8	8
Mvmt Flow	273	1	2	91	1	3

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	279	0	374	279
Stage 1	-	-	-	-	279	-
Stage 2	-	-	-	-	95	-
Critical Hdwy	-	-	4.18	-	6.48	6.28
Critical Hdwy Stg 1	-	-	-	-	5.48	-
Critical Hdwy Stg 2	-	-	-	-	5.48	-
Follow-up Hdwy	-	-	2.272	-	3.572	3.372
Pot Cap-1 Maneuver	-	-	1250	-	615	746
Stage 1	-	-	-	-	755	-
Stage 2	-	-	-	-	914	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1244	-	611	742
Mov Cap-2 Maneuver	-	-	-	-	611	-
Stage 1	-	-	-	-	751	-
Stage 2	-	-	-	-	912	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.2	10.1
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	704	-	-	1244	-
HCM Lane V/C Ratio	0.006	-	-	0.002	-
HCM Control Delay (s)	10.1	-	-	7.9	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0	-

Intersection	
Int Delay, s/veh	1.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	0	230	0	0	80	10	0	10	10	20	10	10
Future Vol, veh/h	0	230	0	0	80	10	0	10	10	20	10	10
Conflicting Peds, #/hr	5	0	5	5	0	5	5	0	5	5	0	5
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	8	8	8	8	8	8	8	8	8	8	8	8
Mvmt Flow	0	253	0	0	88	11	0	11	11	22	11	11

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	104	0	0	258	0	0	368	362	263	368	357	104
Stage 1	-	-	-	-	-	-	258	258	-	99	99	-
Stage 2	-	-	-	-	-	-	110	104	-	269	258	-
Critical Hdwy	4.18	-	-	4.18	-	-	7.18	6.58	6.28	7.18	6.58	6.28
Critical Hdwy Stg 1	-	-	-	-	-	-	6.18	5.58	-	6.18	5.58	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.18	5.58	-	6.18	5.58	-
Follow-up Hdwy	2.272	-	-	2.272	-	-	3.572	4.072	3.372	3.572	4.072	3.372
Pot Cap-1 Maneuver	1451	-	-	1273	-	-	577	556	761	577	560	935
Stage 1	-	-	-	-	-	-	734	683	-	893	802	-
Stage 2	-	-	-	-	-	-	881	798	-	724	683	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1444	-	-	1267	-	-	556	550	754	554	554	926
Mov Cap-2 Maneuver	-	-	-	-	-	-	556	550	-	554	554	-
Stage 1	-	-	-	-	-	-	730	680	-	889	798	-
Stage 2	-	-	-	-	-	-	854	794	-	699	680	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	10.9	11.3
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	636	1444	-	-	1267	-	-	616
HCM Lane V/C Ratio	0.035	-	-	-	-	-	-	0.071
HCM Control Delay (s)	10.9	0	-	-	0	-	-	11.3
HCM Lane LOS	B	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.2

HCM 6th Signalized Intersection Summary
1: Grove Ave & Mission Blvd

02/22/2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	200	620	90	20	600	490	160	810	40	400	680	170
Future Volume (veh/h)	200	620	90	20	600	490	160	810	40	400	680	170
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	217	674	31	22	652	174	174	880	41	435	739	70
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	274	930	413	126	778	345	198	1102	51	462	1884	575
Arrive On Green	0.08	0.27	0.27	0.04	0.22	0.22	0.11	0.22	0.22	0.26	0.37	0.37
Sat Flow, veh/h	3401	3497	1551	3401	3497	1549	1753	4916	228	1753	5025	1533
Grp Volume(v), veh/h	217	674	31	22	652	174	174	599	322	435	739	70
Grp Sat Flow(s),veh/h/ln	1700	1749	1551	1700	1749	1549	1753	1675	1794	1753	1675	1533
Q Serve(g_s), s	8.7	24.3	2.1	0.9	24.7	13.6	13.6	23.4	23.5	33.7	14.9	4.1
Cycle Q Clear(g_c), s	8.7	24.3	2.1	0.9	24.7	13.6	13.6	23.4	23.5	33.7	14.9	4.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.13	1.00		1.00
Lane Grp Cap(c), veh/h	274	930	413	126	778	345	198	751	402	462	1884	575
V/C Ratio(X)	0.79	0.72	0.08	0.17	0.84	0.50	0.88	0.80	0.80	0.94	0.39	0.12
Avail Cap(c_a), veh/h	736	930	413	490	882	391	253	845	453	695	1884	575
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	62.6	46.3	38.1	64.7	51.5	47.2	60.6	50.8	50.9	50.0	31.8	28.4
Incr Delay (d2), s/veh	3.9	2.9	0.1	0.5	6.7	1.4	22.3	5.3	9.7	14.8	0.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.8	10.7	0.8	0.4	11.1	5.2	7.1	10.1	11.3	16.3	6.0	1.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	66.5	49.2	38.2	65.2	58.2	48.6	82.9	56.2	60.6	64.8	32.0	28.5
LnGrp LOS	E	D	D	E	E	D	F	E	E	E	C	C
Approach Vol, veh/h		922			848			1095			1244	
Approach Delay, s/veh		52.9			56.4			61.7			43.2	
Approach LOS		D			E			E			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	43.6	38.1	12.6	44.4	22.7	59.0	18.7	38.4
Change Period (Y+Rc), s	7.0	7.0	7.5	7.5	7.0	7.0	7.5	7.5
Max Green Setting (Gmax), s	55.0	35.0	20.0	35.0	20.0	35.0	30.0	35.0
Max Q Clear Time (g_c+I1), s	35.7	25.5	2.9	26.3	15.6	16.9	10.7	26.7
Green Ext Time (p_c), s	0.9	4.7	0.0	3.2	0.1	6.3	0.5	3.3

Intersection Summary	
HCM 6th Ctrl Delay	53.1
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary
2: Vineyard Ave & Mission Blvd

02/22/2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	860	230	40	660	0	280	30	70	0	20	30
Future Volume (veh/h)	40	860	230	40	660	0	280	30	70	0	20	30
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	43	935	105	43	717	0	304	33	23	0	22	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	102	1265	557	102	1265	0	458	907	399	110	907	
Arrive On Green	0.06	0.36	0.36	0.06	0.36	0.00	0.26	0.26	0.26	0.00	0.26	0.00
Sat Flow, veh/h	1753	3497	1539	1753	3589	0	1368	3497	1539	1326	3589	0
Grp Volume(v), veh/h	43	935	105	43	717	0	304	33	23	0	22	0
Grp Sat Flow(s),veh/h/ln	1753	1749	1539	1753	1749	0	1368	1749	1539	1326	1749	0
Q Serve(g_s), s	1.6	15.2	3.1	1.6	10.8	0.0	13.9	0.5	0.7	0.0	0.3	0.0
Cycle Q Clear(g_c), s	1.6	15.2	3.1	1.6	10.8	0.0	14.3	0.5	0.7	0.0	0.3	0.0
Prop In Lane	1.00		1.00	1.00		0.00	1.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	102	1265	557	102	1265	0	458	907	399	110	907	
V/C Ratio(X)	0.42	0.74	0.19	0.42	0.57	0.00	0.66	0.04	0.06	0.00	0.02	
Avail Cap(c_a), veh/h	536	1603	705	536	1603	0	521	1069	470	171	1069	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	0.00	1.00	0.00
Uniform Delay (d), s/veh	29.8	18.2	14.3	29.8	16.8	0.0	23.4	18.1	18.2	0.0	18.1	0.0
Incr Delay (d2), s/veh	1.0	1.7	0.2	1.0	0.6	0.0	3.6	0.0	0.1	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	5.1	0.9	0.6	3.5	0.0	4.3	0.2	0.2	0.0	0.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	30.8	19.9	14.5	30.8	17.3	0.0	27.0	18.2	18.3	0.0	18.1	0.0
LnGrp LOS	C	B	B	C	B	A	C	B	B	A	B	
Approach Vol, veh/h		1083			760			360			22	A
Approach Delay, s/veh		19.8			18.1			25.6			18.1	
Approach LOS		B			B			C			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.8	30.7		24.0	10.8	30.7		24.0				
Change Period (Y+Rc), s	7.0	7.0		7.0	7.0	7.0		7.0				
Max Green Setting (Gmax), s	20.0	30.0		20.0	20.0	30.0		20.0				
Max Q Clear Time (g_c+I1), s	3.6	17.2		16.3	3.6	12.8		2.3				
Green Ext Time (p_c), s	0.0	6.4		0.7	0.0	5.4		0.1				

Intersection Summary		
HCM 6th Ctrl Delay		20.1
HCM 6th LOS		C

Notes

Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary
3: Vineyard Ave & Francis St

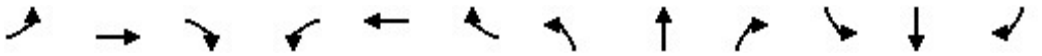
02/22/2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	210	70	90	150	30	30	290	30	20	350	10
Future Volume (veh/h)	20	210	70	90	150	30	30	290	30	20	350	10
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	22	228	51	98	163	21	33	315	26	22	380	10
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	388	493	108	385	706	90	317	728	60	327	734	19
Arrive On Green	0.03	0.17	0.17	0.08	0.23	0.23	0.04	0.22	0.22	0.03	0.21	0.21
Sat Flow, veh/h	1753	2839	621	1753	3114	395	1753	3267	268	1753	3479	91
Grp Volume(v), veh/h	22	138	141	98	90	94	33	168	173	22	191	199
Grp Sat Flow(s),veh/h/ln	1753	1749	1712	1753	1749	1760	1753	1749	1786	1753	1749	1822
Q Serve(g_s), s	0.6	3.9	4.1	2.4	2.3	2.4	0.8	4.6	4.6	0.5	5.3	5.4
Cycle Q Clear(g_c), s	0.6	3.9	4.1	2.4	2.3	2.4	0.8	4.6	4.6	0.5	5.3	5.4
Prop In Lane	1.00		0.36	1.00		0.22	1.00		0.15	1.00		0.05
Lane Grp Cap(c), veh/h	388	303	297	385	397	399	317	390	398	327	369	384
V/C Ratio(X)	0.06	0.46	0.47	0.25	0.23	0.23	0.10	0.43	0.44	0.07	0.52	0.52
Avail Cap(c_a), veh/h	825	1122	1098	729	1122	1129	717	1106	1130	748	1106	1153
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.7	20.5	20.6	16.3	17.4	17.5	16.0	18.5	18.5	16.2	19.3	19.3
Incr Delay (d2), s/veh	0.1	1.5	1.7	0.3	0.4	0.4	0.2	1.1	1.1	0.1	1.6	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	1.5	1.5	0.8	0.8	0.8	0.3	1.7	1.7	0.2	2.0	2.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	17.8	22.0	22.2	16.6	17.8	17.9	16.1	19.5	19.6	16.3	20.9	20.9
LnGrp LOS	B	C	C	B	B	B	B	B	B	B	C	C
Approach Vol, veh/h		301			282			374			412	
Approach Delay, s/veh		21.8			17.4			19.3			20.7	
Approach LOS		C			B			B			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.7	19.3	11.2	16.1	9.4	18.7	8.2	19.0
Change Period (Y+Rc), s	7.0	7.0	6.5	6.5	7.0	7.0	6.5	6.5
Max Green Setting (Gmax), s	15.0	35.0	15.5	35.5	15.0	35.0	15.5	35.5
Max Q Clear Time (g_c+I1), s	2.5	6.6	4.4	6.1	2.8	7.4	2.6	4.4
Green Ext Time (p_c), s	0.0	2.7	0.1	2.1	0.0	3.0	0.0	1.3

Intersection Summary	
HCM 6th Ctrl Delay	19.9
HCM 6th LOS	B

Min green cannot be greater than Max Green.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	400	0	340	350	730	0	0	720	470
Future Volume (veh/h)	0	0	0	400	0	340	350	730	0	0	720	470
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		0.99
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1841	1841	1841	1841	1841	0	0	1841	1841
Adj Flow Rate, veh/h				442	0	64	361	753	0	0	742	159
Peak Hour Factor				0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %				4	4	4	4	4	0	0	4	4
Cap, veh/h				628	0	280	413	2189	0	0	1093	484
Arrive On Green				0.18	0.00	0.18	0.24	0.63	0.00	0.00	0.31	0.31
Sat Flow, veh/h				3506	0	1560	1753	3589	0	0	3589	1547
Grp Volume(v), veh/h				442	0	64	361	753	0	0	742	159
Grp Sat Flow(s),veh/h/ln				1753	0	1560	1753	1749	0	0	1749	1547
Q Serve(g_s), s				7.9	0.0	2.3	13.2	6.8	0.0	0.0	12.4	5.3
Cycle Q Clear(g_c), s				7.9	0.0	2.3	13.2	6.8	0.0	0.0	12.4	5.3
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				628	0	280	413	2189	0	0	1093	484
V/C Ratio(X)				0.70	0.00	0.23	0.87	0.34	0.00	0.00	0.68	0.33
Avail Cap(c_a), veh/h				1051	0	468	525	2189	0	0	1572	696
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				25.7	0.0	23.4	24.6	5.9	0.0	0.0	20.0	17.6
Incr Delay (d2), s/veh				2.1	0.0	0.6	12.6	0.1	0.0	0.0	1.1	0.6
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				3.3	0.0	0.9	6.4	1.8	0.0	0.0	4.6	1.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				27.8	0.0	24.0	37.2	6.1	0.0	0.0	21.1	18.1
LnGrp LOS				C	A	C	D	A	A	A	C	B
Approach Vol, veh/h					506			1114			901	
Approach Delay, s/veh					27.3			16.2			20.6	
Approach LOS					C			B			C	

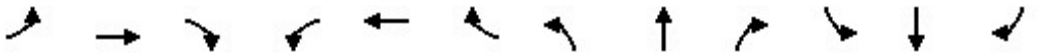
Timer - Assigned Phs	2		5	6		8						
Phs Duration (G+Y+Rc), s	47.8		20.9	26.9		19.0						
Change Period (Y+Rc), s	6.0		* 5.2	6.0		7.0						
Max Green Setting (Gmax), s	30.0		* 20	30.0		20.0						
Max Q Clear Time (g_c+I1), s	8.8		15.2	14.4		9.9						
Green Ext Time (p_c), s	6.8		0.5	6.5		2.1						

Intersection Summary		
HCM 6th Ctrl Delay	20.0	
HCM 6th LOS	B	

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



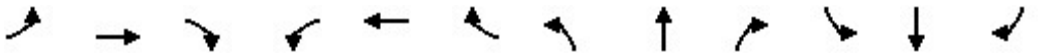
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	210	0	300	0	0	0	0	890	340	210	880	0
Future Volume (veh/h)	210	0	300	0	0	0	0	890	340	210	880	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1841	0	1841				0	1841	1841	1841	1841	0
Adj Flow Rate, veh/h	219	0	187				0	927	132	219	917	0
Peak Hour Factor	0.96	0.96	0.96				0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	4	0	4				0	4	4	4	4	0
Cap, veh/h	306	0	272				0	1345	596	275	2157	0
Arrive On Green	0.17	0.00	0.17				0.00	0.38	0.38	0.16	0.62	0.00
Sat Flow, veh/h	1753	0	1560				0	3589	1550	1753	3589	0
Grp Volume(v), veh/h	219	0	187				0	927	132	219	917	0
Grp Sat Flow(s),veh/h/ln	1753	0	1560				0	1749	1550	1753	1749	0
Q Serve(g_s), s	7.3	0.0	7.0				0.0	13.8	3.6	7.5	8.5	0.0
Cycle Q Clear(g_c), s	7.3	0.0	7.0				0.0	13.8	3.6	7.5	8.5	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	306	0	272				0	1345	596	275	2157	0
V/C Ratio(X)	0.72	0.00	0.69				0.00	0.69	0.22	0.80	0.43	0.00
Avail Cap(c_a), veh/h	563	0	501				0	1684	746	563	2157	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	24.3	0.0	24.1				0.0	16.1	12.9	25.3	6.2	0.0
Incr Delay (d2), s/veh	4.4	0.0	4.3				0.0	1.3	0.3	5.2	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.2	0.0	2.7				0.0	4.8	1.1	3.2	2.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	28.7	0.0	28.5				0.0	17.3	13.2	30.5	6.4	0.0
LnGrp LOS	C	A	C				A	B	B	C	A	A
Approach Vol, veh/h		406						1059			1136	
Approach Delay, s/veh		28.6						16.8			11.0	
Approach LOS		C						B			B	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	14.5	30.0		17.9		44.4
Change Period (Y+Rc), s	* 4.7	6.0		7.0		6.0
Max Green Setting (Gmax), s	* 20	30.0		20.0		30.0
Max Q Clear Time (g_c+I1), s	9.5	15.8		9.3		10.5
Green Ext Time (p_c), s	0.4	8.1		1.5		8.1

Intersection Summary		
HCM 6th Ctrl Delay		16.1
HCM 6th LOS		B

Notes

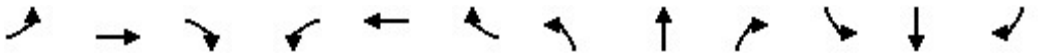
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	200	0	110	230	440	0	0	650	420
Future Volume (veh/h)	0	0	0	200	0	110	230	440	0	0	650	420
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		0.97
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1841	1841	1841	1841	1841	0	0	1841	1841
Adj Flow Rate, veh/h				217	0	23	250	478	0	0	707	362
Peak Hour Factor				0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %				4	4	4	4	4	0	0	4	4
Cap, veh/h				285	0	254	305	2274	0	0	876	448
Arrive On Green				0.16	0.00	0.16	0.17	0.65	0.00	0.00	0.40	0.40
Sat Flow, veh/h				1753	0	1560	1753	3589	0	0	2306	1133
Grp Volume(v), veh/h				217	0	23	250	478	0	0	558	511
Grp Sat Flow(s),veh/h/ln				1753	0	1560	1753	1749	0	0	1749	1598
Q Serve(g_s), s				7.3	0.0	0.8	8.5	3.4	0.0	0.0	17.6	17.6
Cycle Q Clear(g_c), s				7.3	0.0	0.8	8.5	3.4	0.0	0.0	17.6	17.6
Prop In Lane				1.00		1.00	1.00		0.00	0.00		0.71
Lane Grp Cap(c), veh/h				285	0	254	305	2274	0	0	692	632
V/C Ratio(X)				0.76	0.00	0.09	0.82	0.21	0.00	0.00	0.81	0.81
Avail Cap(c_a), veh/h				707	0	629	707	2274	0	0	987	902
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				24.8	0.0	22.1	24.7	4.4	0.0	0.0	16.6	16.7
Incr Delay (d2), s/veh				3.1	0.0	0.1	4.1	0.0	0.0	0.0	2.9	3.1
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				3.1	0.0	0.3	3.5	0.7	0.0	0.0	6.1	5.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				27.9	0.0	22.2	28.8	4.4	0.0	0.0	19.5	19.8
LnGrp LOS				C	A	C	C	A	A	A	B	B
Approach Vol, veh/h					240			728			1069	
Approach Delay, s/veh					27.4			12.8			19.6	
Approach LOS					C			B			B	

Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		46.1			15.8	30.3		15.9				
Change Period (Y+Rc), s		5.8			5.0	5.8		5.8				
Max Green Setting (Gmax), s		35.0			25.0	35.0		25.0				
Max Q Clear Time (g_c+I1), s		5.4			10.5	19.6		9.3				
Green Ext Time (p_c), s		2.4			0.4	4.9		0.9				

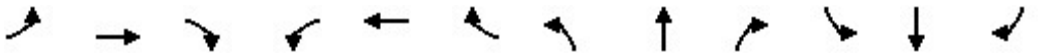
Intersection Summary												
HCM 6th Ctrl Delay			18.1									
HCM 6th LOS			B									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	110	0	240	0	0	0	0	560	300	210	640	0
Future Volume (veh/h)	110	0	240	0	0	0	0	560	300	210	640	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		0.97	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841				0	1841	1841	1841	1841	0
Adj Flow Rate, veh/h	116	0	46				0	589	248	221	674	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4				0	4	4	4	4	0
Cap, veh/h	299	0	266				0	800	336	317	2138	0
Arrive On Green	0.17	0.00	0.17				0.00	0.34	0.34	0.18	0.61	0.00
Sat Flow, veh/h	1753	0	1560				0	2467	998	1753	3589	0
Grp Volume(v), veh/h	116	0	46				0	433	404	221	674	0
Grp Sat Flow(s),veh/h/ln	1753	0	1560				0	1749	1625	1753	1749	0
Q Serve(g_s), s	3.1	0.0	1.3				0.0	11.6	11.7	6.3	4.9	0.0
Cycle Q Clear(g_c), s	3.1	0.0	1.3				0.0	11.6	11.7	6.3	4.9	0.0
Prop In Lane	1.00		1.00				0.00		0.61	1.00		0.00
Lane Grp Cap(c), veh/h	299	0	266				0	589	547	317	2138	0
V/C Ratio(X)	0.39	0.00	0.17				0.00	0.74	0.74	0.70	0.32	0.00
Avail Cap(c_a), veh/h	823	0	733				0	1150	1069	823	2300	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	19.6	0.0	18.9				0.0	15.6	15.6	20.4	5.0	0.0
Incr Delay (d2), s/veh	0.6	0.0	0.2				0.0	1.4	1.5	1.0	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	0.0	0.5				0.0	3.8	3.6	2.3	0.9	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	20.2	0.0	19.1				0.0	16.9	17.0	21.5	5.0	0.0
LnGrp LOS	C	A	B				A	B	B	C	A	A
Approach Vol, veh/h		162						837			895	
Approach Delay, s/veh		19.9						17.0			9.1	
Approach LOS		B						B			A	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	14.6	23.7		14.9		38.3
Change Period (Y+Rc), s	5.0	5.8		5.8		5.8
Max Green Setting (Gmax), s	25.0	35.0		25.0		35.0
Max Q Clear Time (g_c+I1), s	8.3	13.7		5.1		6.9
Green Ext Time (p_c), s	0.3	4.0		0.6		3.6

Intersection Summary	
HCM 6th Ctrl Delay	13.5
HCM 6th LOS	B



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	570	0	200	430	350	0	0	880	200
Future Volume (veh/h)	0	0	0	570	0	200	430	350	0	0	880	200
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		0.97
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1781	1781	1781	1781	1781	0	0	1781	1781
Adj Flow Rate, veh/h				608	0	4	457	372	0	0	936	52
Peak Hour Factor				0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %				8	8	8	8	8	0	0	8	8
Cap, veh/h				920	0	409	987	2918	0	0	1498	357
Arrive On Green				0.27	0.00	0.27	0.40	0.80	0.00	0.00	0.24	0.24
Sat Flow, veh/h				3393	0	1510	3291	5024	0	0	6378	1460
Grp Volume(v), veh/h				608	0	4	457	372	0	0	936	52
Grp Sat Flow(s),veh/h/ln				1697	0	1510	1646	1621	0	0	1532	1460
Q Serve(g_s), s				14.3	0.0	0.2	9.2	1.5	0.0	0.0	12.3	2.5
Cycle Q Clear(g_c), s				14.3	0.0	0.2	9.2	1.5	0.0	0.0	12.3	2.5
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				920	0	409	987	2918	0	0	1498	357
V/C Ratio(X)				0.66	0.00	0.01	0.46	0.13	0.00	0.00	0.62	0.15
Avail Cap(c_a), veh/h				920	0	409	987	2918	0	0	1498	357
HCM Platoon Ratio				1.00	1.00	1.00	1.33	1.33	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.93	0.93	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				29.1	0.0	24.0	21.7	3.8	0.0	0.0	30.3	26.6
Incr Delay (d2), s/veh				3.7	0.0	0.0	1.5	0.1	0.0	0.0	2.0	0.9
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				6.2	0.0	0.2	3.3	0.4	0.0	0.0	4.4	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				32.8	0.0	24.0	23.2	3.9	0.0	0.0	32.3	27.5
LnGrp LOS				C	A	C	C	A	A	A	C	C
Approach Vol, veh/h					612			829			988	
Approach Delay, s/veh					32.8			14.5			32.0	
Approach LOS					C			B			C	

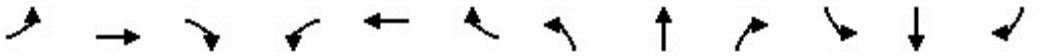
Timer - Assigned Phs	2	4	5	6
Phs Duration (G+Y+Rc), s	59.8	30.2	32.0	27.8
Change Period (Y+Rc), s	5.8	5.8	5.0	5.8
Max Green Setting (Gmax), s	54.0	24.4	27.0	22.0
Max Q Clear Time (g_c+I1), s	3.5	16.3	11.2	14.3
Green Ext Time (p_c), s	2.5	1.6	0.8	3.6

Intersection Summary	
HCM 6th Ctrl Delay	26.2
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

User approved volume balancing among the lanes for turning movement.



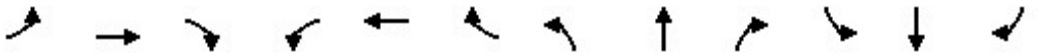
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	70	0	400	0	0	0	0	770	610	360	1080	0
Future Volume (veh/h)	70	0	400	0	0	0	0	770	610	360	1080	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		0.97	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1781	1781	1781				0	1781	1781	1781	1781	0
Adj Flow Rate, veh/h	50	0	323				0	828	227	387	1161	0
Peak Hour Factor	0.93	0.93	0.93				0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	8	8	8				0	8	8	8	8	0
Cap, veh/h	498	0	886				0	2111	505	585	2810	0
Arrive On Green	0.29	0.00	0.29				0.00	0.34	0.34	0.06	0.19	0.00
Sat Flow, veh/h	1697	0	3019				0	6378	1466	3291	5024	0
Grp Volume(v), veh/h	50	0	323				0	828	227	387	1161	0
Grp Sat Flow(s),veh/h/ln	1697	0	1510				0	1532	1466	1646	1621	0
Q Serve(g_s), s	1.9	0.0	7.6				0.0	9.2	10.8	10.4	18.9	0.0
Cycle Q Clear(g_c), s	1.9	0.0	7.6				0.0	9.2	10.8	10.4	18.9	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	498	0	886				0	2111	505	585	2810	0
V/C Ratio(X)	0.10	0.00	0.36				0.00	0.39	0.45	0.66	0.41	0.00
Avail Cap(c_a), veh/h	498	0	886				0	2111	505	585	2810	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	0.33	0.33	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.70	0.70	0.00
Uniform Delay (d), s/veh	23.2	0.0	25.2				0.0	22.4	22.9	39.7	23.0	0.0
Incr Delay (d2), s/veh	0.4	0.0	1.2				0.0	0.5	2.9	4.1	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.0	2.8				0.0	3.2	3.8	4.7	8.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.6	0.0	26.3				0.0	22.9	25.8	43.8	23.3	0.0
LnGrp LOS	C	A	C				A	C	C	D	C	A
Approach Vol, veh/h		373						1055			1548	
Approach Delay, s/veh		26.0						23.5			28.4	
Approach LOS		C						C			C	

Timer - Assigned Phs	1	2				6		8				
Phs Duration (G+Y+Rc), s	21.0	36.8				57.8		32.2				
Change Period (Y+Rc), s	5.0	5.8				5.8		5.8				
Max Green Setting (Gmax), s	16.0	31.0				52.0		26.4				
Max Q Clear Time (g_c+I1), s	12.4	12.8				20.9		9.6				
Green Ext Time (p_c), s	0.3	5.9				9.0		1.3				

Intersection Summary			
HCM 6th Ctrl Delay			26.4
HCM 6th LOS			C

Notes

User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	10	40	20	20	60	90	1110	30	70	1060	20
Future Volume (veh/h)	10	10	40	20	20	60	90	1110	30	70	1060	20
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.98		0.96	0.98		0.96	1.00		0.96	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781
Adj Flow Rate, veh/h	11	11	6	22	22	9	97	1194	30	75	1140	21
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	8	8	8	8	8	8	8	8	8	8	8	8
Cap, veh/h	295	151	82	306	168	69	123	2069	52	94	2000	37
Arrive On Green	0.14	0.14	0.14	0.14	0.14	0.14	0.07	0.42	0.42	0.06	0.41	0.41
Sat Flow, veh/h	1288	1067	582	1303	1186	485	1697	4874	122	1697	4913	90
Grp Volume(v), veh/h	11	0	17	22	0	31	97	794	430	75	752	409
Grp Sat Flow(s),veh/h/ln	1288	0	1649	1303	0	1671	1697	1621	1754	1697	1621	1761
Q Serve(g_s), s	0.4	0.0	0.5	0.8	0.0	0.9	3.0	10.1	10.1	2.4	9.7	9.7
Cycle Q Clear(g_c), s	1.3	0.0	0.5	1.3	0.0	0.9	3.0	10.1	10.1	2.4	9.7	9.7
Prop In Lane	1.00		0.35	1.00		0.29	1.00		0.07	1.00		0.05
Lane Grp Cap(c), veh/h	295	0	234	306	0	237	123	1376	745	94	1320	717
V/C Ratio(X)	0.04	0.00	0.07	0.07	0.00	0.13	0.79	0.58	0.58	0.80	0.57	0.57
Avail Cap(c_a), veh/h	587	0	609	602	0	617	626	2394	1295	626	2394	1300
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.9	0.0	20.2	20.7	0.0	20.3	24.7	11.9	11.9	25.3	12.4	12.4
Incr Delay (d2), s/veh	0.0	0.0	0.1	0.1	0.0	0.2	4.1	0.5	0.9	5.8	0.5	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	0.2	0.2	0.0	0.3	1.2	2.6	2.9	1.0	2.7	3.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	20.9	0.0	20.3	20.8	0.0	20.5	28.8	12.3	12.7	31.1	12.9	13.3
LnGrp LOS	C	A	C	C	A	C	C	B	B	C	B	B
Approach Vol, veh/h		28			53			1321			1236	
Approach Delay, s/veh		20.5			20.6			13.7			14.1	
Approach LOS		C			C			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.5	29.5		15.2	10.4	28.6		15.2				
Change Period (Y+Rc), s	6.5	6.5		7.5	6.5	6.5		7.5				
Max Green Setting (Gmax), s	20.0	40.0		20.0	20.0	40.0		20.0				
Max Q Clear Time (g_c+I1), s	4.4	12.1		3.3	5.0	11.7		3.3				
Green Ext Time (p_c), s	0.1	10.2		0.0	0.1	9.9		0.1				

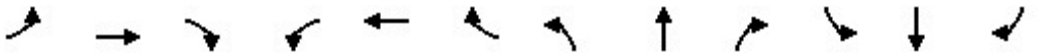
Intersection Summary		
HCM 6th Ctrl Delay		14.1
HCM 6th LOS		B

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary
12: Euclid Ave & Riverside Dr

02/22/2024



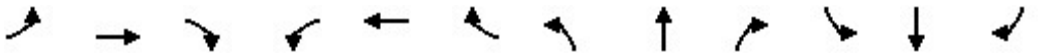
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	110	420	60	110	350	50	50	920	210	90	790	130
Future Volume (veh/h)	110	420	60	110	350	50	50	920	210	90	790	130
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	1.00		0.96	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	112	429	17	112	357	14	51	939	104	92	806	64
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	191	498	411	191	947	411	128	1107	474	154	1159	674
Arrive On Green	0.11	0.27	0.27	0.11	0.27	0.27	0.07	0.32	0.32	0.09	0.33	0.33
Sat Flow, veh/h	1753	1841	1518	1753	3497	1518	1753	3497	1496	1753	3497	1522
Grp Volume(v), veh/h	112	429	17	112	357	14	51	939	104	92	806	64
Grp Sat Flow(s),veh/h/ln	1753	1841	1518	1753	1749	1518	1753	1749	1496	1753	1749	1522
Q Serve(g_s), s	6.5	23.5	0.9	6.5	8.8	0.7	2.9	26.6	5.4	5.4	21.3	2.6
Cycle Q Clear(g_c), s	6.5	23.5	0.9	6.5	8.8	0.7	2.9	26.6	5.4	5.4	21.3	2.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	191	498	411	191	947	411	128	1107	474	154	1159	674
V/C Ratio(X)	0.59	0.86	0.04	0.59	0.38	0.03	0.40	0.85	0.22	0.60	0.70	0.09
Avail Cap(c_a), veh/h	332	746	615	534	1819	790	165	1318	564	311	1401	780
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.0	36.8	28.5	45.0	31.4	28.5	46.9	33.9	26.6	46.6	30.8	17.4
Incr Delay (d2), s/veh	1.1	8.2	0.1	1.1	0.4	0.0	2.0	4.7	0.2	3.7	1.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.8	11.2	0.3	2.7	3.6	0.3	1.3	11.5	1.9	2.4	8.8	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	46.1	44.9	28.6	46.1	31.8	28.5	48.9	38.5	26.9	50.2	32.0	17.4
LnGrp LOS	D	D	C	D	C	C	D	D	C	D	C	B
Approach Vol, veh/h		558			483			1094			962	
Approach Delay, s/veh		44.7			35.0			37.9			32.8	
Approach LOS		D			D			D			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.5	39.6	16.3	35.7	13.0	41.2	16.3	35.7
Change Period (Y+Rc), s	* 5.2	6.0	* 4.7	7.0	* 5.2	6.0	* 4.7	7.0
Max Green Setting (Gmax), s	* 19	40.0	* 32	43.0	* 10	42.5	* 20	55.2
Max Q Clear Time (g_c+I1), s	7.4	28.6	8.5	25.5	4.9	23.3	8.5	10.8
Green Ext Time (p_c), s	0.1	5.0	0.1	3.2	0.0	5.4	0.1	3.3

Intersection Summary	
HCM 6th Ctrl Delay	37.1
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	110	610	30	30	420	70	20	330	70	80	110	90
Future Volume (veh/h)	110	610	30	30	420	70	20	330	70	80	110	90
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	1.00		0.97	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	116	642	13	32	442	61	21	347	67	84	116	29
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	163	681	561	90	1011	139	427	470	91	193	581	483
Arrive On Green	0.09	0.37	0.37	0.05	0.33	0.33	0.31	0.31	0.31	0.31	0.31	0.31
Sat Flow, veh/h	1767	1856	1527	1767	3106	426	1261	1503	290	962	1856	1544
Grp Volume(v), veh/h	116	642	13	32	250	253	21	0	414	84	116	29
Grp Sat Flow(s),veh/h/ln	1767	1856	1527	1767	1763	1770	1261	0	1793	962	1856	1544
Q Serve(g_s), s	5.1	26.8	0.4	1.4	8.9	9.0	1.0	0.0	16.5	6.8	3.7	1.1
Cycle Q Clear(g_c), s	5.1	26.8	0.4	1.4	8.9	9.0	4.7	0.0	16.5	23.3	3.7	1.1
Prop In Lane	1.00		1.00	1.00		0.24	1.00		0.16	1.00		1.00
Lane Grp Cap(c), veh/h	163	681	561	90	574	576	427	0	561	193	581	483
V/C Ratio(X)	0.71	0.94	0.02	0.36	0.43	0.44	0.05	0.00	0.74	0.44	0.20	0.06
Avail Cap(c_a), veh/h	442	697	573	442	662	664	427	0	561	193	581	483
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.2	24.5	16.1	36.7	21.2	21.2	21.8	0.0	24.5	34.9	20.1	19.2
Incr Delay (d2), s/veh	2.1	21.0	0.0	0.9	0.6	0.6	0.1	0.0	5.3	1.6	0.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	14.0	0.1	0.6	3.3	3.4	0.3	0.0	7.2	1.6	1.5	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	37.3	45.4	16.2	37.5	21.8	21.8	21.9	0.0	29.8	36.5	20.3	19.3
LnGrp LOS	D	D	B	D	C	C	C	A	C	D	C	B
Approach Vol, veh/h		771			535			435			229	
Approach Delay, s/veh		43.7			22.8			29.5			26.1	
Approach LOS		D			C			C			C	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		31.5	11.6	36.8		31.5	14.9	33.5				
Change Period (Y+Rc), s		6.5	7.5	7.5		6.5	7.5	7.5				
Max Green Setting (Gmax), s		25.0	20.0	30.0		25.0	20.0	30.0				
Max Q Clear Time (g_c+I1), s		18.5	3.4	28.8		25.3	7.1	11.0				
Green Ext Time (p_c), s		1.6	0.0	0.5		0.0	0.1	3.0				

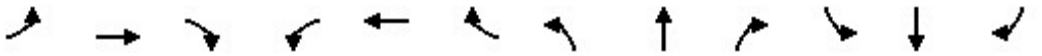
Intersection Summary	
HCM 6th Ctrl Delay	32.8
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary
15: Grove Ave & Riverside Dr

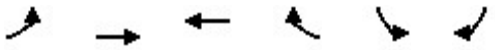
02/22/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	190	680	0	0	430	140	10	30	20	190	30	160
Future Volume (veh/h)	190	680	0	0	430	140	10	30	20	190	30	160
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.97	1.00		0.97	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	198	708	0	0	448	122	10	31	3	198	31	51
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	242	876	0	2	640	173	27	149	14	242	393	325
Arrive On Green	0.14	0.47	0.00	0.00	0.24	0.24	0.02	0.09	0.09	0.14	0.21	0.21
Sat Flow, veh/h	1767	1856	0	1767	2722	734	1767	1660	161	1767	1856	1536
Grp Volume(v), veh/h	198	708	0	0	289	281	10	0	34	198	31	51
Grp Sat Flow(s),veh/h/ln	1767	1856	0	1767	1763	1693	1767	0	1820	1767	1856	1536
Q Serve(g_s), s	8.1	24.3	0.0	0.0	11.2	11.4	0.4	0.0	1.3	8.1	1.0	2.0
Cycle Q Clear(g_c), s	8.1	24.3	0.0	0.0	11.2	11.4	0.4	0.0	1.3	8.1	1.0	2.0
Prop In Lane	1.00		0.00	1.00		0.43	1.00		0.09	1.00		1.00
Lane Grp Cap(c), veh/h	242	876	0	2	415	398	27	0	164	242	393	325
V/C Ratio(X)	0.82	0.81	0.00	0.00	0.70	0.71	0.38	0.00	0.21	0.82	0.08	0.16
Avail Cap(c_a), veh/h	473	876	0	473	825	793	473	0	730	473	745	616
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.4	16.8	0.0	0.0	26.1	26.2	36.5	0.0	31.6	31.4	23.6	24.0
Incr Delay (d2), s/veh	5.1	5.8	0.0	0.0	2.5	2.8	6.4	0.0	0.8	5.1	0.1	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.5	9.6	0.0	0.0	4.5	4.4	0.2	0.0	0.6	3.5	0.4	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	36.5	22.6	0.0	0.0	28.7	29.0	42.9	0.0	32.3	36.4	23.7	24.3
LnGrp LOS	D	C	A	A	C	C	D	A	C	D	C	C
Approach Vol, veh/h		906			570			44			280	
Approach Delay, s/veh		25.7			28.8			34.7			32.8	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.7	25.1	8.6	23.3	0.0	42.8	17.7	14.2
Change Period (Y+Rc), s	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5
Max Green Setting (Gmax), s	20.0	35.0	20.0	30.0	20.0	35.0	20.0	30.0
Max Q Clear Time (g_c+I1), s	10.1	13.4	2.4	4.0	0.0	26.3	10.1	3.3
Green Ext Time (p_c), s	0.3	3.7	0.0	0.3	0.0	3.3	0.3	0.1

Intersection Summary	
HCM 6th Ctrl Delay	28.0
HCM 6th LOS	C



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	170	660	410	210	420	110
Future Volume (veh/h)	170	660	410	210	420	110
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			0.97	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	175	680	423	145	433	36
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	221	905	634	215	499	444
Arrive On Green	0.12	0.49	0.25	0.25	0.28	0.28
Sat Flow, veh/h	1767	1856	2653	867	1767	1572
Grp Volume(v), veh/h	175	680	290	278	433	36
Grp Sat Flow(s),veh/h/ln	1767	1856	1763	1665	1767	1572
Q Serve(g_s), s	6.3	19.3	9.6	9.8	15.2	1.1
Cycle Q Clear(g_c), s	6.3	19.3	9.6	9.8	15.2	1.1
Prop In Lane	1.00			0.52	1.00	1.00
Lane Grp Cap(c), veh/h	221	905	437	412	499	444
V/C Ratio(X)	0.79	0.75	0.66	0.68	0.87	0.08
Avail Cap(c_a), veh/h	542	996	947	894	678	603
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.7	13.5	22.1	22.2	22.2	17.2
Incr Delay (d2), s/veh	4.8	3.1	2.1	2.3	9.5	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	6.4	3.6	3.5	6.7	1.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	32.5	16.6	24.2	24.5	31.8	17.3
LnGrp LOS	C	B	C	C	C	B
Approach Vol, veh/h		855	568		469	
Approach Delay, s/veh		19.9	24.3		30.7	
Approach LOS		B	C		C	

Timer - Assigned Phs	4	6	7	8
Phs Duration (G+Y+Rc), s	39.3	25.9	15.6	23.6
Change Period (Y+Rc), s	7.5	7.5	7.5	7.5
Max Green Setting (Gmax), s	35.0	25.0	20.0	35.0
Max Q Clear Time (g_c+I1), s	21.3	17.2	8.3	11.8
Green Ext Time (p_c), s	4.0	1.2	0.2	3.6

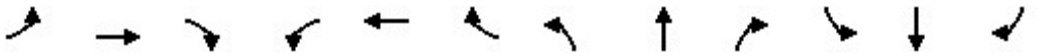
Intersection Summary	
HCM 6th Ctrl Delay	23.9
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary
25: Colonial Ave & Riverside Ave

02/22/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	1040	30	30	630	10	10	0	30	0	0	20
Future Volume (veh/h)	30	1040	30	30	630	10	10	0	30	0	0	20
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	0.97		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	32	1118	32	32	677	11	11	0	0	0	0	3
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	92	1616	46	92	1640	27	248	0	0	0	0	89
Arrive On Green	0.05	0.46	0.46	0.05	0.46	0.46	0.06	0.00	0.00	0.00	0.00	0.06
Sat Flow, veh/h	1767	3497	100	1767	3548	58	1324	0	0	0	0	1536
Grp Volume(v), veh/h	32	563	587	32	336	352	11	0	0	0	0	3
Grp Sat Flow(s),veh/h/ln	1767	1763	1834	1767	1763	1843	1324	0	0	0	0	1536
Q Serve(g_s), s	0.7	10.6	10.6	0.7	5.3	5.3	0.3	0.0	0.0	0.0	0.0	0.1
Cycle Q Clear(g_c), s	0.7	10.6	10.6	0.7	5.3	5.3	0.4	0.0	0.0	0.0	0.0	0.1
Prop In Lane	1.00		0.05	1.00		0.03	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h	92	815	848	92	815	852	248	0	0	0	0	89
V/C Ratio(X)	0.35	0.69	0.69	0.35	0.41	0.41	0.04	0.00	0.00	0.00	0.00	0.03
Avail Cap(c_a), veh/h	840	1467	1526	840	1467	1534	981	0	0	0	0	913
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	19.3	8.9	8.9	19.3	7.5	7.5	18.9	0.0	0.0	0.0	0.0	18.7
Incr Delay (d2), s/veh	2.3	1.1	1.0	2.3	0.3	0.3	0.1	0.0	0.0	0.0	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	2.1	2.2	0.3	1.1	1.2	0.1	0.0	0.0	0.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	21.5	10.0	10.0	21.5	7.9	7.8	18.9	0.0	0.0	0.0	0.0	18.8
LnGrp LOS	C	B	A	C	A	A	B	A	A	A	A	B
Approach Vol, veh/h		1182			720			11			3	
Approach Delay, s/veh		10.3			8.5			18.9			18.8	
Approach LOS		B			A			B			B	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		8.4	7.2	26.4		8.4	7.2	26.4				
Change Period (Y+Rc), s		6.0	5.0	7.0		6.0	5.0	7.0				
Max Green Setting (Gmax), s		25.0	20.0	35.0		25.0	20.0	35.0				
Max Q Clear Time (g_c+I1), s		2.4	2.7	12.6		2.1	2.7	7.3				
Green Ext Time (p_c), s		0.0	0.0	6.8		0.0	0.0	3.8				

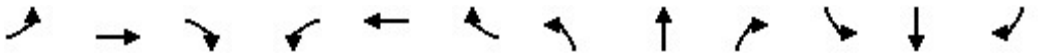
Intersection Summary	
HCM 6th Ctrl Delay	9.7
HCM 6th LOS	A

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary
26: Archibald Ave & Riverside Ave

02/22/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	200	540	310	130	360	160	200	880	50	180	800	120
Future Volume (veh/h)	200	540	310	130	360	160	200	880	50	180	800	120
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.97	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781
Adj Flow Rate, veh/h	211	568	280	137	379	136	211	926	50	189	842	114
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	8	8	8	8	8	8	8	8	8	8	8	8
Cap, veh/h	259	675	332	177	636	225	259	1371	74	235	1195	161
Arrive On Green	0.15	0.31	0.31	0.10	0.26	0.26	0.15	0.29	0.29	0.14	0.28	0.28
Sat Flow, veh/h	1697	2179	1072	1697	2432	859	1697	4716	254	1697	4319	581
Grp Volume(v), veh/h	211	441	407	137	262	253	211	636	340	189	631	325
Grp Sat Flow(s),veh/h/ln	1697	1692	1559	1697	1692	1598	1697	1621	1728	1697	1621	1658
Q Serve(g_s), s	12.3	24.8	24.9	8.0	13.8	14.2	12.3	17.7	17.7	11.0	17.8	18.0
Cycle Q Clear(g_c), s	12.3	24.8	24.9	8.0	13.8	14.2	12.3	17.7	17.7	11.0	17.8	18.0
Prop In Lane	1.00		0.69	1.00		0.54	1.00		0.15	1.00		0.35
Lane Grp Cap(c), veh/h	259	524	483	177	443	418	259	942	502	235	897	459
V/C Ratio(X)	0.82	0.84	0.84	0.77	0.59	0.61	0.82	0.67	0.68	0.80	0.70	0.71
Avail Cap(c_a), veh/h	582	580	535	582	580	548	582	1112	593	582	1112	569
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.9	32.9	32.9	44.5	32.9	33.0	41.9	31.9	32.0	42.6	33.1	33.2
Incr Delay (d2), s/veh	12.4	11.6	12.6	14.2	2.7	3.0	12.4	2.1	4.0	12.8	2.5	5.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.8	11.1	10.4	3.9	5.6	5.5	5.8	6.7	7.5	5.2	6.9	7.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	54.3	44.4	45.5	58.7	35.6	36.0	54.3	34.0	35.9	55.4	35.6	38.2
LnGrp LOS	D	D	D	E	D	D	D	C	D	E	D	D
Approach Vol, veh/h		1059			652			1187			1145	
Approach Delay, s/veh		46.8			40.6			38.2			39.6	
Approach LOS		D			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.1	33.7	14.6	35.6	19.6	32.2	19.6	30.7
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0
Max Q Clear Time (g_c+I1), s	13.0	19.7	10.0	26.9	14.3	20.0	14.3	16.2
Green Ext Time (p_c), s	1.2	8.4	0.8	4.7	1.3	8.2	1.3	4.9

Intersection Summary	
HCM 6th Ctrl Delay	41.2
HCM 6th LOS	D

HCM 6th Signalized Intersection Summary
27: Haven Ave & Riverside Dr

02/22/2024

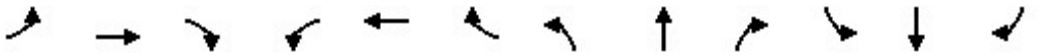
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	190	270	40	70	280	60	20	360	40	90	490	320
Future Volume (veh/h)	190	270	40	70	280	60	20	360	40	90	490	320
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.97	1.00		0.97	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	198	281	38	73	292	47	21	375	40	94	510	143
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	231	331	45	121	442	70	21	382	41	432	454	377
Arrive On Green	0.13	0.21	0.21	0.07	0.15	0.15	0.24	0.24	0.24	0.24	0.24	0.24
Sat Flow, veh/h	1767	1592	215	1767	3035	482	87	1561	166	1767	1856	1541
Grp Volume(v), veh/h	198	0	319	73	168	171	436	0	0	94	510	143
Grp Sat Flow(s),veh/h/ln	1767	0	1807	1767	1763	1754	1814	0	0	1767	1856	1541
Q Serve(g_s), s	11.2	0.0	17.4	4.1	9.2	9.4	24.4	0.0	0.0	4.3	25.0	7.9
Cycle Q Clear(g_c), s	11.2	0.0	17.4	4.1	9.2	9.4	24.4	0.0	0.0	4.3	25.0	7.9
Prop In Lane	1.00		0.12	1.00		0.27	0.05		0.09	1.00		1.00
Lane Grp Cap(c), veh/h	231	0	376	121	257	256	444	0	0	432	454	377
V/C Ratio(X)	0.86	0.00	0.85	0.60	0.65	0.67	0.98	0.00	0.00	0.22	1.12	0.38
Avail Cap(c_a), veh/h	432	0	530	346	517	515	444	0	0	432	454	377
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.5	0.0	38.9	46.3	41.2	41.3	38.4	0.0	0.0	30.8	38.6	32.2
Incr Delay (d2), s/veh	3.6	0.0	8.9	1.8	2.8	3.0	38.1	0.0	0.0	0.2	80.8	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.9	0.0	8.2	1.8	4.0	4.1	15.0	0.0	0.0	1.8	20.9	2.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	47.1	0.0	47.9	48.1	44.0	44.4	76.5	0.0	0.0	31.0	119.4	32.6
LnGrp LOS	D	A	D	D	D	D	E	A	A	C	F	C
Approach Vol, veh/h		517			412			436			747	
Approach Delay, s/veh		47.6			44.9			76.5			91.7	
Approach LOS		D			D			E			F	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		30.0	14.0	28.3		30.0	20.4	21.9				
Change Period (Y+Rc), s		5.0	7.0	7.0		5.0	7.0	7.0				
Max Green Setting (Gmax), s		25.0	20.0	30.0		25.0	25.0	30.0				
Max Q Clear Time (g_c+I1), s		26.4	6.1	19.4		27.0	13.2	11.4				
Green Ext Time (p_c), s		0.0	0.1	1.2		0.0	0.2	1.6				

Intersection Summary												
HCM 6th Ctrl Delay			68.6									
HCM 6th LOS			E									

Notes

User approved pedestrian interval to be less than phase max green.



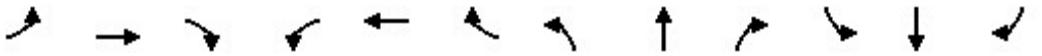
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	100	300	50	60	60	20	40	1070	210	10	900	60
Future Volume (veh/h)	100	300	50	60	60	20	40	1070	210	10	900	60
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.97	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	112	337	14	67	67	15	45	1202	190	11	1011	31
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	375	509	423	144	126	22	147	1499	650	48	1302	579
Arrive On Green	0.28	0.28	0.28	0.28	0.28	0.28	0.08	0.43	0.43	0.03	0.37	0.37
Sat Flow, veh/h	1292	1841	1530	248	456	79	1753	3497	1517	1753	3497	1554
Grp Volume(v), veh/h	112	337	14	149	0	0	45	1202	190	11	1011	31
Grp Sat Flow(s),veh/h/ln	1292	1841	1530	783	0	0	1753	1749	1517	1753	1749	1554
Q Serve(g_s), s	0.0	11.2	0.5	3.9	0.0	0.0	1.7	20.6	5.6	0.4	17.6	0.9
Cycle Q Clear(g_c), s	7.1	11.2	0.5	15.1	0.0	0.0	1.7	20.6	5.6	0.4	17.6	0.9
Prop In Lane	1.00		1.00	0.45		0.10	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	375	509	423	292	0	0	147	1499	650	48	1302	579
V/C Ratio(X)	0.30	0.66	0.03	0.51	0.00	0.00	0.31	0.80	0.29	0.23	0.78	0.05
Avail Cap(c_a), veh/h	675	936	779	602	0	0	382	1779	772	382	1779	790
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.6	22.1	18.2	23.6	0.0	0.0	29.6	17.1	12.8	32.7	19.1	13.8
Incr Delay (d2), s/veh	0.4	1.5	0.0	1.4	0.0	0.0	0.4	2.3	0.2	0.9	1.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	4.5	0.1	2.2	0.0	0.0	0.7	7.0	1.6	0.2	6.1	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	21.0	23.5	18.2	25.0	0.0	0.0	30.1	19.4	13.1	33.6	20.6	13.9
LnGrp LOS	C	C	B	C	A	A	C	B	B	C	C	B
Approach Vol, veh/h		463			149			1437			1053	
Approach Delay, s/veh		22.8			25.0			18.9			20.5	
Approach LOS		C			C			B			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.6	36.0		26.2	10.5	32.1		26.2				
Change Period (Y+Rc), s	* 4.7	6.5		7.2	* 4.7	6.5		7.2				
Max Green Setting (Gmax), s	* 15	35.0		35.0	* 15	35.0		35.0				
Max Q Clear Time (g_c+I1), s	2.4	22.6		13.2	3.7	19.6		17.1				
Green Ext Time (p_c), s	0.0	6.6		2.2	0.0	5.8		0.7				

Intersection Summary	
HCM 6th Ctrl Delay	20.3
HCM 6th LOS	C

Notes

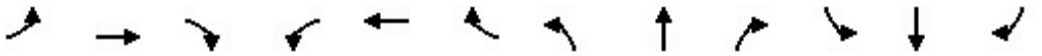
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	80	70	30	20	20	80	20	930	20	80	1050	40
Future Volume (veh/h)	80	70	30	20	20	80	20	930	20	80	1050	40
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781
Adj Flow Rate, veh/h	85	74	21	21	21	12	21	989	21	85	1117	42
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	8	8	8	8	8	8	8	8	8	8	8	8
Cap, veh/h	114	154	44	48	138	115	48	1997	42	114	1483	56
Arrive On Green	0.07	0.12	0.12	0.03	0.08	0.08	0.03	0.41	0.41	0.07	0.45	0.45
Sat Flow, veh/h	1697	1325	376	1697	1781	1483	1697	4899	104	1697	3323	125
Grp Volume(v), veh/h	85	0	95	21	21	12	21	654	356	85	569	590
Grp Sat Flow(s),veh/h/ln	1697	0	1701	1697	1781	1483	1697	1621	1761	1697	1692	1756
Q Serve(g_s), s	3.6	0.0	3.8	0.9	0.8	0.6	0.9	11.0	11.0	3.6	20.6	20.6
Cycle Q Clear(g_c), s	3.6	0.0	3.8	0.9	0.8	0.6	0.9	11.0	11.0	3.6	20.6	20.6
Prop In Lane	1.00		0.22	1.00		1.00	1.00		0.06	1.00		0.07
Lane Grp Cap(c), veh/h	114	0	198	48	138	115	48	1322	718	114	755	784
V/C Ratio(X)	0.75	0.00	0.48	0.43	0.15	0.10	0.43	0.50	0.50	0.75	0.75	0.75
Avail Cap(c_a), veh/h	461	0	809	461	847	705	576	1982	1076	576	1035	1073
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.7	0.0	30.4	35.2	31.7	31.6	35.2	16.2	16.2	33.7	17.0	17.0
Incr Delay (d2), s/veh	3.6	0.0	2.6	2.3	0.7	0.6	2.3	0.4	0.8	3.6	2.7	2.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	0.0	1.6	0.4	0.4	0.2	0.4	3.5	3.9	1.5	7.0	7.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	37.3	0.0	33.0	37.5	32.4	32.1	37.5	16.6	16.9	37.3	19.7	19.6
LnGrp LOS	D	A	C	D	C	C	D	B	B	D	B	B
Approach Vol, veh/h		180			54			1031			1244	
Approach Delay, s/veh		35.0			34.3			17.1			20.8	
Approach LOS		D			C			B			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.4	37.5	8.6	15.1	9.6	40.4	11.4	12.2
Change Period (Y+Rc), s	7.5	7.5	6.5	6.5	7.5	7.5	6.5	6.5
Max Green Setting (Gmax), s	25.0	45.0	20.0	35.0	25.0	45.0	20.0	35.0
Max Q Clear Time (g_c+I1), s	5.6	13.0	2.9	5.8	2.9	22.6	5.6	2.8
Green Ext Time (p_c), s	0.1	9.9	0.0	0.6	0.0	10.2	0.1	0.1

Intersection Summary	
HCM 6th Ctrl Delay	20.6
HCM 6th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	140	410	240	40	280	130	200	920	70	100	810	110
Future Volume (veh/h)	140	410	240	40	280	130	200	920	70	100	810	110
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.97	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	156	456	95	44	311	132	222	1022	28	111	900	44
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	178	614	511	176	407	173	377	1250	541	183	1227	538
Arrive On Green	0.33	0.33	0.33	0.33	0.33	0.33	0.11	0.36	0.36	0.10	0.35	0.35
Sat Flow, veh/h	930	1841	1532	842	1219	517	3401	3497	1515	1753	3497	1533
Grp Volume(v), veh/h	156	456	95	44	0	443	222	1022	28	111	900	44
Grp Sat Flow(s),veh/h/ln	930	1841	1532	842	0	1737	1700	1749	1515	1753	1749	1533
Q Serve(g_s), s	9.5	19.7	4.0	4.4	0.0	20.5	5.6	23.9	1.1	5.4	20.2	1.7
Cycle Q Clear(g_c), s	30.0	19.7	4.0	24.1	0.0	20.5	5.6	23.9	1.1	5.4	20.2	1.7
Prop In Lane	1.00		1.00	1.00		0.30	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	178	614	511	176	0	579	377	1250	541	183	1227	538
V/C Ratio(X)	0.88	0.74	0.19	0.25	0.00	0.76	0.59	0.82	0.05	0.61	0.73	0.08
Avail Cap(c_a), veh/h	178	614	511	223	0	676	946	1750	758	487	1750	767
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.0	26.5	21.3	37.2	0.0	26.8	38.0	26.2	18.9	38.5	25.5	19.5
Incr Delay (d2), s/veh	35.2	4.8	0.2	0.7	0.0	4.5	0.5	2.2	0.0	1.2	1.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.1	8.8	1.3	0.9	0.0	8.5	2.2	9.1	0.3	2.2	7.5	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	77.1	31.4	21.5	38.0	0.0	31.2	38.6	28.4	19.0	39.7	26.5	19.6
LnGrp LOS	E	C	C	D	A	C	D	C	B	D	C	B
Approach Vol, veh/h		707			487			1272			1055	
Approach Delay, s/veh		40.1			31.9			30.0			27.6	
Approach LOS		D			C			C			C	

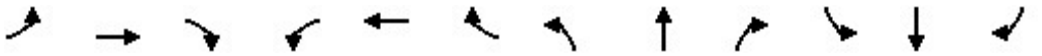
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	14.1	38.6		37.2	14.7	38.1		37.2				
Change Period (Y+Rc), s	* 4.7	6.5		7.2	* 4.7	6.5		7.2				
Max Green Setting (Gmax), s	* 25	45.0		30.0	* 25	45.0		35.0				
Max Q Clear Time (g_c+I1), s	7.4	25.9		32.0	7.6	22.2		26.1				
Green Ext Time (p_c), s	0.1	6.3		0.0	0.3	5.8		1.9				

Intersection Summary		
HCM 6th Ctrl Delay		31.6
HCM 6th LOS		C

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	90	680	140	160	280	70	60	760	240	100	830	60
Future Volume (veh/h)	90	680	140	160	280	70	60	760	240	100	830	60
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	95	716	0	168	295	23	63	800	0	105	874	23
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	190	1051		294	610	508	85	1138		145	1257	544
Arrive On Green	0.06	0.30	0.00	0.09	0.33	0.33	0.05	0.33	0.00	0.08	0.36	0.36
Sat Flow, veh/h	3401	3497	1560	3401	1841	1532	1753	3497	1560	1753	3497	1515
Grp Volume(v), veh/h	95	716	0	168	295	23	63	800	0	105	874	23
Grp Sat Flow(s),veh/h/ln	1700	1749	1560	1700	1841	1532	1753	1749	1560	1753	1749	1515
Q Serve(g_s), s	2.1	14.1	0.0	3.7	10.0	0.8	2.8	15.6	0.0	4.6	16.7	0.8
Cycle Q Clear(g_c), s	2.1	14.1	0.0	3.7	10.0	0.8	2.8	15.6	0.0	4.6	16.7	0.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	190	1051		294	610	508	85	1138		145	1257	544
V/C Ratio(X)	0.50	0.68		0.57	0.48	0.05	0.74	0.70		0.73	0.70	0.04
Avail Cap(c_a), veh/h	1524	1568		1524	825	687	786	1568		786	1568	679
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.8	24.0	0.0	34.3	20.8	17.7	36.7	23.0	0.0	35.0	21.4	16.3
Incr Delay (d2), s/veh	4.3	1.7	0.0	3.7	1.3	0.1	23.0	1.7	0.0	13.7	1.7	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	5.4	0.0	1.6	4.0	0.3	1.6	5.8	0.0	2.3	6.0	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	40.1	25.7	0.0	38.0	22.1	17.8	59.7	24.8	0.0	48.6	23.1	16.3
LnGrp LOS	D	C		D	C	B	E	C		D	C	B
Approach Vol, veh/h		811	A		486			863	A		1002	
Approach Delay, s/veh		27.4			27.4			27.3			25.6	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.4	29.4	10.8	27.5	7.8	32.1	8.4	29.9
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0
Max Q Clear Time (g_c+I1), s	6.6	17.6	5.7	16.1	4.8	18.7	4.1	12.0
Green Ext Time (p_c), s	0.6	7.8	1.2	7.4	0.3	8.3	0.6	3.1

Intersection Summary	
HCM 6th Ctrl Delay	26.8
HCM 6th LOS	C

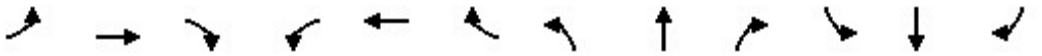
Notes

Unsignalized Delay for [NBR, EBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	180	860	30	290	590	170	10	220	160	160	400	60
Future Volume (veh/h)	180	860	30	290	590	170	10	220	160	160	400	60
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.97	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	186	887	8	299	608	42	10	227	40	165	412	56
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	223	1410	430	384	1688	403	30	353	292	201	892	120
Arrive On Green	0.13	0.28	0.28	0.11	0.27	0.27	0.02	0.19	0.19	0.11	0.29	0.29
Sat Flow, veh/h	1753	5025	1531	3401	6332	1510	1753	1841	1526	1753	3088	417
Grp Volume(v), veh/h	186	887	8	299	608	42	10	227	40	165	232	236
Grp Sat Flow(s),veh/h/ln	1753	1675	1531	1700	1583	1510	1753	1841	1526	1753	1749	1756
Q Serve(g_s), s	9.0	13.4	0.3	7.4	6.7	1.8	0.5	9.8	1.9	8.0	9.4	9.6
Cycle Q Clear(g_c), s	9.0	13.4	0.3	7.4	6.7	1.8	0.5	9.8	1.9	8.0	9.4	9.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.24
Lane Grp Cap(c), veh/h	223	1410	430	384	1688	403	30	353	292	201	505	507
V/C Ratio(X)	0.84	0.63	0.02	0.78	0.36	0.10	0.33	0.64	0.14	0.82	0.46	0.47
Avail Cap(c_a), veh/h	405	2321	707	785	2925	697	405	999	828	405	949	953
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.9	27.2	22.5	37.4	25.8	24.0	42.1	32.3	29.1	37.5	25.2	25.3
Incr Delay (d2), s/veh	3.2	0.7	0.0	1.3	0.2	0.2	2.3	0.7	0.1	3.2	0.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.8	4.9	0.1	2.9	2.3	0.6	0.2	4.2	0.6	3.4	3.6	3.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	40.1	27.9	22.5	38.7	25.9	24.1	44.4	33.0	29.1	40.7	25.5	25.5
LnGrp LOS	D	C	C	D	C	C	D	C	C	D	C	C
Approach Vol, veh/h		1081			949			277			633	
Approach Delay, s/veh		29.9			29.9			32.9			29.5	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.4	23.1	16.3	30.8	8.0	31.5	17.5	29.6
Change Period (Y+Rc), s	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
Max Green Setting (Gmax), s	20.0	47.0	20.0	40.0	20.0	47.0	20.0	40.0
Max Q Clear Time (g_c+I1), s	10.0	11.8	9.4	15.4	2.5	11.6	11.0	8.7
Green Ext Time (p_c), s	0.1	0.8	0.4	8.2	0.0	1.6	0.2	5.8

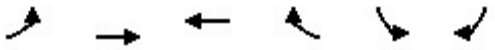
Intersection Summary	
HCM 6th Ctrl Delay	30.1
HCM 6th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	100	860	220	540	690	160	300	390	350	270	530	110
Future Volume (veh/h)	100	860	220	540	690	160	300	390	350	270	530	110
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	114	977	59	614	784	96	341	443	89	307	602	27
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	179	1191	362	684	1347	591	403	1125	342	368	748	326
Arrive On Green	0.05	0.24	0.24	0.20	0.39	0.39	0.12	0.22	0.22	0.11	0.21	0.21
Sat Flow, veh/h	3401	5025	1529	3401	3497	1533	3401	5025	1528	3401	3497	1527
Grp Volume(v), veh/h	114	977	59	614	784	96	341	443	89	307	602	27
Grp Sat Flow(s),veh/h/ln	1700	1675	1529	1700	1749	1533	1700	1675	1528	1700	1749	1527
Q Serve(g_s), s	4.3	24.0	4.0	23.0	23.2	5.4	12.8	9.8	6.3	11.5	21.3	1.8
Cycle Q Clear(g_c), s	4.3	24.0	4.0	23.0	23.2	5.4	12.8	9.8	6.3	11.5	21.3	1.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	179	1191	362	684	1347	591	403	1125	342	368	748	326
V/C Ratio(X)	0.64	0.82	0.16	0.90	0.58	0.16	0.85	0.39	0.26	0.83	0.81	0.08
Avail Cap(c_a), veh/h	912	1348	410	912	1347	591	652	1125	342	652	938	410
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	60.6	47.2	39.5	50.8	31.8	26.3	56.4	43.1	41.7	57.0	48.7	41.1
Incr Delay (d2), s/veh	2.8	3.9	0.3	8.8	0.7	0.2	4.6	0.2	0.4	3.7	4.5	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	10.0	1.5	10.2	9.4	1.9	5.6	4.0	2.3	5.0	9.5	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	63.3	51.1	39.8	59.6	32.5	26.5	61.0	43.3	42.2	60.8	53.2	41.2
LnGrp LOS	E	D	D	E	C	C	E	D	D	E	D	D
Approach Vol, veh/h		1150			1494			873			936	
Approach Delay, s/veh		51.7			43.3			50.1			55.3	
Approach LOS		D			D			D			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	33.7	38.4	23.0	35.4	14.4	57.8	21.6	36.7
Change Period (Y+Rc), s	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5
Max Green Setting (Gmax), s	35.0	35.0	25.0	35.0	35.0	35.0	25.0	25.0
Max Q Clear Time (g_c+I1), s	25.0	26.0	14.8	23.3	6.3	25.2	13.5	11.8
Green Ext Time (p_c), s	1.3	4.3	0.6	3.3	0.2	4.1	0.6	2.6

Intersection Summary	
HCM 6th Ctrl Delay	49.3
HCM 6th LOS	D



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	1100	610	0	230	1320
Future Volume (veh/h)	0	1100	610	0	230	1320
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	0	1841	1841	0	1841	1841
Adj Flow Rate, veh/h	0	1170	649	0	245	1255
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	4	4	0	4	4
Cap, veh/h	0	1715	1194	0	797	1419
Arrive On Green	0.00	0.34	0.34	0.00	0.45	0.45
Sat Flow, veh/h	0	5356	3681	0	1753	3120
Grp Volume(v), veh/h	0	1170	649	0	245	1255
Grp Sat Flow(s),veh/h/ln	0	1675	1749	0	1753	1560
Q Serve(g_s), s	0.0	12.1	9.1	0.0	5.3	22.1
Cycle Q Clear(g_c), s	0.0	12.1	9.1	0.0	5.3	22.1
Prop In Lane	0.00			0.00	1.00	1.00
Lane Grp Cap(c), veh/h	0	1715	1194	0	797	1419
V/C Ratio(X)	0.00	0.68	0.54	0.00	0.31	0.88
Avail Cap(c_a), veh/h	0	2500	1740	0	872	1552
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	17.1	16.1	0.0	10.4	15.0
Incr Delay (d2), s/veh	0.0	0.5	0.4	0.0	0.2	6.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	3.7	2.9	0.0	1.6	7.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.0	17.5	16.5	0.0	10.6	21.1
LnGrp LOS	A	B	B	A	B	C
Approach Vol, veh/h		1170	649		1500	
Approach Delay, s/veh		17.5	16.5		19.4	
Approach LOS		B	B		B	

Timer - Assigned Phs	2	4	6
Phs Duration (G+Y+Rc), s	27.4	32.9	27.4
Change Period (Y+Rc), s	6.8	5.5	6.8
Max Green Setting (Gmax), s	30.0	30.0	30.0
Max Q Clear Time (g_c+I1), s	14.1	24.1	11.1
Green Ext Time (p_c), s	6.5	3.3	3.6

Intersection Summary	
HCM 6th Ctrl Delay	18.2
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	480	880	210	290	430	90
Future Volume (veh/h)	480	880	210	290	430	90
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		0.97	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	490	730	214	296	439	37
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	4	4	4	4	4	4
Cap, veh/h	2168	927	336	3125	613	273
Arrive On Green	0.43	0.43	0.10	0.62	0.17	0.17
Sat Flow, veh/h	5191	1517	3401	5191	3506	1560
Grp Volume(v), veh/h	490	730	214	296	439	37
Grp Sat Flow(s),veh/h/ln	1675	1517	1700	1675	1753	1560
Q Serve(g_s), s	4.0	23.9	4.0	1.5	7.7	1.3
Cycle Q Clear(g_c), s	4.0	23.9	4.0	1.5	7.7	1.3
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	2168	927	336	3125	613	273
V/C Ratio(X)	0.23	0.79	0.64	0.09	0.72	0.14
Avail Cap(c_a), veh/h	2304	968	1559	3125	1608	715
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	11.7	9.8	28.3	5.0	25.5	22.8
Incr Delay (d2), s/veh	0.1	4.2	2.0	0.0	1.6	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	10.0	1.5	0.3	3.2	0.5
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	11.8	14.0	30.3	5.0	27.1	23.0
LnGrp LOS	B	B	C	A	C	C
Approach Vol, veh/h	1220			510	476	
Approach Delay, s/veh	13.1			15.6	26.7	
Approach LOS	B			B	C	

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	12.5	35.5				48.0	17.4
Change Period (Y+Rc), s	6.0	7.3				7.3	6.0
Max Green Setting (Gmax), s	30.0	30.0				30.0	30.0
Max Q Clear Time (g_c+I1), s	6.0	25.9				3.5	9.7
Green Ext Time (p_c), s	0.6	2.2				1.7	1.7

Intersection Summary	
HCM 6th Ctrl Delay	16.6
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.
User approved volume balancing among the lanes for turning movement.

Intersection	
Intersection Delay, s/veh	7.2
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	10	0	0	10	0	0	30	0	0	10	0
Future Vol, veh/h	0	10	0	0	10	0	0	30	0	0	10	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	8	8	8	8	8	8	8	8	8	8	8	8
Mvmt Flow	0	11	0	0	11	0	0	33	0	0	11	0
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	7.2	7.2	7.3	7.2
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	0%	0%	0%	0%
Vol Thru, %	100%	100%	100%	100%
Vol Right, %	0%	0%	0%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	30	10	10	10
LT Vol	0	0	0	0
Through Vol	30	10	10	10
RT Vol	0	0	0	0
Lane Flow Rate	33	11	11	11
Geometry Grp	1	1	1	1
Degree of Util (X)	0.037	0.012	0.012	0.012
Departure Headway (Hd)	4.084	4.121	4.121	4.1
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	880	869	869	875
Service Time	2.093	2.142	2.142	2.114
HCM Lane V/C Ratio	0.037	0.013	0.013	0.013
HCM Control Delay	7.3	7.2	7.2	7.2
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.1	0	0	0

Intersection	
Intersection Delay, s/veh	9.5
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	30	20	20	30	40	20	10	120	130	40	100	20
Future Vol, veh/h	30	20	20	30	40	20	10	120	130	40	100	20
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles, %	8	8	8	8	8	8	8	8	8	8	8	8
Mvmt Flow	34	22	22	34	45	22	11	135	146	45	112	22
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8.9	9.1	9.9	9.4
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	4%	43%	33%	25%
Vol Thru, %	46%	29%	44%	62%
Vol Right, %	50%	29%	22%	12%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	260	70	90	160
LT Vol	10	30	30	40
Through Vol	120	20	40	100
RT Vol	130	20	20	20
Lane Flow Rate	292	79	101	180
Geometry Grp	1	1	1	1
Degree of Util (X)	0.359	0.113	0.145	0.24
Departure Headway (Hd)	4.424	5.17	5.154	4.801
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	809	689	692	744
Service Time	2.468	3.236	3.218	2.851
HCM Lane V/C Ratio	0.361	0.115	0.146	0.242
HCM Control Delay	9.9	8.9	9.1	9.4
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	1.6	0.4	0.5	0.9

Intersection	
Intersection Delay, s/veh	40.6
Intersection LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	30	570	30	50	330	10	70	30	70	20	10	10
Future Vol, veh/h	30	570	30	50	330	10	70	30	70	20	10	10
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles, %	4	4	4	4	4	4	4	4	4	4	4	4
Mvmt Flow	32	613	32	54	355	11	75	32	75	22	11	11
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	62.5	20.1	13.4	11.2
HCM LOS	F	C	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	41%	5%	13%	50%
Vol Thru, %	18%	90%	85%	25%
Vol Right, %	41%	5%	3%	25%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	170	630	390	40
LT Vol	70	30	50	20
Through Vol	30	570	330	10
RT Vol	70	30	10	10
Lane Flow Rate	183	677	419	43
Geometry Grp	1	1	1	1
Degree of Util (X)	0.342	1.017	0.674	0.088
Departure Headway (Hd)	6.838	5.406	5.783	7.521
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	530	664	621	479
Service Time	4.838	3.479	3.869	5.521
HCM Lane V/C Ratio	0.345	1.02	0.675	0.09
HCM Control Delay	13.4	62.5	20.1	11.2
HCM Lane LOS	B	F	C	B
HCM 95th-tile Q	1.5	16.5	5.1	0.3

Intersection	
Int Delay, s/veh	11.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	30	700	30	80	500	10	20	20	170	0	10	30
Future Vol, veh/h	30	700	30	80	500	10	20	20	170	0	10	30
Conflicting Peds, #/hr	5	0	5	5	0	5	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	127	-	-	143	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	32	753	32	86	538	11	22	22	183	0	11	32

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	554	0	0	790	0	0	1285	1564	774	1657	1575	280
Stage 1	-	-	-	-	-	-	838	838	-	721	721	-
Stage 2	-	-	-	-	-	-	447	726	-	936	854	-
Critical Hdwy	4.145	-	-	4.145	-	-	7.345	6.545	6.245	7.345	6.545	6.945
Critical Hdwy Stg 1	-	-	-	-	-	-	6.145	5.545	-	6.545	5.545	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.545	5.545	-	6.145	5.545	-
Follow-up Hdwy	2.2285	-	-	2.2285	-	-	3.5285	4.0285	3.3285	3.5285	4.0285	3.3285
Pot Cap-1 Maneuver	1008	-	-	822	-	-	130	110	395	70	109	715
Stage 1	-	-	-	-	-	-	358	379	-	384	429	-
Stage 2	-	-	-	-	-	-	559	427	-	315	372	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1003	-	-	818	-	-	101	94	393	28	94	712
Mov Cap-2 Maneuver	-	-	-	-	-	-	101	94	-	28	94	-
Stage 1	-	-	-	-	-	-	345	365	-	370	382	-
Stage 2	-	-	-	-	-	-	464	380	-	153	358	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.3	1.3	78.1	20.9
HCM LOS			F	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	249	1003	-	-	818	-	-	269
HCM Lane V/C Ratio	0.907	0.032	-	-	0.105	-	-	0.16
HCM Control Delay (s)	78.1	8.7	-	-	9.9	-	-	20.9
HCM Lane LOS	F	A	-	-	A	-	-	C
HCM 95th %tile Q(veh)	7.9	0.1	-	-	0.4	-	-	0.6

Intersection	
Int Delay, s/veh	10.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	20	740	130	40	470	20	80	10	70	10	0	20
Future Vol, veh/h	20	740	130	40	470	20	80	10	70	10	0	20
Conflicting Peds, #/hr	5	0	5	5	0	5	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	69	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	21	763	134	41	485	21	82	10	72	10	0	21

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	511	0	0	902	0	0	1202	1470	835	1496	1527	258
Stage 1	-	-	-	-	-	-	877	877	-	583	583	-
Stage 2	-	-	-	-	-	-	325	593	-	913	944	-
Critical Hdwy	4.145	-	-	4.145	-	-	7.345	6.545	6.245	7.345	6.545	6.945
Critical Hdwy Stg 1	-	-	-	-	-	-	6.145	5.545	-	6.545	5.545	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.545	5.545	-	6.145	5.545	-
Follow-up Hdwy	2.2285	-	-	2.2285	-	-	3.5285	4.0285	3.3285	3.5285	4.0285	3.3285
Pot Cap-1 Maneuver	1046	-	-	746	-	-	149	126	365	92	116	739
Stage 1	-	-	-	-	-	-	340	363	-	464	496	-
Stage 2	-	-	-	-	-	-	660	490	-	325	338	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1041	-	-	742	-	-	136	116	363	65	106	735
Mov Cap-2 Maneuver	-	-	-	-	-	-	136	116	-	65	106	-
Stage 1	-	-	-	-	-	-	332	354	-	452	466	-
Stage 2	-	-	-	-	-	-	606	461	-	248	330	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.2	0.8	93.1	31.6
HCM LOS			F	D

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	184	1041	-	-	742	-	-	166
HCM Lane V/C Ratio	0.896	0.02	-	-	0.056	-	-	0.186
HCM Control Delay (s)	93.1	8.5	-	-	10.1	-	-	31.6
HCM Lane LOS	F	A	-	-	B	-	-	D
HCM 95th %tile Q(veh)	6.8	0.1	-	-	0.2	-	-	0.7

Intersection	
Int Delay, s/veh	1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	10	790	10	10	510	30	10	0	20	10	0	10
Future Vol, veh/h	10	790	10	10	510	30	10	0	20	10	0	10
Conflicting Peds, #/hr	5	0	5	5	0	5	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	98	-	-	47	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	11	840	11	11	543	32	11	0	21	11	0	11

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	580	0	0	856	0	0	1167	1475	851	1464	1464	293
Stage 1	-	-	-	-	-	-	873	873	-	586	586	-
Stage 2	-	-	-	-	-	-	294	602	-	878	878	-
Critical Hdwy	4.145	-	-	4.145	-	-	7.345	6.545	6.245	7.345	6.545	6.945
Critical Hdwy Stg 1	-	-	-	-	-	-	6.145	5.545	-	6.545	5.545	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.545	5.545	-	6.145	5.545	-
Follow-up Hdwy	2.2285	-	-	2.2285	-	-	3.5285	4.0285	3.3285	3.5285	4.0285	3.3285
Pot Cap-1 Maneuver	986	-	-	777	-	-	158	125	357	97	127	702
Stage 1	-	-	-	-	-	-	342	365	-	462	494	-
Stage 2	-	-	-	-	-	-	688	486	-	340	363	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	981	-	-	773	-	-	152	121	355	89	123	699
Mov Cap-2 Maneuver	-	-	-	-	-	-	152	121	-	89	123	-
Stage 1	-	-	-	-	-	-	337	359	-	455	485	-
Stage 2	-	-	-	-	-	-	668	477	-	316	357	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.2	21.8	31.3
HCM LOS			C	D

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	246	981	-	-	773	-	-	158
HCM Lane V/C Ratio	0.13	0.011	-	-	0.014	-	-	0.135
HCM Control Delay (s)	21.8	8.7	-	-	9.7	-	-	31.3
HCM Lane LOS	C	A	-	-	A	-	-	D
HCM 95th %tile Q(veh)	0.4	0	-	-	0	-	-	0.5

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	1080	610	20	0	10
Future Vol, veh/h	0	1080	610	20	0	10
Conflicting Peds, #/hr	5	0	0	5	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	25	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	0	1161	656	22	0	11

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	683	0	-	0	1833	344
Stage 1	-	-	-	-	672	-
Stage 2	-	-	-	-	1161	-
Critical Hdwy	4.145	-	-	-	6.645	6.945
Critical Hdwy Stg 1	-	-	-	-	5.845	-
Critical Hdwy Stg 2	-	-	-	-	5.445	-
Follow-up Hdwy	2.2285	-	-	-	3.5285	3.3285
Pot Cap-1 Maneuver	902	-	-	-	75	650
Stage 1	-	-	-	-	468	-
Stage 2	-	-	-	-	295	-
Platoon blocked, %			-	-		
Mov Cap-1 Maneuver	898	-	-	-	74	647
Mov Cap-2 Maneuver	-	-	-	-	196	-
Stage 1	-	-	-	-	466	-
Stage 2	-	-	-	-	294	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	10.7
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	898	-	-	-	647
HCM Lane V/C Ratio	-	-	-	-	0.017
HCM Control Delay (s)	0	-	-	-	10.7
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.1

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	1080	620	10	0	10
Future Vol, veh/h	0	1080	620	10	0	10
Conflicting Peds, #/hr	5	0	0	5	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	25	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	0	1149	660	11	0	11

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	676	0	-	0	1820	341
Stage 1	-	-	-	-	671	-
Stage 2	-	-	-	-	1149	-
Critical Hdwy	4.145	-	-	-	6.645	6.945
Critical Hdwy Stg 1	-	-	-	-	5.845	-
Critical Hdwy Stg 2	-	-	-	-	5.445	-
Follow-up Hdwy	2.2285	-	-	-	3.5285	3.3285
Pot Cap-1 Maneuver	908	-	-	-	76	653
Stage 1	-	-	-	-	468	-
Stage 2	-	-	-	-	299	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	904	-	-	-	75	650
Mov Cap-2 Maneuver	-	-	-	-	198	-
Stage 1	-	-	-	-	466	-
Stage 2	-	-	-	-	298	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	10.6
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	904	-	-	-	650
HCM Lane V/C Ratio	-	-	-	-	0.016
HCM Control Delay (s)	0	-	-	-	10.6
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.1

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	1080	630	10	20	0
Future Vol, veh/h	0	1080	630	10	20	0
Conflicting Peds, #/hr	5	0	0	5	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	0	1161	677	11	22	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	693	0	-	0	1849	349
Stage 1	-	-	-	-	688	-
Stage 2	-	-	-	-	1161	-
Critical Hdwy	4.145	-	-	-	6.645	6.945
Critical Hdwy Stg 1	-	-	-	-	5.845	-
Critical Hdwy Stg 2	-	-	-	-	5.445	-
Follow-up Hdwy	2.2285	-	-	-	3.5285	3.3285
Pot Cap-1 Maneuver	895	-	-	-	73	645
Stage 1	-	-	-	-	459	-
Stage 2	-	-	-	-	295	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	891	-	-	-	72	642
Mov Cap-2 Maneuver	-	-	-	-	194	-
Stage 1	-	-	-	-	457	-
Stage 2	-	-	-	-	294	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	25.9
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	891	-	-	-	194
HCM Lane V/C Ratio	-	-	-	-	0.111
HCM Control Delay (s)	0	-	-	-	25.9
HCM Lane LOS	A	-	-	-	D
HCM 95th %tile Q(veh)	0	-	-	-	0.4

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	10	1090	630	20	30	10
Future Vol, veh/h	10	1090	630	20	30	10
Conflicting Peds, #/hr	5	0	0	5	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	350	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	11	1172	677	22	32	11

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	704	0	-	0	1887	355
Stage 1	-	-	-	-	693	-
Stage 2	-	-	-	-	1194	-
Critical Hdwy	4.145	-	-	-	6.645	6.945
Critical Hdwy Stg 1	-	-	-	-	5.845	-
Critical Hdwy Stg 2	-	-	-	-	5.445	-
Follow-up Hdwy	2.2285	-	-	-	3.5285	3.3285
Pot Cap-1 Maneuver	886	-	-	-	69	640
Stage 1	-	-	-	-	456	-
Stage 2	-	-	-	-	284	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	882	-	-	-	67	637
Mov Cap-2 Maneuver	-	-	-	-	187	-
Stage 1	-	-	-	-	448	-
Stage 2	-	-	-	-	283	-

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	24.5
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	882	-	-	-	227
HCM Lane V/C Ratio	0.012	-	-	-	0.189
HCM Control Delay (s)	9.1	-	-	-	24.5
HCM Lane LOS	A	-	-	-	C
HCM 95th %tile Q(veh)	0	-	-	-	0.7

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	1120	640	10	10	10
Future Vol, veh/h	0	1120	640	10	10	10
Conflicting Peds, #/hr	5	0	0	5	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	175	-	-	-	0	76
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	0	1231	703	11	11	11

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	719	0	-	0	1945	362
Stage 1	-	-	-	-	714	-
Stage 2	-	-	-	-	1231	-
Critical Hdwy	4.145	-	-	-	6.645	6.945
Critical Hdwy Stg 1	-	-	-	-	5.845	-
Critical Hdwy Stg 2	-	-	-	-	5.445	-
Follow-up Hdwy	2.2285	-	-	-	3.5285	3.3285
Pot Cap-1 Maneuver	875	-	-	-	63	633
Stage 1	-	-	-	-	445	-
Stage 2	-	-	-	-	273	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	871	-	-	-	62	630
Mov Cap-2 Maneuver	-	-	-	-	62	-
Stage 1	-	-	-	-	443	-
Stage 2	-	-	-	-	272	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	43
HCM LOS			E

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	871	-	-	-	62	630
HCM Lane V/C Ratio	-	-	-	-	0.177	0.017
HCM Control Delay (s)	0	-	-	-	75.2	10.8
HCM Lane LOS	A	-	-	-	F	B
HCM 95th %tile Q(veh)	0	-	-	-	0.6	0.1

Intersection	
Int Delay, s/veh	0.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1090	40	10	630	20	10
Future Vol, veh/h	1090	40	10	630	20	10
Conflicting Peds, #/hr	0	5	5	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	200	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	1185	43	11	685	22	11

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1233	0	1577	1212
Stage 1	-	-	-	-	1212	-
Stage 2	-	-	-	-	365	-
Critical Hdwy	-	-	4.145	-	6.645	6.245
Critical Hdwy Stg 1	-	-	-	-	5.445	-
Critical Hdwy Stg 2	-	-	-	-	5.845	-
Follow-up Hdwy	-	-	2.2285	-	3.5285	3.3285
Pot Cap-1 Maneuver	-	-	558	-	109	220
Stage 1	-	-	-	-	279	-
Stage 2	-	-	-	-	671	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	555	-	106	219
Mov Cap-2 Maneuver	-	-	-	-	106	-
Stage 1	-	-	-	-	278	-
Stage 2	-	-	-	-	658	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.2	42.5
HCM LOS			E

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	128	-	-	555	-
HCM Lane V/C Ratio	0.255	-	-	0.02	-
HCM Control Delay (s)	42.5	-	-	11.6	-
HCM Lane LOS	E	-	-	B	-
HCM 95th %tile Q(veh)	0.9	-	-	0.1	-

Intersection	
Int Delay, s/veh	0.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	200	0	0	80	0	20
Future Vol, veh/h	200	0	0	80	0	20
Conflicting Peds, #/hr	0	5	5	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	79	79	79	79	79	79
Heavy Vehicles, %	8	8	8	8	8	8
Mvmt Flow	253	0	0	101	0	25

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	258	0	359	258
Stage 1	-	-	-	-	258	-
Stage 2	-	-	-	-	101	-
Critical Hdwy	-	-	4.18	-	6.48	6.28
Critical Hdwy Stg 1	-	-	-	-	5.48	-
Critical Hdwy Stg 2	-	-	-	-	5.48	-
Follow-up Hdwy	-	-	2.272	-	3.572	3.372
Pot Cap-1 Maneuver	-	-	1273	-	628	766
Stage 1	-	-	-	-	771	-
Stage 2	-	-	-	-	908	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1267	-	625	762
Mov Cap-2 Maneuver	-	-	-	-	625	-
Stage 1	-	-	-	-	767	-
Stage 2	-	-	-	-	908	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	9.9
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	762	-	-	1267	-
HCM Lane V/C Ratio	0.033	-	-	-	-
HCM Control Delay (s)	9.9	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Intersection	
Int Delay, s/veh	0.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	210	1	2	70	1	3
Future Vol, veh/h	210	1	2	70	1	3
Conflicting Peds, #/hr	0	5	5	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	76	76	76	76	76	76
Heavy Vehicles, %	8	8	8	8	8	8
Mvmt Flow	276	1	3	92	1	4

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	282	0	380	282
Stage 1	-	-	-	-	282	-
Stage 2	-	-	-	-	98	-
Critical Hdwy	-	-	4.18	-	6.48	6.28
Critical Hdwy Stg 1	-	-	-	-	5.48	-
Critical Hdwy Stg 2	-	-	-	-	5.48	-
Follow-up Hdwy	-	-	2.272	-	3.572	3.372
Pot Cap-1 Maneuver	-	-	1247	-	610	743
Stage 1	-	-	-	-	752	-
Stage 2	-	-	-	-	911	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1241	-	605	739
Mov Cap-2 Maneuver	-	-	-	-	605	-
Stage 1	-	-	-	-	748	-
Stage 2	-	-	-	-	908	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.2	10.2
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	700	-	-	1241	-
HCM Lane V/C Ratio	0.008	-	-	0.002	-
HCM Control Delay (s)	10.2	-	-	7.9	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0	-

Intersection	
Int Delay, s/veh	2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	0	200	0	0	70	10	0	10	10	20	10	10
Future Vol, veh/h	0	200	0	0	70	10	0	10	10	20	10	10
Conflicting Peds, #/hr	5	0	5	5	0	5	5	0	5	5	0	5
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	83	83	83	83	83	83	83	83	83	83	83	83
Heavy Vehicles, %	8	8	8	8	8	8	8	8	8	8	8	8
Mvmt Flow	0	241	0	0	84	12	0	12	12	24	12	12

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	101	0	0	246	0	0	353	347	251	353	341	100
Stage 1	-	-	-	-	-	-	246	246	-	95	95	-
Stage 2	-	-	-	-	-	-	107	101	-	258	246	-
Critical Hdwy	4.18	-	-	4.18	-	-	7.18	6.58	6.28	7.18	6.58	6.28
Critical Hdwy Stg 1	-	-	-	-	-	-	6.18	5.58	-	6.18	5.58	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.18	5.58	-	6.18	5.58	-
Follow-up Hdwy	2.272	-	-	2.272	-	-	3.572	4.072	3.372	3.572	4.072	3.372
Pot Cap-1 Maneuver	1455	-	-	1286	-	-	591	567	773	591	571	939
Stage 1	-	-	-	-	-	-	745	692	-	897	805	-
Stage 2	-	-	-	-	-	-	884	800	-	734	692	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1448	-	-	1280	-	-	569	561	766	567	565	930
Mov Cap-2 Maneuver	-	-	-	-	-	-	569	561	-	567	565	-
Stage 1	-	-	-	-	-	-	741	689	-	893	801	-
Stage 2	-	-	-	-	-	-	855	796	-	706	689	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	10.8	11.2
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	648	1448	-	-	1280	-	-	628
HCM Lane V/C Ratio	0.037	-	-	-	-	-	-	0.077
HCM Control Delay (s)	10.8	0	-	-	0	-	-	11.2
HCM Lane LOS	B	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.2

HCM 6th Signalized Intersection Summary
1: Grove Ave & Mission Blvd

03/18/2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	276	604	171	48	716	484	120	678	28	549	1011	241
Future Volume (veh/h)	276	604	171	48	716	484	120	678	28	549	1011	241
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	303	664	79	53	787	224	132	745	30	603	1111	121
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	352	921	408	167	731	324	152	919	37	576	2148	656
Arrive On Green	0.10	0.26	0.26	0.05	0.21	0.21	0.09	0.19	0.19	0.33	0.43	0.43
Sat Flow, veh/h	3401	3497	1551	3401	3497	1549	1753	4951	199	1753	5025	1534
Grp Volume(v), veh/h	303	664	79	53	787	224	132	503	272	603	1111	121
Grp Sat Flow(s),veh/h/ln	1700	1749	1551	1700	1749	1549	1753	1675	1800	1753	1675	1534
Q Serve(g_s), s	14.7	28.9	6.6	2.5	35.0	22.4	12.4	24.1	24.2	55.0	27.2	8.2
Cycle Q Clear(g_c), s	14.7	28.9	6.6	2.5	35.0	22.4	12.4	24.1	24.2	55.0	27.2	8.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.11	1.00		1.00
Lane Grp Cap(c), veh/h	352	921	408	167	731	324	152	622	334	576	2148	656
V/C Ratio(X)	0.86	0.72	0.19	0.32	1.08	0.69	0.87	0.81	0.81	1.05	0.52	0.18
Avail Cap(c_a), veh/h	610	921	408	406	731	324	209	701	376	576	2148	656
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	73.9	56.1	47.9	76.9	66.2	61.2	75.5	65.3	65.4	56.2	35.2	29.8
Incr Delay (d2), s/veh	4.8	2.9	0.3	0.8	55.7	6.5	21.7	6.9	12.6	50.3	0.3	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.6	13.0	2.5	1.1	20.8	9.2	6.4	10.7	12.1	31.8	11.0	3.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	78.6	59.0	48.1	77.7	121.8	67.7	97.2	72.2	77.9	106.5	35.5	30.0
LnGrp LOS	E	E	D	E	F	E	F	E	E	F	D	C
Approach Vol, veh/h		1046			1064			907			1835	
Approach Delay, s/veh		63.8			108.2			77.6			58.5	
Approach LOS		E			F			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	62.0	38.1	15.7	51.6	21.5	78.6	24.8	42.5
Change Period (Y+Rc), s	7.0	7.0	7.5	7.5	7.0	7.0	7.5	7.5
Max Green Setting (Gmax), s	55.0	35.0	20.0	35.0	20.0	35.0	30.0	35.0
Max Q Clear Time (g_c+I1), s	57.0	26.2	4.5	30.9	14.4	29.2	16.7	37.0
Green Ext Time (p_c), s	0.0	3.8	0.1	1.9	0.1	4.1	0.6	0.0

Intersection Summary	
HCM 6th Ctrl Delay	74.1
HCM 6th LOS	E

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary
2: Vineyard Ave & Mission Blvd

03/18/2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	744	259	64	1019	7	257	23	23	7	30	47
Future Volume (veh/h)	20	744	259	64	1019	7	257	23	23	7	30	47
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	22	836	117	72	1145	8	289	26	8	8	34	0
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	62	1242	547	136	1414	10	439	882	388	442	882	
Arrive On Green	0.04	0.36	0.36	0.08	0.40	0.40	0.25	0.25	0.25	0.25	0.25	0.00
Sat Flow, veh/h	1753	3497	1539	1753	3560	25	1353	3497	1538	1353	3589	0
Grp Volume(v), veh/h	22	836	117	72	562	591	289	26	8	8	34	0
Grp Sat Flow(s),veh/h/ln	1753	1749	1539	1753	1749	1836	1353	1749	1538	1353	1749	0
Q Serve(g_s), s	0.8	13.5	3.5	2.6	19.0	19.0	13.7	0.4	0.3	0.3	0.5	0.0
Cycle Q Clear(g_c), s	0.8	13.5	3.5	2.6	19.0	19.0	14.2	0.4	0.3	0.7	0.5	0.0
Prop In Lane	1.00		1.00	1.00		0.01	1.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	62	1242	547	136	695	729	439	882	388	442	882	
V/C Ratio(X)	0.36	0.67	0.21	0.53	0.81	0.81	0.66	0.03	0.02	0.02	0.04	
Avail Cap(c_a), veh/h	526	1575	693	526	788	827	504	1050	462	507	1050	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	31.4	18.2	15.0	29.6	17.8	17.8	24.1	18.8	18.7	19.0	18.8	0.0
Incr Delay (d2), s/veh	1.3	1.0	0.3	1.2	6.2	5.9	3.6	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	4.5	1.0	1.0	7.1	7.4	4.2	0.1	0.1	0.1	0.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	32.7	19.2	15.3	30.8	24.0	23.8	27.7	18.8	18.8	19.0	18.8	0.0
LnGrp LOS	C	B	B	C	C	C	C	B	B	B	B	
Approach Vol, veh/h		975			1225			323			42	A
Approach Delay, s/veh		19.1			24.3			26.8			18.9	
Approach LOS		B			C			C			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	12.2	30.7		23.8	9.3	33.5		23.8				
Change Period (Y+Rc), s	7.0	7.0		7.0	7.0	7.0		7.0				
Max Green Setting (Gmax), s	20.0	30.0		20.0	20.0	30.0		20.0				
Max Q Clear Time (g_c+I1), s	4.6	15.5		16.2	2.8	21.0		2.7				
Green Ext Time (p_c), s	0.1	6.3		0.7	0.0	5.4		0.2				

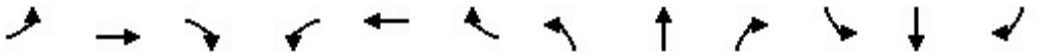
Intersection Summary	
HCM 6th Ctrl Delay	22.5
HCM 6th LOS	C

Notes

Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary
3: Vineyard Ave & Francis St

03/18/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	14	107	62	24	132	12	109	375	105	16	334	13
Future Volume (veh/h)	14	107	62	24	132	12	109	375	105	16	334	13
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.97	0.99		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	15	118	13	26	145	8	120	412	99	18	367	13
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	318	450	49	333	523	29	419	783	186	318	731	26
Arrive On Green	0.02	0.14	0.14	0.04	0.16	0.16	0.09	0.28	0.28	0.03	0.21	0.21
Sat Flow, veh/h	1753	3173	344	1753	3367	184	1753	2791	664	1753	3443	122
Grp Volume(v), veh/h	15	64	67	26	75	78	120	257	254	18	186	194
Grp Sat Flow(s),veh/h/ln	1753	1749	1768	1753	1749	1802	1753	1749	1706	1753	1749	1816
Q Serve(g_s), s	0.4	1.7	1.8	0.6	2.0	2.0	2.7	6.5	6.6	0.4	4.9	4.9
Cycle Q Clear(g_c), s	0.4	1.7	1.8	0.6	2.0	2.0	2.7	6.5	6.6	0.4	4.9	4.9
Prop In Lane	1.00		0.19	1.00		0.10	1.00		0.39	1.00		0.07
Lane Grp Cap(c), veh/h	318	248	251	333	272	280	419	491	479	318	372	386
V/C Ratio(X)	0.05	0.26	0.27	0.08	0.28	0.28	0.29	0.52	0.53	0.06	0.50	0.50
Avail Cap(c_a), veh/h	797	1184	1198	789	1184	1221	755	1168	1139	774	1168	1213
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	18.5	20.0	20.1	18.0	19.5	19.5	13.8	15.9	15.9	15.4	18.2	18.2
Incr Delay (d2), s/veh	0.1	0.8	0.8	0.1	0.8	0.8	0.4	1.2	1.3	0.1	1.5	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.6	0.7	0.2	0.7	0.8	0.9	2.2	2.2	0.1	1.8	1.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	18.6	20.8	20.9	18.1	20.3	20.3	14.2	17.1	17.2	15.5	19.7	19.6
LnGrp LOS	B	C	C	B	C	C	B	B	B	B	B	B
Approach Vol, veh/h		146			179			631			398	
Approach Delay, s/veh		20.6			20.0			16.6			19.5	
Approach LOS		C			B			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.4	21.7	8.4	13.9	12.0	18.1	7.7	14.6
Change Period (Y+Rc), s	7.0	7.0	6.5	6.5	7.0	7.0	6.5	6.5
Max Green Setting (Gmax), s	15.0	35.0	15.5	35.5	15.0	35.0	15.5	35.5
Max Q Clear Time (g_c+I1), s	2.4	8.6	2.6	3.8	4.7	6.9	2.4	4.0
Green Ext Time (p_c), s	0.0	4.2	0.0	0.9	0.2	3.0	0.0	1.1

Intersection Summary	
HCM 6th Ctrl Delay	18.3
HCM 6th LOS	B

Min green cannot be greater than Max Green.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	348	1	288	334	883	0	0	930	381
Future Volume (veh/h)	0	0	0	348	1	288	334	883	0	0	930	381
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		0.99
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1841	1841	1841	1841	1841	0	0	1841	1841
Adj Flow Rate, veh/h				406	0	77	355	939	0	0	989	164
Peak Hour Factor				0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %				4	4	4	4	4	0	0	4	4
Cap, veh/h				483	0	215	399	2510	0	0	1511	670
Arrive On Green				0.14	0.00	0.14	0.15	0.48	0.00	0.00	0.43	0.43
Sat Flow, veh/h				3506	0	1560	1753	3589	0	0	3589	1551
Grp Volume(v), veh/h				406	0	77	355	939	0	0	989	164
Grp Sat Flow(s),veh/h/ln				1753	0	1560	1753	1749	0	0	1749	1551
Q Serve(g_s), s				10.2	0.0	4.0	17.9	15.3	0.0	0.0	20.2	6.0
Cycle Q Clear(g_c), s				10.2	0.0	4.0	17.9	15.3	0.0	0.0	20.2	6.0
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				483	0	215	399	2510	0	0	1511	670
V/C Ratio(X)				0.84	0.00	0.36	0.89	0.37	0.00	0.00	0.65	0.24
Avail Cap(c_a), veh/h				506	0	225	526	2510	0	0	1511	670
HCM Platoon Ratio				1.00	1.00	1.00	0.67	0.67	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.50	0.50	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				37.8	0.0	35.2	37.0	10.6	0.0	0.0	20.2	16.2
Incr Delay (d2), s/veh				12.1	0.0	1.4	7.7	0.2	0.0	0.0	2.2	0.9
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				5.1	0.0	1.6	8.6	6.2	0.0	0.0	8.0	2.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				49.9	0.0	36.6	44.7	10.8	0.0	0.0	22.5	17.1
LnGrp LOS				D	A	D	D	B	A	A	C	B
Approach Vol, veh/h					483			1294			1153	
Approach Delay, s/veh					47.8			20.1			21.7	
Approach LOS					D			C			C	

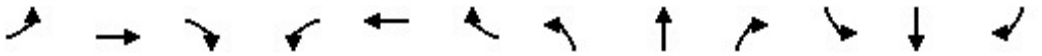
Timer - Assigned Phs	2		5	6		8						
Phs Duration (G+Y+Rc), s	70.6		25.7	44.9		19.4						
Change Period (Y+Rc), s	6.0		* 5.2	6.0		7.0						
Max Green Setting (Gmax), s	64.0		* 27	31.0		13.0						
Max Q Clear Time (g_c+I1), s	17.3		19.9	22.2		12.2						
Green Ext Time (p_c), s	11.5		0.6	5.6		0.2						

Intersection Summary		
HCM 6th Ctrl Delay	25.3	
HCM 6th LOS	C	

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



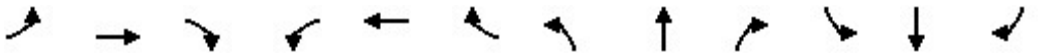
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	327	2	465	0	0	0	0	844	386	293	1052	0
Future Volume (veh/h)	327	2	465	0	0	0	0	844	386	293	1052	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841				0	1841	1841	1841	1841	0
Adj Flow Rate, veh/h	344	2	423				0	888	126	308	1107	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4				0	4	4	4	4	0
Cap, veh/h	487	0	433				0	1163	515	338	2021	0
Arrive On Green	0.28	0.28	0.28				0.00	0.33	0.33	0.39	1.00	0.00
Sat Flow, veh/h	1753	0	1560				0	3589	1548	1753	3589	0
Grp Volume(v), veh/h	344	0	423				0	888	126	308	1107	0
Grp Sat Flow(s),veh/h/ln	1753	0	1560				0	1749	1548	1753	1749	0
Q Serve(g_s), s	15.9	0.0	24.2				0.0	20.4	5.3	15.0	0.0	0.0
Cycle Q Clear(g_c), s	15.9	0.0	24.2				0.0	20.4	5.3	15.0	0.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	487	0	433				0	1163	515	338	2021	0
V/C Ratio(X)	0.71	0.00	0.98				0.00	0.76	0.24	0.91	0.55	0.00
Avail Cap(c_a), veh/h	487	0	433				0	1163	515	429	2021	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.56	0.56	0.00
Uniform Delay (d), s/veh	29.2	0.0	32.2				0.0	26.9	21.8	26.9	0.0	0.0
Incr Delay (d2), s/veh	5.1	0.0	37.0				0.0	4.8	1.1	12.8	0.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.2	0.0	13.3				0.0	8.7	2.0	5.8	0.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	34.3	0.0	69.2				0.0	31.7	23.0	39.7	0.6	0.0
LnGrp LOS	C	A	E				A	C	C	D	A	A
Approach Vol, veh/h		767						1014			1415	
Approach Delay, s/veh		53.5						30.6			9.1	
Approach LOS		D						C			A	

Timer - Assigned Phs	1	2	4	6
Phs Duration (G+Y+Rc), s	22.1	35.9	32.0	58.0
Change Period (Y+Rc), s	* 4.7	6.0	7.0	6.0
Max Green Setting (Gmax), s	* 22	25.0	25.0	52.0
Max Q Clear Time (g_c+I1), s	17.0	22.4	26.2	2.0
Green Ext Time (p_c), s	0.4	1.8	0.0	14.9

Intersection Summary	
HCM 6th Ctrl Delay	26.6
HCM 6th LOS	C

Notes

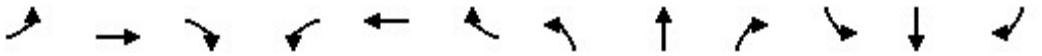
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	225	2	253	301	1061	0	0	435	141
Future Volume (veh/h)	0	0	0	225	2	253	301	1061	0	0	435	141
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		0.97
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1841	1841	1841	1841	1841	0	0	1841	1841
Adj Flow Rate, veh/h				227	2	170	304	1072	0	0	439	108
Peak Hour Factor				0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %				4	4	4	4	4	0	0	4	4
Cap, veh/h				284	3	255	333	2419	0	0	1216	296
Arrive On Green				0.16	0.16	0.16	0.38	1.00	0.00	0.00	0.44	0.44
Sat Flow, veh/h				1738	15	1560	1753	3589	0	0	2862	675
Grp Volume(v), veh/h				229	0	170	304	1072	0	0	276	271
Grp Sat Flow(s),veh/h/ln				1754	0	1560	1753	1749	0	0	1749	1697
Q Serve(g_s), s				10.1	0.0	8.2	13.2	0.0	0.0	0.0	8.4	8.5
Cycle Q Clear(g_c), s				10.1	0.0	8.2	13.2	0.0	0.0	0.0	8.4	8.5
Prop In Lane				0.99		1.00	1.00		0.00	0.00		0.40
Lane Grp Cap(c), veh/h				287	0	255	333	2419	0	0	768	745
V/C Ratio(X)				0.80	0.00	0.67	0.91	0.44	0.00	0.00	0.36	0.36
Avail Cap(c_a), veh/h				447	0	398	351	2419	0	0	768	745
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.09	0.09	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				32.2	0.0	31.4	24.2	0.0	0.0	0.0	14.9	15.0
Incr Delay (d2), s/veh				4.3	0.0	2.2	3.6	0.1	0.0	0.0	1.3	1.4
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				4.5	0.0	3.2	4.2	0.0	0.0	0.0	3.2	3.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				36.5	0.0	33.7	27.7	0.1	0.0	0.0	16.3	16.4
LnGrp LOS				D	A	C	C	A	A	A	B	B
Approach Vol, veh/h					399			1376			547	
Approach Delay, s/veh					35.3			6.2			16.3	
Approach LOS					D			A			B	

Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		61.1			20.2	40.9		18.9				
Change Period (Y+Rc), s		5.8			5.0	5.8		5.8				
Max Green Setting (Gmax), s		48.0			16.0	27.0		20.4				
Max Q Clear Time (g_c+I1), s		2.0			15.2	10.5		12.1				
Green Ext Time (p_c), s		6.9			0.1	2.2		1.0				

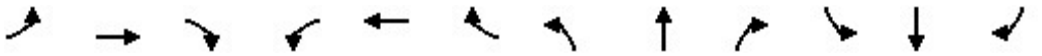
Intersection Summary												
HCM 6th Ctrl Delay			13.6									
HCM 6th LOS			B									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	501	1	378	0	0	0	0	867	284	137	537	0
Future Volume (veh/h)	501	1	378	0	0	0	0	867	284	137	537	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		0.97	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841				0	1841	1841	1841	1841	0
Adj Flow Rate, veh/h	516	1	194				0	894	255	141	554	0
Peak Hour Factor	0.97	0.97	0.97				0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	4	4	4				0	4	4	4	4	0
Cap, veh/h	550	1	490				0	957	272	210	1892	0
Arrive On Green	0.31	0.31	0.31				0.00	0.36	0.36	0.04	0.18	0.00
Sat Flow, veh/h	1750	3	1560				0	2759	759	1753	3589	0
Grp Volume(v), veh/h	517	0	194				0	586	563	141	554	0
Grp Sat Flow(s),veh/h/ln	1753	0	1560				0	1749	1677	1753	1749	0
Q Serve(g_s), s	22.9	0.0	7.8				0.0	25.8	25.9	6.3	11.0	0.0
Cycle Q Clear(g_c), s	22.9	0.0	7.8				0.0	25.8	25.9	6.3	11.0	0.0
Prop In Lane	1.00		1.00				0.00		0.45	1.00		0.00
Lane Grp Cap(c), veh/h	551	0	490				0	627	602	210	1892	0
V/C Ratio(X)	0.94	0.00	0.40				0.00	0.93	0.94	0.67	0.29	0.00
Avail Cap(c_a), veh/h	557	0	495				0	627	602	263	1892	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	0.33	0.33	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.91	0.91	0.00
Uniform Delay (d), s/veh	26.7	0.0	21.5				0.0	24.7	24.8	36.9	19.6	0.0
Incr Delay (d2), s/veh	23.7	0.0	0.4				0.0	22.8	23.9	2.3	0.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.7	0.0	2.8				0.0	13.4	13.1	2.8	4.7	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	50.4	0.0	21.9				0.0	47.5	48.7	39.2	20.0	0.0
LnGrp LOS	D	A	C				A	D	D	D	B	A
Approach Vol, veh/h		711						1149			695	
Approach Delay, s/veh		42.6						48.1			23.9	
Approach LOS		D						D			C	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	14.6	34.5		30.9		49.1
Change Period (Y+Rc), s	5.0	5.8		5.8		5.8
Max Green Setting (Gmax), s	12.0	26.0		25.4		43.0
Max Q Clear Time (g_c+I1), s	8.3	27.9		24.9		13.0
Green Ext Time (p_c), s	0.1	0.0		0.2		2.9

Intersection Summary		
HCM 6th Ctrl Delay		40.0
HCM 6th LOS		D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	583	2	416	557	799	0	0	542	83
Future Volume (veh/h)	0	0	0	583	2	416	557	799	0	0	542	83
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		0.97
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1781	1781	1781	1781	1781	0	0	1781	1781
Adj Flow Rate, veh/h				704	0	192	586	841	0	0	571	20
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				8	8	8	8	8	0	0	8	8
Cap, veh/h				882	0	393	1097	2972	0	0	1362	324
Arrive On Green				0.26	0.00	0.26	0.11	0.20	0.00	0.00	0.22	0.22
Sat Flow, veh/h				3393	0	1510	3291	5024	0	0	6378	1458
Grp Volume(v), veh/h				704	0	192	586	841	0	0	571	20
Grp Sat Flow(s),veh/h/ln				1697	0	1510	1646	1621	0	0	1532	1458
Q Serve(g_s), s				17.4	0.0	9.7	15.2	13.2	0.0	0.0	7.2	1.0
Cycle Q Clear(g_c), s				17.4	0.0	9.7	15.2	13.2	0.0	0.0	7.2	1.0
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				882	0	393	1097	2972	0	0	1362	324
V/C Ratio(X)				0.80	0.00	0.49	0.53	0.28	0.00	0.00	0.42	0.06
Avail Cap(c_a), veh/h				882	0	393	1097	2972	0	0	1362	324
HCM Platoon Ratio				1.00	1.00	1.00	0.33	0.33	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.64	0.64	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				31.1	0.0	28.2	33.4	19.2	0.0	0.0	30.0	27.6
Incr Delay (d2), s/veh				7.4	0.0	4.3	1.2	0.2	0.0	0.0	1.0	0.4
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				7.8	0.0	8.8	6.7	5.5	0.0	0.0	2.6	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				38.5	0.0	32.5	34.6	19.4	0.0	0.0	31.0	28.0
LnGrp LOS				D	A	C	C	B	A	A	C	C
Approach Vol, veh/h					896			1427			591	
Approach Delay, s/veh					37.3			25.6			30.9	
Approach LOS					D			C			C	

Timer - Assigned Phs	2	4	5	6
Phs Duration (G+Y+Rc), s	60.8	29.2	35.0	25.8
Change Period (Y+Rc), s	5.8	5.8	5.0	5.8
Max Green Setting (Gmax), s	55.0	23.4	30.0	20.0
Max Q Clear Time (g_c+I1), s	15.2	19.4	17.2	9.2
Green Ext Time (p_c), s	6.2	1.5	1.0	2.7

Intersection Summary	
HCM 6th Ctrl Delay	30.3
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

User approved volume balancing among the lanes for turning movement.

HCM 6th Signalized Intersection Summary
10: Archibald Ave & SR 60 EB Ramps

03/18/2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	270	5	503	0	0	0	0	1363	757	142	961	0
Future Volume (veh/h)	270	5	503	0	0	0	0	1363	757	142	961	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		0.97	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1781	1781	1781				0	1781	1781	1781	1781	0
Adj Flow Rate, veh/h	193	0	521				0	1450	259	151	1022	0
Peak Hour Factor	0.94	0.94	0.94				0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	8	8	8				0	8	8	8	8	0
Cap, veh/h	573	0	1020				0	1975	472	512	2594	0
Arrive On Green	0.34	0.00	0.34				0.00	0.32	0.32	0.21	0.71	0.00
Sat Flow, veh/h	1697	0	3019				0	6378	1465	3291	5024	0
Grp Volume(v), veh/h	193	0	521				0	1450	259	151	1022	0
Grp Sat Flow(s),veh/h/ln	1697	0	1510				0	1532	1465	1646	1621	0
Q Serve(g_s), s	7.7	0.0	12.4				0.0	18.9	13.1	3.5	7.6	0.0
Cycle Q Clear(g_c), s	7.7	0.0	12.4				0.0	18.9	13.1	3.5	7.6	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	573	0	1020				0	1975	472	512	2594	0
V/C Ratio(X)	0.34	0.00	0.51				0.00	0.73	0.55	0.29	0.39	0.00
Avail Cap(c_a), veh/h	573	0	1020				0	1975	472	512	2594	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.33	1.33	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.76	0.76	0.00
Uniform Delay (d), s/veh	22.3	0.0	23.8				0.0	27.1	25.1	31.5	7.2	0.0
Incr Delay (d2), s/veh	1.6	0.0	1.8				0.0	2.5	4.5	1.1	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.2	0.0	4.6				0.0	6.7	4.8	1.4	2.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.9	0.0	25.7				0.0	29.5	29.7	32.6	7.6	0.0
LnGrp LOS	C	A	C				A	C	C	C	A	A
Approach Vol, veh/h		714						1709			1173	
Approach Delay, s/veh		25.2						29.6			10.8	
Approach LOS		C						C			B	

Timer - Assigned Phs	1	2				6		8				
Phs Duration (G+Y+Rc), s	19.0	34.8				53.8		36.2				
Change Period (Y+Rc), s	5.0	5.8				5.8		5.8				
Max Green Setting (Gmax), s	14.0	29.0				48.0		30.4				
Max Q Clear Time (g_c+I1), s	5.5	20.9				9.6		14.4				
Green Ext Time (p_c), s	0.1	5.7				8.0		2.6				

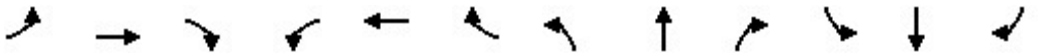
Intersection Summary			
HCM 6th Ctrl Delay			22.6
HCM 6th LOS			C

Notes

User approved volume balancing among the lanes for turning movement.

HCM 6th Signalized Intersection Summary
11: Archibald Ave & Walnut St

03/18/2024



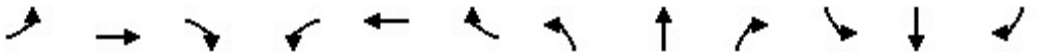
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	14	12	40	117	35	194	136	1742	54	68	844	12
Future Volume (veh/h)	14	12	40	117	35	194	136	1742	54	68	844	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.98		0.96	0.98		0.96	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781
Adj Flow Rate, veh/h	15	13	7	127	38	35	148	1893	57	74	917	13
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	8	8	8	8	8	8	8	8	8	8	8	8
Cap, veh/h	224	167	90	270	130	120	178	2718	82	94	2524	36
Arrive On Green	0.16	0.16	0.16	0.16	0.16	0.16	0.11	0.56	0.56	0.06	0.51	0.51
Sat Flow, veh/h	1245	1073	578	1302	837	771	1697	4846	146	1697	4938	70
Grp Volume(v), veh/h	15	0	20	127	0	73	148	1266	684	74	602	328
Grp Sat Flow(s),veh/h/ln	1245	0	1651	1302	0	1607	1697	1621	1750	1697	1621	1766
Q Serve(g_s), s	1.0	0.0	0.9	8.3	0.0	3.6	7.7	25.3	25.4	3.9	10.0	10.0
Cycle Q Clear(g_c), s	4.6	0.0	0.9	9.2	0.0	3.6	7.7	25.3	25.4	3.9	10.0	10.0
Prop In Lane	1.00		0.35	1.00		0.48	1.00		0.08	1.00		0.04
Lane Grp Cap(c), veh/h	224	0	257	270	0	251	178	1818	981	94	1657	903
V/C Ratio(X)	0.07	0.00	0.08	0.47	0.00	0.29	0.83	0.70	0.70	0.79	0.36	0.36
Avail Cap(c_a), veh/h	337	0	407	388	0	396	183	1818	981	268	1657	903
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.6	0.0	32.4	36.4	0.0	33.6	39.5	14.2	14.3	42.0	13.2	13.2
Incr Delay (d2), s/veh	0.1	0.0	0.1	0.9	0.0	0.5	24.3	2.2	4.1	5.4	0.6	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	0.4	2.7	0.0	1.4	4.2	8.0	9.2	1.7	3.3	3.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	35.7	0.0	32.5	37.3	0.0	34.1	63.8	16.5	18.4	47.4	13.8	14.3
LnGrp LOS	D	A	C	D	A	C	E	B	B	D	B	B
Approach Vol, veh/h		35			200			2098			1004	
Approach Delay, s/veh		33.9			36.1			20.4			16.5	
Approach LOS		C			D			C			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.5	57.0		21.5	16.0	52.5		21.5				
Change Period (Y+Rc), s	6.5	6.5		7.5	6.5	6.5		7.5				
Max Green Setting (Gmax), s	14.2	32.2		22.2	9.7	37.6		22.2				
Max Q Clear Time (g_c+I1), s	5.9	27.4		6.6	9.7	12.0		11.2				
Green Ext Time (p_c), s	0.0	4.2		0.1	0.0	7.2		0.5				

Intersection Summary			
HCM 6th Ctrl Delay		20.3	
HCM 6th LOS		C	

Notes

User approved pedestrian interval to be less than phase max green.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	132	463	52	262	800	90	57	809	135	152	1066	137
Future Volume (veh/h)	132	463	52	262	800	90	57	809	135	152	1066	137
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	1.00		0.96	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	143	503	17	285	870	36	62	879	40	165	1159	96
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	166	530	438	308	1291	563	112	943	402	188	1095	624
Arrive On Green	0.09	0.29	0.29	0.18	0.37	0.37	0.06	0.27	0.27	0.11	0.31	0.31
Sat Flow, veh/h	1753	1841	1519	1753	3497	1524	1753	3497	1490	1753	3497	1521
Grp Volume(v), veh/h	143	503	17	285	870	36	62	879	40	165	1159	96
Grp Sat Flow(s),veh/h/ln	1753	1841	1519	1753	1749	1524	1753	1749	1490	1753	1749	1521
Q Serve(g_s), s	11.6	38.5	1.2	23.0	30.0	2.2	4.9	35.3	2.9	13.3	45.0	5.7
Cycle Q Clear(g_c), s	11.6	38.5	1.2	23.0	30.0	2.2	4.9	35.3	2.9	13.3	45.0	5.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	166	530	438	308	1291	563	112	943	402	188	1095	624
V/C Ratio(X)	0.86	0.95	0.04	0.93	0.67	0.06	0.56	0.93	0.10	0.88	1.06	0.15
Avail Cap(c_a), veh/h	245	550	454	394	1343	585	122	973	414	229	1095	624
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	64.2	50.1	36.8	58.3	38.1	29.3	65.3	51.2	39.4	63.2	49.4	26.9
Incr Delay (d2), s/veh	13.1	25.9	0.1	21.7	1.5	0.1	4.5	15.0	0.1	25.9	43.9	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.7	21.0	0.4	11.8	12.7	0.8	2.3	17.1	1.1	7.2	25.9	2.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	77.3	76.0	36.9	80.1	39.5	29.4	69.9	66.2	39.5	89.2	93.3	27.0
LnGrp LOS	E	E	D	F	D	C	E	E	D	F	F	C
Approach Vol, veh/h		663			1191			981			1420	
Approach Delay, s/veh		75.3			48.9			65.4			88.3	
Approach LOS		E			D			E			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	20.6	44.8	30.0	48.4	14.4	51.0	18.3	60.1
Change Period (Y+Rc), s	* 5.2	6.0	* 4.7	7.0	* 5.2	6.0	* 4.7	7.0
Max Green Setting (Gmax), s	* 19	40.0	* 32	43.0	* 10	42.5	* 20	55.2
Max Q Clear Time (g_c+I1), s	15.3	37.3	25.0	40.5	6.9	47.0	13.6	32.0
Green Ext Time (p_c), s	0.1	1.5	0.2	1.0	0.0	0.0	0.1	8.1

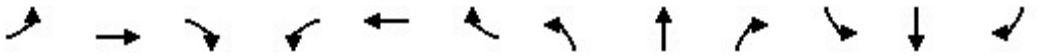
Intersection Summary	
HCM 6th Ctrl Delay	70.0
HCM 6th LOS	E

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th Signalized Intersection Summary
13: Campus Ave & Riverside Dr

03/18/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	86	631	34	85	951	227	24	295	88	105	262	179
Future Volume (veh/h)	86	631	34	85	951	227	24	295	88	105	262	179
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	1.00		0.97	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	93	686	13	92	1034	227	26	321	86	114	285	60
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	150	667	549	149	1029	225	272	419	112	174	555	462
Arrive On Green	0.08	0.36	0.36	0.08	0.36	0.36	0.30	0.30	0.30	0.30	0.30	0.30
Sat Flow, veh/h	1767	1856	1527	1767	2866	627	1083	1399	375	968	1856	1544
Grp Volume(v), veh/h	93	686	13	92	635	626	26	0	407	114	285	60
Grp Sat Flow(s),veh/h/ln	1767	1856	1527	1767	1763	1730	1083	0	1774	968	1856	1544
Q Serve(g_s), s	4.2	30.0	0.5	4.2	30.0	30.0	1.7	0.0	17.4	7.6	10.6	2.4
Cycle Q Clear(g_c), s	4.2	30.0	0.5	4.2	30.0	30.0	12.3	0.0	17.4	25.0	10.6	2.4
Prop In Lane	1.00		1.00	1.00		0.36	1.00		0.21	1.00		1.00
Lane Grp Cap(c), veh/h	150	667	549	149	633	621	272	0	531	174	555	462
V/C Ratio(X)	0.62	1.03	0.02	0.62	1.00	1.01	0.10	0.00	0.77	0.66	0.51	0.13
Avail Cap(c_a), veh/h	423	667	549	423	633	621	272	0	531	174	555	462
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.0	26.8	17.3	37.0	26.8	26.8	29.4	0.0	26.6	38.9	24.3	21.4
Incr Delay (d2), s/veh	1.6	42.5	0.0	1.5	36.5	38.3	0.2	0.0	6.9	8.6	0.8	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	19.4	0.1	1.8	17.3	17.3	0.4	0.0	7.8	2.7	4.5	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	38.5	69.3	17.3	38.5	63.3	65.1	29.5	0.0	33.5	47.5	25.1	21.5
LnGrp LOS	D	F	B	D	F	F	C	A	C	D	C	C
Approach Vol, veh/h		792			1353			433			459	
Approach Delay, s/veh		64.9			62.5			33.3			30.2	
Approach LOS		E			E			C			C	

Timer - Assigned Phs	2	3	4	6	7	8
Phs Duration (G+Y+Rc), s	31.5	14.6	37.5	31.5	14.6	37.5
Change Period (Y+Rc), s	6.5	7.5	7.5	6.5	7.5	7.5
Max Green Setting (Gmax), s	25.0	20.0	30.0	25.0	20.0	30.0
Max Q Clear Time (g_c+I1), s	19.4	6.2	32.0	27.0	6.2	32.0
Green Ext Time (p_c), s	1.4	0.1	0.0	0.0	0.1	0.0

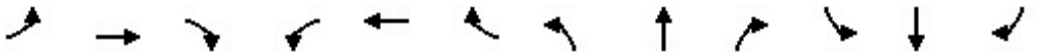
Intersection Summary	
HCM 6th Ctrl Delay	54.0
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary
15: Grove Ave & Riverside Dr

03/18/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	195	734	4	4	1132	242	5	11	9	164	52	180
Future Volume (veh/h)	195	734	4	4	1132	242	5	11	9	164	52	180
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.97	1.00		0.96	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	217	816	4	4	1258	258	6	12	1	182	58	50
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	252	913	4	9	1039	210	16	119	10	216	342	283
Arrive On Green	0.14	0.49	0.49	0.01	0.36	0.36	0.01	0.07	0.07	0.12	0.18	0.18
Sat Flow, veh/h	1767	1845	9	1767	2904	588	1767	1683	140	1767	1856	1535
Grp Volume(v), veh/h	217	0	820	4	757	759	6	0	13	182	58	50
Grp Sat Flow(s),veh/h/ln	1767	0	1854	1767	1763	1729	1767	0	1824	1767	1856	1535
Q Serve(g_s), s	11.7	0.0	39.2	0.2	35.0	35.0	0.3	0.0	0.7	9.9	2.6	2.7
Cycle Q Clear(g_c), s	11.7	0.0	39.2	0.2	35.0	35.0	0.3	0.0	0.7	9.9	2.6	2.7
Prop In Lane	1.00		0.00	1.00		0.34	1.00		0.08	1.00		1.00
Lane Grp Cap(c), veh/h	252	0	917	9	631	619	16	0	129	216	342	283
V/C Ratio(X)	0.86	0.00	0.89	0.43	1.20	1.23	0.37	0.00	0.10	0.84	0.17	0.18
Avail Cap(c_a), veh/h	361	0	917	361	631	619	361	0	559	361	569	471
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.0	0.0	22.4	48.5	31.4	31.4	48.2	0.0	42.5	42.0	33.6	33.7
Incr Delay (d2), s/veh	12.4	0.0	11.3	21.6	105.0	115.9	10.0	0.0	0.4	6.7	0.3	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.7	0.0	17.5	0.1	31.8	33.1	0.2	0.0	0.3	4.5	1.1	1.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	53.4	0.0	33.7	70.1	136.5	147.3	58.1	0.0	42.9	48.7	33.9	34.0
LnGrp LOS	D	A	C	E	F	F	E	A	D	D	C	C
Approach Vol, veh/h		1037			1520			19			290	
Approach Delay, s/veh		37.8			141.7			47.7			43.2	
Approach LOS		D			F			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	21.4	42.5	8.4	25.5	8.0	55.9	19.5	14.4
Change Period (Y+Rc), s	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5
Max Green Setting (Gmax), s	20.0	35.0	20.0	30.0	20.0	35.0	20.0	30.0
Max Q Clear Time (g_c+I1), s	13.7	37.0	2.3	4.7	2.2	41.2	11.9	2.7
Green Ext Time (p_c), s	0.2	0.0	0.0	0.5	0.0	0.0	0.2	0.0

Intersection Summary	
HCM 6th Ctrl Delay	93.5
HCM 6th LOS	F

HCM 6th Signalized Intersection Summary
18: Vineyard Ave & Riverside Dr

03/18/2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	267	580	2	1	908	332	4	196	3	328	259	266
Future Volume (veh/h)	267	580	2	1	908	332	4	196	3	328	259	266
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.97	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	284	617	2	1	966	220	4	209	1	268	390	178
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	287	1567	687	6	1001	438	175	349	151	374	510	229
Arrive On Green	0.16	0.44	0.44	0.00	0.28	0.28	0.10	0.10	0.10	0.21	0.21	0.21
Sat Flow, veh/h	1767	3526	1547	3428	3526	1543	1767	3526	1523	1767	2408	1081
Grp Volume(v), veh/h	284	617	2	1	966	220	4	209	1	268	299	269
Grp Sat Flow(s),veh/h/ln	1767	1763	1547	1714	1763	1543	1767	1763	1523	1767	1856	1634
Q Serve(g_s), s	19.8	14.5	0.1	0.0	33.3	14.7	0.3	7.0	0.1	17.4	18.7	19.2
Cycle Q Clear(g_c), s	19.8	14.5	0.1	0.0	33.3	14.7	0.3	7.0	0.1	17.4	18.7	19.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.66
Lane Grp Cap(c), veh/h	287	1567	687	6	1001	438	175	349	151	374	393	346
V/C Ratio(X)	0.99	0.39	0.00	0.18	0.97	0.50	0.02	0.60	0.01	0.72	0.76	0.78
Avail Cap(c_a), veh/h	287	1567	687	167	1001	438	502	1001	432	502	527	464
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	51.6	23.1	19.1	61.5	43.6	36.9	50.2	53.2	50.1	45.2	45.7	45.9
Incr Delay (d2), s/veh	50.5	0.2	0.0	14.4	20.5	1.1	0.1	1.6	0.0	3.7	5.0	6.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.4	5.7	0.0	0.0	16.5	5.4	0.1	3.1	0.0	7.8	8.9	8.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	102.1	23.3	19.1	75.9	64.1	38.0	50.2	54.9	50.1	48.8	50.7	52.3
LnGrp LOS	F	C	B	E	E	D	D	D	D	D	D	D
Approach Vol, veh/h		903			1187			214			836	
Approach Delay, s/veh		48.0			59.3			54.8			50.6	
Approach LOS		D			E			D			D	

Timer - Assigned Phs	2	3	4	6	7	8
Phs Duration (G+Y+Rc), s	19.7	7.7	62.3	33.6	27.5	42.5
Change Period (Y+Rc), s	7.5	7.5	7.5	7.5	7.5	7.5
Max Green Setting (Gmax), s	35.0	6.0	46.0	35.0	20.0	35.0
Max Q Clear Time (g_c+I1), s	9.0	2.0	16.5	21.2	21.8	35.3
Green Ext Time (p_c), s	1.1	0.0	4.6	4.1	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	53.4
HCM 6th LOS	D

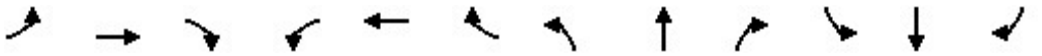
Notes

User approved pedestrian interval to be less than phase max green.

User approved volume balancing among the lanes for turning movement.

HCM 6th Signalized Intersection Summary
23: Street A/Whispering Lakes Golf Course Dwy & Riverside Dr

03/18/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	29	844	42	22	1241	15	25	0	20	2	0	2
Future Volume (veh/h)	29	844	42	22	1241	15	25	0	20	2	0	2
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	0.98		0.97	0.98		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	32	927	28	24	1364	16	27	0	2	2	0	1
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	74	1820	790	59	1811	21	248	0	134	247	0	134
Arrive On Green	0.04	0.52	0.52	0.03	0.51	0.51	0.09	0.00	0.09	0.09	0.00	0.09
Sat Flow, veh/h	1767	3526	1531	1767	3568	42	1381	0	1525	1380	0	1525
Grp Volume(v), veh/h	32	927	28	24	674	706	27	0	2	2	0	1
Grp Sat Flow(s),veh/h/ln	1767	1763	1531	1767	1763	1847	1381	0	1525	1380	0	1525
Q Serve(g_s), s	1.0	9.8	0.5	0.8	17.2	17.2	1.0	0.0	0.1	0.1	0.0	0.0
Cycle Q Clear(g_c), s	1.0	9.8	0.5	0.8	17.2	17.2	1.1	0.0	0.1	0.1	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.02	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	74	1820	790	59	895	937	248	0	134	247	0	134
V/C Ratio(X)	0.43	0.51	0.04	0.41	0.75	0.75	0.11	0.00	0.01	0.01	0.00	0.01
Avail Cap(c_a), veh/h	188	2340	1016	188	1170	1226	1007	0	972	1005	0	972
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	26.4	9.0	6.7	26.8	11.1	11.1	24.0	0.0	23.5	23.6	0.0	23.5
Incr Delay (d2), s/veh	3.9	0.3	0.0	4.5	2.2	2.2	0.2	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	2.3	0.1	0.3	4.6	4.8	0.3	0.0	0.0	0.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	30.3	9.2	6.8	31.2	13.3	13.2	24.2	0.0	23.6	23.6	0.0	23.6
LnGrp LOS	C	A	A	C	B	B	C	A	C	C	A	C
Approach Vol, veh/h		987			1404			29			3	
Approach Delay, s/veh		9.9			13.6			24.2			23.6	
Approach LOS		A			B			C			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.4	36.2		11.0	8.9	36.7		11.0				
Change Period (Y+Rc), s	7.0	7.5		6.0	7.0	7.5		6.0				
Max Green Setting (Gmax), s	6.0	37.5		36.0	6.0	37.5		36.0				
Max Q Clear Time (g_c+I1), s	3.0	19.2		2.1	2.8	11.8		3.1				
Green Ext Time (p_c), s	0.0	9.4		0.0	0.0	7.5		0.1				

Intersection Summary			
HCM 6th Ctrl Delay		12.2	
HCM 6th LOS		B	

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	824	67	110	1201	60	71
Future Volume (veh/h)	824	67	110	1201	60	71
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		0.97	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	886	30	118	1291	65	13
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	1390	603	175	2252	143	127
Arrive On Green	0.39	0.39	0.10	0.64	0.08	0.08
Sat Flow, veh/h	3618	1528	1767	3618	1767	1572
Grp Volume(v), veh/h	886	30	118	1291	65	13
Grp Sat Flow(s),veh/h/ln	1763	1528	1767	1763	1767	1572
Q Serve(g_s), s	9.8	0.6	3.1	10.0	1.7	0.4
Cycle Q Clear(g_c), s	9.8	0.6	3.1	10.0	1.7	0.4
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1390	603	175	2252	143	127
V/C Ratio(X)	0.64	0.05	0.67	0.57	0.46	0.10
Avail Cap(c_a), veh/h	2674	1159	257	3699	1322	1176
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	11.8	9.0	20.9	5.0	21.1	20.5
Incr Delay (d2), s/veh	0.6	0.0	4.5	0.3	2.3	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	0.1	1.2	0.9	0.7	0.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	12.4	9.0	25.4	5.2	23.4	20.9
LnGrp LOS	B	A	C	A	C	C
Approach Vol, veh/h	916			1409	78	
Approach Delay, s/veh	12.3			6.9	23.0	
Approach LOS	B			A	C	

Timer - Assigned Phs		2			5	6	8
Phs Duration (G+Y+Rc), s		38.2			11.8	26.5	9.9
Change Period (Y+Rc), s		7.5			7.0	7.5	6.0
Max Green Setting (Gmax), s		50.5			7.0	36.5	36.0
Max Q Clear Time (g_c+I1), s		12.0			5.1	11.8	3.7
Green Ext Time (p_c), s		13.1			0.0	7.0	0.2

Intersection Summary	
HCM 6th Ctrl Delay	9.5
HCM 6th LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	9	847	11	25	1280	5	37	3	66	6	1	29
Future Volume (veh/h)	9	847	11	25	1280	5	37	3	66	6	1	29
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	0.99		0.97	0.99		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	10	911	12	27	1376	5	40	3	10	6	1	4
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	32	1718	23	77	1830	7	233	27	31	177	44	62
Arrive On Green	0.02	0.48	0.48	0.04	0.51	0.51	0.11	0.11	0.11	0.11	0.11	0.11
Sat Flow, veh/h	1767	3561	47	1767	3602	13	954	238	277	587	391	559
Grp Volume(v), veh/h	10	451	472	27	673	708	53	0	0	11	0	0
Grp Sat Flow(s),veh/h/ln	1767	1763	1846	1767	1763	1853	1470	0	0	1537	0	0
Q Serve(g_s), s	0.3	8.8	8.8	0.7	15.1	15.1	0.9	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.3	8.8	8.8	0.7	15.1	15.1	1.5	0.0	0.0	0.3	0.0	0.0
Prop In Lane	1.00		0.03	1.00		0.01	0.75		0.19	0.55		0.36
Lane Grp Cap(c), veh/h	32	850	890	77	896	941	291	0	0	283	0	0
V/C Ratio(X)	0.31	0.53	0.53	0.35	0.75	0.75	0.18	0.00	0.00	0.04	0.00	0.00
Avail Cap(c_a), veh/h	712	1243	1301	712	1243	1306	851	0	0	857	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	24.1	8.9	8.9	23.0	9.7	9.7	20.3	0.0	0.0	19.7	0.0	0.0
Incr Delay (d2), s/veh	5.4	0.5	0.5	2.7	1.7	1.6	0.2	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	2.0	2.1	0.3	3.7	3.9	0.5	0.0	0.0	0.1	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	29.5	9.5	9.4	25.7	11.4	11.3	20.5	0.0	0.0	19.8	0.0	0.0
LnGrp LOS	C	A	A	C	B	B	C	A	A	B	A	A
Approach Vol, veh/h		933			1408			53			11	
Approach Delay, s/veh		9.7			11.6			20.5			19.8	
Approach LOS		A			B			C			B	

Timer - Assigned Phs	2	3	4	6	7	8
Phs Duration (G+Y+Rc), s	11.5	7.2	31.0	11.5	5.9	32.2
Change Period (Y+Rc), s	6.0	5.0	7.0	6.0	5.0	7.0
Max Green Setting (Gmax), s	25.0	20.0	35.0	25.0	20.0	35.0
Max Q Clear Time (g_c+I1), s	3.5	2.7	10.8	2.3	2.3	17.1
Green Ext Time (p_c), s	0.2	0.0	5.2	0.0	0.0	8.1

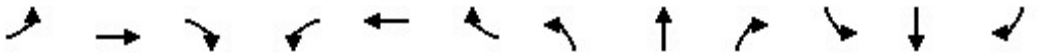
Intersection Summary	
HCM 6th Ctrl Delay	11.1
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary
26: Archibald Ave & Riverside Ave

03/18/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	283	448	229	107	663	237	329	1449	75	133	602	294
Future Volume (veh/h)	283	448	229	107	663	237	329	1449	75	133	602	294
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.97	1.00		0.98	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781
Adj Flow Rate, veh/h	308	487	213	116	721	235	358	1575	80	145	654	265
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	8	8	8	8	8	8	8	8	8	8	8	8
Cap, veh/h	338	806	350	143	595	194	382	1655	84	174	770	305
Arrive On Green	0.20	0.35	0.35	0.08	0.24	0.24	0.23	0.35	0.35	0.10	0.23	0.23
Sat Flow, veh/h	1697	2279	990	1697	2488	811	1697	4733	240	1697	3389	1344
Grp Volume(v), veh/h	308	361	339	116	490	466	358	1079	576	145	625	294
Grp Sat Flow(s),veh/h/ln	1697	1692	1577	1697	1692	1607	1697	1621	1731	1697	1621	1491
Q Serve(g_s), s	26.0	25.6	25.9	9.8	35.0	35.0	30.3	47.4	47.5	12.3	27.0	27.8
Cycle Q Clear(g_c), s	26.0	25.6	25.9	9.8	35.0	35.0	30.3	47.4	47.5	12.3	27.0	27.8
Prop In Lane	1.00		0.63	1.00		0.50	1.00		0.14	1.00		0.90
Lane Grp Cap(c), veh/h	338	599	558	143	405	384	382	1133	605	174	737	339
V/C Ratio(X)	0.91	0.60	0.61	0.81	1.21	1.21	0.94	0.95	0.95	0.83	0.85	0.87
Avail Cap(c_a), veh/h	406	599	558	406	405	384	406	1133	605	406	776	357
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	57.3	38.8	38.9	65.8	55.7	55.7	55.7	46.4	46.4	64.4	54.1	54.4
Incr Delay (d2), s/veh	25.1	2.6	2.9	19.9	115.9	116.9	29.9	16.8	25.7	18.8	9.5	20.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	13.2	10.7	10.1	5.0	27.5	26.2	15.7	20.9	23.9	6.1	11.7	12.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	82.4	41.4	41.8	85.7	171.6	172.5	85.5	63.1	72.0	83.2	63.6	75.3
LnGrp LOS	F	D	D	F	F	F	F	E	E	F	E	E
Approach Vol, veh/h		1008			1072			2013			1064	
Approach Delay, s/veh		54.1			162.7			69.7			69.5	
Approach LOS		D			F			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	19.0	55.1	16.4	55.7	36.9	37.3	33.1	39.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0
Max Q Clear Time (g_c+I1), s	14.3	49.5	11.8	27.9	32.3	29.8	28.0	37.0
Green Ext Time (p_c), s	0.8	0.0	0.7	3.6	0.6	3.5	1.1	0.0

Intersection Summary	
HCM 6th Ctrl Delay	85.9
HCM 6th LOS	F

HCM 6th Signalized Intersection Summary
27: Haven Ave & Riverside Dr

03/18/2024

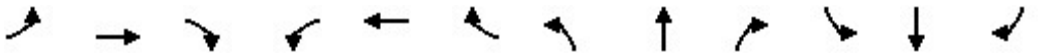
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	317	426	22	103	492	152	14	490	133	263	329	302
Future Volume (veh/h)	317	426	22	103	492	152	14	490	133	263	329	302
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	1.00		0.96	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	330	444	23	107	512	135	15	510	133	274	343	65
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	353	587	30	131	580	152	8	274	72	351	368	305
Arrive On Green	0.20	0.34	0.34	0.07	0.21	0.21	0.20	0.20	0.20	0.20	0.20	0.20
Sat Flow, veh/h	1767	1746	90	1767	2749	721	40	1374	358	1767	1856	1538
Grp Volume(v), veh/h	330	0	467	107	327	320	658	0	0	274	343	65
Grp Sat Flow(s),veh/h/ln	1767	0	1836	1767	1763	1708	1773	0	0	1767	1856	1538
Q Serve(g_s), s	23.0	0.0	28.4	7.5	22.5	22.8	25.0	0.0	0.0	18.4	22.8	4.4
Cycle Q Clear(g_c), s	23.0	0.0	28.4	7.5	22.5	22.8	25.0	0.0	0.0	18.4	22.8	4.4
Prop In Lane	1.00		0.05	1.00		0.42	0.02		0.20	1.00		1.00
Lane Grp Cap(c), veh/h	353	0	617	131	372	360	354	0	0	351	368	305
V/C Ratio(X)	0.94	0.00	0.76	0.81	0.88	0.89	1.86	0.00	0.00	0.78	0.93	0.21
Avail Cap(c_a), veh/h	353	0	617	282	422	409	354	0	0	353	370	307
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	49.4	0.0	37.0	57.1	47.9	48.0	50.1	0.0	0.0	47.6	49.4	42.0
Incr Delay (d2), s/veh	31.4	0.0	5.4	4.6	17.4	19.0	397.5	0.0	0.0	10.4	29.7	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.8	0.0	13.0	3.4	11.3	11.2	49.8	0.0	0.0	8.9	13.3	1.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	80.8	0.0	42.4	61.7	65.3	67.0	447.6	0.0	0.0	58.0	79.1	42.3
LnGrp LOS	F	A	D	E	E	E	F	A	A	E	E	D
Approach Vol, veh/h		797			754			658			682	
Approach Delay, s/veh		58.3			65.5			447.6			67.1	
Approach LOS		E			E			F			E	

Timer - Assigned Phs	2	3	4	6	7	8
Phs Duration (G+Y+Rc), s	30.0	16.3	49.1	29.9	32.0	33.4
Change Period (Y+Rc), s	5.0	7.0	7.0	5.0	7.0	7.0
Max Green Setting (Gmax), s	25.0	20.0	30.0	25.0	25.0	30.0
Max Q Clear Time (g_c+I1), s	27.0	9.5	30.4	24.8	25.0	24.8
Green Ext Time (p_c), s	0.0	0.1	0.0	0.1	0.0	1.6

Intersection Summary	
HCM 6th Ctrl Delay	150.9
HCM 6th LOS	F

Notes

User approved pedestrian interval to be less than phase max green.



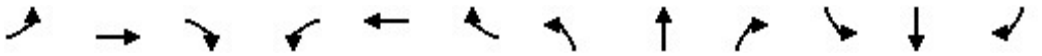
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	60	242	54	110	205	38	57	911	170	55	1237	94
Future Volume (veh/h)	60	242	54	110	205	38	57	911	170	55	1237	94
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.97	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	69	278	19	126	236	41	66	1047	121	63	1422	47
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	257	571	475	134	206	33	147	1175	509	266	1476	656
Arrive On Green	0.31	0.31	0.31	0.31	0.31	0.31	0.08	0.34	0.34	0.15	0.42	0.42
Sat Flow, veh/h	1083	1841	1532	280	665	107	1753	3497	1514	1753	3497	1554
Grp Volume(v), veh/h	69	278	19	403	0	0	66	1047	121	63	1422	47
Grp Sat Flow(s),veh/h/ln	1083	1841	1532	1052	0	0	1753	1749	1514	1753	1749	1554
Q Serve(g_s), s	0.0	12.3	0.9	18.7	0.0	0.0	3.6	28.4	5.8	3.2	39.6	1.8
Cycle Q Clear(g_c), s	9.0	12.3	0.9	31.0	0.0	0.0	3.6	28.4	5.8	3.2	39.6	1.8
Prop In Lane	1.00		1.00	0.31		0.10	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	257	571	475	373	0	0	147	1175	509	266	1476	656
V/C Ratio(X)	0.27	0.49	0.04	1.08	0.00	0.00	0.45	0.89	0.24	0.24	0.96	0.07
Avail Cap(c_a), veh/h	257	571	475	373	0	0	245	1175	509	266	1476	656
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.9	28.0	24.1	39.2	0.0	0.0	43.6	31.5	24.0	37.3	28.2	17.2
Incr Delay (d2), s/veh	0.6	0.6	0.0	69.3	0.0	0.0	0.8	10.3	1.1	0.2	16.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	5.3	0.3	16.1	0.0	0.0	1.5	12.6	2.1	1.3	18.1	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	27.5	28.7	24.1	108.5	0.0	0.0	44.4	41.8	25.1	37.5	44.4	17.4
LnGrp LOS	C	C	C	F	A	A	D	D	C	D	D	B
Approach Vol, veh/h		366			403			1234			1532	
Approach Delay, s/veh		28.2			108.5			40.3			43.2	
Approach LOS		C			F			D			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	21.7	40.1		38.2	13.1	48.7		38.2				
Change Period (Y+Rc), s	6.5	* 6.5		7.2	* 4.7	6.5		7.2				
Max Green Setting (Gmax), s	14.0	* 34		31.0	* 14	36.6		31.0				
Max Q Clear Time (g_c+I1), s	5.2	30.4		14.3	5.6	41.6		33.0				
Green Ext Time (p_c), s	0.0	2.0		1.7	0.0	0.0		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		48.1	
HCM 6th LOS		D	

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



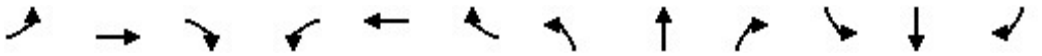
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	3	150	3	3	302	22	1	166	3	29	227	7
Future Volume (veh/h)	3	150	3	3	302	22	1	166	3	29	227	7
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	1.00		0.98	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781
Adj Flow Rate, veh/h	3	167	3	3	336	7	1	184	2	32	252	2
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	8	8	8	8	8	8	8	8	8	8	8	8
Cap, veh/h	8	935	17	8	490	408	3	883	10	71	389	318
Arrive On Green	0.00	0.28	0.28	0.00	0.28	0.28	0.00	0.18	0.18	0.04	0.22	0.22
Sat Flow, veh/h	1697	3400	61	1697	1781	1481	1697	4959	54	1697	1781	1457
Grp Volume(v), veh/h	3	83	87	3	336	7	1	120	66	32	252	2
Grp Sat Flow(s),veh/h/ln	1697	1692	1768	1697	1781	1481	1697	1621	1770	1697	1781	1457
Q Serve(g_s), s	0.1	2.2	2.2	0.1	9.8	0.2	0.0	1.8	1.8	1.1	7.5	0.1
Cycle Q Clear(g_c), s	0.1	2.2	2.2	0.1	9.8	0.2	0.0	1.8	1.8	1.1	7.5	0.1
Prop In Lane	1.00		0.03	1.00		1.00	1.00		0.03	1.00		1.00
Lane Grp Cap(c), veh/h	8	466	487	8	490	408	3	577	315	71	389	318
V/C Ratio(X)	0.36	0.18	0.18	0.36	0.69	0.02	0.34	0.21	0.21	0.45	0.65	0.01
Avail Cap(c_a), veh/h	176	1153	1205	176	1214	1009	176	1929	1053	176	1060	867
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.8	16.0	16.0	28.8	18.8	15.3	28.9	20.3	20.3	27.1	20.6	17.7
Incr Delay (d2), s/veh	24.6	0.2	0.2	24.6	2.1	0.0	57.7	0.2	0.4	4.5	2.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.7	0.8	0.1	3.6	0.1	0.1	0.6	0.7	0.5	2.8	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	53.3	16.2	16.2	53.3	20.8	15.3	86.7	20.6	20.7	31.6	22.8	17.8
LnGrp LOS	D	B	B	D	C	B	F	C	C	C	C	B
Approach Vol, veh/h		173			346			187			286	
Approach Delay, s/veh		16.9			21.0			21.0			23.8	
Approach LOS		B			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.4	17.8	7.3	23.5	7.1	20.1	7.3	23.5
Change Period (Y+Rc), s	7.0	7.5	7.0	7.5	7.0	7.5	7.0	7.5
Max Green Setting (Gmax), s	6.0	34.5	6.0	39.5	6.0	34.5	6.0	39.5
Max Q Clear Time (g_c+I1), s	3.1	3.8	2.1	4.2	2.0	9.5	2.1	11.8
Green Ext Time (p_c), s	0.0	1.2	0.0	1.0	0.0	1.5	0.0	2.2

Intersection Summary	
HCM 6th Ctrl Delay	21.1
HCM 6th LOS	C

HCM 6th Signalized Intersection Summary
33: Ontario Ave & Chino Ave

03/18/2024



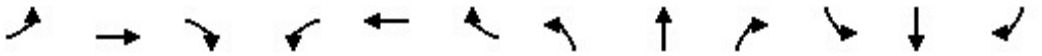
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	74	184	4	6	309	138	4	6	8	79	6	52
Future Volume (veh/h)	74	184	4	6	309	138	4	6	8	79	6	52
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.96	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781
Adj Flow Rate, veh/h	76	190	4	6	319	51	4	6	1	81	6	8
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	8	8	8	8	8	8	8	8	8	8	8	8
Cap, veh/h	139	928	19	16	682	293	11	53	9	145	78	104
Arrive On Green	0.08	0.27	0.27	0.01	0.20	0.20	0.01	0.04	0.04	0.09	0.11	0.11
Sat Flow, veh/h	1697	3387	71	1697	3385	1456	1697	1482	247	1697	681	908
Grp Volume(v), veh/h	76	95	99	6	319	51	4	0	7	81	0	14
Grp Sat Flow(s),veh/h/ln	1697	1692	1766	1697	1692	1456	1697	0	1729	1697	0	1589
Q Serve(g_s), s	1.9	1.9	1.9	0.2	3.7	1.3	0.1	0.0	0.2	2.0	0.0	0.4
Cycle Q Clear(g_c), s	1.9	1.9	1.9	0.2	3.7	1.3	0.1	0.0	0.2	2.0	0.0	0.4
Prop In Lane	1.00		0.04	1.00		1.00	1.00		0.14	1.00		0.57
Lane Grp Cap(c), veh/h	139	464	484	16	682	293	11	0	62	145	0	182
V/C Ratio(X)	0.55	0.20	0.21	0.37	0.47	0.17	0.36	0.00	0.11	0.56	0.00	0.08
Avail Cap(c_a), veh/h	229	969	1011	229	1938	834	229	0	1398	229	0	1285
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	19.6	12.4	12.4	21.9	15.7	14.7	22.0	0.0	20.8	19.6	0.0	17.6
Incr Delay (d2), s/veh	3.3	0.3	0.3	13.2	0.6	0.3	18.8	0.0	0.8	3.4	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	0.6	0.6	0.1	1.1	0.4	0.1	0.0	0.1	0.8	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	22.9	12.7	12.7	35.1	16.3	15.0	40.8	0.0	21.6	22.9	0.0	17.8
LnGrp LOS	C	B	B	D	B	B	D	A	C	C	A	B
Approach Vol, veh/h		270			376			11			95	
Approach Delay, s/veh		15.6			16.4			28.6			22.2	
Approach LOS		B			B			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.7	16.5	6.3	11.1	7.4	19.7	9.8	7.6
Change Period (Y+Rc), s	7.0	7.5	6.0	6.0	7.0	7.5	6.0	6.0
Max Green Setting (Gmax), s	6.0	25.5	6.0	36.0	6.0	25.5	6.0	36.0
Max Q Clear Time (g_c+I1), s	3.9	5.7	2.1	2.4	2.2	3.9	4.0	2.2
Green Ext Time (p_c), s	0.0	2.2	0.0	0.0	0.0	1.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	17.0
HCM 6th LOS	B

HCM 6th Signalized Intersection Summary
34: Archibald Ave & Chino Ave

03/18/2024



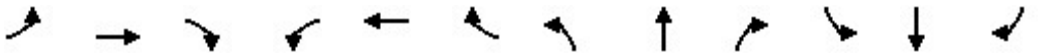
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	93	46	98	40	134	215	206	1565	34	92	772	71
Future Volume (veh/h)	93	46	98	40	134	215	206	1565	34	92	772	71
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781
Adj Flow Rate, veh/h	101	50	21	43	146	36	224	1701	37	100	839	74
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	8	8	8	8	8	8	8	8	8	8	8	8
Cap, veh/h	127	342	134	73	202	168	258	2153	47	126	1138	100
Arrive On Green	0.07	0.15	0.15	0.04	0.11	0.11	0.15	0.44	0.44	0.07	0.36	0.36
Sat Flow, veh/h	1697	2356	923	1697	1781	1486	1697	4896	106	1697	3142	277
Grp Volume(v), veh/h	101	35	36	43	146	36	224	1126	612	100	452	461
Grp Sat Flow(s),veh/h/ln	1697	1692	1587	1697	1781	1486	1697	1621	1760	1697	1692	1727
Q Serve(g_s), s	5.5	1.7	1.9	2.3	7.4	2.1	12.1	28.1	28.1	5.5	21.9	21.9
Cycle Q Clear(g_c), s	5.5	1.7	1.9	2.3	7.4	2.1	12.1	28.1	28.1	5.5	21.9	21.9
Prop In Lane	1.00		0.58	1.00		1.00	1.00		0.06	1.00		0.16
Lane Grp Cap(c), veh/h	127	246	231	73	202	168	258	1426	774	126	613	625
V/C Ratio(X)	0.79	0.14	0.16	0.59	0.72	0.21	0.87	0.79	0.79	0.79	0.74	0.74
Avail Cap(c_a), veh/h	361	630	591	361	663	553	451	1551	842	451	810	826
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.8	35.1	35.2	44.2	40.3	37.9	39.0	22.6	22.6	42.8	26.1	26.1
Incr Delay (d2), s/veh	4.2	0.4	0.4	2.8	6.8	0.9	3.5	2.9	5.2	4.2	3.1	3.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	0.7	0.7	1.0	3.5	0.8	5.0	9.9	11.3	2.3	8.5	8.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	47.0	35.5	35.6	47.0	47.1	38.8	42.4	25.5	27.8	47.0	29.2	29.2
LnGrp LOS	D	D	D	D	D	D	D	C	C	D	C	C
Approach Vol, veh/h		172			225			1962			1013	
Approach Delay, s/veh		42.3			45.7			28.1			31.0	
Approach LOS		D			D			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.5	48.9	10.5	20.2	21.8	41.6	13.5	17.2
Change Period (Y+Rc), s	7.5	7.5	6.5	6.5	7.5	7.5	6.5	6.5
Max Green Setting (Gmax), s	25.0	45.0	20.0	35.0	25.0	45.0	20.0	35.0
Max Q Clear Time (g_c+I1), s	7.5	30.1	4.3	3.9	14.1	23.9	7.5	9.4
Green Ext Time (p_c), s	0.1	11.3	0.0	0.5	0.2	7.5	0.1	1.2

Intersection Summary	
HCM 6th Ctrl Delay	30.9
HCM 6th LOS	C

HCM 6th Signalized Intersection Summary
35: Euclid Ave & Edison Ave

03/18/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	79	334	196	100	489	79	286	927	73	141	1095	140
Future Volume (veh/h)	79	334	196	100	489	79	286	927	73	141	1095	140
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.97	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	86	363	68	109	532	82	311	1008	30	153	1190	85
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	68	608	506	224	513	79	382	1370	594	183	1343	589
Arrive On Green	0.33	0.33	0.33	0.33	0.33	0.33	0.11	0.39	0.39	0.10	0.38	0.38
Sat Flow, veh/h	795	1841	1532	940	1553	239	3401	3497	1516	1753	3497	1533
Grp Volume(v), veh/h	86	363	68	109	0	614	311	1008	30	153	1190	85
Grp Sat Flow(s),veh/h/ln	795	1841	1532	940	0	1793	1700	1749	1516	1753	1749	1533
Q Serve(g_s), s	0.0	17.5	3.3	11.6	0.0	35.0	9.5	26.1	1.3	9.1	33.7	3.8
Cycle Q Clear(g_c), s	35.0	17.5	3.3	29.1	0.0	35.0	9.5	26.1	1.3	9.1	33.7	3.8
Prop In Lane	1.00		1.00	1.00		0.13	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	68	608	506	224	0	592	382	1370	594	183	1343	589
V/C Ratio(X)	1.27	0.60	0.13	0.49	0.00	1.04	0.81	0.74	0.05	0.83	0.89	0.14
Avail Cap(c_a), veh/h	68	608	506	224	0	592	802	1484	643	413	1484	651
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.0	29.6	24.9	41.8	0.0	35.5	46.0	27.6	20.0	46.6	30.5	21.3
Incr Delay (d2), s/veh	196.8	1.6	0.1	1.6	0.0	47.1	1.6	1.8	0.0	3.8	6.4	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.5	7.6	1.2	2.7	0.0	22.0	3.9	10.2	0.4	3.9	14.0	1.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	249.8	31.3	25.0	43.4	0.0	82.7	47.6	29.3	20.0	50.3	36.9	21.4
LnGrp LOS	F	C	C	D	A	F	D	C	C	D	D	C
Approach Vol, veh/h		517			723			1349			1428	
Approach Delay, s/veh		66.8			76.8			33.3			37.4	
Approach LOS		E			E			C			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	15.8	48.0		42.2	16.6	47.2		42.2				
Change Period (Y+Rc), s	* 4.7	6.5		7.2	* 4.7	6.5		7.2				
Max Green Setting (Gmax), s	* 25	45.0		30.0	* 25	45.0		35.0				
Max Q Clear Time (g_c+I1), s	11.1	28.1		37.0	11.5	35.7		37.0				
Green Ext Time (p_c), s	0.1	5.9		0.0	0.4	5.0		0.0				

Intersection Summary		
HCM 6th Ctrl Delay		46.9
HCM 6th LOS		D

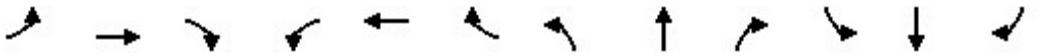
Notes

User approved pedestrian interval to be less than phase max green.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th Signalized Intersection Summary
37: Archibald Ave & Ontario Ranch Rd

03/18/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	75	299	91	328	705	216	136	1271	185	129	724	93
Future Volume (veh/h)	75	299	91	328	705	216	136	1271	185	129	724	93
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	78	311	0	342	734	157	142	1324	0	134	754	54
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	150	877		482	641	534	185	1218		175	1200	519
Arrive On Green	0.04	0.25	0.00	0.14	0.35	0.35	0.11	0.35	0.00	0.10	0.34	0.34
Sat Flow, veh/h	3401	3497	1560	3401	1841	1533	1753	3497	1560	1753	3497	1514
Grp Volume(v), veh/h	78	311	0	342	734	157	142	1324	0	134	754	54
Grp Sat Flow(s),veh/h/ln	1700	1749	1560	1700	1841	1533	1753	1749	1560	1753	1749	1514
Q Serve(g_s), s	2.3	7.3	0.0	9.6	35.0	7.5	7.9	35.0	0.0	7.5	18.1	2.4
Cycle Q Clear(g_c), s	2.3	7.3	0.0	9.6	35.0	7.5	7.9	35.0	0.0	7.5	18.1	2.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	150	877		482	641	534	185	1218		175	1200	519
V/C Ratio(X)	0.52	0.35		0.71	1.14	0.29	0.77	1.09		0.76	0.63	0.10
Avail Cap(c_a), veh/h	1185	1218		1185	641	534	611	1218		611	1218	527
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.0	30.9	0.0	41.2	32.7	23.8	43.8	32.7	0.0	44.1	27.6	22.5
Incr Delay (d2), s/veh	5.8	0.5	0.0	4.1	82.6	0.6	13.4	52.7	0.0	13.7	1.5	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	3.0	0.0	4.1	28.9	2.6	3.9	22.2	0.0	3.7	7.1	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	52.8	31.5	0.0	45.3	115.4	24.4	57.1	85.5	0.0	57.7	29.1	22.7
LnGrp LOS	D	C		D	F	C	E	F		E	C	C
Approach Vol, veh/h		389	A		1233			1466	A		942	
Approach Delay, s/veh		35.8			84.3			82.7			32.8	
Approach LOS		D			F			F			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.0	39.0	18.2	29.2	14.6	38.5	8.4	39.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0
Max Q Clear Time (g_c+I1), s	9.5	37.0	11.6	9.3	9.9	20.1	4.3	37.0
Green Ext Time (p_c), s	0.8	0.0	2.6	3.4	0.9	7.0	0.5	0.0

Intersection Summary	
HCM 6th Ctrl Delay	67.0
HCM 6th LOS	E

Notes

Unsignalized Delay for [NBR, EBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary
38: Haven Ave & Ontario Ranch Rd

03/18/2024

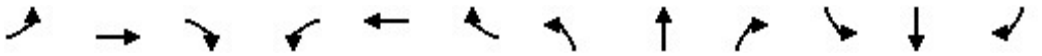
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	144	629	28	244	1002	205	44	461	315	173	309	104
Future Volume (veh/h)	144	629	28	244	1002	205	44	461	315	173	309	104
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.97	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	153	669	9	260	1066	55	47	490	159	184	329	93
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	181	1297	395	322	1581	377	82	558	465	212	1016	282
Arrive On Green	0.10	0.26	0.26	0.09	0.25	0.25	0.05	0.30	0.30	0.12	0.38	0.38
Sat Flow, veh/h	1753	5025	1530	3401	6332	1509	1753	1841	1531	1753	2692	748
Grp Volume(v), veh/h	153	669	9	260	1066	55	47	490	159	184	212	210
Grp Sat Flow(s),veh/h/ln	1753	1675	1530	1700	1583	1509	1753	1841	1531	1753	1749	1691
Q Serve(g_s), s	10.0	13.3	0.5	8.7	17.7	3.3	3.1	29.5	9.4	12.0	10.0	10.3
Cycle Q Clear(g_c), s	10.0	13.3	0.5	8.7	17.7	3.3	3.1	29.5	9.4	12.0	10.0	10.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.44
Lane Grp Cap(c), veh/h	181	1297	395	322	1581	377	82	558	465	212	660	638
V/C Ratio(X)	0.85	0.52	0.02	0.81	0.67	0.15	0.57	0.88	0.34	0.87	0.32	0.33
Avail Cap(c_a), veh/h	301	1724	525	583	2173	518	301	742	617	301	705	682
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	51.4	37.0	32.3	51.7	39.5	34.1	54.4	38.6	31.6	50.3	25.7	25.8
Incr Delay (d2), s/veh	4.9	0.5	0.0	1.8	0.7	0.3	2.3	7.6	0.2	13.1	0.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.5	5.3	0.2	3.6	6.6	1.2	1.4	13.9	3.3	5.9	4.0	4.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	56.3	37.5	32.3	53.6	40.2	34.3	56.7	46.2	31.7	63.4	25.8	25.9
LnGrp LOS	E	D	C	D	D	C	E	D	C	E	C	C
Approach Vol, veh/h		831			1381			696			606	
Approach Delay, s/veh		40.9			42.5			43.6			37.3	
Approach LOS		D			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	20.6	41.9	17.5	36.6	12.0	50.5	18.5	35.6
Change Period (Y+Rc), s	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
Max Green Setting (Gmax), s	20.0	47.0	20.0	40.0	20.0	47.0	20.0	40.0
Max Q Clear Time (g_c+I1), s	14.0	31.5	10.7	15.3	5.1	12.3	12.0	19.7
Green Ext Time (p_c), s	0.1	1.8	0.3	6.0	0.0	1.4	0.1	9.2

Intersection Summary	
HCM 6th Ctrl Delay	41.4
HCM 6th LOS	D

HCM 6th Signalized Intersection Summary
39: Hamner Ave & Ontario Ranch Rd

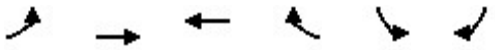
03/18/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	150	869	150	375	1190	331	177	659	499	145	214	51
Future Volume (veh/h)	150	869	150	375	1190	331	177	659	499	145	214	51
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	156	905	42	391	1240	236	184	686	142	151	223	11
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	241	1454	443	482	1259	552	261	978	297	224	643	280
Arrive On Green	0.07	0.29	0.29	0.14	0.36	0.36	0.08	0.19	0.19	0.07	0.18	0.18
Sat Flow, veh/h	3401	5025	1531	3401	3497	1533	3401	5025	1526	3401	3497	1525
Grp Volume(v), veh/h	156	905	42	391	1240	236	184	686	142	151	223	11
Grp Sat Flow(s),veh/h/ln	1700	1675	1531	1700	1749	1533	1700	1675	1526	1700	1749	1525
Q Serve(g_s), s	4.3	15.2	1.9	10.8	34.2	11.3	5.1	12.4	8.0	4.2	5.4	0.6
Cycle Q Clear(g_c), s	4.3	15.2	1.9	10.8	34.2	11.3	5.1	12.4	8.0	4.2	5.4	0.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	241	1454	443	482	1259	552	261	978	297	224	643	280
V/C Ratio(X)	0.65	0.62	0.09	0.81	0.99	0.43	0.71	0.70	0.48	0.67	0.35	0.04
Avail Cap(c_a), veh/h	1224	1809	551	1224	1259	552	874	1292	392	874	1259	549
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.0	30.0	25.3	40.5	30.9	23.5	43.8	36.5	34.8	44.4	34.6	32.6
Incr Delay (d2), s/veh	2.2	0.5	0.1	2.5	21.8	0.6	2.6	1.2	1.3	2.6	0.4	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	5.7	0.7	4.4	16.6	3.9	2.1	4.9	2.9	1.8	2.2	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	46.1	30.5	25.4	43.0	52.6	24.2	46.4	37.7	36.1	47.0	35.0	32.7
LnGrp LOS	D	C	C	D	D	C	D	D	D	D	C	C
Approach Vol, veh/h		1103			1867			1012			385	
Approach Delay, s/veh		32.5			47.0			39.1			39.6	
Approach LOS		C			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	21.3	35.6	15.0	25.4	14.4	42.5	13.9	26.4
Change Period (Y+Rc), s	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5
Max Green Setting (Gmax), s	35.0	35.0	25.0	35.0	35.0	35.0	25.0	25.0
Max Q Clear Time (g_c+I1), s	12.8	17.2	7.1	7.4	6.3	36.2	6.2	14.4
Green Ext Time (p_c), s	0.9	5.9	0.4	1.5	0.3	0.0	0.3	3.7

Intersection Summary	
HCM 6th Ctrl Delay	40.9
HCM 6th LOS	D



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑	↑↑		↰↰	↱
Traffic Volume (veh/h)	0	941	972	0	235	1467
Future Volume (veh/h)	0	941	972	0	235	1467
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	0	1841	1841	0	1841	1841
Adj Flow Rate, veh/h	0	1023	1057	0	255	1556
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	4	4	0	4	4
Cap, veh/h	0	1855	1291	0	784	1396
Arrive On Green	0.00	0.37	0.37	0.00	0.45	0.45
Sat Flow, veh/h	0	5356	3681	0	1753	3120
Grp Volume(v), veh/h	0	1023	1057	0	255	1556
Grp Sat Flow(s),veh/h/ln	0	1675	1749	0	1753	1560
Q Serve(g_s), s	0.0	10.8	18.3	0.0	6.3	30.0
Cycle Q Clear(g_c), s	0.0	10.8	18.3	0.0	6.3	30.0
Prop In Lane	0.00			0.00	1.00	1.00
Lane Grp Cap(c), veh/h	0	1855	1291	0	784	1396
V/C Ratio(X)	0.00	0.55	0.82	0.00	0.33	1.11
Avail Cap(c_a), veh/h	0	2248	1565	0	784	1396
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	16.8	19.1	0.0	12.0	18.5
Incr Delay (d2), s/veh	0.0	0.3	3.0	0.0	0.2	62.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	3.4	6.4	0.0	2.1	20.5
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.0	17.0	22.1	0.0	12.2	80.6
LnGrp LOS	A	B	C	A	B	F
Approach Vol, veh/h		1023	1057		1811	
Approach Delay, s/veh		17.0	22.1		71.0	
Approach LOS		B	C		E	

Timer - Assigned Phs	2	4	6
Phs Duration (G+Y+Rc), s	31.6	35.5	31.6
Change Period (Y+Rc), s	6.8	5.5	6.8
Max Green Setting (Gmax), s	30.0	30.0	30.0
Max Q Clear Time (g_c+I1), s	12.8	32.0	20.3
Green Ext Time (p_c), s	5.8	0.0	4.4

Intersection Summary	
HCM 6th Ctrl Delay	43.5
HCM 6th LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	334	842	177	308	786	328
Future Volume (veh/h)	334	842	177	308	786	328
Initial Q (Qb), veh	0	216	0	0	0	182
Ped-Bike Adj(A_pbT)		0.97	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	341	673	181	314	802	148
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	4	4	4	4	4	4
Cap, veh/h	1749	1070	272	2501	1220	543
Arrive On Green	0.36	0.36	0.08	0.53	0.29	0.29
Sat Flow, veh/h	5191	1515	3401	5191	3506	1560
Grp Volume(v), veh/h	341	673	181	314	802	148
Grp Sat Flow(s),veh/h/ln	1675	1515	1700	1675	1753	1560
Q Serve(g_s), s	3.3	20.2	3.7	2.2	15.1	5.3
Cycle Q Clear(g_c), s	3.3	20.2	3.7	2.2	15.1	5.3
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1749	1070	272	2501	1220	543
V/C Ratio(X)	0.19	0.63	0.67	0.13	0.66	0.27
Avail Cap(c_a), veh/h	2121	1085	1436	2649	1480	658
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.7	8.5	38.5	11.6	23.8	28.1
Incr Delay (d2), s/veh	0.1	1.1	2.8	0.0	0.8	0.3
Initial Q Delay(d3),s/veh	0.0	559.7	0.0	0.0	0.0	879.5
%ile BackOfQ(50%),veh/ln	1.4	188.0	1.8	0.9	6.9	143.4
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	19.7	569.4	41.3	11.6	24.5	907.8
LnGrp LOS	B	F	D	B	C	F
Approach Vol, veh/h	1014			495	950	
Approach Delay, s/veh	384.6			22.5	162.1	
Approach LOS	F			C	F	

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	12.0	32.7				44.8	26.3
Change Period (Y+Rc), s	6.0	7.3				7.3	6.0
Max Green Setting (Gmax), s	30.0	30.0				30.0	30.0
Max Q Clear Time (g_c+I1), s	5.7	22.2				4.2	17.1
Green Ext Time (p_c), s	0.5	3.0				1.8	3.3

Intersection Summary		
HCM 6th Ctrl Delay	225.7	
HCM 6th LOS	F	

Notes

User approved pedestrian interval to be less than phase max green.
User approved volume balancing among the lanes for turning movement.

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	9	16	187	4	8	254
Future Volume (veh/h)	9	16	187	4	8	254
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		0.97	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	9	17	197	4	8	267
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	59	52	1197	359	19	2577
Arrive On Green	0.03	0.03	0.24	0.24	0.01	0.51
Sat Flow, veh/h	1767	1572	5233	1520	1767	5233
Grp Volume(v), veh/h	9	17	197	4	8	267
Grp Sat Flow(s),veh/h/ln	1767	1572	1689	1520	1767	1689
Q Serve(g_s), s	0.1	0.2	0.7	0.0	0.1	0.6
Cycle Q Clear(g_c), s	0.1	0.2	0.7	0.0	0.1	0.6
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	59	52	1197	359	19	2577
V/C Ratio(X)	0.15	0.32	0.16	0.01	0.42	0.10
Avail Cap(c_a), veh/h	2467	2195	4529	1359	462	7181
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	10.8	10.8	7.0	6.7	11.3	2.9
Incr Delay (d2), s/veh	1.2	3.5	0.1	0.0	13.9	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.1	0.1	0.0	0.1	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	12.0	14.4	7.0	6.7	25.1	2.9
LnGrp LOS	B	B	A	A	C	A
Approach Vol, veh/h	26		201			275
Approach Delay, s/veh	13.5		7.0			3.6
Approach LOS	B		A			A

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	6.2	11.4			17.7	5.3
Change Period (Y+Rc), s	6.0	6.0			6.0	4.5
Max Green Setting (Gmax), s	6.0	20.5			32.5	32.0
Max Q Clear Time (g_c+I1), s	2.1	2.7			2.6	2.2
Green Ext Time (p_c), s	0.0	1.0			1.6	0.0

Intersection Summary	
HCM 6th Ctrl Delay	5.5
HCM 6th LOS	A

Intersection	
Intersection Delay, s/veh	7.4
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	37	0	4	29	2	0	10	6	3	37	0
Future Vol, veh/h	0	37	0	4	29	2	0	10	6	3	37	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	8	8	8	8	8	8	8	8	8	8	8	8
Mvmt Flow	0	40	0	4	32	2	0	11	7	3	40	0
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	7.4	7.4	7.1	7.5
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	0%	0%	11%	7%
Vol Thru, %	62%	100%	83%	93%
Vol Right, %	38%	0%	6%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	16	37	35	40
LT Vol	0	0	4	3
Through Vol	10	37	29	37
RT Vol	6	0	2	0
Lane Flow Rate	17	40	38	43
Geometry Grp	1	1	1	1
Degree of Util (X)	0.019	0.047	0.044	0.051
Departure Headway (Hd)	3.981	4.171	4.161	4.201
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	893	855	857	849
Service Time	2.032	2.211	2.202	2.245
HCM Lane V/C Ratio	0.019	0.047	0.044	0.051
HCM Control Delay	7.1	7.4	7.4	7.5
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.1	0.1	0.1	0.2

Intersection	
Intersection Delay, s/veh	12.2
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	33	57	23	169	90	38	11	134	76	23	142	29
Future Vol, veh/h	33	57	23	169	90	38	11	134	76	23	142	29
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles, %	8	8	8	8	8	8	8	8	8	8	8	8
Mvmt Flow	35	61	25	182	97	41	12	144	82	25	153	31
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	10.3	13.9	11.6	11.4
HCM LOS	B	B	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	5%	29%	57%	12%
Vol Thru, %	61%	50%	30%	73%
Vol Right, %	34%	20%	13%	15%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	221	113	297	194
LT Vol	11	33	169	23
Through Vol	134	57	90	142
RT Vol	76	23	38	29
Lane Flow Rate	238	122	319	209
Geometry Grp	1	1	1	1
Degree of Util (X)	0.361	0.196	0.491	0.327
Departure Headway (Hd)	5.467	5.794	5.54	5.641
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	656	617	648	636
Service Time	3.519	3.852	3.587	3.693
HCM Lane V/C Ratio	0.363	0.198	0.492	0.329
HCM Control Delay	11.6	10.3	13.9	11.4
HCM Lane LOS	B	B	B	B
HCM 95th-tile Q	1.6	0.7	2.7	1.4

Intersection	
Intersection Delay, s/veh	69.5
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	21	359	84	152	597	25	34	35	26	6	28	29
Future Vol, veh/h	21	359	84	152	597	25	34	35	26	6	28	29
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles, %	4	4	4	4	4	4	4	4	4	4	4	4
Mvmt Flow	22	370	87	157	615	26	35	36	27	6	29	30
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	20.8	110.5	11.9	11.3
HCM LOS	C	F	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	36%	5%	20%	10%
Vol Thru, %	37%	77%	77%	44%
Vol Right, %	27%	18%	3%	46%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	95	464	774	63
LT Vol	34	21	152	6
Through Vol	35	359	597	28
RT Vol	26	84	25	29
Lane Flow Rate	98	478	798	65
Geometry Grp	1	1	1	1
Degree of Util (X)	0.187	0.703	1.167	0.124
Departure Headway (Hd)	7.275	5.617	5.265	7.259
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	497	646	694	497
Service Time	5.275	3.617	3.279	5.259
HCM Lane V/C Ratio	0.197	0.74	1.15	0.131
HCM Control Delay	11.9	20.8	110.5	11.3
HCM Lane LOS	B	C	F	B
HCM 95th-tile Q	0.7	5.7	25.8	0.4

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	86	711	25	194	1150	51	14	22	152	12	22	93
Future Vol, veh/h	86	711	25	194	1150	51	14	22	152	12	22	93
Conflicting Peds, #/hr	5	0	5	5	0	5	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	127	-	-	143	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	98	808	28	220	1307	58	16	25	173	14	25	106

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1370	0	0	841	0	0	2129	2833	827	2898	2818	688
Stage 1	-	-	-	-	-	-	1023	1023	-	1781	1781	-
Stage 2	-	-	-	-	-	-	1106	1810	-	1117	1037	-
Critical Hdwy	4.145	-	-	4.145	-	-	7.345	6.545	6.245	7.345	6.545	6.945
Critical Hdwy Stg 1	-	-	-	-	-	-	6.145	5.545	-	6.545	5.545	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.545	5.545	-	6.145	5.545	-
Follow-up Hdwy	2.2285	-	-	2.2285	-	-	3.5285	4.0285	3.3285	3.5285	4.0285	3.3285
Pot Cap-1 Maneuver	495	-	-	787	-	-	32	~ 17	369	~ 8	~ 18	388
Stage 1	-	-	-	-	-	-	282	310	-	85	133	-
Stage 2	-	-	-	-	-	-	224	128	-	249	306	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	493	-	-	783	-	-	-	~ 10	367	-	~ 10	386
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	~ 10	-	-	~ 10	-
Stage 1	-	-	-	-	-	-	225	247	-	68	95	-
Stage 2	-	-	-	-	-	-	86	92	-	95	244	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.5	1.6		
HCM LOS			-	-

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	493	-	-	783	-	-	-
HCM Lane V/C Ratio	-	0.198	-	-	0.282	-	-	-
HCM Control Delay (s)	-	14.1	-	-	11.4	-	-	-
HCM Lane LOS	-	B	-	-	B	-	-	-
HCM 95th %tile Q(veh)	-	0.7	-	-	1.2	-	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	180.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	11	755	125	59	1180	19	108	13	87	22	11	45
Future Vol, veh/h	11	755	125	59	1180	19	108	13	87	22	11	45
Conflicting Peds, #/hr	5	0	5	5	0	5	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	69	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	12	821	136	64	1283	21	117	14	95	24	12	49

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1309	0	0	962	0	0	1694	2355	894	2395	2413	657
Stage 1	-	-	-	-	-	-	918	918	-	1427	1427	-
Stage 2	-	-	-	-	-	-	776	1437	-	968	986	-
Critical Hdwy	4.145	-	-	4.145	-	-	7.345	6.545	6.245	7.345	6.545	6.945
Critical Hdwy Stg 1	-	-	-	-	-	-	6.145	5.545	-	6.545	5.545	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.545	5.545	-	6.145	5.545	-
Follow-up Hdwy	2.2285	-	-	2.2285	-	-	3.5285	4.0285	3.3285	3.5285	4.0285	3.3285
Pot Cap-1 Maneuver	522	-	-	708	-	-	~ 66	35	337	~ 20	32	406
Stage 1	-	-	-	-	-	-	323	348	-	142	199	-
Stage 2	-	-	-	-	-	-	355	196	-	303	323	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	520	-	-	705	-	-	~ 35	31	335	~ 8	28	404
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 35	31	-	~ 8	28	-
Stage 1	-	-	-	-	-	-	314	338	-	138	180	-
Stage 2	-	-	-	-	-	-	265	177	-	204	314	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.5	$ 1552	$ 1475.3
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	55	520	-	-	705	-	-	24
HCM Lane V/C Ratio	4.111	0.023	-	-	0.091	-	-	3.533
HCM Control Delay (s)	$ 1552	12.1	-	-	10.6	-	-	$ 1475.3
HCM Lane LOS	F	B	-	-	B	-	-	F
HCM 95th %tile Q(veh)	24.8	0.1	-	-	0.3	-	-	10.6

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	20.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	29	815	16	7	1155	13	58	4	22	15	3	42
Future Vol, veh/h	29	815	16	7	1155	13	58	4	22	15	3	42
Conflicting Peds, #/hr	5	0	5	5	0	5	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	98	-	-	47	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	32	906	18	8	1283	14	64	4	24	17	3	47

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1302	0	0	929	0	0	1643	2302	920	2304	2304	654
Stage 1	-	-	-	-	-	-	984	984	-	1311	1311	-
Stage 2	-	-	-	-	-	-	659	1318	-	993	993	-
Critical Hdwy	4.145	-	-	4.145	-	-	7.345	6.545	6.245	7.345	6.545	6.945
Critical Hdwy Stg 1	-	-	-	-	-	-	6.145	5.545	-	6.545	5.545	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.545	5.545	-	6.145	5.545	-
Follow-up Hdwy	2.2285	-	-	2.2285	-	-	3.5285	4.0285	3.3285	3.5285	4.0285	3.3285
Pot Cap-1 Maneuver	525	-	-	729	-	-	72	38	326	23	38	408
Stage 1	-	-	-	-	-	-	296	324	-	167	226	-
Stage 2	-	-	-	-	-	-	418	224	-	293	321	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	523	-	-	726	-	-	~ 56	35	324	18	35	406
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 56	35	-	18	35	-
Stage 1	-	-	-	-	-	-	276	303	-	156	222	-
Stage 2	-	-	-	-	-	-	360	220	-	251	300	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.4	0.1	$ 331.6	273.8
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	69	523	-	-	726	-	-	59
HCM Lane V/C Ratio	1.353	0.062	-	-	0.011	-	-	1.13
HCM Control Delay (s)	$ 331.6	12.3	-	-	10	-	-	273.8
HCM Lane LOS	F	B	-	-	B	-	-	F
HCM 95th %tile Q(veh)	7.6	0.2	-	-	0	-	-	5.5

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑			↱
Traffic Vol, veh/h	0	909	1230	23	1	12
Future Vol, veh/h	0	909	1230	23	1	12
Conflicting Peds, #/hr	5	0	0	5	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	0	988	1337	25	1	13

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	1849	686
Stage 1	-	-	-	-	1355	-
Stage 2	-	-	-	-	494	-
Critical Hdwy	-	-	-	-	6.86	6.96
Critical Hdwy Stg 1	-	-	-	-	5.86	-
Critical Hdwy Stg 2	-	-	-	-	5.86	-
Follow-up Hdwy	-	-	-	-	3.53	3.33
Pot Cap-1 Maneuver	0	-	-	-	65	388
Stage 1	0	-	-	-	203	-
Stage 2	0	-	-	-	576	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	64	386
Mov Cap-2 Maneuver	-	-	-	-	64	-
Stage 1	-	-	-	-	202	-
Stage 2	-	-	-	-	573	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	14.7
HCM LOS			B

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	386
HCM Lane V/C Ratio	-	-	-	0.034
HCM Control Delay (s)	-	-	-	14.7
HCM Lane LOS	-	-	-	B
HCM 95th %tile Q(veh)	-	-	-	0.1

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	909	1251	7	0	3
Future Vol, veh/h	0	909	1251	7	0	3
Conflicting Peds, #/hr	5	0	0	5	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	0	988	1360	8	0	3

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	689
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.96
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.33
Pot Cap-1 Maneuver	0	-	-	-	0	386
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	384
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	14.5
HCM LOS			B

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	384
HCM Lane V/C Ratio	-	-	-	0.008
HCM Control Delay (s)	-	-	-	14.5
HCM Lane LOS	-	-	-	B
HCM 95th %tile Q(veh)	-	-	-	0

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	2	928	1236	16	8	2
Future Vol, veh/h	2	928	1236	16	8	2
Conflicting Peds, #/hr	5	0	0	5	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	2	1009	1343	17	9	2

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1365	0	-	0	1866	685
Stage 1	-	-	-	-	1357	-
Stage 2	-	-	-	-	509	-
Critical Hdwy	4.16	-	-	-	6.86	6.96
Critical Hdwy Stg 1	-	-	-	-	5.86	-
Critical Hdwy Stg 2	-	-	-	-	5.86	-
Follow-up Hdwy	2.23	-	-	-	3.53	3.33
Pot Cap-1 Maneuver	494	-	-	-	63	388
Stage 1	-	-	-	-	203	-
Stage 2	-	-	-	-	566	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	492	-	-	-	62	386
Mov Cap-2 Maneuver	-	-	-	-	156	-
Stage 1	-	-	-	-	201	-
Stage 2	-	-	-	-	563	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	26.7
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	492	-	-	-	177
HCM Lane V/C Ratio	0.004	-	-	-	0.061
HCM Control Delay (s)	12.3	-	-	-	26.7
HCM Lane LOS	B	-	-	-	D
HCM 95th %tile Q(veh)	0	-	-	-	0.2

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	14	923	1239	19	18	18
Future Vol, veh/h	14	923	1239	19	18	18
Conflicting Peds, #/hr	5	0	0	5	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	350	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	15	1014	1362	21	20	20

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1388	0	-	0	1915	697
Stage 1	-	-	-	-	1378	-
Stage 2	-	-	-	-	537	-
Critical Hdwy	4.16	-	-	-	6.86	6.96
Critical Hdwy Stg 1	-	-	-	-	5.86	-
Critical Hdwy Stg 2	-	-	-	-	5.86	-
Follow-up Hdwy	2.23	-	-	-	3.53	3.33
Pot Cap-1 Maneuver	484	-	-	-	59	381
Stage 1	-	-	-	-	197	-
Stage 2	-	-	-	-	547	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	482	-	-	-	57	379
Mov Cap-2 Maneuver	-	-	-	-	147	-
Stage 1	-	-	-	-	190	-
Stage 2	-	-	-	-	544	-

Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	25.8
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	482	-	-	-	212
HCM Lane V/C Ratio	0.032	-	-	-	0.187
HCM Control Delay (s)	12.7	-	-	-	25.8
HCM Lane LOS	B	-	-	-	D
HCM 95th %tile Q(veh)	0.1	-	-	-	0.7

Intersection	
Int Delay, s/veh	0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	183	2	1	320	2	1
Future Vol, veh/h	183	2	1	320	2	1
Conflicting Peds, #/hr	0	5	5	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	150	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	8	8	8	8	8	8
Mvmt Flow	195	2	1	340	2	1

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	202	0	373	104
Stage 1	-	-	-	-	201	-
Stage 2	-	-	-	-	172	-
Critical Hdwy	-	-	4.26	-	6.96	7.06
Critical Hdwy Stg 1	-	-	-	-	5.96	-
Critical Hdwy Stg 2	-	-	-	-	5.96	-
Follow-up Hdwy	-	-	2.28	-	3.58	3.38
Pot Cap-1 Maneuver	-	-	1324	-	585	912
Stage 1	-	-	-	-	795	-
Stage 2	-	-	-	-	823	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1318	-	581	908
Mov Cap-2 Maneuver	-	-	-	-	581	-
Stage 1	-	-	-	-	791	-
Stage 2	-	-	-	-	822	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	10.5
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	660	-	-	1318	-
HCM Lane V/C Ratio	0.005	-	-	0.001	-
HCM Control Delay (s)	10.5	-	-	7.7	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0	-

HCM 6th Signalized Intersection Summary
1: Grove Ave & Mission Blvd

03/18/2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	255	785	123	29	759	619	213	1020	55	516	865	208
Future Volume (veh/h)	255	785	123	29	759	619	213	1020	55	516	865	208
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	258	793	34	29	767	254	215	1030	54	521	874	87
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	307	919	407	137	744	329	213	1038	54	541	2008	613
Arrive On Green	0.09	0.26	0.26	0.04	0.21	0.21	0.12	0.21	0.21	0.31	0.40	0.40
Sat Flow, veh/h	3401	3497	1551	3401	3497	1549	1753	4883	256	1753	5025	1534
Grp Volume(v), veh/h	258	793	34	29	767	254	215	706	378	521	874	87
Grp Sat Flow(s),veh/h/ln	1700	1749	1551	1700	1749	1549	1753	1675	1788	1753	1675	1534
Q Serve(g_s), s	12.3	35.6	2.7	1.4	35.0	25.4	20.0	34.6	34.7	48.1	20.8	5.9
Cycle Q Clear(g_c), s	12.3	35.6	2.7	1.4	35.0	25.4	20.0	34.6	34.7	48.1	20.8	5.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.14	1.00		1.00
Lane Grp Cap(c), veh/h	307	919	407	137	744	329	213	712	380	541	2008	613
V/C Ratio(X)	0.84	0.86	0.08	0.21	1.03	0.77	1.01	0.99	0.99	0.96	0.44	0.14
Avail Cap(c_a), veh/h	620	919	407	413	744	329	213	712	380	586	2008	613
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	73.7	57.9	45.8	76.5	64.8	61.0	72.3	64.7	64.7	56.0	35.9	31.5
Incr Delay (d2), s/veh	4.7	8.7	0.1	0.6	41.3	11.0	64.1	31.5	44.3	27.1	0.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.5	16.6	1.0	0.6	19.4	10.7	12.6	17.5	20.1	24.9	8.5	2.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	78.4	66.5	45.9	77.0	106.1	72.0	136.4	96.2	109.0	83.1	36.1	31.6
LnGrp LOS	E	E	D	E	F	E	F	F	F	F	D	C
Approach Vol, veh/h		1085			1050			1299			1482	
Approach Delay, s/veh		68.7			97.1			106.6			52.4	
Approach LOS		E			F			F			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	57.8	42.0	14.1	50.7	27.0	72.8	22.3	42.5
Change Period (Y+Rc), s	7.0	7.0	7.5	7.5	7.0	7.0	7.5	7.5
Max Green Setting (Gmax), s	55.0	35.0	20.0	35.0	20.0	35.0	30.0	35.0
Max Q Clear Time (g_c+I1), s	50.1	36.7	3.4	37.6	22.0	22.8	14.3	37.0
Green Ext Time (p_c), s	0.6	0.0	0.0	0.0	0.0	6.0	0.5	0.0

Intersection Summary	
HCM 6th Ctrl Delay	79.8
HCM 6th LOS	E

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary
2: Vineyard Ave & Mission Blvd

03/18/2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	48	1077	321	49	823	4	377	42	86	4	30	43
Future Volume (veh/h)	48	1077	321	49	823	4	377	42	86	4	30	43
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	50	1122	183	51	857	4	393	44	24	4	31	0
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	107	1334	587	108	1364	6	458	950	418	442	950	
Arrive On Green	0.06	0.38	0.38	0.06	0.38	0.38	0.27	0.27	0.27	0.27	0.27	0.00
Sat Flow, veh/h	1753	3497	1539	1753	3569	17	1357	3497	1539	1312	3589	0
Grp Volume(v), veh/h	50	1122	183	51	420	441	393	44	24	4	31	0
Grp Sat Flow(s),veh/h/ln	1753	1749	1539	1753	1749	1837	1357	1749	1539	1312	1749	0
Q Serve(g_s), s	2.0	21.5	6.1	2.1	14.4	14.4	19.5	0.7	0.8	0.2	0.5	0.0
Cycle Q Clear(g_c), s	2.0	21.5	6.1	2.1	14.4	14.4	20.0	0.7	0.8	0.8	0.5	0.0
Prop In Lane	1.00		1.00	1.00		0.01	1.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	107	1334	587	108	668	702	458	950	418	442	950	
V/C Ratio(X)	0.47	0.84	0.31	0.47	0.63	0.63	0.86	0.05	0.06	0.01	0.03	
Avail Cap(c_a), veh/h	476	1425	627	476	713	749	458	950	418	442	950	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	33.4	20.7	16.0	33.4	18.5	18.5	27.9	19.8	19.8	20.1	19.7	0.0
Incr Delay (d2), s/veh	1.2	4.7	0.4	1.2	1.9	1.8	15.8	0.0	0.1	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	8.0	1.9	0.8	5.1	5.4	8.2	0.3	0.3	0.0	0.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	34.6	25.5	16.4	34.6	20.4	20.3	43.7	19.8	19.9	20.1	19.7	0.0
LnGrp LOS	C	C	B	C	C	C	D	B	B	C	B	
Approach Vol, veh/h		1355			912			461			35	A
Approach Delay, s/veh		24.6			21.2			40.2			19.8	
Approach LOS		C			C			D			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.5	35.1		27.0	11.5	35.1		27.0				
Change Period (Y+Rc), s	7.0	7.0		7.0	7.0	7.0		7.0				
Max Green Setting (Gmax), s	20.0	30.0		20.0	20.0	30.0		20.0				
Max Q Clear Time (g_c+I1), s	4.1	23.5		22.0	4.0	16.4		2.8				
Green Ext Time (p_c), s	0.0	4.6		0.0	0.0	5.4		0.1				

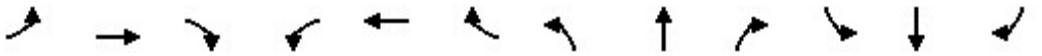
Intersection Summary		
HCM 6th Ctrl Delay		26.0
HCM 6th LOS		C

Notes

Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary
3: Vineyard Ave & Francis St

03/18/2024

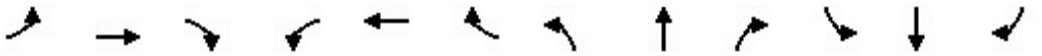


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	22	262	94	118	188	41	37	383	38	19	463	9
Future Volume (veh/h)	22	262	94	118	188	41	37	383	38	19	463	9
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	26	305	81	137	219	35	43	445	38	22	538	10
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	383	546	142	357	760	119	294	876	74	300	876	16
Arrive On Green	0.03	0.20	0.20	0.09	0.25	0.25	0.05	0.27	0.27	0.03	0.25	0.25
Sat Flow, veh/h	1753	2731	712	1753	3018	474	1753	3256	277	1753	3511	65
Grp Volume(v), veh/h	26	193	193	137	125	129	43	238	245	22	268	280
Grp Sat Flow(s),veh/h/ln	1753	1749	1694	1753	1749	1744	1753	1749	1785	1753	1749	1827
Q Serve(g_s), s	0.8	6.5	6.7	3.9	3.8	3.9	1.1	7.5	7.6	0.6	8.8	8.9
Cycle Q Clear(g_c), s	0.8	6.5	6.7	3.9	3.8	3.9	1.1	7.5	7.6	0.6	8.8	8.9
Prop In Lane	1.00		0.42	1.00		0.27	1.00		0.16	1.00		0.04
Lane Grp Cap(c), veh/h	383	349	339	357	440	439	294	470	480	300	436	456
V/C Ratio(X)	0.07	0.55	0.57	0.38	0.28	0.29	0.15	0.51	0.51	0.07	0.61	0.61
Avail Cap(c_a), veh/h	739	953	923	623	953	951	610	940	959	651	940	982
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.4	23.4	23.5	18.4	19.6	19.7	17.0	20.1	20.2	17.4	21.7	21.7
Incr Delay (d2), s/veh	0.1	1.9	2.1	0.7	0.5	0.5	0.3	1.2	1.2	0.1	2.0	1.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	2.5	2.5	1.4	1.4	1.4	0.4	2.8	2.9	0.2	3.4	3.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	19.5	25.4	25.7	19.1	20.1	20.2	17.3	21.4	21.4	17.5	23.7	23.6
LnGrp LOS	B	C	C	B	C	C	B	C	C	B	C	C
Approach Vol, veh/h		412			391			526			570	
Approach Delay, s/veh		25.1			19.8			21.0			23.4	
Approach LOS		C			B			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.0	24.5	12.1	19.5	10.2	23.2	8.8	22.9
Change Period (Y+Rc), s	7.0	7.0	6.5	6.5	7.0	7.0	6.5	6.5
Max Green Setting (Gmax), s	15.0	35.0	15.5	35.5	15.0	35.0	15.5	35.5
Max Q Clear Time (g_c+I1), s	2.6	9.6	5.9	8.7	3.1	10.9	2.8	5.9
Green Ext Time (p_c), s	0.0	3.8	0.2	3.0	0.1	4.4	0.0	1.9

Intersection Summary	
HCM 6th Ctrl Delay	22.4
HCM 6th LOS	C

Min green cannot be greater than Max Green.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	505	2	429	454	929	0	0	919	589
Future Volume (veh/h)	0	0	0	505	2	429	454	929	0	0	919	589
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		0.99
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1841	1841	1841	1841	1841	0	0	1841	1841
Adj Flow Rate, veh/h				635	0	232	473	968	0	0	957	173
Peak Hour Factor				0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %				4	4	4	4	4	0	0	4	4
Cap, veh/h				832	0	370	390	2162	0	0	1183	524
Arrive On Green				0.24	0.00	0.24	0.30	0.82	0.00	0.00	0.34	0.34
Sat Flow, veh/h				3506	0	1560	1753	3589	0	0	3589	1548
Grp Volume(v), veh/h				635	0	232	473	968	0	0	957	173
Grp Sat Flow(s),veh/h/ln				1753	0	1560	1753	1749	0	0	1749	1548
Q Serve(g_s), s				15.2	0.0	12.0	20.0	7.0	0.0	0.0	22.4	7.5
Cycle Q Clear(g_c), s				15.2	0.0	12.0	20.0	7.0	0.0	0.0	22.4	7.5
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				832	0	370	390	2162	0	0	1183	524
V/C Ratio(X)				0.76	0.00	0.63	1.21	0.45	0.00	0.00	0.81	0.33
Avail Cap(c_a), veh/h				1169	0	520	390	2162	0	0	1183	524
HCM Platoon Ratio				1.00	1.00	1.00	1.33	1.33	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.29	0.29	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				32.0	0.0	30.7	31.7	3.7	0.0	0.0	27.1	22.2
Incr Delay (d2), s/veh				2.5	0.0	2.5	103.4	0.2	0.0	0.0	6.0	1.7
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				6.6	0.0	4.7	18.5	1.7	0.0	0.0	9.7	2.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				34.5	0.0	33.2	135.1	3.9	0.0	0.0	33.2	23.9
LnGrp LOS				C	A	C	F	A	A	A	C	C
Approach Vol, veh/h					867			1441			1130	
Approach Delay, s/veh					34.1			47.0			31.7	
Approach LOS					C			D			C	

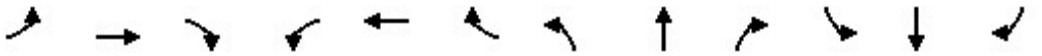
Timer - Assigned Phs	2		5	6		8						
Phs Duration (G+Y+Rc), s	61.6		25.2	36.4		28.4						
Change Period (Y+Rc), s	6.0		* 5.2	6.0		7.0						
Max Green Setting (Gmax), s	47.0		* 20	21.0		30.0						
Max Q Clear Time (g_c+I1), s	9.0		22.0	24.4		17.2						
Green Ext Time (p_c), s	11.4		0.0	0.0		4.2						

Intersection Summary	
HCM 6th Ctrl Delay	38.7
HCM 6th LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



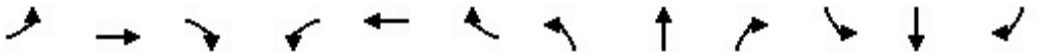
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	266	0	397	0	0	0	0	1152	419	261	1126	0
Future Volume (veh/h)	266	0	397	0	0	0	0	1152	419	261	1126	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1841	0	1841				0	1841	1841	1841	1841	0
Adj Flow Rate, veh/h	271	0	337				0	1176	147	266	1149	0
Peak Hour Factor	0.98	0.98	0.98				0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	4	0	4				0	4	4	4	4	0
Cap, veh/h	430	0	382				0	1337	592	309	2135	0
Arrive On Green	0.25	0.00	0.25				0.00	0.38	0.38	0.12	0.41	0.00
Sat Flow, veh/h	1753	0	1560				0	3589	1550	1753	3589	0
Grp Volume(v), veh/h	271	0	337				0	1176	147	266	1149	0
Grp Sat Flow(s),veh/h/ln	1753	0	1560				0	1749	1550	1753	1749	0
Q Serve(g_s), s	12.4	0.0	18.7				0.0	28.2	5.8	13.4	22.4	0.0
Cycle Q Clear(g_c), s	12.4	0.0	18.7				0.0	28.2	5.8	13.4	22.4	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	430	0	382				0	1337	592	309	2135	0
V/C Ratio(X)	0.63	0.00	0.88				0.00	0.88	0.25	0.86	0.54	0.00
Avail Cap(c_a), veh/h	487	0	433				0	1337	592	448	2135	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	0.67	0.67	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.30	0.30	0.00
Uniform Delay (d), s/veh	30.3	0.0	32.7				0.0	25.9	19.0	38.6	17.0	0.0
Incr Delay (d2), s/veh	2.7	0.0	18.1				0.0	8.5	1.0	3.7	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.5	0.0	8.8				0.0	12.3	2.1	6.2	9.3	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	33.1	0.0	50.8				0.0	34.4	20.0	42.4	17.3	0.0
LnGrp LOS	C	A	D				A	C	B	D	B	A
Approach Vol, veh/h		608						1323			1415	
Approach Delay, s/veh		42.9						32.8			22.0	
Approach LOS		D						C			C	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	20.5	40.4		29.1		60.9
Change Period (Y+Rc), s	* 4.7	6.0		7.0		6.0
Max Green Setting (Gmax), s	* 23	24.0		25.0		52.0
Max Q Clear Time (g_c+I1), s	15.4	30.2		20.7		24.4
Green Ext Time (p_c), s	0.5	0.0		1.3		12.6

Intersection Summary	
HCM 6th Ctrl Delay	30.1
HCM 6th LOS	C

Notes

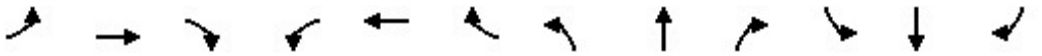
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	261	4	140	370	581	0	0	860	519
Future Volume (veh/h)	0	0	0	261	4	140	370	581	0	0	860	519
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		0.97
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1841	1841	1841	1841	1841	0	0	1841	1841
Adj Flow Rate, veh/h				278	4	32	394	618	0	0	915	448
Peak Hour Factor				0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %				4	4	4	4	4	0	0	4	4
Cap, veh/h				327	5	295	351	2328	0	0	913	440
Arrive On Green				0.19	0.19	0.19	0.40	1.00	0.00	0.00	0.40	0.40
Sat Flow, veh/h				1729	25	1560	1753	3589	0	0	2357	1091
Grp Volume(v), veh/h				282	0	32	394	618	0	0	703	660
Grp Sat Flow(s),veh/h/ln				1754	0	1560	1753	1749	0	0	1749	1607
Q Serve(g_s), s				12.4	0.0	1.4	16.0	0.0	0.0	0.0	32.1	32.3
Cycle Q Clear(g_c), s				12.4	0.0	1.4	16.0	0.0	0.0	0.0	32.1	32.3
Prop In Lane				0.99		1.00	1.00		0.00	0.00		0.68
Lane Grp Cap(c), veh/h				332	0	295	351	2328	0	0	705	648
V/C Ratio(X)				0.85	0.00	0.11	1.12	0.27	0.00	0.00	1.00	1.02
Avail Cap(c_a), veh/h				447	0	398	351	2328	0	0	705	648
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.25	0.25	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				31.3	0.0	26.8	24.0	0.0	0.0	0.0	23.8	23.9
Incr Delay (d2), s/veh				10.1	0.0	0.1	65.6	0.1	0.0	0.0	33.3	40.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				6.0	0.0	0.5	10.8	0.0	0.0	0.0	17.9	17.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				41.4	0.0	27.0	89.6	0.1	0.0	0.0	57.1	63.9
LnGrp LOS				D	A	C	F	A	A	A	E	F
Approach Vol, veh/h					314			1012			1363	
Approach Delay, s/veh					39.9			34.9			60.4	
Approach LOS					D			C			E	

Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		59.1			21.0	38.1		20.9				
Change Period (Y+Rc), s		5.8			5.0	5.8		5.8				
Max Green Setting (Gmax), s		48.0			16.0	27.0		20.4				
Max Q Clear Time (g_c+I1), s		2.0			18.0	34.3		14.4				
Green Ext Time (p_c), s		3.4			0.0	0.0		0.7				

Intersection Summary												
HCM 6th Ctrl Delay			48.4									
HCM 6th LOS			D									



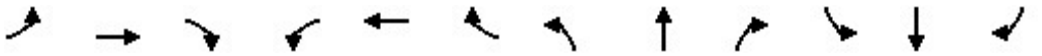
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	138	1	393	0	0	0	0	808	379	262	866	0
Future Volume (veh/h)	138	1	393	0	0	0	0	808	379	262	866	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		0.97	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841				0	1841	1841	1841	1841	0
Adj Flow Rate, veh/h	142	1	266				0	833	335	270	893	0
Peak Hour Factor	0.97	0.97	0.97				0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	4	4	4				0	4	4	4	4	0
Cap, veh/h	339	2	304				0	1007	404	317	2309	0
Arrive On Green	0.19	0.19	0.19				0.00	0.42	0.42	0.06	0.22	0.00
Sat Flow, veh/h	1741	12	1560				0	2507	968	1753	3589	0
Grp Volume(v), veh/h	143	0	266				0	602	566	270	893	0
Grp Sat Flow(s),veh/h/ln	1754	0	1560				0	1749	1634	1753	1749	0
Q Serve(g_s), s	5.7	0.0	13.2				0.0	24.5	24.7	12.2	17.4	0.0
Cycle Q Clear(g_c), s	5.7	0.0	13.2				0.0	24.5	24.7	12.2	17.4	0.0
Prop In Lane	0.99		1.00				0.00		0.59	1.00		0.00
Lane Grp Cap(c), veh/h	342	0	304				0	729	681	317	2309	0
V/C Ratio(X)	0.42	0.00	0.88				0.00	0.83	0.83	0.85	0.39	0.00
Avail Cap(c_a), veh/h	381	0	339				0	729	681	592	2309	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	0.33	0.33	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.09	0.09	0.00
Uniform Delay (d), s/veh	28.2	0.0	31.3				0.0	20.7	20.8	36.5	17.5	0.0
Incr Delay (d2), s/veh	0.6	0.0	19.7				0.0	10.4	11.3	0.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	0.0	6.5				0.0	10.7	10.3	5.5	7.9	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	28.8	0.0	50.9				0.0	31.1	32.1	36.8	17.5	0.0
LnGrp LOS	C	A	D				A	C	C	D	B	A
Approach Vol, veh/h		409						1168			1163	
Approach Delay, s/veh		43.2						31.6			22.0	
Approach LOS		D						C			C	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	19.5	39.2		21.4		58.6
Change Period (Y+Rc), s	5.0	5.8		5.8		5.8
Max Green Setting (Gmax), s	27.0	19.0		17.4		51.0
Max Q Clear Time (g_c+I1), s	14.2	26.7		15.2		19.4
Green Ext Time (p_c), s	0.3	0.0		0.3		5.2

Intersection Summary	
HCM 6th Ctrl Delay	29.2
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.



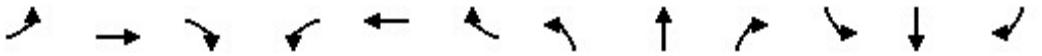
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	896	5	250	539	455	0	0	1116	252
Future Volume (veh/h)	0	0	0	896	5	250	539	455	0	0	1116	252
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		0.97
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1781	1781	1781	1781	1781	0	0	1781	1781
Adj Flow Rate, veh/h				982	0	58	573	484	0	0	1187	81
Peak Hour Factor				0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %				8	8	8	8	8	0	0	8	8
Cap, veh/h				845	0	376	951	3026	0	0	1702	406
Arrive On Green				0.25	0.00	0.25	0.48	1.00	0.00	0.00	0.28	0.28
Sat Flow, veh/h				3393	0	1510	3291	5024	0	0	6378	1462
Grp Volume(v), veh/h				982	0	58	573	484	0	0	1187	81
Grp Sat Flow(s),veh/h/ln				1697	0	1510	1646	1621	0	0	1532	1462
Q Serve(g_s), s				22.4	0.0	2.7	11.4	0.0	0.0	0.0	15.6	3.8
Cycle Q Clear(g_c), s				22.4	0.0	2.7	11.4	0.0	0.0	0.0	15.6	3.8
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				845	0	376	951	3026	0	0	1702	406
V/C Ratio(X)				1.16	0.00	0.15	0.60	0.16	0.00	0.00	0.70	0.20
Avail Cap(c_a), veh/h				845	0	376	951	3026	0	0	1702	406
HCM Platoon Ratio				1.00	1.00	1.00	1.67	1.67	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.74	0.74	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				33.8	0.0	26.4	19.5	0.0	0.0	0.0	29.1	24.8
Incr Delay (d2), s/veh				86.2	0.0	0.9	2.1	0.1	0.0	0.0	2.4	1.1
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				19.0	0.0	2.6	3.7	0.0	0.0	0.0	5.6	1.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				120.0	0.0	27.3	21.6	0.1	0.0	0.0	31.5	25.9
LnGrp LOS				F	A	C	C	A	A	A	C	C
Approach Vol, veh/h					1040			1057			1268	
Approach Delay, s/veh					114.8			11.8			31.1	
Approach LOS					F			B			C	

Timer - Assigned Phs	2	4	5	6
Phs Duration (G+Y+Rc), s	61.8	28.2	31.0	30.8
Change Period (Y+Rc), s	5.8	5.8	5.0	5.8
Max Green Setting (Gmax), s	56.0	22.4	26.0	25.0
Max Q Clear Time (g_c+I1), s	2.0	24.4	13.4	17.6
Green Ext Time (p_c), s	3.3	0.0	0.9	4.3

Intersection Summary	
HCM 6th Ctrl Delay	50.9
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.
User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	84	5	494	0	0	0	0	977	919	448	1560	0
Future Volume (veh/h)	84	5	494	0	0	0	0	977	919	448	1560	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		0.97	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1781	1781	1781				0	1781	1781	1781	1781	0
Adj Flow Rate, veh/h	60	0	465				0	1018	504	467	1625	0
Peak Hour Factor	0.96	0.96	0.96				0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	8	8	8				0	8	8	8	8	0
Cap, veh/h	498	0	886				0	1566	373	878	2810	0
Arrive On Green	0.29	0.00	0.29				0.00	0.26	0.26	0.09	0.19	0.00
Sat Flow, veh/h	1697	0	3019				0	6378	1461	3291	5024	0
Grp Volume(v), veh/h	60	0	465				0	1018	504	467	1625	0
Grp Sat Flow(s),veh/h/ln	1697	0	1510				0	1532	1461	1646	1621	0
Q Serve(g_s), s	2.3	0.0	11.6				0.0	13.3	23.0	12.2	27.4	0.0
Cycle Q Clear(g_c), s	2.3	0.0	11.6				0.0	13.3	23.0	12.2	27.4	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	498	0	886				0	1566	373	878	2810	0
V/C Ratio(X)	0.12	0.00	0.53				0.00	0.65	1.35	0.53	0.58	0.00
Avail Cap(c_a), veh/h	498	0	886				0	1566	373	878	2810	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	0.33	0.33	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.38	0.38	0.00
Uniform Delay (d), s/veh	23.3	0.0	26.6				0.0	29.9	33.5	35.7	26.4	0.0
Incr Delay (d2), s/veh	0.5	0.0	2.2				0.0	2.1	174.4	0.9	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	0.0	4.3				0.0	4.8	25.6	5.3	11.7	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.8	0.0	28.8				0.0	32.0	207.9	36.5	26.8	0.0
LnGrp LOS	C	A	C				A	C	F	D	C	A
Approach Vol, veh/h		525						1522			2092	
Approach Delay, s/veh		28.2						90.2			29.0	
Approach LOS		C						F			C	

Timer - Assigned Phs	1	2				6		8				
Phs Duration (G+Y+Rc), s	29.0	28.8				57.8		32.2				
Change Period (Y+Rc), s	5.0	5.8				5.8		5.8				
Max Green Setting (Gmax), s	24.0	23.0				52.0		26.4				
Max Q Clear Time (g_c+I1), s	14.2	25.0				29.4		13.6				
Green Ext Time (p_c), s	0.7	0.0				12.1		1.8				

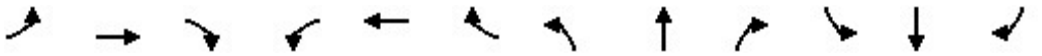
Intersection Summary			
HCM 6th Ctrl Delay			51.4
HCM 6th LOS			D

Notes

User approved pedestrian interval to be less than phase max green.
User approved volume balancing among the lanes for turning movement.

HCM 6th Signalized Intersection Summary
11: Archibald Ave & Walnut St

03/18/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	18	10	47	28	26	77	109	1560	43	91	1536	21
Future Volume (veh/h)	18	10	47	28	26	77	109	1560	43	91	1536	21
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.98		0.95	0.98		0.95	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781
Adj Flow Rate, veh/h	19	11	5	30	28	10	116	1660	45	97	1634	22
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	8	8	8	8	8	8	8	8	8	8	8	8
Cap, veh/h	206	136	62	224	147	53	144	2827	77	122	2809	38
Arrive On Green	0.12	0.12	0.12	0.12	0.12	0.12	0.08	0.58	0.58	0.07	0.57	0.57
Sat Flow, veh/h	1276	1140	518	1299	1236	441	1697	4863	132	1697	4943	67
Grp Volume(v), veh/h	19	0	16	30	0	38	116	1107	598	97	1072	584
Grp Sat Flow(s),veh/h/ln	1276	0	1659	1299	0	1677	1697	1621	1753	1697	1621	1767
Q Serve(g_s), s	1.2	0.0	0.8	1.9	0.0	1.8	6.0	19.5	19.5	5.1	19.2	19.2
Cycle Q Clear(g_c), s	3.1	0.0	0.8	2.7	0.0	1.8	6.0	19.5	19.5	5.1	19.2	19.2
Prop In Lane	1.00		0.31	1.00		0.26	1.00		0.08	1.00		0.04
Lane Grp Cap(c), veh/h	206	0	198	224	0	200	144	1885	1019	122	1843	1004
V/C Ratio(X)	0.09	0.00	0.08	0.13	0.00	0.19	0.81	0.59	0.59	0.80	0.58	0.58
Avail Cap(c_a), veh/h	369	0	409	389	0	414	183	1885	1019	183	1843	1004
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.1	0.0	35.3	36.4	0.0	35.7	40.5	12.0	12.0	41.1	12.5	12.5
Incr Delay (d2), s/veh	0.1	0.0	0.1	0.2	0.0	0.3	14.7	1.3	2.5	7.3	1.3	2.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.0	0.3	0.6	0.0	0.8	3.0	5.9	6.8	2.3	6.1	7.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	37.2	0.0	35.4	36.6	0.0	36.1	55.2	13.3	14.5	48.4	13.9	15.0
LnGrp LOS	D	A	D	D	A	D	E	B	B	D	B	B
Approach Vol, veh/h		35			68			1821			1753	
Approach Delay, s/veh		36.4			36.3			16.4			16.2	
Approach LOS		D			D			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	13.0	58.8		18.2	14.1	57.7		18.2				
Change Period (Y+Rc), s	6.5	6.5		7.5	6.5	6.5		7.5				
Max Green Setting (Gmax), s	9.7	37.6		22.2	9.7	37.6		22.2				
Max Q Clear Time (g_c+I1), s	7.1	21.5		5.1	8.0	21.2		4.7				
Green Ext Time (p_c), s	0.0	10.8		0.1	0.0	10.8		0.2				

Intersection Summary		
HCM 6th Ctrl Delay		16.8
HCM 6th LOS		B

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary
12: Euclid Ave & Riverside Dr

03/18/2024

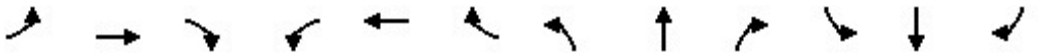
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	140	569	72	153	470	92	66	1157	273	145	1003	163
Future Volume (veh/h)	140	569	72	153	470	92	66	1157	273	145	1003	163
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.96	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	146	593	24	159	490	31	69	1205	166	151	1045	93
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	171	594	491	184	1156	503	121	1049	448	176	1159	656
Arrive On Green	0.10	0.32	0.32	0.11	0.33	0.33	0.07	0.30	0.30	0.10	0.33	0.33
Sat Flow, veh/h	1753	1841	1522	1753	3497	1522	1753	3497	1494	1753	3497	1522
Grp Volume(v), veh/h	146	593	24	159	490	31	69	1205	166	151	1045	93
Grp Sat Flow(s),veh/h/ln	1753	1841	1522	1753	1749	1522	1753	1749	1494	1753	1749	1522
Q Serve(g_s), s	10.9	42.9	1.4	11.9	14.5	1.9	5.1	40.0	11.7	11.3	38.0	5.0
Cycle Q Clear(g_c), s	10.9	42.9	1.4	11.9	14.5	1.9	5.1	40.0	11.7	11.3	38.0	5.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	171	594	491	184	1156	503	121	1049	448	176	1159	656
V/C Ratio(X)	0.86	1.00	0.05	0.86	0.42	0.06	0.57	1.15	0.37	0.86	0.90	0.14
Avail Cap(c_a), veh/h	264	594	491	425	1448	630	131	1049	448	247	1159	656
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	59.3	45.2	31.1	58.7	34.8	30.5	60.1	46.7	36.8	59.0	42.5	23.2
Incr Delay (d2), s/veh	9.7	36.7	0.1	4.6	0.4	0.1	4.9	78.2	0.5	18.4	9.8	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.2	24.9	0.5	5.4	6.0	0.7	2.4	28.3	4.2	5.9	17.5	1.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	68.9	81.8	31.2	63.3	35.1	30.6	65.0	124.9	37.3	77.4	52.3	23.3
LnGrp LOS	E	F	C	E	D	C	E	F	D	E	D	C
Approach Vol, veh/h		763			680			1440			1289	
Approach Delay, s/veh		77.8			41.5			111.9			53.2	
Approach LOS		E			D			F			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.6	46.0	18.7	50.0	14.4	50.2	17.7	51.1
Change Period (Y+Rc), s	* 5.2	6.0	* 4.7	7.0	* 5.2	6.0	* 4.7	7.0
Max Green Setting (Gmax), s	* 19	40.0	* 32	43.0	* 10	42.5	* 20	55.2
Max Q Clear Time (g_c+I1), s	13.3	42.0	13.9	44.9	7.1	40.0	12.9	16.5
Green Ext Time (p_c), s	0.2	0.0	0.2	0.0	0.0	1.6	0.1	4.8

Intersection Summary	
HCM 6th Ctrl Delay	76.1
HCM 6th LOS	E

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	132	849	39	35	597	94	20	409	86	101	141	116
Future Volume (veh/h)	132	849	39	35	597	94	20	409	86	101	141	116
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	1.00		0.97	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	140	903	17	37	635	87	21	435	84	107	150	38
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	175	687	566	99	1016	139	392	464	90	112	573	476
Arrive On Green	0.10	0.37	0.37	0.06	0.33	0.33	0.31	0.31	0.31	0.31	0.31	0.31
Sat Flow, veh/h	1767	1856	1528	1767	3108	425	1223	1502	290	874	1856	1544
Grp Volume(v), veh/h	140	903	17	37	360	362	21	0	519	107	150	38
Grp Sat Flow(s),veh/h/ln	1767	1856	1528	1767	1763	1770	1223	0	1793	874	1856	1544
Q Serve(g_s), s	6.3	30.0	0.6	1.6	14.0	14.0	1.1	0.0	22.8	2.2	4.9	1.4
Cycle Q Clear(g_c), s	6.3	30.0	0.6	1.6	14.0	14.0	6.0	0.0	22.8	25.0	4.9	1.4
Prop In Lane	1.00		1.00	1.00		0.24	1.00		0.16	1.00		1.00
Lane Grp Cap(c), veh/h	175	687	566	99	576	579	392	0	553	112	573	476
V/C Ratio(X)	0.80	1.31	0.03	0.38	0.62	0.63	0.05	0.00	0.94	0.95	0.26	0.08
Avail Cap(c_a), veh/h	436	687	566	436	653	655	392	0	553	112	573	476
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.7	25.5	16.2	36.9	23.1	23.1	23.3	0.0	27.3	40.3	21.1	19.9
Incr Delay (d2), s/veh	3.2	151.7	0.0	0.9	1.7	1.7	0.1	0.0	24.1	69.9	0.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.7	40.3	0.2	0.7	5.4	5.5	0.3	0.0	12.6	4.2	2.0	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	38.9	177.2	16.3	37.8	24.8	24.8	23.4	0.0	51.3	110.2	21.3	19.9
LnGrp LOS	D	F	B	D	C	C	C	A	D	F	C	B
Approach Vol, veh/h		1060			759			540			295	
Approach Delay, s/veh		156.3			25.4			50.3			53.4	
Approach LOS		F			C			D			D	

Timer - Assigned Phs	2	3	4	6	7	8
Phs Duration (G+Y+Rc), s	31.5	12.0	37.5	31.5	15.5	34.0
Change Period (Y+Rc), s	6.5	7.5	7.5	6.5	7.5	7.5
Max Green Setting (Gmax), s	25.0	20.0	30.0	25.0	20.0	30.0
Max Q Clear Time (g_c+I1), s	24.8	3.6	32.0	27.0	8.3	16.0
Green Ext Time (p_c), s	0.1	0.0	0.0	0.0	0.1	4.0

Intersection Summary	
HCM 6th Ctrl Delay	85.9
HCM 6th LOS	F

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary
15: Grove Ave & Riverside Dr

03/18/2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	242	946	2	6	613	186	11	44	26	254	46	196
Future Volume (veh/h)	242	946	2	6	613	186	11	44	26	254	46	196
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.97	1.00		0.96	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	249	975	2	6	632	172	11	45	9	262	47	58
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	284	808	2	14	771	209	28	108	22	297	417	345
Arrive On Green	0.16	0.44	0.44	0.01	0.28	0.28	0.02	0.07	0.07	0.17	0.22	0.22
Sat Flow, veh/h	1767	1851	4	1767	2719	739	1767	1490	298	1767	1856	1536
Grp Volume(v), veh/h	249	0	977	6	409	395	11	0	54	262	47	58
Grp Sat Flow(s),veh/h/ln	1767	0	1855	1767	1763	1694	1767	0	1788	1767	1856	1536
Q Serve(g_s), s	13.1	0.0	41.5	0.3	20.6	20.7	0.6	0.0	2.7	13.8	1.9	2.9
Cycle Q Clear(g_c), s	13.1	0.0	41.5	0.3	20.6	20.7	0.6	0.0	2.7	13.8	1.9	2.9
Prop In Lane	1.00		0.00	1.00		0.44	1.00		0.17	1.00		1.00
Lane Grp Cap(c), veh/h	284	0	810	14	500	480	28	0	130	297	417	345
V/C Ratio(X)	0.88	0.00	1.21	0.44	0.82	0.82	0.39	0.00	0.42	0.88	0.11	0.17
Avail Cap(c_a), veh/h	371	0	810	371	648	623	371	0	564	371	585	484
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.0	0.0	26.8	47.0	31.8	31.9	46.4	0.0	42.2	38.7	29.3	29.7
Incr Delay (d2), s/veh	15.7	0.0	104.6	15.7	6.9	7.2	6.4	0.0	2.5	17.4	0.1	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.6	0.0	39.5	0.2	9.0	8.8	0.3	0.0	1.3	7.1	0.8	1.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	54.7	0.0	131.4	62.7	38.7	39.1	52.8	0.0	44.7	56.0	29.5	30.0
LnGrp LOS	D	A	F	E	D	D	D	A	D	E	C	C
Approach Vol, veh/h		1226			810			65			367	
Approach Delay, s/veh		115.8			39.1			46.1			48.5	
Approach LOS		F			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	22.8	34.5	9.0	28.9	8.2	49.0	23.5	14.4
Change Period (Y+Rc), s	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5
Max Green Setting (Gmax), s	20.0	35.0	20.0	30.0	20.0	35.0	20.0	30.0
Max Q Clear Time (g_c+I1), s	15.1	22.7	2.6	4.9	2.3	43.5	15.8	4.7
Green Ext Time (p_c), s	0.2	4.3	0.0	0.4	0.0	0.0	0.2	0.2

Intersection Summary	
HCM 6th Ctrl Delay	78.8
HCM 6th LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	216	931	9	10	611	339	4	339	7	628	269	139
Future Volume (veh/h)	216	931	9	10	611	339	4	339	7	628	269	139
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.97	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	225	970	4	10	636	145	4	353	2	688	232	132
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	251	1225	537	48	773	338	254	507	220	886	276	157
Arrive On Green	0.14	0.35	0.35	0.01	0.22	0.22	0.14	0.14	0.14	0.25	0.25	0.25
Sat Flow, veh/h	1767	3526	1545	3428	3526	1540	1767	3526	1533	3534	1101	627
Grp Volume(v), veh/h	225	970	4	10	636	145	4	353	2	688	0	364
Grp Sat Flow(s),veh/h/ln	1767	1763	1545	1714	1763	1540	1767	1763	1533	1767	0	1728
Q Serve(g_s), s	15.4	30.4	0.2	0.4	21.1	10.0	0.2	11.7	0.1	22.3	0.0	24.6
Cycle Q Clear(g_c), s	15.4	30.4	0.2	0.4	21.1	10.0	0.2	11.7	0.1	22.3	0.0	24.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.36
Lane Grp Cap(c), veh/h	251	1225	537	48	773	338	254	507	220	886	0	433
V/C Ratio(X)	0.90	0.79	0.01	0.21	0.82	0.43	0.02	0.70	0.01	0.78	0.00	0.84
Avail Cap(c_a), veh/h	286	1346	590	167	947	414	526	1050	457	1021	0	499
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	51.8	36.1	26.2	59.9	45.7	41.3	45.1	50.1	45.1	42.8	0.0	43.7
Incr Delay (d2), s/veh	25.4	3.2	0.0	1.5	5.2	1.0	0.0	2.1	0.0	3.5	0.0	11.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.3	12.7	0.1	0.2	9.3	3.7	0.1	5.1	0.1	9.8	0.0	11.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	77.2	39.3	26.2	61.4	50.9	42.4	45.2	52.2	45.1	46.4	0.0	55.0
LnGrp LOS	E	D	C	E	D	D	D	D	D	D	A	E
Approach Vol, veh/h		1199			791			359			1052	
Approach Delay, s/veh		46.4			49.5			52.0			49.4	
Approach LOS		D			D			D			D	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		25.2	9.2	50.2		38.3	25.0	34.4				
Change Period (Y+Rc), s		7.5	7.5	7.5		7.5	7.5	7.5				
Max Green Setting (Gmax), s		36.6	6.0	46.9		35.5	19.9	33.0				
Max Q Clear Time (g_c+I1), s		13.7	2.4	32.4		26.6	17.4	23.1				
Green Ext Time (p_c), s		2.4	0.0	6.0		3.8	0.1	2.7				

Intersection Summary		
HCM 6th Ctrl Delay	48.6	
HCM 6th LOS	D	

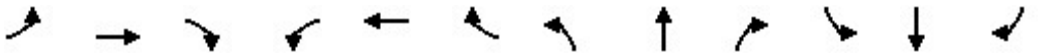
Notes

User approved pedestrian interval to be less than phase max green.

User approved volume balancing among the lanes for turning movement.

HCM 6th Signalized Intersection Summary
23: Street A/Whispering Lakes Golf Course Dwy & Riverside Dr

03/18/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	6	1483	133	89	892	11	92	0	79	12	0	18
Future Volume (veh/h)	6	1483	133	89	892	11	92	0	79	12	0	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.97	0.99		0.99	0.99		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1781	1781	1856	1856	1781	1781	1781	1856	1781	1856
Adj Flow Rate, veh/h	6	1498	93	90	901	11	93	0	12	12	0	4
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	3	3	8	8	3	3	8	8	8	3	8	3
Cap, veh/h	17	1875	799	115	2106	26	260	0	187	259	0	187
Arrive On Green	0.01	0.53	0.53	0.07	0.59	0.59	0.13	0.00	0.13	0.13	0.00	0.13
Sat Flow, veh/h	1767	3526	1503	1697	3566	44	1329	0	1492	1375	0	1492
Grp Volume(v), veh/h	6	1498	93	90	445	467	93	0	12	12	0	4
Grp Sat Flow(s),veh/h/ln	1767	1763	1503	1697	1763	1846	1329	0	1492	1375	0	1492
Q Serve(g_s), s	0.3	25.8	2.3	3.9	10.3	10.3	4.9	0.0	0.5	0.6	0.0	0.2
Cycle Q Clear(g_c), s	0.3	25.8	2.3	3.9	10.3	10.3	5.1	0.0	0.5	1.1	0.0	0.2
Prop In Lane	1.00		1.00	1.00		0.02	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	17	1875	799	115	1041	1090	260	0	187	259	0	187
V/C Ratio(X)	0.36	0.80	0.12	0.78	0.43	0.43	0.36	0.00	0.06	0.05	0.00	0.02
Avail Cap(c_a), veh/h	142	2245	957	136	1123	1176	735	0	720	751	0	720
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	36.7	14.2	8.7	34.2	8.4	8.4	30.9	0.0	28.8	29.3	0.0	28.6
Incr Delay (d2), s/veh	12.7	1.9	0.1	21.3	0.3	0.3	0.8	0.0	0.1	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	7.9	0.6	2.1	2.8	2.9	1.6	0.0	0.2	0.2	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	49.4	16.1	8.8	55.5	8.7	8.7	31.7	0.0	28.9	29.3	0.0	28.7
LnGrp LOS	D	B	A	E	A	A	C	A	C	C	A	C
Approach Vol, veh/h		1597			1002			105			16	
Approach Delay, s/veh		15.8			12.9			31.4			29.2	
Approach LOS		B			B			C			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.7	51.5		15.3	12.1	47.2		15.3				
Change Period (Y+Rc), s	7.0	7.5		6.0	7.0	7.5		6.0				
Max Green Setting (Gmax), s	6.0	47.5		36.0	6.0	47.5		36.0				
Max Q Clear Time (g_c+I1), s	2.3	12.3		3.1	5.9	27.8		7.1				
Green Ext Time (p_c), s	0.0	6.9		0.0	0.0	11.9		0.3				

Intersection Summary												
HCM 6th Ctrl Delay			15.4									
HCM 6th LOS			B									

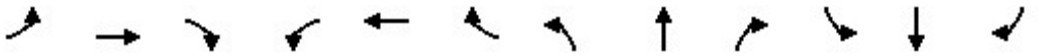
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1440	134	181	882	110	149
Future Volume (veh/h)	1440	134	181	882	110	149
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		0.97	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	1548	104	195	948	118	25
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	1872	813	232	2633	160	142
Arrive On Green	0.53	0.53	0.13	0.75	0.09	0.09
Sat Flow, veh/h	3618	1532	1767	3618	1767	1572
Grp Volume(v), veh/h	1548	104	195	948	118	25
Grp Sat Flow(s),veh/h/ln	1763	1532	1767	1763	1767	1572
Q Serve(g_s), s	30.5	2.8	8.9	7.7	5.4	1.2
Cycle Q Clear(g_c), s	30.5	2.8	8.9	7.7	5.4	1.2
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1872	813	232	2633	160	142
V/C Ratio(X)	0.83	0.13	0.84	0.36	0.74	0.18
Avail Cap(c_a), veh/h	2146	932	277	2995	767	682
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	16.3	9.8	35.2	3.6	36.8	34.9
Incr Delay (d2), s/veh	2.6	0.1	17.4	0.1	6.5	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.1	0.8	4.6	1.2	2.5	0.5
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	18.9	9.9	52.6	3.7	43.3	35.5
LnGrp LOS	B	A	D	A	D	D
Approach Vol, veh/h	1652			1143	143	
Approach Delay, s/veh	18.3			12.1	42.0	
Approach LOS	B			B	D	

Timer - Assigned Phs		2			5	6	8
Phs Duration (G+Y+Rc), s		69.5			17.9	51.6	13.5
Change Period (Y+Rc), s		7.5			7.0	7.5	6.0
Max Green Setting (Gmax), s		70.5			13.0	50.5	36.0
Max Q Clear Time (g_c+I1), s		9.7			10.9	32.5	7.4
Green Ext Time (p_c), s		8.8			0.1	11.6	0.4

Intersection Summary	
HCM 6th Ctrl Delay	17.0
HCM 6th LOS	B

HCM 6th Signalized Intersection Summary
25: Colonial Ave & Riverside Ave

03/18/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	1511	35	38	1043	18	17	0	33	3	3	25
Future Volume (veh/h)	40	1511	35	38	1043	18	17	0	33	3	3	25
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	0.98		1.00	0.98		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	41	1558	36	39	1075	19	18	0	0	3	3	3
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	105	1907	44	101	1912	34	234	0	0	111	57	40
Arrive On Green	0.06	0.54	0.54	0.06	0.54	0.54	0.07	0.00	0.00	0.07	0.07	0.07
Sat Flow, veh/h	1767	3520	81	1767	3542	63	1395	0	0	317	770	543
Grp Volume(v), veh/h	41	779	815	39	535	559	18	0	0	9	0	0
Grp Sat Flow(s),veh/h/ln	1767	1763	1838	1767	1763	1842	1395	0	0	1631	0	0
Q Serve(g_s), s	1.2	19.9	20.1	1.2	11.0	11.0	0.3	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	1.2	19.9	20.1	1.2	11.0	11.0	0.6	0.0	0.0	0.3	0.0	0.0
Prop In Lane	1.00		0.04	1.00		0.03	1.00		0.00	0.33		0.33
Lane Grp Cap(c), veh/h	105	955	996	101	951	994	234	0	0	208	0	0
V/C Ratio(X)	0.39	0.82	0.82	0.39	0.56	0.56	0.08	0.00	0.00	0.04	0.00	0.00
Avail Cap(c_a), veh/h	643	1122	1170	643	1122	1172	756	0	0	803	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	24.9	10.3	10.4	25.0	8.4	8.4	23.9	0.0	0.0	23.7	0.0	0.0
Incr Delay (d2), s/veh	2.4	4.1	4.1	2.4	0.5	0.5	0.1	0.0	0.0	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	5.3	5.5	0.5	2.6	2.7	0.2	0.0	0.0	0.1	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	27.3	14.5	14.5	27.4	8.9	8.9	24.0	0.0	0.0	23.8	0.0	0.0
LnGrp LOS	C	B	B	C	A	A	C	A	A	C	A	A
Approach Vol, veh/h		1635			1133			18			9	
Approach Delay, s/veh		14.8			9.5			24.0			23.8	
Approach LOS		B			A			C			C	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		10.1	8.1	36.8		10.1	8.3	36.7				
Change Period (Y+Rc), s		6.0	5.0	7.0		6.0	5.0	7.0				
Max Green Setting (Gmax), s		25.0	20.0	35.0		25.0	20.0	35.0				
Max Q Clear Time (g_c+I1), s		2.6	3.2	22.1		2.3	3.2	13.0				
Green Ext Time (p_c), s		0.0	0.0	7.7		0.0	0.1	6.5				

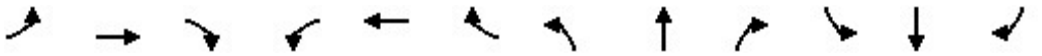
Intersection Summary	
HCM 6th Ctrl Delay	12.7
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary
26: Archibald Ave & Riverside Ave

03/18/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	411	729	387	158	503	202	246	1122	65	219	1010	353
Future Volume (veh/h)	411	729	387	158	503	202	246	1122	65	219	1010	353
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.97	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781
Adj Flow Rate, veh/h	415	736	353	160	508	178	248	1133	63	221	1020	318
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	8	8	8	8	8	8	8	8	8	8	8	8
Cap, veh/h	416	803	385	191	567	197	281	1228	68	254	893	278
Arrive On Green	0.25	0.36	0.36	0.11	0.23	0.23	0.17	0.26	0.26	0.15	0.25	0.25
Sat Flow, veh/h	1697	2202	1055	1697	2441	850	1697	4706	262	1697	3645	1135
Grp Volume(v), veh/h	415	565	524	160	351	335	248	780	416	221	907	431
Grp Sat Flow(s),veh/h/ln	1697	1692	1565	1697	1692	1598	1697	1621	1726	1697	1621	1538
Q Serve(g_s), s	34.9	45.5	45.6	13.2	28.7	29.1	20.4	33.5	33.5	18.2	35.0	35.0
Cycle Q Clear(g_c), s	34.9	45.5	45.6	13.2	28.7	29.1	20.4	33.5	33.5	18.2	35.0	35.0
Prop In Lane	1.00		0.67	1.00		0.53	1.00		0.15	1.00		0.74
Lane Grp Cap(c), veh/h	416	617	571	191	393	371	281	846	450	254	794	377
V/C Ratio(X)	1.00	0.92	0.92	0.84	0.89	0.90	0.88	0.92	0.92	0.87	1.14	1.14
Avail Cap(c_a), veh/h	416	617	571	416	415	392	416	846	450	416	794	377
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.9	43.3	43.3	62.1	53.1	53.2	58.2	51.4	51.4	59.4	53.9	53.9
Incr Delay (d2), s/veh	43.7	19.2	20.6	18.0	22.0	24.2	19.8	15.9	25.4	18.1	78.7	91.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	19.4	21.5	20.1	6.5	14.2	13.8	10.1	15.0	17.1	8.9	22.5	22.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	97.6	62.4	63.9	80.1	75.1	77.4	78.1	67.2	76.8	77.5	132.7	145.3
LnGrp LOS	F	E	E	F	E	E	E	E	E	E	F	F
Approach Vol, veh/h		1504			846			1444			1559	
Approach Delay, s/veh		72.6			77.0			71.8			128.3	
Approach LOS		E			E			E			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	25.4	41.3	20.1	56.1	27.7	39.0	39.0	37.2
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0
Max Q Clear Time (g_c+I1), s	20.2	35.5	15.2	47.6	22.4	37.0	36.9	31.1
Green Ext Time (p_c), s	1.2	0.0	0.9	0.0	1.3	0.0	0.0	2.1

Intersection Summary	
HCM 6th Ctrl Delay	89.3
HCM 6th LOS	F

HCM 6th Signalized Intersection Summary
27: Haven Ave & Riverside Dr

03/18/2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	255	358	73	86	369	79	36	445	54	116	611	429
Future Volume (veh/h)	255	358	73	86	369	79	36	445	54	116	611	429
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	1.00		0.97	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	266	373	71	90	384	67	38	464	54	121	636	239
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	296	406	77	119	508	88	28	338	39	396	416	345
Arrive On Green	0.17	0.27	0.27	0.07	0.17	0.17	0.22	0.22	0.22	0.22	0.22	0.22
Sat Flow, veh/h	1767	1506	287	1767	2994	517	124	1511	176	1767	1856	1540
Grp Volume(v), veh/h	266	0	444	90	225	226	556	0	0	121	636	239
Grp Sat Flow(s),veh/h/ln	1767	0	1793	1767	1763	1748	1810	0	0	1767	1856	1540
Q Serve(g_s), s	16.5	0.0	26.8	5.6	13.5	13.8	25.0	0.0	0.0	6.4	25.0	15.9
Cycle Q Clear(g_c), s	16.5	0.0	26.8	5.6	13.5	13.8	25.0	0.0	0.0	6.4	25.0	15.9
Prop In Lane	1.00		0.16	1.00		0.30	0.07		0.10	1.00		1.00
Lane Grp Cap(c), veh/h	296	0	484	119	299	297	405	0	0	396	416	345
V/C Ratio(X)	0.90	0.00	0.92	0.76	0.75	0.76	1.37	0.00	0.00	0.31	1.53	0.69
Avail Cap(c_a), veh/h	396	0	484	317	474	470	405	0	0	396	416	345
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.6	0.0	39.6	51.2	44.1	44.2	43.3	0.0	0.0	36.1	43.3	39.8
Incr Delay (d2), s/veh	16.0	0.0	22.5	3.7	3.8	4.1	182.2	0.0	0.0	0.3	250.6	5.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.2	0.0	14.1	2.5	6.0	6.0	31.2	0.0	0.0	2.7	39.9	6.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	61.6	0.0	62.1	54.8	47.9	48.2	225.5	0.0	0.0	36.4	293.9	45.3
LnGrp LOS	E	A	E	D	D	D	F	A	A	D	F	D
Approach Vol, veh/h		710			541			556			996	
Approach Delay, s/veh		61.9			49.2			225.5			203.0	
Approach LOS		E			D			F			F	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		30.0	14.5	37.1		30.0	25.7	26.0				
Change Period (Y+Rc), s		5.0	7.0	7.0		5.0	7.0	7.0				
Max Green Setting (Gmax), s		25.0	20.0	30.0		25.0	25.0	30.0				
Max Q Clear Time (g_c+I1), s		27.0	7.6	28.8		27.0	18.5	15.8				
Green Ext Time (p_c), s		0.0	0.1	0.3		0.0	0.2	2.0				

Intersection Summary	
HCM 6th Ctrl Delay	142.0
HCM 6th LOS	F

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary
28: Euclid Ave & Chino Ave

03/18/2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	122	394	58	89	89	31	45	1349	281	26	1133	74
Future Volume (veh/h)	122	394	58	89	89	31	45	1349	281	26	1133	74
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.97	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	123	398	18	90	90	26	45	1363	219	26	1144	36
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	333	585	487	125	114	27	125	1077	466	302	1492	663
Arrive On Green	0.32	0.32	0.32	0.32	0.32	0.32	0.07	0.31	0.31	0.17	0.43	0.43
Sat Flow, veh/h	1256	1841	1532	232	359	85	1753	3497	1513	1753	3497	1554
Grp Volume(v), veh/h	123	398	18	206	0	0	45	1363	219	26	1144	36
Grp Sat Flow(s),veh/h/ln	1256	1841	1532	676	0	0	1753	1749	1513	1753	1749	1554
Q Serve(g_s), s	0.0	18.8	0.8	12.2	0.0	0.0	2.4	30.8	11.7	1.2	27.9	1.4
Cycle Q Clear(g_c), s	12.2	18.8	0.8	31.0	0.0	0.0	2.4	30.8	11.7	1.2	27.9	1.4
Prop In Lane	1.00		1.00	0.44		0.13	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	333	585	487	267	0	0	125	1077	466	302	1492	663
V/C Ratio(X)	0.37	0.68	0.04	0.77	0.00	0.00	0.36	1.27	0.47	0.09	0.77	0.05
Avail Cap(c_a), veh/h	333	585	487	267	0	0	280	1077	466	302	1492	663
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.4	29.7	23.5	37.9	0.0	0.0	44.3	34.6	28.0	34.8	24.4	16.8
Incr Delay (d2), s/veh	0.7	3.2	0.0	13.1	0.0	0.0	0.6	126.9	3.4	0.0	3.8	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.3	8.4	0.3	5.7	0.0	0.0	1.0	31.0	4.4	0.5	11.1	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	28.1	32.9	23.6	51.0	0.0	0.0	44.9	161.5	31.4	34.8	28.3	17.0
LnGrp LOS	C	C	C	D	A	A	D	F	C	C	C	B
Approach Vol, veh/h		539			206			1627			1206	
Approach Delay, s/veh		31.5			51.0			140.8			28.1	
Approach LOS		C			D			F			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	23.7	37.3		39.0	11.8	49.2		39.0				
Change Period (Y+Rc), s	6.5	* 6.5		7.2	* 4.7	6.5		7.2				
Max Green Setting (Gmax), s	16.0	* 31		31.8	* 16	33.8		31.8				
Max Q Clear Time (g_c+I1), s	3.2	32.8		20.8	4.4	29.9		33.0				
Green Ext Time (p_c), s	0.0	0.0		2.1	0.0	2.5		0.0				

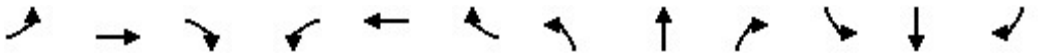
Intersection Summary		
HCM 6th Ctrl Delay	81.1	
HCM 6th LOS	F	

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th Signalized Intersection Summary
31: Vineyard Ave & Chino Ave

03/18/2024



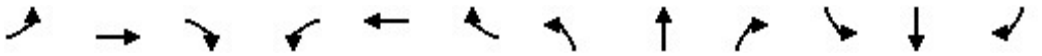
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	18	318	0	2	146	44	1	298	19	32	206	12
Future Volume (veh/h)	18	318	0	2	146	44	1	298	19	32	206	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		0.98	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781
Adj Flow Rate, veh/h	19	342	0	2	157	12	1	320	14	34	222	4
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	8	8	8	8	8	8	8	8	8	8	8	8
Cap, veh/h	47	704	0	6	327	271	3	843	37	76	392	320
Arrive On Green	0.03	0.21	0.00	0.00	0.18	0.18	0.00	0.18	0.18	0.04	0.22	0.22
Sat Flow, veh/h	1697	3474	0	1697	1781	1476	1697	4774	207	1697	1781	1458
Grp Volume(v), veh/h	19	342	0	2	157	12	1	216	118	34	222	4
Grp Sat Flow(s),veh/h/ln	1697	1692	0	1697	1781	1476	1697	1621	1739	1697	1781	1458
Q Serve(g_s), s	0.6	4.6	0.0	0.1	4.0	0.3	0.0	3.0	3.1	1.0	5.7	0.1
Cycle Q Clear(g_c), s	0.6	4.6	0.0	0.1	4.0	0.3	0.0	3.0	3.1	1.0	5.7	0.1
Prop In Lane	1.00		0.00	1.00		1.00	1.00		0.12	1.00		1.00
Lane Grp Cap(c), veh/h	47	704	0	6	327	271	3	572	307	76	392	320
V/C Ratio(X)	0.40	0.49	0.00	0.36	0.48	0.04	0.30	0.38	0.38	0.45	0.57	0.01
Avail Cap(c_a), veh/h	199	2615	0	199	1376	1140	199	2188	1173	199	1202	984
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.4	17.8	0.0	25.4	18.7	17.2	25.5	18.6	18.6	23.8	17.8	15.6
Incr Delay (d2), s/veh	5.5	0.6	0.0	34.8	1.3	0.1	44.3	0.5	0.9	4.0	1.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	1.5	0.0	0.1	1.5	0.1	0.1	1.0	1.1	0.4	2.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	29.9	18.5	0.0	60.2	20.0	17.3	69.8	19.1	19.5	27.8	19.3	15.6
LnGrp LOS	C	B	A	E	C	B	E	B	B	C	B	B
Approach Vol, veh/h		361			171			335			260	
Approach Delay, s/veh		19.1			20.3			19.4			20.4	
Approach LOS		B			C			B			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.3	16.5	7.2	18.1	7.1	18.7	8.4	16.9
Change Period (Y+Rc), s	7.0	7.5	7.0	7.5	7.0	7.5	7.0	7.5
Max Green Setting (Gmax), s	6.0	34.5	6.0	39.5	6.0	34.5	6.0	39.5
Max Q Clear Time (g_c+I1), s	3.0	5.1	2.1	6.6	2.0	7.7	2.6	6.0
Green Ext Time (p_c), s	0.0	2.2	0.0	2.5	0.0	1.3	0.0	1.0

Intersection Summary	
HCM 6th Ctrl Delay	19.7
HCM 6th LOS	B

HCM 6th Signalized Intersection Summary
33: Ontario Ave & Chino Ave

03/18/2024



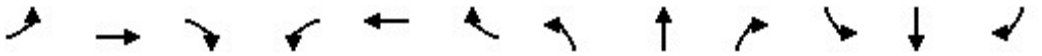
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	104	363	4	2	214	227	2	15	10	187	9	87
Future Volume (veh/h)	104	363	4	2	214	227	2	15	10	187	9	87
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.96	1.00		0.97	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781
Adj Flow Rate, veh/h	107	374	4	2	221	68	2	15	2	193	9	17
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	8	8	8	8	8	8	8	8	8	8	8	8
Cap, veh/h	163	873	9	6	547	234	6	76	10	217	95	179
Arrive On Green	0.10	0.25	0.25	0.00	0.16	0.16	0.00	0.05	0.05	0.13	0.17	0.17
Sat Flow, veh/h	1697	3429	37	1697	3385	1450	1697	1533	204	1697	543	1026
Grp Volume(v), veh/h	107	184	194	2	221	68	2	0	17	193	0	26
Grp Sat Flow(s),veh/h/ln	1697	1692	1773	1697	1692	1450	1697	0	1738	1697	0	1568
Q Serve(g_s), s	2.9	4.3	4.3	0.1	2.7	1.9	0.1	0.0	0.4	5.3	0.0	0.7
Cycle Q Clear(g_c), s	2.9	4.3	4.3	0.1	2.7	1.9	0.1	0.0	0.4	5.3	0.0	0.7
Prop In Lane	1.00		0.02	1.00		1.00	1.00		0.12	1.00		0.65
Lane Grp Cap(c), veh/h	163	431	451	6	547	234	6	0	86	217	0	273
V/C Ratio(X)	0.66	0.43	0.43	0.36	0.40	0.29	0.36	0.00	0.20	0.89	0.00	0.10
Avail Cap(c_a), veh/h	217	920	964	217	1839	788	217	0	1333	217	0	1203
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	20.5	14.6	14.6	23.3	17.6	17.3	23.3	0.0	21.4	20.1	0.0	16.3
Incr Delay (d2), s/veh	4.4	0.8	0.8	34.7	0.6	0.8	34.7	0.0	1.1	33.2	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	1.3	1.4	0.1	0.9	0.6	0.1	0.0	0.2	3.8	0.0	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	24.9	15.4	15.4	58.1	18.2	18.1	58.1	0.0	22.5	53.3	0.0	16.4
LnGrp LOS	C	B	B	E	B	B	E	A	C	D	A	B
Approach Vol, veh/h		485			291			19			219	
Approach Delay, s/veh		17.5			18.5			26.2			48.9	
Approach LOS		B			B			C			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.5	15.1	6.2	14.2	7.2	19.4	12.0	8.3
Change Period (Y+Rc), s	7.0	7.5	6.0	6.0	7.0	7.5	6.0	6.0
Max Green Setting (Gmax), s	6.0	25.5	6.0	36.0	6.0	25.5	6.0	36.0
Max Q Clear Time (g_c+I1), s	4.9	4.7	2.1	2.7	2.1	6.3	7.3	2.4
Green Ext Time (p_c), s	0.0	1.6	0.0	0.1	0.0	2.1	0.0	0.1

Intersection Summary	
HCM 6th Ctrl Delay	24.7
HCM 6th LOS	C

HCM 6th Signalized Intersection Summary
34: Archibald Ave & Chino Ave

03/18/2024



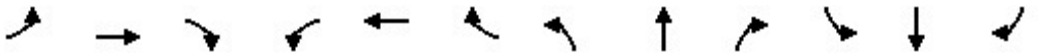
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	115	87	196	20	22	103	245	1158	29	107	1318	63
Future Volume (veh/h)	115	87	196	20	22	103	245	1158	29	107	1318	63
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781
Adj Flow Rate, veh/h	119	90	40	21	23	12	253	1194	30	110	1359	64
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	8	8	8	8	8	8	8	8	8	8	8	8
Cap, veh/h	146	269	112	44	101	84	283	2498	63	136	1400	66
Arrive On Green	0.09	0.12	0.12	0.03	0.06	0.06	0.17	0.51	0.51	0.08	0.43	0.43
Sat Flow, veh/h	1697	2308	960	1697	1781	1480	1697	4877	123	1697	3289	155
Grp Volume(v), veh/h	119	64	66	21	23	12	253	794	430	110	698	725
Grp Sat Flow(s),veh/h/ln	1697	1692	1576	1697	1781	1480	1697	1621	1757	1697	1692	1751
Q Serve(g_s), s	7.3	3.7	4.1	1.3	1.3	0.8	15.4	16.7	16.7	6.7	42.6	42.9
Cycle Q Clear(g_c), s	7.3	3.7	4.1	1.3	1.3	0.8	15.4	16.7	16.7	6.7	42.6	42.9
Prop In Lane	1.00		0.61	1.00		1.00	1.00		0.07	1.00		0.09
Lane Grp Cap(c), veh/h	146	197	184	44	101	84	283	1660	900	136	720	745
V/C Ratio(X)	0.81	0.33	0.36	0.47	0.23	0.14	0.89	0.48	0.48	0.81	0.97	0.97
Avail Cap(c_a), veh/h	321	560	522	321	590	490	401	1660	900	401	721	746
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.5	42.9	43.0	50.7	47.7	47.4	43.1	16.7	16.7	47.8	29.7	29.7
Incr Delay (d2), s/veh	4.1	1.4	1.7	2.9	1.6	1.1	13.4	0.3	0.6	4.2	26.1	26.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.2	1.6	1.6	0.6	0.6	0.3	7.2	5.6	6.2	2.9	20.8	21.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	51.6	44.2	44.7	53.6	49.3	48.5	56.5	17.0	17.2	52.0	55.7	56.1
LnGrp LOS	D	D	D	D	D	D	E	B	B	D	E	E
Approach Vol, veh/h		249			56			1477			1533	
Approach Delay, s/veh		47.9			50.8			23.8			55.6	
Approach LOS		D			D			C			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.0	61.6	9.3	18.8	25.1	52.5	15.6	12.5
Change Period (Y+Rc), s	7.5	7.5	6.5	6.5	7.5	7.5	6.5	6.5
Max Green Setting (Gmax), s	25.0	45.0	20.0	35.0	25.0	45.0	20.0	35.0
Max Q Clear Time (g_c+I1), s	8.7	18.7	3.3	6.1	17.4	44.9	9.3	3.3
Green Ext Time (p_c), s	0.1	11.7	0.0	0.9	0.2	0.1	0.1	0.2

Intersection Summary	
HCM 6th Ctrl Delay	40.8
HCM 6th LOS	D

HCM 6th Signalized Intersection Summary
35: Euclid Ave & Edison Ave

03/18/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	190	519	304	59	360	157	249	1165	96	123	1021	145
Future Volume (veh/h)	190	519	304	59	360	157	249	1165	96	123	1021	145
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.97	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	198	541	141	61	375	153	259	1214	52	128	1064	59
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	111	620	517	115	416	170	331	1370	594	165	1359	596
Arrive On Green	0.34	0.34	0.34	0.34	0.34	0.34	0.10	0.39	0.39	0.09	0.39	0.39
Sat Flow, veh/h	860	1841	1532	747	1235	504	3401	3497	1516	1753	3497	1534
Grp Volume(v), veh/h	198	541	141	61	0	528	259	1214	52	128	1064	59
Grp Sat Flow(s),veh/h/ln	860	1841	1532	747	0	1739	1700	1749	1516	1753	1749	1534
Q Serve(g_s), s	5.0	28.7	7.0	6.3	0.0	30.0	7.7	33.6	2.2	7.4	27.8	2.5
Cycle Q Clear(g_c), s	35.0	28.7	7.0	35.0	0.0	30.0	7.7	33.6	2.2	7.4	27.8	2.5
Prop In Lane	1.00		1.00	1.00		0.29	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	111	620	517	115	0	586	331	1370	594	165	1359	596
V/C Ratio(X)	1.79	0.87	0.27	0.53	0.00	0.90	0.78	0.89	0.09	0.78	0.78	0.10
Avail Cap(c_a), veh/h	111	620	517	115	0	586	819	1516	657	422	1516	665
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	51.0	32.3	25.1	49.5	0.0	32.8	45.8	29.4	19.9	46.0	27.9	20.2
Incr Delay (d2), s/veh	388.4	12.9	0.3	4.6	0.0	17.0	1.6	6.3	0.1	3.0	2.5	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	14.7	14.1	2.5	1.7	0.0	14.6	3.2	13.8	0.7	3.2	10.9	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	439.4	45.2	25.4	54.1	0.0	49.8	47.4	35.7	19.9	49.0	30.4	20.3
LnGrp LOS	F	D	C	D	A	D	D	D	B	D	C	C
Approach Vol, veh/h		880			589			1525			1251	
Approach Delay, s/veh		130.7			50.2			37.1			31.8	
Approach LOS		F			D			D			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	14.5	47.2		42.2	14.8	46.8		42.2				
Change Period (Y+Rc), s	* 4.7	6.5		7.2	* 4.7	6.5		7.2				
Max Green Setting (Gmax), s	* 25	45.0		30.0	* 25	45.0		35.0				
Max Q Clear Time (g_c+I1), s	9.4	35.6		37.0	9.7	29.8		37.0				
Green Ext Time (p_c), s	0.1	5.1		0.0	0.4	6.0		0.0				

Intersection Summary	
HCM 6th Ctrl Delay	56.8
HCM 6th LOS	E

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	118	854	177	196	359	260	78	1001	295	244	1074	72
Future Volume (veh/h)	118	854	177	196	359	260	78	1001	295	244	1074	72
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	128	928	0	213	390	118	85	1088	0	265	1167	39
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	206	1025		310	596	496	113	1054		310	1447	627
Arrive On Green	0.06	0.29	0.00	0.09	0.32	0.32	0.06	0.30	0.00	0.18	0.41	0.41
Sat Flow, veh/h	3401	3497	1560	3401	1841	1532	1753	3497	1560	1753	3497	1517
Grp Volume(v), veh/h	128	928	0	213	390	118	85	1088	0	265	1167	39
Grp Sat Flow(s),veh/h/ln	1700	1749	1560	1700	1841	1532	1753	1749	1560	1753	1749	1517
Q Serve(g_s), s	4.3	29.7	0.0	7.1	21.1	6.6	5.5	35.0	0.0	17.0	34.1	1.8
Cycle Q Clear(g_c), s	4.3	29.7	0.0	7.1	21.1	6.6	5.5	35.0	0.0	17.0	34.1	1.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	206	1025		310	596	496	113	1054		310	1447	627
V/C Ratio(X)	0.62	0.91		0.69	0.65	0.24	0.75	1.03		0.85	0.81	0.06
Avail Cap(c_a), veh/h	1025	1054		1025	596	496	528	1054		528	1447	627
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.3	39.5	0.0	51.2	33.7	28.8	53.4	40.6	0.0	46.4	30.0	20.5
Incr Delay (d2), s/veh	6.4	11.6	0.0	5.6	3.5	0.5	19.1	36.5	0.0	13.2	3.9	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	13.7	0.0	3.1	9.5	2.4	2.9	19.3	0.0	8.2	13.9	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	59.7	51.1	0.0	56.8	37.3	29.3	72.5	77.1	0.0	59.6	33.9	20.6
LnGrp LOS	E	D		E	D	C	E	F		E	C	C
Approach Vol, veh/h		1056	A		721			1173	A		1471	
Approach Delay, s/veh		52.1			41.7			76.7			38.2	
Approach LOS		D			D			E			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	24.6	39.0	14.6	38.0	11.5	52.1	11.0	41.6
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0
Max Q Clear Time (g_c+I1), s	19.0	37.0	9.1	31.7	7.5	36.1	6.3	23.1
Green Ext Time (p_c), s	1.5	0.0	1.6	2.4	0.5	0.0	0.9	3.6

Intersection Summary	
HCM 6th Ctrl Delay	52.3
HCM 6th LOS	D

Notes

Unsignalized Delay for [NBR, EBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary
38: Haven Ave & Ontario Ranch Rd

03/18/2024

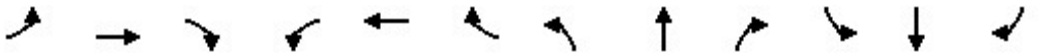
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	223	1190	52	366	896	225	35	276	195	216	506	75
Future Volume (veh/h)	223	1190	52	366	896	225	35	276	195	216	506	75
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.97	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	232	1240	17	381	933	66	36	288	45	225	527	72
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	258	1522	464	440	1805	431	72	380	315	252	954	130
Arrive On Green	0.15	0.30	0.30	0.13	0.28	0.28	0.04	0.21	0.21	0.14	0.31	0.31
Sat Flow, veh/h	1753	5025	1531	3401	6332	1511	1753	1841	1527	1753	3085	420
Grp Volume(v), veh/h	232	1240	17	381	933	66	36	288	45	225	298	301
Grp Sat Flow(s),veh/h/ln	1753	1675	1531	1700	1583	1511	1753	1841	1527	1753	1749	1756
Q Serve(g_s), s	15.5	27.3	0.9	13.1	14.8	3.9	2.4	17.6	2.9	15.1	17.0	17.1
Cycle Q Clear(g_c), s	15.5	27.3	0.9	13.1	14.8	3.9	2.4	17.6	2.9	15.1	17.0	17.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.24
Lane Grp Cap(c), veh/h	258	1522	464	440	1805	431	72	380	315	252	541	543
V/C Ratio(X)	0.90	0.81	0.04	0.87	0.52	0.15	0.50	0.76	0.14	0.89	0.55	0.55
Avail Cap(c_a), veh/h	293	1682	512	569	2119	506	293	724	600	293	688	690
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.1	38.6	29.4	51.0	35.8	32.0	56.1	44.6	38.8	50.3	34.4	34.4
Incr Delay (d2), s/veh	24.6	3.2	0.0	9.0	0.3	0.2	2.0	1.2	0.1	23.2	0.3	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.3	11.1	0.3	5.9	5.4	1.4	1.1	7.9	1.0	8.0	7.0	7.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	74.6	41.7	29.4	60.0	36.2	32.2	58.2	45.8	38.8	73.5	34.7	34.7
LnGrp LOS	E	D	C	E	D	C	E	D	D	E	C	C
Approach Vol, veh/h		1489			1380			369			824	
Approach Delay, s/veh		46.7			42.6			46.1			45.3	
Approach LOS		D			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	23.7	31.2	22.0	42.7	11.4	43.5	24.1	40.6
Change Period (Y+Rc), s	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
Max Green Setting (Gmax), s	20.0	47.0	20.0	40.0	20.0	47.0	20.0	40.0
Max Q Clear Time (g_c+I1), s	17.1	19.6	15.1	29.3	4.4	19.1	17.5	16.8
Green Ext Time (p_c), s	0.1	1.0	0.3	6.9	0.0	2.1	0.1	8.6

Intersection Summary	
HCM 6th Ctrl Delay	45.0
HCM 6th LOS	D

HCM 6th Signalized Intersection Summary
39: Hamner Ave & Ontario Ranch Rd

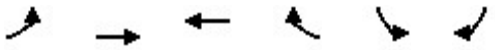
03/18/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	122	1183	291	675	1002	203	399	486	437	334	663	141
Future Volume (veh/h)	122	1183	291	675	1002	203	399	486	437	334	663	141
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	127	1232	103	703	1044	129	416	506	134	348	691	44
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	175	1152	350	747	1390	610	465	1191	362	399	761	333
Arrive On Green	0.05	0.23	0.23	0.22	0.40	0.40	0.14	0.24	0.24	0.12	0.22	0.22
Sat Flow, veh/h	3401	5025	1528	3401	3497	1534	3401	5025	1529	3401	3497	1528
Grp Volume(v), veh/h	127	1232	103	703	1044	129	416	506	134	348	691	44
Grp Sat Flow(s),veh/h/ln	1700	1675	1528	1700	1749	1534	1700	1675	1529	1700	1749	1528
Q Serve(g_s), s	5.6	35.0	8.5	31.0	39.1	8.4	18.4	13.0	11.2	15.4	29.4	3.5
Cycle Q Clear(g_c), s	5.6	35.0	8.5	31.0	39.1	8.4	18.4	13.0	11.2	15.4	29.4	3.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	175	1152	350	747	1390	610	465	1191	362	399	761	333
V/C Ratio(X)	0.73	1.07	0.29	0.94	0.75	0.21	0.89	0.42	0.37	0.87	0.91	0.13
Avail Cap(c_a), veh/h	780	1152	350	780	1390	610	557	1191	362	557	802	350
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	71.3	58.8	48.6	58.6	39.5	30.2	64.8	49.4	48.7	66.2	58.2	48.1
Incr Delay (d2), s/veh	4.2	47.1	0.6	18.8	2.4	0.2	14.5	0.3	0.7	9.7	13.9	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	19.3	3.2	14.8	16.5	3.1	8.7	5.4	4.3	7.1	14.1	1.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	75.6	105.9	49.2	77.3	41.9	30.4	79.2	49.7	49.4	75.9	72.1	48.3
LnGrp LOS	E	F	D	E	D	C	E	D	D	E	E	D
Approach Vol, veh/h		1462			1876			1056			1083	
Approach Delay, s/veh		99.2			54.4			61.3			72.3	
Approach LOS		F			D			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	41.0	42.5	28.4	40.7	15.3	68.2	25.4	43.7
Change Period (Y+Rc), s	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5
Max Green Setting (Gmax), s	35.0	35.0	25.0	35.0	35.0	35.0	25.0	25.0
Max Q Clear Time (g_c+I1), s	33.0	37.0	20.4	31.4	7.6	41.1	17.4	15.0
Green Ext Time (p_c), s	0.5	0.0	0.5	1.6	0.3	0.0	0.6	2.6

Intersection Summary	
HCM 6th Ctrl Delay	71.2
HCM 6th LOS	E



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑	↑↑		↰↰	↱
Traffic Volume (veh/h)	0	1406	893	0	291	1664
Future Volume (veh/h)	0	1406	893	0	291	1664
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	0	1841	1841	0	1841	1841
Adj Flow Rate, veh/h	0	1654	1051	0	342	1918
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	0	4	4	0	4	4
Cap, veh/h	0	1999	1391	0	749	1333
Arrive On Green	0.00	0.40	0.40	0.00	0.43	0.43
Sat Flow, veh/h	0	5356	3681	0	1753	3120
Grp Volume(v), veh/h	0	1654	1051	0	342	1918
Grp Sat Flow(s),veh/h/ln	0	1675	1749	0	1753	1560
Q Serve(g_s), s	0.0	20.8	18.2	0.0	9.8	30.0
Cycle Q Clear(g_c), s	0.0	20.8	18.2	0.0	9.8	30.0
Prop In Lane	0.00			0.00	1.00	1.00
Lane Grp Cap(c), veh/h	0	1999	1391	0	749	1333
V/C Ratio(X)	0.00	0.83	0.76	0.00	0.46	1.44
Avail Cap(c_a), veh/h	0	2146	1494	0	749	1333
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	19.0	18.2	0.0	14.3	20.1
Incr Delay (d2), s/veh	0.0	2.7	2.1	0.0	0.4	202.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	6.9	6.2	0.0	3.3	46.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.0	21.7	20.3	0.0	14.8	222.2
LnGrp LOS	A	C	C	A	B	F
Approach Vol, veh/h		1654	1051		2260	
Approach Delay, s/veh		21.7	20.3		190.8	
Approach LOS		C	C		F	

Timer - Assigned Phs	2	4	6
Phs Duration (G+Y+Rc), s	34.7	35.5	34.7
Change Period (Y+Rc), s	6.8	5.5	6.8
Max Green Setting (Gmax), s	30.0	30.0	30.0
Max Q Clear Time (g_c+I1), s	22.8	32.0	20.2
Green Ext Time (p_c), s	5.2	0.0	4.5

Intersection Summary	
HCM 6th Ctrl Delay	98.4
HCM 6th LOS	F

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	618	1106	265	390	639	118
Future Volume (veh/h)	618	1106	265	390	639	118
Initial Q (Qb), veh	0	105	0	0	0	76
Ped-Bike Adj(A_pbT)		0.97	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	702	1158	301	443	726	58
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	4	4	4	4	4	4
Cap, veh/h	1717	1026	404	2656	1122	478
Arrive On Green	0.38	0.38	0.12	0.58	0.25	0.25
Sat Flow, veh/h	5191	1516	3401	5191	3506	1560
Grp Volume(v), veh/h	702	1158	301	443	726	58
Grp Sat Flow(s),veh/h/ln	1675	1516	1700	1675	1753	1560
Q Serve(g_s), s	8.0	30.0	6.7	3.2	15.4	2.3
Cycle Q Clear(g_c), s	8.0	30.0	6.7	3.2	15.4	2.3
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1717	1026	404	2656	1122	478
V/C Ratio(X)	0.41	1.13	0.75	0.17	0.65	0.12
Avail Cap(c_a), veh/h	1909	971	1292	2905	1332	593
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.2	10.0	37.5	10.8	25.6	27.5
Incr Delay (d2), s/veh	0.2	70.7	2.8	0.0	0.8	0.1
Initial Q Delay(d3),s/veh	0.0	368.6	0.0	0.0	0.0	207.5
%ile BackOfQ(50%),veh/ln	3.3	146.6	3.0	1.2	6.5	35.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	22.4	449.2	40.3	10.8	26.5	235.1
LnGrp LOS	C	F	D	B	C	F
Approach Vol, veh/h	1860			744	784	
Approach Delay, s/veh	288.1			22.7	41.9	
Approach LOS	F			C	D	

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	15.6	37.3				52.9	26.0
Change Period (Y+Rc), s	6.0	7.3				7.3	6.0
Max Green Setting (Gmax), s	30.0	30.0				30.0	30.0
Max Q Clear Time (g_c+I1), s	8.7	32.0				5.2	17.4
Green Ext Time (p_c), s	0.9	0.0				2.6	2.6

Intersection Summary		
HCM 6th Ctrl Delay	172.9	
HCM 6th LOS	F	

Notes
User approved pedestrian interval to be less than phase max green.
User approved volume balancing among the lanes for turning movement.

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	8	16	333	27	45	243
Future Volume (veh/h)	8	16	333	27	45	243
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		0.97	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	8	17	351	28	47	256
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	56	50	1184	355	99	2717
Arrive On Green	0.03	0.03	0.23	0.23	0.06	0.54
Sat Flow, veh/h	1767	1572	5233	1520	1767	5233
Grp Volume(v), veh/h	8	17	351	28	47	256
Grp Sat Flow(s),veh/h/ln	1767	1572	1689	1520	1767	1689
Q Serve(g_s), s	0.1	0.3	1.4	0.3	0.6	0.6
Cycle Q Clear(g_c), s	0.1	0.3	1.4	0.3	0.6	0.6
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	56	50	1184	355	99	2717
V/C Ratio(X)	0.14	0.34	0.30	0.08	0.48	0.09
Avail Cap(c_a), veh/h	2325	2069	4061	1218	509	6769
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	11.4	11.5	7.7	7.3	11.1	2.8
Incr Delay (d2), s/veh	1.1	3.9	0.1	0.1	3.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.1	0.2	0.0	0.2	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	12.6	15.4	7.8	7.4	14.7	2.8
LnGrp LOS	B	B	A	A	B	A
Approach Vol, veh/h	25		379			303
Approach Delay, s/veh	14.5		7.8			4.6
Approach LOS	B		A			A

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	7.4	11.7				19.0	5.3
Change Period (Y+Rc), s	6.0	6.0				6.0	4.5
Max Green Setting (Gmax), s	7.0	19.5				32.5	32.0
Max Q Clear Time (g_c+I1), s	2.6	3.4				2.6	2.3
Green Ext Time (p_c), s	0.0	1.9				1.5	0.0

Intersection Summary	
HCM 6th Ctrl Delay	6.7
HCM 6th LOS	A

Intersection	
Intersection Delay, s/veh	7.7
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	77	0	7	58	3	0	41	11	4	17	0
Future Vol, veh/h	0	77	0	7	58	3	0	41	11	4	17	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles, %	8	8	8	8	8	8	8	8	8	8	8	8
Mvmt Flow	0	82	0	7	62	3	0	44	12	4	18	0
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	7.7	7.7	7.6	7.6
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	0%	0%	10%	19%
Vol Thru, %	79%	100%	85%	81%
Vol Right, %	21%	0%	4%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	52	77	68	21
LT Vol	0	0	7	4
Through Vol	41	77	58	17
RT Vol	11	0	3	0
Lane Flow Rate	55	82	72	22
Geometry Grp	1	1	1	1
Degree of Util (X)	0.064	0.096	0.085	0.027
Departure Headway (Hd)	4.192	4.226	4.228	4.384
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	841	840	840	803
Service Time	2.283	2.288	2.291	2.483
HCM Lane V/C Ratio	0.065	0.098	0.086	0.027
HCM Control Delay	7.6	7.7	7.7	7.6
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.2	0.3	0.3	0.1

Intersection	
Intersection Delay, s/veh	11.9
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	35	100	22	35	101	21	7	146	162	49	129	24
Future Vol, veh/h	35	100	22	35	101	21	7	146	162	49	129	24
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	8	8	8	8	8	8	8	8	8	8	8	8
Mvmt Flow	38	109	24	38	110	23	8	159	176	53	140	26
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	11.1	11.1	12.9	11.4
HCM LOS	B	B	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	2%	22%	22%	24%
Vol Thru, %	46%	64%	64%	64%
Vol Right, %	51%	14%	13%	12%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	315	157	157	202
LT Vol	7	35	35	49
Through Vol	146	100	101	129
RT Vol	162	22	21	24
Lane Flow Rate	342	171	171	220
Geometry Grp	1	1	1	1
Degree of Util (X)	0.485	0.276	0.276	0.338
Departure Headway (Hd)	5.102	5.818	5.82	5.55
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	705	616	616	646
Service Time	3.147	3.87	3.874	3.6
HCM Lane V/C Ratio	0.485	0.278	0.278	0.341
HCM Control Delay	12.9	11.1	11.1	11.4
HCM Lane LOS	B	B	B	B
HCM 95th-tile Q	2.7	1.1	1.1	1.5

Intersection	
Intersection Delay, s/veh	156.6
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	52	716	33	57	407	17	85	32	83	20	14	23
Future Vol, veh/h	52	716	33	57	407	17	85	32	83	20	14	23
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles, %	4	4	4	4	4	4	4	4	4	4	4	4
Mvmt Flow	59	814	38	65	463	19	97	36	94	23	16	26
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	265.9	49.4	17.6	13.6
HCM LOS	F	E	C	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	42%	6%	12%	35%
Vol Thru, %	16%	89%	85%	25%
Vol Right, %	41%	4%	4%	40%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	200	801	481	57
LT Vol	85	52	57	20
Through Vol	32	716	407	14
RT Vol	83	33	17	23
Lane Flow Rate	227	910	547	65
Geometry Grp	1	1	1	1
Degree of Util (X)	0.45	1.534	0.927	0.141
Departure Headway (Hd)	8.103	6.069	6.854	9.103
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	448	601	536	396
Service Time	6.103	4.14	4.854	7.103
HCM Lane V/C Ratio	0.507	1.514	1.021	0.164
HCM Control Delay	17.6	265.9	49.4	13.6
HCM Lane LOS	C	F	E	B
HCM 95th-tile Q	2.3	46.4	11.3	0.5

Intersection	
Int Delay, s/veh	87.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	40	964	32	102	695	16	24	21	215	5	14	32
Future Vol, veh/h	40	964	32	102	695	16	24	21	215	5	14	32
Conflicting Peds, #/hr	5	0	5	5	0	5	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	127	-	-	143	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	42	1015	34	107	732	17	25	22	226	5	15	34

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	754	0	0	1054	0	0	1709	2089	1037	2200	2098	380
Stage 1	-	-	-	-	-	-	1121	1121	-	960	960	-
Stage 2	-	-	-	-	-	-	588	968	-	1240	1138	-
Critical Hdwy	4.145	-	-	4.145	-	-	7.345	6.545	6.245	7.345	6.545	6.945
Critical Hdwy Stg 1	-	-	-	-	-	-	6.145	5.545	-	6.545	5.545	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.545	5.545	-	6.145	5.545	-
Follow-up Hdwy	2.2285	-	-	2.2285	-	-	3.5285	4.0285	3.3285	3.5285	4.0285	3.3285
Pot Cap-1 Maneuver	849	-	-	654	-	-	64	52	278	28	51	616
Stage 1	-	-	-	-	-	-	248	279	-	275	332	-
Stage 2	-	-	-	-	-	-	461	329	-	212	274	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	845	-	-	651	-	-	37	41	277	~ 3	40	613
Mov Cap-2 Maneuver	-	-	-	-	-	-	37	41	-	~ 3	40	-
Stage 1	-	-	-	-	-	-	235	264	-	260	276	-
Stage 2	-	-	-	-	-	-	345	274	-	34	259	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.4	1.5	$ 548.7	$ 860.8
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	134	845	-	-	651	-	-	25
HCM Lane V/C Ratio	2.042	0.05	-	-	0.165	-	-	2.147
HCM Control Delay (s)	$ 548.7	9.5	-	-	11.6	-	-	$ 860.8
HCM Lane LOS	F	A	-	-	B	-	-	F
HCM 95th %tile Q(veh)	22.1	0.2	-	-	0.6	-	-	6.6

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	66.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	23	1042	164	50	684	23	94	16	87	12	2	23
Future Vol, veh/h	23	1042	164	50	684	23	94	16	87	12	2	23
Conflicting Peds, #/hr	5	0	5	5	0	5	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	69	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	98	98	98	98	98	98	98	98	98	98	98	98
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	23	1063	167	51	698	23	96	16	89	12	2	23

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	726	0	0	1235	0	0	1650	2026	1152	2062	2098	366
Stage 1	-	-	-	-	-	-	1198	1198	-	817	817	-
Stage 2	-	-	-	-	-	-	452	828	-	1245	1281	-
Critical Hdwy	4.145	-	-	4.145	-	-	7.345	6.545	6.245	7.345	6.545	6.945
Critical Hdwy Stg 1	-	-	-	-	-	-	6.145	5.545	-	6.545	5.545	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.545	5.545	-	6.145	5.545	-
Follow-up Hdwy	2.2285	-	-	2.2285	-	-	3.5285	4.0285	3.3285	3.5285	4.0285	3.3285
Pot Cap-1 Maneuver	869	-	-	557	-	-	~ 71	57	238	35	51	629
Stage 1	-	-	-	-	-	-	224	256	-	336	387	-
Stage 2	-	-	-	-	-	-	555	383	-	211	234	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	865	-	-	554	-	-	~ 60	50	237	15	45	626
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 60	50	-	15	45	-
Stage 1	-	-	-	-	-	-	217	248	-	326	349	-
Stage 2	-	-	-	-	-	-	482	346	-	120	227	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.2	0.8	$ 701.8	255.6
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	87	865	-	-	554	-	-	42
HCM Lane V/C Ratio	2.311	0.027	-	-	0.092	-	-	0.899
HCM Control Delay (s)	$ 701.8	9.3	-	-	12.2	-	-	255.6
HCM Lane LOS	F	A	-	-	B	-	-	F
HCM 95th %tile Q(veh)	18.4	0.1	-	-	0.3	-	-	3.5

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	3.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	18	1105	16	17	725	40	15	3	24	10	3	18
Future Vol, veh/h	18	1105	16	17	725	40	15	3	24	10	3	18
Conflicting Peds, #/hr	5	0	5	5	0	5	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	98	-	-	47	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	20	1201	17	18	788	43	16	3	26	11	3	20

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	836	0	0	1223	0	0	1687	2127	1215	2115	2114	421
Stage 1	-	-	-	-	-	-	1255	1255	-	851	851	-
Stage 2	-	-	-	-	-	-	432	872	-	1264	1263	-
Critical Hdwy	4.145	-	-	4.145	-	-	7.345	6.545	6.245	7.345	6.545	6.945
Critical Hdwy Stg 1	-	-	-	-	-	-	6.145	5.545	-	6.545	5.545	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.545	5.545	-	6.145	5.545	-
Follow-up Hdwy	2.2285	-	-	2.2285	-	-	3.5285	4.0285	3.3285	3.5285	4.0285	3.3285
Pot Cap-1 Maneuver	790	-	-	563	-	-	67	49	219	32	50	580
Stage 1	-	-	-	-	-	-	208	241	-	320	374	-
Stage 2	-	-	-	-	-	-	571	365	-	206	239	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	786	-	-	560	-	-	58	46	218	25	47	577
Mov Cap-2 Maneuver	-	-	-	-	-	-	58	46	-	25	47	-
Stage 1	-	-	-	-	-	-	202	234	-	310	360	-
Stage 2	-	-	-	-	-	-	529	351	-	174	232	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.2	0.3	71.5	114.7
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	97	786	-	-	560	-	-	63
HCM Lane V/C Ratio	0.471	0.025	-	-	0.033	-	-	0.535
HCM Control Delay (s)	71.5	9.7	-	-	11.6	-	-	114.7
HCM Lane LOS	F	A	-	-	B	-	-	F
HCM 95th %tile Q(veh)	2	0.1	-	-	0.1	-	-	2.2

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑			↱
Traffic Vol, veh/h	0	1566	948	22	5	12
Future Vol, veh/h	0	1566	948	22	5	12
Conflicting Peds, #/hr	5	0	0	5	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	0	1648	998	23	5	13

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	1839	516
Stage 1	-	-	-	-	1015	-
Stage 2	-	-	-	-	824	-
Critical Hdwy	-	-	-	-	6.86	6.96
Critical Hdwy Stg 1	-	-	-	-	5.86	-
Critical Hdwy Stg 2	-	-	-	-	5.86	-
Follow-up Hdwy	-	-	-	-	3.53	3.33
Pot Cap-1 Maneuver	0	-	-	-	66	501
Stage 1	0	-	-	-	309	-
Stage 2	0	-	-	-	389	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	65	499
Mov Cap-2 Maneuver	-	-	-	-	65	-
Stage 1	-	-	-	-	307	-
Stage 2	-	-	-	-	387	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	12.4
HCM LOS			B

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	499
HCM Lane V/C Ratio	-	-	-	0.025
HCM Control Delay (s)	-	-	-	12.4
HCM Lane LOS	-	-	-	B
HCM 95th %tile Q(veh)	-	-	-	0.1

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	4	1566	953	16	2	18
Future Vol, veh/h	4	1566	953	16	2	18
Conflicting Peds, #/hr	5	0	0	5	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	4	1648	1003	17	2	19

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1025	0	-	0	1849	515
Stage 1	-	-	-	-	1017	-
Stage 2	-	-	-	-	832	-
Critical Hdwy	4.16	-	-	-	6.86	6.96
Critical Hdwy Stg 1	-	-	-	-	5.86	-
Critical Hdwy Stg 2	-	-	-	-	5.86	-
Follow-up Hdwy	2.23	-	-	-	3.53	3.33
Pot Cap-1 Maneuver	667	-	-	-	65	502
Stage 1	-	-	-	-	308	-
Stage 2	-	-	-	-	385	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	664	-	-	-	60	500
Mov Cap-2 Maneuver	-	-	-	-	176	-
Stage 1	-	-	-	-	284	-
Stage 2	-	-	-	-	383	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	12.5
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	664	-	-	-	500
HCM Lane V/C Ratio	0.006	-	-	-	0.038
HCM Control Delay (s)	10.5	-	-	-	12.5
HCM Lane LOS	B	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.1

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	2	1572	968	16	25	1
Future Vol, veh/h	2	1572	968	16	25	1
Conflicting Peds, #/hr	5	0	0	5	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	2	1621	998	16	26	1

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1019	0	-	0	1826	512
Stage 1	-	-	-	-	1011	-
Stage 2	-	-	-	-	815	-
Critical Hdwy	4.16	-	-	-	6.86	6.96
Critical Hdwy Stg 1	-	-	-	-	5.86	-
Critical Hdwy Stg 2	-	-	-	-	5.86	-
Follow-up Hdwy	2.23	-	-	-	3.53	3.33
Pot Cap-1 Maneuver	671	-	-	-	68	504
Stage 1	-	-	-	-	310	-
Stage 2	-	-	-	-	393	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	668	-	-	-	67	502
Mov Cap-2 Maneuver	-	-	-	-	187	-
Stage 1	-	-	-	-	308	-
Stage 2	-	-	-	-	391	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	26.8
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	668	-	-	-	192
HCM Lane V/C Ratio	0.003	-	-	-	0.14
HCM Control Delay (s)	10.4	-	-	-	26.8
HCM Lane LOS	B	-	-	-	D
HCM 95th %tile Q(veh)	0	-	-	-	0.5

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	14	1586	973	30	34	11
Future Vol, veh/h	14	1586	973	30	34	11
Conflicting Peds, #/hr	5	0	0	5	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	350	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	15	1652	1014	31	35	11

Major/Minor	Major1			Major2			Minor2		
Conflicting Flow All	1050	0	-	0	1891	528			
Stage 1	-	-	-	-	1035	-			
Stage 2	-	-	-	-	856	-			
Critical Hdwy	4.16	-	-	-	6.86	6.96			
Critical Hdwy Stg 1	-	-	-	-	5.86	-			
Critical Hdwy Stg 2	-	-	-	-	5.86	-			
Follow-up Hdwy	2.23	-	-	-	3.53	3.33			
Pot Cap-1 Maneuver	653	-	-	-	61	492			
Stage 1	-	-	-	-	301	-			
Stage 2	-	-	-	-	374	-			
Platoon blocked, %		-	-	-					
Mov Cap-1 Maneuver	650	-	-	-	59	490			
Mov Cap-2 Maneuver	-	-	-	-	176	-			
Stage 1	-	-	-	-	293	-			
Stage 2	-	-	-	-	372	-			

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	27.1
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	650	-	-	-	209
HCM Lane V/C Ratio	0.022	-	-	-	0.224
HCM Control Delay (s)	10.7	-	-	-	27.1
HCM Lane LOS	B	-	-	-	D
HCM 95th %tile Q(veh)	0.1	-	-	-	0.8

Intersection	
Int Delay, s/veh	0.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	368	1	4	187	3	4
Future Vol, veh/h	368	1	4	187	3	4
Conflicting Peds, #/hr	0	5	5	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	150	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	8	8	8	8	8	8
Mvmt Flow	379	1	4	193	3	4

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	385	0	490	195
Stage 1	-	-	-	-	385	-
Stage 2	-	-	-	-	105	-
Critical Hdwy	-	-	4.26	-	6.96	7.06
Critical Hdwy Stg 1	-	-	-	-	5.96	-
Critical Hdwy Stg 2	-	-	-	-	5.96	-
Follow-up Hdwy	-	-	2.28	-	3.58	3.38
Pot Cap-1 Maneuver	-	-	1128	-	493	795
Stage 1	-	-	-	-	640	-
Stage 2	-	-	-	-	890	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1123	-	489	791
Mov Cap-2 Maneuver	-	-	-	-	489	-
Stage 1	-	-	-	-	637	-
Stage 2	-	-	-	-	886	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.2	10.8
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	625	-	-	1123	-
HCM Lane V/C Ratio	0.012	-	-	0.004	-
HCM Control Delay (s)	10.8	-	-	8.2	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0	-

HCM 6th Signalized Intersection Summary
1: Grove Ave & Mission Blvd

03/18/2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	255	787	124	29	760	618	213	1019	55	516	865	208
Future Volume (veh/h)	255	787	124	29	760	618	213	1019	55	516	865	208
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	258	795	34	29	768	254	215	1029	54	521	874	87
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	307	919	407	137	744	329	213	1038	54	541	2008	613
Arrive On Green	0.09	0.26	0.26	0.04	0.21	0.21	0.12	0.21	0.21	0.31	0.40	0.40
Sat Flow, veh/h	3401	3497	1551	3401	3497	1549	1753	4882	256	1753	5025	1534
Grp Volume(v), veh/h	258	795	34	29	768	254	215	706	377	521	874	87
Grp Sat Flow(s),veh/h/ln	1700	1749	1551	1700	1749	1549	1753	1675	1788	1753	1675	1534
Q Serve(g_s), s	12.3	35.7	2.7	1.4	35.0	25.4	20.0	34.6	34.7	48.1	20.8	5.9
Cycle Q Clear(g_c), s	12.3	35.7	2.7	1.4	35.0	25.4	20.0	34.6	34.7	48.1	20.8	5.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.14	1.00		1.00
Lane Grp Cap(c), veh/h	307	919	407	137	744	329	213	712	380	541	2008	613
V/C Ratio(X)	0.84	0.87	0.08	0.21	1.03	0.77	1.01	0.99	0.99	0.96	0.44	0.14
Avail Cap(c_a), veh/h	620	919	407	413	744	329	213	712	380	586	2008	613
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	73.7	57.9	45.8	76.5	64.8	61.0	72.3	64.6	64.7	56.0	35.9	31.5
Incr Delay (d2), s/veh	4.7	8.8	0.1	0.6	41.7	11.0	64.1	31.3	44.1	27.1	0.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.5	16.6	1.0	0.6	19.4	10.7	12.6	17.5	20.1	24.9	8.5	2.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	78.4	66.7	45.9	77.0	106.5	72.0	136.4	95.9	108.8	83.1	36.1	31.6
LnGrp LOS	E	E	D	E	F	E	F	F	F	F	D	C
Approach Vol, veh/h		1087			1051			1298			1482	
Approach Delay, s/veh		68.8			97.4			106.4			52.4	
Approach LOS		E			F			F			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	57.8	42.0	14.1	50.7	27.0	72.8	22.3	42.5
Change Period (Y+Rc), s	7.0	7.0	7.5	7.5	7.0	7.0	7.5	7.5
Max Green Setting (Gmax), s	55.0	35.0	20.0	35.0	20.0	35.0	30.0	35.0
Max Q Clear Time (g_c+I1), s	50.1	36.7	3.4	37.7	22.0	22.8	14.3	37.0
Green Ext Time (p_c), s	0.6	0.0	0.0	0.0	0.0	6.0	0.5	0.0

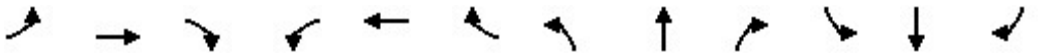
Intersection Summary	
HCM 6th Ctrl Delay	79.9
HCM 6th LOS	E

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary
2: Vineyard Ave & Mission Blvd

03/18/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	48	1077	323	49	823	4	377	42	86	4	30	43
Future Volume (veh/h)	48	1077	323	49	823	4	377	42	86	4	30	43
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	50	1122	183	51	857	4	393	44	24	4	31	0
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	107	1334	587	108	1364	6	458	950	418	442	950	
Arrive On Green	0.06	0.38	0.38	0.06	0.38	0.38	0.27	0.27	0.27	0.27	0.27	0.00
Sat Flow, veh/h	1753	3497	1539	1753	3569	17	1357	3497	1539	1312	3589	0
Grp Volume(v), veh/h	50	1122	183	51	420	441	393	44	24	4	31	0
Grp Sat Flow(s),veh/h/ln	1753	1749	1539	1753	1749	1837	1357	1749	1539	1312	1749	0
Q Serve(g_s), s	2.0	21.5	6.1	2.1	14.4	14.4	19.5	0.7	0.8	0.2	0.5	0.0
Cycle Q Clear(g_c), s	2.0	21.5	6.1	2.1	14.4	14.4	20.0	0.7	0.8	0.8	0.5	0.0
Prop In Lane	1.00		1.00	1.00		0.01	1.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	107	1334	587	108	668	702	458	950	418	442	950	
V/C Ratio(X)	0.47	0.84	0.31	0.47	0.63	0.63	0.86	0.05	0.06	0.01	0.03	
Avail Cap(c_a), veh/h	476	1425	627	476	713	749	458	950	418	442	950	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	33.4	20.7	16.0	33.4	18.5	18.5	27.9	19.8	19.8	20.1	19.7	0.0
Incr Delay (d2), s/veh	1.2	4.7	0.4	1.2	1.9	1.8	15.8	0.0	0.1	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	8.0	1.9	0.8	5.1	5.4	8.2	0.3	0.3	0.0	0.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	34.6	25.5	16.4	34.6	20.4	20.3	43.7	19.8	19.9	20.1	19.7	0.0
LnGrp LOS	C	C	B	C	C	C	D	B	B	C	B	
Approach Vol, veh/h		1355			912			461			35	A
Approach Delay, s/veh		24.6			21.2			40.2			19.8	
Approach LOS		C			C			D			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.5	35.1		27.0	11.5	35.1		27.0				
Change Period (Y+Rc), s	7.0	7.0		7.0	7.0	7.0		7.0				
Max Green Setting (Gmax), s	20.0	30.0		20.0	20.0	30.0		20.0				
Max Q Clear Time (g_c+I1), s	4.1	23.5		22.0	4.0	16.4		2.8				
Green Ext Time (p_c), s	0.0	4.6		0.0	0.0	5.4		0.1				

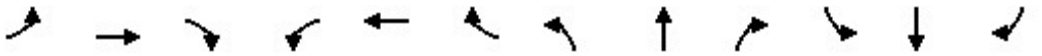
Intersection Summary	
HCM 6th Ctrl Delay	26.0
HCM 6th LOS	C

Notes

Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary
3: Vineyard Ave & Francis St

03/18/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	22	262	94	118	188	41	37	383	38	19	465	9
Future Volume (veh/h)	22	262	94	118	188	41	37	383	38	19	465	9
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	26	305	81	137	219	35	43	445	38	22	541	10
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	382	545	142	357	759	119	293	878	75	301	879	16
Arrive On Green	0.03	0.20	0.20	0.09	0.25	0.25	0.05	0.27	0.27	0.03	0.25	0.25
Sat Flow, veh/h	1753	2731	712	1753	3018	474	1753	3256	277	1753	3511	65
Grp Volume(v), veh/h	26	193	193	137	125	129	43	238	245	22	269	282
Grp Sat Flow(s),veh/h/ln	1753	1749	1694	1753	1749	1744	1753	1749	1785	1753	1749	1828
Q Serve(g_s), s	0.8	6.5	6.7	3.9	3.8	3.9	1.1	7.5	7.6	0.6	8.9	8.9
Cycle Q Clear(g_c), s	0.8	6.5	6.7	3.9	3.8	3.9	1.1	7.5	7.6	0.6	8.9	8.9
Prop In Lane	1.00		0.42	1.00		0.27	1.00		0.16	1.00		0.04
Lane Grp Cap(c), veh/h	382	349	338	357	440	439	293	472	481	301	438	457
V/C Ratio(X)	0.07	0.55	0.57	0.38	0.28	0.29	0.15	0.50	0.51	0.07	0.62	0.62
Avail Cap(c_a), veh/h	738	952	922	622	952	949	609	938	957	651	938	980
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.4	23.5	23.6	18.4	19.7	19.7	17.0	20.1	20.2	17.4	21.7	21.7
Incr Delay (d2), s/veh	0.1	1.9	2.1	0.7	0.5	0.5	0.3	1.2	1.2	0.1	2.0	1.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	2.5	2.5	1.4	1.4	1.4	0.4	2.8	2.9	0.2	3.4	3.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	19.5	25.4	25.7	19.1	20.2	20.3	17.3	21.3	21.3	17.5	23.7	23.6
LnGrp LOS	B	C	C	B	C	C	B	C	C	B	C	C
Approach Vol, veh/h		412			391			526			573	
Approach Delay, s/veh		25.2			19.8			21.0			23.4	
Approach LOS		C			B			C			C	

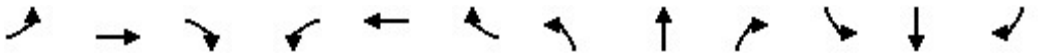
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.0	24.6	12.1	19.5	10.2	23.3	8.8	22.9
Change Period (Y+Rc), s	7.0	7.0	6.5	6.5	7.0	7.0	6.5	6.5
Max Green Setting (Gmax), s	15.0	35.0	15.5	35.5	15.0	35.0	15.5	35.5
Max Q Clear Time (g_c+I1), s	2.6	9.6	5.9	8.7	3.1	10.9	2.8	5.9
Green Ext Time (p_c), s	0.0	3.8	0.2	3.0	0.1	4.4	0.0	1.9

Intersection Summary	
HCM 6th Ctrl Delay	22.4
HCM 6th LOS	C

Min green cannot be greater than Max Green.

HCM 6th Signalized Intersection Summary
5: Euclid Ave & SR-60 WB Ramps

03/18/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	505	2	429	454	928	0	0	922	589
Future Volume (veh/h)	0	0	0	505	2	429	454	928	0	0	922	589
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		0.99
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1841	1841	1841	1841	1841	0	0	1841	1841
Adj Flow Rate, veh/h				635	0	232	473	967	0	0	960	173
Peak Hour Factor				0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %				4	4	4	4	4	0	0	4	4
Cap, veh/h				832	0	370	390	2162	0	0	1183	524
Arrive On Green				0.24	0.00	0.24	0.30	0.82	0.00	0.00	0.34	0.34
Sat Flow, veh/h				3506	0	1560	1753	3589	0	0	3589	1548
Grp Volume(v), veh/h				635	0	232	473	967	0	0	960	173
Grp Sat Flow(s),veh/h/ln				1753	0	1560	1753	1749	0	0	1749	1548
Q Serve(g_s), s				15.2	0.0	12.0	20.0	7.0	0.0	0.0	22.5	7.5
Cycle Q Clear(g_c), s				15.2	0.0	12.0	20.0	7.0	0.0	0.0	22.5	7.5
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				832	0	370	390	2162	0	0	1183	524
V/C Ratio(X)				0.76	0.00	0.63	1.21	0.45	0.00	0.00	0.81	0.33
Avail Cap(c_a), veh/h				1169	0	520	390	2162	0	0	1183	524
HCM Platoon Ratio				1.00	1.00	1.00	1.33	1.33	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.29	0.29	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				32.0	0.0	30.7	31.7	3.7	0.0	0.0	27.2	22.2
Incr Delay (d2), s/veh				2.5	0.0	2.5	103.4	0.2	0.0	0.0	6.1	1.7
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				6.6	0.0	4.7	18.5	1.7	0.0	0.0	9.7	2.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				34.5	0.0	33.2	135.1	3.9	0.0	0.0	33.3	23.9
LnGrp LOS				C	A	C	F	A	A	A	C	C
Approach Vol, veh/h					867			1440			1133	
Approach Delay, s/veh					34.1			47.0			31.8	
Approach LOS					C			D			C	

Timer - Assigned Phs	2		5	6		8						
Phs Duration (G+Y+Rc), s	61.6		25.2	36.4		28.4						
Change Period (Y+Rc), s	6.0		* 5.2	6.0		7.0						
Max Green Setting (Gmax), s	47.0		* 20	21.0		30.0						
Max Q Clear Time (g_c+I1), s	9.0		22.0	24.5		17.2						
Green Ext Time (p_c), s	11.4		0.0	0.0		4.2						

Intersection Summary	
HCM 6th Ctrl Delay	38.8
HCM 6th LOS	D

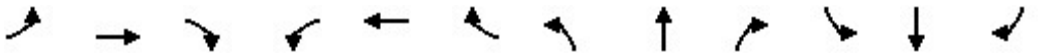
Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th Signalized Intersection Summary
6: Euclid Ave & SR-60 EB Ramps

03/18/2024



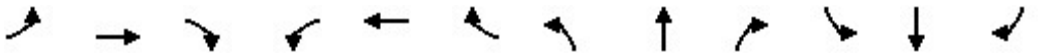
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	266	0	398	0	0	0	0	1151	419	261	1129	0
Future Volume (veh/h)	266	0	398	0	0	0	0	1151	419	261	1129	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1841	0	1841				0	1841	1841	1841	1841	0
Adj Flow Rate, veh/h	271	0	338				0	1174	147	266	1152	0
Peak Hour Factor	0.98	0.98	0.98				0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	4	0	4				0	4	4	4	4	0
Cap, veh/h	431	0	383				0	1335	591	309	2133	0
Arrive On Green	0.25	0.00	0.25				0.00	0.38	0.38	0.12	0.41	0.00
Sat Flow, veh/h	1753	0	1560				0	3589	1550	1753	3589	0
Grp Volume(v), veh/h	271	0	338				0	1174	147	266	1152	0
Grp Sat Flow(s),veh/h/ln	1753	0	1560				0	1749	1550	1753	1749	0
Q Serve(g_s), s	12.4	0.0	18.8				0.0	28.1	5.8	13.4	22.5	0.0
Cycle Q Clear(g_c), s	12.4	0.0	18.8				0.0	28.1	5.8	13.4	22.5	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	431	0	383				0	1335	591	309	2133	0
V/C Ratio(X)	0.63	0.00	0.88				0.00	0.88	0.25	0.86	0.54	0.00
Avail Cap(c_a), veh/h	487	0	433				0	1335	591	448	2133	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	0.67	0.67	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.30	0.30	0.00
Uniform Delay (d), s/veh	30.3	0.0	32.7				0.0	25.9	19.0	38.6	17.0	0.0
Incr Delay (d2), s/veh	2.7	0.0	18.2				0.0	8.5	1.0	3.7	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.4	0.0	8.8				0.0	12.3	2.1	6.2	9.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	33.0	0.0	50.9				0.0	34.4	20.0	42.4	17.3	0.0
LnGrp LOS	C	A	D				A	C	C	D	B	A
Approach Vol, veh/h		609						1321			1418	
Approach Delay, s/veh		42.9						32.8			22.0	
Approach LOS		D						C			C	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	20.5	40.3		29.1		60.9
Change Period (Y+Rc), s	* 4.7	6.0		7.0		6.0
Max Green Setting (Gmax), s	* 23	24.0		25.0		52.0
Max Q Clear Time (g_c+I1), s	15.4	30.1		20.8		24.5
Green Ext Time (p_c), s	0.5	0.0		1.3		12.6

Intersection Summary	
HCM 6th Ctrl Delay	30.1
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



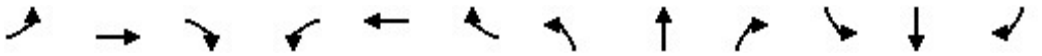
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	261	4	140	370	581	0	0	863	519
Future Volume (veh/h)	0	0	0	261	4	140	370	581	0	0	863	519
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		0.97
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1841	1841	1841	1841	1841	0	0	1841	1841
Adj Flow Rate, veh/h				278	4	32	394	618	0	0	918	448
Peak Hour Factor				0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %				4	4	4	4	4	0	0	4	4
Cap, veh/h				327	5	295	351	2328	0	0	914	439
Arrive On Green				0.19	0.19	0.19	0.40	1.00	0.00	0.00	0.40	0.40
Sat Flow, veh/h				1729	25	1560	1753	3589	0	0	2360	1089
Grp Volume(v), veh/h				282	0	32	394	618	0	0	705	661
Grp Sat Flow(s),veh/h/ln				1754	0	1560	1753	1749	0	0	1749	1608
Q Serve(g_s), s				12.4	0.0	1.4	16.0	0.0	0.0	0.0	32.2	32.3
Cycle Q Clear(g_c), s				12.4	0.0	1.4	16.0	0.0	0.0	0.0	32.2	32.3
Prop In Lane				0.99		1.00	1.00		0.00	0.00		0.68
Lane Grp Cap(c), veh/h				332	0	295	351	2328	0	0	705	648
V/C Ratio(X)				0.85	0.00	0.11	1.12	0.27	0.00	0.00	1.00	1.02
Avail Cap(c_a), veh/h				447	0	398	351	2328	0	0	705	648
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.24	0.24	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				31.3	0.0	26.8	24.0	0.0	0.0	0.0	23.9	23.9
Incr Delay (d2), s/veh				10.1	0.0	0.1	65.2	0.1	0.0	0.0	33.7	40.6
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				6.0	0.0	0.5	10.7	0.0	0.0	0.0	18.1	17.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				41.4	0.0	27.0	89.2	0.1	0.0	0.0	57.6	64.5
LnGrp LOS				D	A	C	F	A	A	A	E	F
Approach Vol, veh/h					314			1012			1366	
Approach Delay, s/veh					39.9			34.8			60.9	
Approach LOS					D			C			E	

Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		59.1			21.0	38.1		20.9				
Change Period (Y+Rc), s		5.8			5.0	5.8		5.8				
Max Green Setting (Gmax), s		48.0			16.0	27.0		20.4				
Max Q Clear Time (g_c+I1), s		2.0			18.0	34.3		14.4				
Green Ext Time (p_c), s		3.4			0.0	0.0		0.7				

Intersection Summary												
HCM 6th Ctrl Delay			48.6									
HCM 6th LOS			D									

HCM 6th Signalized Intersection Summary
8: Vineyard Ave & SR-60 EB Ramps

03/18/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	138	1	398	0	0	0	0	808	379	262	868	0
Future Volume (veh/h)	138	1	398	0	0	0	0	808	379	262	868	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		0.97	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841				0	1841	1841	1841	1841	0
Adj Flow Rate, veh/h	142	1	272				0	833	335	270	895	0
Peak Hour Factor	0.97	0.97	0.97				0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	4	4	4				0	4	4	4	4	0
Cap, veh/h	345	2	309				0	999	400	317	2297	0
Arrive On Green	0.20	0.20	0.20				0.00	0.41	0.41	0.06	0.22	0.00
Sat Flow, veh/h	1741	12	1560				0	2507	968	1753	3589	0
Grp Volume(v), veh/h	143	0	272				0	602	566	270	895	0
Grp Sat Flow(s),veh/h/ln	1754	0	1560				0	1749	1634	1753	1749	0
Q Serve(g_s), s	5.7	0.0	13.5				0.0	24.7	24.8	12.2	17.5	0.0
Cycle Q Clear(g_c), s	5.7	0.0	13.5				0.0	24.7	24.8	12.2	17.5	0.0
Prop In Lane	0.99		1.00				0.00		0.59	1.00		0.00
Lane Grp Cap(c), veh/h	347	0	309				0	723	676	317	2297	0
V/C Ratio(X)	0.41	0.00	0.88				0.00	0.83	0.84	0.85	0.39	0.00
Avail Cap(c_a), veh/h	381	0	339				0	723	676	592	2297	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	0.33	0.33	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.09	0.09	0.00
Uniform Delay (d), s/veh	28.0	0.0	31.2				0.0	21.0	21.0	36.5	17.6	0.0
Incr Delay (d2), s/veh	0.6	0.0	20.6				0.0	10.9	11.8	0.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	0.0	6.7				0.0	10.9	10.4	5.5	8.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	28.6	0.0	51.8				0.0	31.8	32.8	36.8	17.7	0.0
LnGrp LOS	C	A	D				A	C	C	D	B	A
Approach Vol, veh/h		415						1168			1165	
Approach Delay, s/veh		43.8						32.3			22.1	
Approach LOS		D						C			C	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	19.5	38.9		21.6		58.4
Change Period (Y+Rc), s	5.0	5.8		5.8		5.8
Max Green Setting (Gmax), s	27.0	19.0		17.4		51.0
Max Q Clear Time (g_c+I1), s	14.2	26.8		15.5		19.5
Green Ext Time (p_c), s	0.3	0.0		0.3		5.2

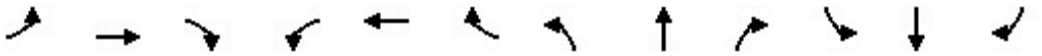
Intersection Summary	
HCM 6th Ctrl Delay	29.7
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary
9: Archibald Ave & SR-60 WB Ramps

03/18/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	900	5	250	539	455	0	0	1117	252
Future Volume (veh/h)	0	0	0	900	5	250	539	455	0	0	1117	252
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		0.97
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1781	1781	1781	1781	1781	0	0	1781	1781
Adj Flow Rate, veh/h				986	0	58	573	484	0	0	1188	81
Peak Hour Factor				0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %				8	8	8	8	8	0	0	8	8
Cap, veh/h				845	0	376	951	3026	0	0	1702	406
Arrive On Green				0.25	0.00	0.25	0.48	1.00	0.00	0.00	0.28	0.28
Sat Flow, veh/h				3393	0	1510	3291	5024	0	0	6378	1462
Grp Volume(v), veh/h				986	0	58	573	484	0	0	1188	81
Grp Sat Flow(s),veh/h/ln				1697	0	1510	1646	1621	0	0	1532	1462
Q Serve(g_s), s				22.4	0.0	2.7	11.4	0.0	0.0	0.0	15.6	3.8
Cycle Q Clear(g_c), s				22.4	0.0	2.7	11.4	0.0	0.0	0.0	15.6	3.8
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				845	0	376	951	3026	0	0	1702	406
V/C Ratio(X)				1.17	0.00	0.15	0.60	0.16	0.00	0.00	0.70	0.20
Avail Cap(c_a), veh/h				845	0	376	951	3026	0	0	1702	406
HCM Platoon Ratio				1.00	1.00	1.00	1.67	1.67	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.74	0.74	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				33.8	0.0	26.4	19.5	0.0	0.0	0.0	29.1	24.8
Incr Delay (d2), s/veh				88.1	0.0	0.9	2.1	0.1	0.0	0.0	2.4	1.1
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				19.3	0.0	2.6	3.7	0.0	0.0	0.0	5.6	1.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				121.9	0.0	27.3	21.6	0.1	0.0	0.0	31.5	25.9
LnGrp LOS				F	A	C	C	A	A	A	C	C
Approach Vol, veh/h					1044			1057			1269	
Approach Delay, s/veh					116.6			11.8			31.2	
Approach LOS					F			B			C	

Timer - Assigned Phs	2	4	5	6
Phs Duration (G+Y+Rc), s	61.8	28.2	31.0	30.8
Change Period (Y+Rc), s	5.8	5.8	5.0	5.8
Max Green Setting (Gmax), s	56.0	22.4	26.0	25.0
Max Q Clear Time (g_c+I1), s	2.0	24.4	13.4	17.6
Green Ext Time (p_c), s	3.3	0.0	0.9	4.3

Intersection Summary	
HCM 6th Ctrl Delay	51.6
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

User approved volume balancing among the lanes for turning movement.

HCM 6th Signalized Intersection Summary
10: Archibald Ave & SR 60 EB Ramps

03/18/2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	84	5	494	0	0	0	0	977	920	448	1565	0
Future Volume (veh/h)	84	5	494	0	0	0	0	977	920	448	1565	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		0.97	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1781	1781	1781				0	1781	1781	1781	1781	0
Adj Flow Rate, veh/h	60	0	465				0	1018	505	467	1630	0
Peak Hour Factor	0.96	0.96	0.96				0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	8	8	8				0	8	8	8	8	0
Cap, veh/h	498	0	886				0	1566	373	878	2810	0
Arrive On Green	0.29	0.00	0.29				0.00	0.26	0.26	0.09	0.19	0.00
Sat Flow, veh/h	1697	0	3019				0	6378	1461	3291	5024	0
Grp Volume(v), veh/h	60	0	465				0	1018	505	467	1630	0
Grp Sat Flow(s),veh/h/ln	1697	0	1510				0	1532	1461	1646	1621	0
Q Serve(g_s), s	2.3	0.0	11.6				0.0	13.3	23.0	12.2	27.4	0.0
Cycle Q Clear(g_c), s	2.3	0.0	11.6				0.0	13.3	23.0	12.2	27.4	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	498	0	886				0	1566	373	878	2810	0
V/C Ratio(X)	0.12	0.00	0.53				0.00	0.65	1.35	0.53	0.58	0.00
Avail Cap(c_a), veh/h	498	0	886				0	1566	373	878	2810	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	0.33	0.33	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.37	0.37	0.00
Uniform Delay (d), s/veh	23.3	0.0	26.6				0.0	29.9	33.5	35.7	26.5	0.0
Incr Delay (d2), s/veh	0.5	0.0	2.2				0.0	2.1	175.5	0.9	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	0.0	4.3				0.0	4.8	25.7	5.3	11.7	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.8	0.0	28.8				0.0	32.0	209.0	36.5	26.8	0.0
LnGrp LOS	C	A	C				A	C	F	D	C	A
Approach Vol, veh/h		525						1523			2097	
Approach Delay, s/veh		28.2						90.7			29.0	
Approach LOS		C						F			C	

Timer - Assigned Phs	1	2				6		8				
Phs Duration (G+Y+Rc), s	29.0	28.8				57.8		32.2				
Change Period (Y+Rc), s	5.0	5.8				5.8		5.8				
Max Green Setting (Gmax), s	24.0	23.0				52.0		26.4				
Max Q Clear Time (g_c+I1), s	14.2	25.0				29.4		13.6				
Green Ext Time (p_c), s	0.7	0.0				12.1		1.8				

Intersection Summary			
HCM 6th Ctrl Delay			51.6
HCM 6th LOS			D

Notes
User approved pedestrian interval to be less than phase max green.
User approved volume balancing among the lanes for turning movement.

HCM 6th Signalized Intersection Summary
11: Archibald Ave & Walnut St

03/18/2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	18	10	47	28	26	77	109	1561	43	91	1541	21
Future Volume (veh/h)	18	10	47	28	26	77	109	1561	43	91	1541	21
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.98		0.95	0.98		0.95	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781
Adj Flow Rate, veh/h	19	11	5	30	28	10	116	1661	45	97	1639	22
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	8	8	8	8	8	8	8	8	8	8	8	8
Cap, veh/h	206	136	62	224	147	53	144	2827	77	122	2809	38
Arrive On Green	0.12	0.12	0.12	0.12	0.12	0.12	0.08	0.58	0.58	0.07	0.57	0.57
Sat Flow, veh/h	1276	1140	518	1299	1236	441	1697	4863	132	1697	4943	66
Grp Volume(v), veh/h	19	0	16	30	0	38	116	1107	599	97	1075	586
Grp Sat Flow(s),veh/h/ln	1276	0	1659	1299	0	1677	1697	1621	1753	1697	1621	1767
Q Serve(g_s), s	1.2	0.0	0.8	1.9	0.0	1.8	6.0	19.5	19.6	5.1	19.3	19.3
Cycle Q Clear(g_c), s	3.1	0.0	0.8	2.7	0.0	1.8	6.0	19.5	19.6	5.1	19.3	19.3
Prop In Lane	1.00		0.31	1.00		0.26	1.00		0.08	1.00		0.04
Lane Grp Cap(c), veh/h	206	0	198	224	0	200	144	1885	1019	122	1843	1004
V/C Ratio(X)	0.09	0.00	0.08	0.13	0.00	0.19	0.81	0.59	0.59	0.80	0.58	0.58
Avail Cap(c_a), veh/h	369	0	409	389	0	414	183	1885	1019	183	1843	1004
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.1	0.0	35.3	36.4	0.0	35.7	40.5	12.0	12.0	41.1	12.5	12.5
Incr Delay (d2), s/veh	0.1	0.0	0.1	0.2	0.0	0.3	14.7	1.4	2.5	7.3	1.4	2.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.0	0.3	0.6	0.0	0.8	3.0	6.0	6.8	2.3	6.2	7.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	37.2	0.0	35.4	36.6	0.0	36.1	55.2	13.3	14.5	48.4	13.9	15.0
LnGrp LOS	D	A	D	D	A	D	E	B	B	D	B	B
Approach Vol, veh/h		35			68			1822			1758	
Approach Delay, s/veh		36.4			36.3			16.4			16.2	
Approach LOS		D			D			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	13.0	58.8		18.2	14.1	57.7		18.2				
Change Period (Y+Rc), s	6.5	6.5		7.5	6.5	6.5		7.5				
Max Green Setting (Gmax), s	9.7	37.6		22.2	9.7	37.6		22.2				
Max Q Clear Time (g_c+I1), s	7.1	21.6		5.1	8.0	21.3		4.7				
Green Ext Time (p_c), s	0.0	10.8		0.1	0.0	10.8		0.2				

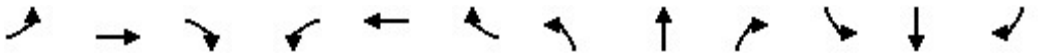
Intersection Summary	
HCM 6th Ctrl Delay	16.8
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary
12: Euclid Ave & Riverside Dr

03/18/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	140	571	72	153	470	91	66	1157	273	148	1004	163
Future Volume (veh/h)	140	571	72	153	470	91	66	1157	273	148	1004	163
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.96	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	146	595	24	159	490	30	69	1205	166	154	1046	93
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	171	592	490	184	1153	502	121	1047	447	179	1163	658
Arrive On Green	0.10	0.32	0.32	0.11	0.33	0.33	0.07	0.30	0.30	0.10	0.33	0.33
Sat Flow, veh/h	1753	1841	1522	1753	3497	1522	1753	3497	1494	1753	3497	1522
Grp Volume(v), veh/h	146	595	24	159	490	30	69	1205	166	154	1046	93
Grp Sat Flow(s),veh/h/ln	1753	1841	1522	1753	1749	1522	1753	1749	1494	1753	1749	1522
Q Serve(g_s), s	11.0	43.0	1.5	11.9	14.6	1.8	5.1	40.0	11.7	11.6	38.1	5.0
Cycle Q Clear(g_c), s	11.0	43.0	1.5	11.9	14.6	1.8	5.1	40.0	11.7	11.6	38.1	5.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	171	592	490	184	1153	502	121	1047	447	179	1163	658
V/C Ratio(X)	0.86	1.00	0.05	0.86	0.42	0.06	0.57	1.15	0.37	0.86	0.90	0.14
Avail Cap(c_a), veh/h	264	592	490	424	1445	629	131	1047	447	247	1163	658
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	59.4	45.3	31.2	58.8	34.9	30.6	60.3	46.8	36.9	59.0	42.5	23.1
Incr Delay (d2), s/veh	9.8	38.1	0.1	4.6	0.4	0.1	4.9	79.2	0.5	19.3	9.6	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.2	25.1	0.5	5.4	6.1	0.7	2.4	28.5	4.2	6.0	17.5	1.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	69.2	83.4	31.3	63.4	35.3	30.7	65.2	126.0	37.4	78.3	52.1	23.2
LnGrp LOS	E	F	C	E	D	C	E	F	D	E	D	C
Approach Vol, veh/h		765			679			1440			1293	
Approach Delay, s/veh		79.1			41.6			112.9			53.1	
Approach LOS		E			D			F			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.9	46.0	18.8	50.0	14.4	50.4	17.7	51.1
Change Period (Y+Rc), s	* 5.2	6.0	* 4.7	7.0	* 5.2	6.0	* 4.7	7.0
Max Green Setting (Gmax), s	* 19	40.0	* 32	43.0	* 10	42.5	* 20	55.2
Max Q Clear Time (g_c+I1), s	13.6	42.0	13.9	45.0	7.1	40.1	13.0	16.6
Green Ext Time (p_c), s	0.2	0.0	0.2	0.0	0.0	1.6	0.1	4.7

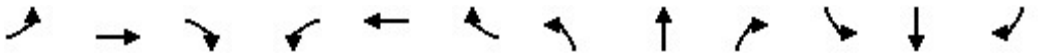
Intersection Summary	
HCM 6th Ctrl Delay	76.6
HCM 6th LOS	E

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th Signalized Intersection Summary
13: Campus Ave & Riverside Dr

03/18/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	132	854	39	35	597	94	20	409	86	101	141	116
Future Volume (veh/h)	132	854	39	35	597	94	20	409	86	101	141	116
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	1.00		0.97	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	140	909	17	37	635	87	21	435	84	107	150	38
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	175	687	566	99	1016	139	392	464	90	112	573	476
Arrive On Green	0.10	0.37	0.37	0.06	0.33	0.33	0.31	0.31	0.31	0.31	0.31	0.31
Sat Flow, veh/h	1767	1856	1528	1767	3108	425	1223	1502	290	874	1856	1544
Grp Volume(v), veh/h	140	909	17	37	360	362	21	0	519	107	150	38
Grp Sat Flow(s),veh/h/ln	1767	1856	1528	1767	1763	1770	1223	0	1793	874	1856	1544
Q Serve(g_s), s	6.3	30.0	0.6	1.6	14.0	14.0	1.1	0.0	22.8	2.2	4.9	1.4
Cycle Q Clear(g_c), s	6.3	30.0	0.6	1.6	14.0	14.0	6.0	0.0	22.8	25.0	4.9	1.4
Prop In Lane	1.00		1.00	1.00		0.24	1.00		0.16	1.00		1.00
Lane Grp Cap(c), veh/h	175	687	566	99	576	579	392	0	553	112	573	476
V/C Ratio(X)	0.80	1.32	0.03	0.38	0.62	0.63	0.05	0.00	0.94	0.95	0.26	0.08
Avail Cap(c_a), veh/h	436	687	566	436	653	655	392	0	553	112	573	476
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.7	25.5	16.2	36.9	23.1	23.1	23.3	0.0	27.3	40.3	21.1	19.9
Incr Delay (d2), s/veh	3.2	155.4	0.0	0.9	1.7	1.7	0.1	0.0	24.1	69.9	0.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.7	41.0	0.2	0.7	5.4	5.5	0.3	0.0	12.6	4.2	2.0	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	38.9	180.9	16.3	37.8	24.8	24.8	23.4	0.0	51.3	110.2	21.3	19.9
LnGrp LOS	D	F	B	D	C	C	C	A	D	F	C	B
Approach Vol, veh/h		1066			759			540			295	
Approach Delay, s/veh		159.6			25.4			50.3			53.4	
Approach LOS		F			C			D			D	

Timer - Assigned Phs	2	3	4	6	7	8
Phs Duration (G+Y+Rc), s	31.5	12.0	37.5	31.5	15.5	34.0
Change Period (Y+Rc), s	6.5	7.5	7.5	6.5	7.5	7.5
Max Green Setting (Gmax), s	25.0	20.0	30.0	25.0	20.0	30.0
Max Q Clear Time (g_c+I1), s	24.8	3.6	32.0	27.0	8.3	16.0
Green Ext Time (p_c), s	0.1	0.0	0.0	0.0	0.1	4.0

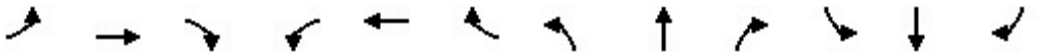
Intersection Summary	
HCM 6th Ctrl Delay	87.4
HCM 6th LOS	F

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary
15: Grove Ave & Riverside Dr

03/18/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	242	951	2	6	613	185	11	44	26	255	46	196
Future Volume (veh/h)	242	951	2	6	613	185	11	44	26	255	46	196
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.97	1.00		0.96	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	249	980	2	6	632	172	11	45	9	263	47	58
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	284	808	2	14	770	209	28	108	22	298	418	346
Arrive On Green	0.16	0.44	0.44	0.01	0.28	0.28	0.02	0.07	0.07	0.17	0.23	0.23
Sat Flow, veh/h	1767	1851	4	1767	2719	739	1767	1490	298	1767	1856	1536
Grp Volume(v), veh/h	249	0	982	6	409	395	11	0	54	263	47	58
Grp Sat Flow(s),veh/h/ln	1767	0	1855	1767	1763	1694	1767	0	1788	1767	1856	1536
Q Serve(g_s), s	13.1	0.0	41.6	0.3	20.7	20.7	0.6	0.0	2.8	13.9	1.9	2.9
Cycle Q Clear(g_c), s	13.1	0.0	41.6	0.3	20.7	20.7	0.6	0.0	2.8	13.9	1.9	2.9
Prop In Lane	1.00		0.00	1.00		0.44	1.00		0.17	1.00		1.00
Lane Grp Cap(c), veh/h	284	0	809	14	499	480	28	0	130	298	418	346
V/C Ratio(X)	0.88	0.00	1.21	0.44	0.82	0.82	0.39	0.00	0.42	0.88	0.11	0.17
Avail Cap(c_a), veh/h	371	0	809	371	648	622	371	0	563	371	584	484
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.1	0.0	26.9	47.1	31.9	31.9	46.4	0.0	42.3	38.7	29.3	29.7
Incr Delay (d2), s/veh	15.7	0.0	107.3	15.7	6.9	7.3	6.4	0.0	2.6	17.5	0.1	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.6	0.0	40.1	0.2	9.0	8.8	0.3	0.0	1.3	7.2	0.8	1.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	54.8	0.0	134.1	62.8	38.8	39.2	52.9	0.0	44.8	56.2	29.5	30.0
LnGrp LOS	D	A	F	E	D	D	D	A	D	E	C	C
Approach Vol, veh/h		1231			810			65			368	
Approach Delay, s/veh		118.1			39.1			46.2			48.7	
Approach LOS		F			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	22.8	34.5	9.0	29.0	8.2	49.1	23.6	14.4
Change Period (Y+Rc), s	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5
Max Green Setting (Gmax), s	20.0	35.0	20.0	30.0	20.0	35.0	20.0	30.0
Max Q Clear Time (g_c+I1), s	15.1	22.7	2.6	4.9	2.3	43.6	15.9	4.8
Green Ext Time (p_c), s	0.2	4.3	0.0	0.4	0.0	0.0	0.2	0.2

Intersection Summary	
HCM 6th Ctrl Delay	80.0
HCM 6th LOS	F

HCM 6th Signalized Intersection Summary
18: Vineyard Ave & Riverside Dr

03/18/2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	216	937	9	11	611	338	4	340	7	635	270	139
Future Volume (veh/h)	216	937	9	11	611	338	4	340	7	635	270	139
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.97	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	225	976	4	11	636	143	4	354	2	693	237	132
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	251	1219	534	52	772	337	254	507	220	891	280	156
Arrive On Green	0.14	0.35	0.35	0.02	0.22	0.22	0.14	0.14	0.14	0.25	0.25	0.25
Sat Flow, veh/h	1767	3526	1545	3428	3526	1540	1767	3526	1533	3534	1111	619
Grp Volume(v), veh/h	225	976	4	11	636	143	4	354	2	693	0	369
Grp Sat Flow(s),veh/h/ln	1767	1763	1545	1714	1763	1540	1767	1763	1533	1767	0	1730
Q Serve(g_s), s	15.5	30.9	0.2	0.4	21.2	9.9	0.2	11.8	0.1	22.5	0.0	25.0
Cycle Q Clear(g_c), s	15.5	30.9	0.2	0.4	21.2	9.9	0.2	11.8	0.1	22.5	0.0	25.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.36
Lane Grp Cap(c), veh/h	251	1219	534	52	772	337	254	507	220	891	0	436
V/C Ratio(X)	0.90	0.80	0.01	0.21	0.82	0.42	0.02	0.70	0.01	0.78	0.00	0.85
Avail Cap(c_a), veh/h	285	1339	587	167	942	412	524	1045	454	1016	0	497
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	52.1	36.5	26.5	60.1	46.0	41.5	45.4	50.3	45.3	42.9	0.0	43.9
Incr Delay (d2), s/veh	25.7	3.4	0.0	1.5	5.3	1.0	0.0	2.1	0.0	3.6	0.0	12.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.3	13.0	0.1	0.2	9.4	3.7	0.1	5.2	0.1	10.0	0.0	11.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	77.8	40.0	26.5	61.5	51.3	42.5	45.4	52.4	45.3	46.6	0.0	55.9
LnGrp LOS	E	D	C	E	D	D	D	D	D	D	A	E
Approach Vol, veh/h		1205			790			360			1062	
Approach Delay, s/veh		47.0			49.8			52.3			49.8	
Approach LOS		D			D			D			D	

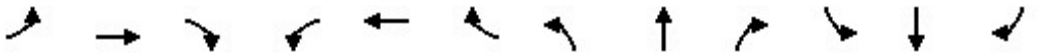
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		25.3	9.4	50.2		38.6	25.1	34.5				
Change Period (Y+Rc), s		7.5	7.5	7.5		7.5	7.5	7.5				
Max Green Setting (Gmax), s		36.6	6.0	46.9		35.5	19.9	33.0				
Max Q Clear Time (g_c+I1), s		13.8	2.4	32.9		27.0	17.5	23.2				
Green Ext Time (p_c), s		2.4	0.0	5.9		3.7	0.1	2.7				

Intersection Summary	
HCM 6th Ctrl Delay	49.1
HCM 6th LOS	D

Notes
User approved pedestrian interval to be less than phase max green.
User approved volume balancing among the lanes for turning movement.

HCM 6th Signalized Intersection Summary
23: Street A/Whispering Lakes Golf Course Dwy & Riverside Dr

03/18/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	6	1487	142	94	897	11	87	0	77	12	0	18
Future Volume (veh/h)	6	1487	142	94	897	11	87	0	77	12	0	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.97	0.99		0.99	0.99		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1781	1781	1856	1856	1781	1781	1781	1856	1781	1856
Adj Flow Rate, veh/h	6	1502	102	95	906	11	88	0	12	12	0	4
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	3	3	8	8	3	3	8	8	8	3	8	3
Cap, veh/h	17	1880	801	120	2119	26	255	0	181	254	0	181
Arrive On Green	0.01	0.53	0.53	0.07	0.59	0.59	0.12	0.00	0.12	0.12	0.00	0.12
Sat Flow, veh/h	1767	3526	1503	1697	3566	43	1329	0	1491	1375	0	1491
Grp Volume(v), veh/h	6	1502	102	95	448	469	88	0	12	12	0	4
Grp Sat Flow(s),veh/h/ln	1767	1763	1503	1697	1763	1846	1329	0	1491	1375	0	1491
Q Serve(g_s), s	0.3	25.8	2.5	4.1	10.3	10.3	4.7	0.0	0.5	0.6	0.0	0.2
Cycle Q Clear(g_c), s	0.3	25.8	2.5	4.1	10.3	10.3	4.8	0.0	0.5	1.1	0.0	0.2
Prop In Lane	1.00		1.00	1.00		0.02	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	17	1880	801	120	1048	1097	255	0	181	254	0	181
V/C Ratio(X)	0.36	0.80	0.13	0.79	0.43	0.43	0.35	0.00	0.07	0.05	0.00	0.02
Avail Cap(c_a), veh/h	142	2245	957	136	1123	1176	735	0	720	750	0	720
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	36.7	14.2	8.7	34.1	8.2	8.2	31.0	0.0	29.0	29.5	0.0	28.9
Incr Delay (d2), s/veh	12.7	1.9	0.1	24.1	0.3	0.3	0.8	0.0	0.2	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	7.9	0.6	2.3	2.7	2.9	1.5	0.0	0.2	0.2	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	49.4	16.1	8.8	58.2	8.6	8.5	31.8	0.0	29.2	29.6	0.0	28.9
LnGrp LOS	D	B	A	E	A	A	C	A	C	C	A	C
Approach Vol, veh/h		1610			1012			100			16	
Approach Delay, s/veh		15.7			13.2			31.5			29.4	
Approach LOS		B			B			C			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.7	51.8		15.1	12.3	47.3		15.1				
Change Period (Y+Rc), s	7.0	7.5		6.0	7.0	7.5		6.0				
Max Green Setting (Gmax), s	6.0	47.5		36.0	6.0	47.5		36.0				
Max Q Clear Time (g_c+I1), s	2.3	12.3		3.1	6.1	27.8		6.8				
Green Ext Time (p_c), s	0.0	6.9		0.0	0.0	11.9		0.3				

Intersection Summary			
HCM 6th Ctrl Delay		15.5	
HCM 6th LOS		B	

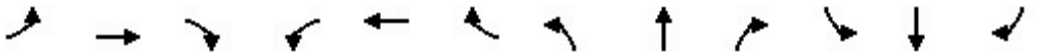
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1438	138	181	888	114	152
Future Volume (veh/h)	1438	138	181	888	114	152
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		0.97	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	1546	106	195	955	123	25
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	1867	811	232	2626	165	147
Arrive On Green	0.53	0.53	0.13	0.74	0.09	0.09
Sat Flow, veh/h	3618	1532	1767	3618	1767	1572
Grp Volume(v), veh/h	1546	106	195	955	123	25
Grp Sat Flow(s),veh/h/ln	1763	1532	1767	1763	1767	1572
Q Serve(g_s), s	30.7	2.9	9.0	7.9	5.7	1.2
Cycle Q Clear(g_c), s	30.7	2.9	9.0	7.9	5.7	1.2
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1867	811	232	2626	165	147
V/C Ratio(X)	0.83	0.13	0.84	0.36	0.74	0.17
Avail Cap(c_a), veh/h	2134	927	275	2979	763	679
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	16.5	9.9	35.4	3.7	36.9	34.8
Incr Delay (d2), s/veh	2.7	0.1	17.7	0.1	6.5	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.2	0.8	4.7	1.3	2.7	0.5
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	19.1	10.0	53.1	3.8	43.4	35.4
LnGrp LOS	B	B	D	A	D	D
Approach Vol, veh/h	1652			1150	148	
Approach Delay, s/veh	18.5			12.2	42.0	
Approach LOS	B			B	D	

Timer - Assigned Phs		2			5	6	8
Phs Duration (G+Y+Rc), s		69.6			18.0	51.7	13.8
Change Period (Y+Rc), s		7.5			7.0	7.5	6.0
Max Green Setting (Gmax), s		70.5			13.0	50.5	36.0
Max Q Clear Time (g_c+I1), s		9.9			11.0	32.7	7.7
Green Ext Time (p_c), s		8.9			0.1	11.5	0.4

Intersection Summary	
HCM 6th Ctrl Delay	17.2
HCM 6th LOS	B

HCM 6th Signalized Intersection Summary
25: Colonial Ave & Riverside Ave

03/18/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	1512	35	38	1049	18	17	0	33	3	3	25
Future Volume (veh/h)	40	1512	35	38	1049	18	17	0	33	3	3	25
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	0.98		1.00	0.98		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	41	1559	36	39	1081	19	18	0	0	3	3	3
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	105	1908	44	101	1912	34	234	0	0	111	57	40
Arrive On Green	0.06	0.54	0.54	0.06	0.54	0.54	0.07	0.00	0.00	0.07	0.07	0.07
Sat Flow, veh/h	1767	3520	81	1767	3543	62	1395	0	0	317	770	544
Grp Volume(v), veh/h	41	779	816	39	538	562	18	0	0	9	0	0
Grp Sat Flow(s),veh/h/ln	1767	1763	1838	1767	1763	1842	1395	0	0	1631	0	0
Q Serve(g_s), s	1.2	20.0	20.1	1.2	11.1	11.1	0.3	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	1.2	20.0	20.1	1.2	11.1	11.1	0.6	0.0	0.0	0.3	0.0	0.0
Prop In Lane	1.00		0.04	1.00		0.03	1.00		0.00	0.33		0.33
Lane Grp Cap(c), veh/h	105	955	996	101	952	995	234	0	0	208	0	0
V/C Ratio(X)	0.39	0.82	0.82	0.39	0.57	0.57	0.08	0.00	0.00	0.04	0.00	0.00
Avail Cap(c_a), veh/h	642	1121	1169	642	1121	1172	756	0	0	803	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	24.9	10.3	10.4	25.0	8.4	8.4	23.9	0.0	0.0	23.7	0.0	0.0
Incr Delay (d2), s/veh	2.4	4.1	4.1	2.4	0.5	0.5	0.1	0.0	0.0	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	5.3	5.5	0.5	2.6	2.8	0.2	0.0	0.0	0.1	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	27.3	14.5	14.5	27.4	8.9	8.9	24.0	0.0	0.0	23.8	0.0	0.0
LnGrp LOS	C	B	B	C	A	A	C	A	A	C	A	A
Approach Vol, veh/h		1636			1139			18			9	
Approach Delay, s/veh		14.8			9.5			24.0			23.8	
Approach LOS		B			A			C			C	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		10.1	8.1	36.8		10.1	8.3	36.7				
Change Period (Y+Rc), s		6.0	5.0	7.0		6.0	5.0	7.0				
Max Green Setting (Gmax), s		25.0	20.0	35.0		25.0	20.0	35.0				
Max Q Clear Time (g_c+I1), s		2.6	3.2	22.1		2.3	3.2	13.1				
Green Ext Time (p_c), s		0.0	0.0	7.7		0.0	0.1	6.6				

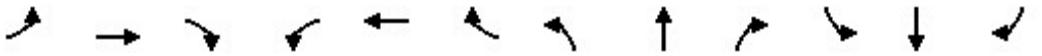
Intersection Summary	
HCM 6th Ctrl Delay	12.7
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary
26: Archibald Ave & Riverside Ave

03/18/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	412	729	387	158	503	202	246	1122	65	219	1009	359
Future Volume (veh/h)	412	729	387	158	503	202	246	1122	65	219	1009	359
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.97	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781
Adj Flow Rate, veh/h	416	736	353	160	508	178	248	1133	63	221	1019	323
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	8	8	8	8	8	8	8	8	8	8	8	8
Cap, veh/h	416	803	385	191	567	197	281	1228	68	254	889	282
Arrive On Green	0.25	0.36	0.36	0.11	0.23	0.23	0.17	0.26	0.26	0.15	0.25	0.25
Sat Flow, veh/h	1697	2202	1055	1697	2441	850	1697	4706	262	1697	3628	1149
Grp Volume(v), veh/h	416	565	524	160	351	335	248	780	416	221	911	431
Grp Sat Flow(s),veh/h/ln	1697	1692	1565	1697	1692	1598	1697	1621	1726	1697	1621	1535
Q Serve(g_s), s	35.0	45.5	45.6	13.2	28.7	29.1	20.4	33.5	33.5	18.2	35.0	35.0
Cycle Q Clear(g_c), s	35.0	45.5	45.6	13.2	28.7	29.1	20.4	33.5	33.5	18.2	35.0	35.0
Prop In Lane	1.00		0.67	1.00		0.53	1.00		0.15	1.00		0.75
Lane Grp Cap(c), veh/h	416	617	571	191	393	371	281	846	450	254	794	376
V/C Ratio(X)	1.00	0.92	0.92	0.84	0.89	0.90	0.88	0.92	0.92	0.87	1.15	1.15
Avail Cap(c_a), veh/h	416	617	571	416	415	392	416	846	450	416	794	376
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.9	43.3	43.3	62.1	53.1	53.2	58.2	51.4	51.4	59.4	53.9	53.9
Incr Delay (d2), s/veh	44.3	19.2	20.6	18.0	22.0	24.2	19.8	15.9	25.4	18.1	80.3	92.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	19.5	21.5	20.1	6.5	14.2	13.8	10.1	15.0	17.1	8.9	22.6	22.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	98.2	62.4	63.9	80.1	75.1	77.4	78.1	67.2	76.8	77.5	134.3	146.8
LnGrp LOS	F	E	E	F	E	E	E	E	E	E	F	F
Approach Vol, veh/h		1505			846			1444			1563	
Approach Delay, s/veh		72.8			77.0			71.8			129.7	
Approach LOS		E			E			E			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	25.4	41.3	20.1	56.1	27.7	39.0	39.0	37.2
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0
Max Q Clear Time (g_c+I1), s	20.2	35.5	15.2	47.6	22.4	37.0	37.0	31.1
Green Ext Time (p_c), s	1.2	0.0	0.9	0.0	1.3	0.0	0.0	2.1

Intersection Summary	
HCM 6th Ctrl Delay	89.8
HCM 6th LOS	F

HCM 6th Signalized Intersection Summary
27: Haven Ave & Riverside Dr

03/18/2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	255	358	73	86	369	79	36	445	54	116	611	429
Future Volume (veh/h)	255	358	73	86	369	79	36	445	54	116	611	429
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	1.00		0.97	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	266	373	71	90	384	67	38	464	54	121	636	239
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	296	406	77	119	508	88	28	338	39	396	416	345
Arrive On Green	0.17	0.27	0.27	0.07	0.17	0.17	0.22	0.22	0.22	0.22	0.22	0.22
Sat Flow, veh/h	1767	1506	287	1767	2994	517	124	1511	176	1767	1856	1540
Grp Volume(v), veh/h	266	0	444	90	225	226	556	0	0	121	636	239
Grp Sat Flow(s),veh/h/ln	1767	0	1793	1767	1763	1748	1810	0	0	1767	1856	1540
Q Serve(g_s), s	16.5	0.0	26.8	5.6	13.5	13.8	25.0	0.0	0.0	6.4	25.0	15.9
Cycle Q Clear(g_c), s	16.5	0.0	26.8	5.6	13.5	13.8	25.0	0.0	0.0	6.4	25.0	15.9
Prop In Lane	1.00		0.16	1.00		0.30	0.07		0.10	1.00		1.00
Lane Grp Cap(c), veh/h	296	0	484	119	299	297	405	0	0	396	416	345
V/C Ratio(X)	0.90	0.00	0.92	0.76	0.75	0.76	1.37	0.00	0.00	0.31	1.53	0.69
Avail Cap(c_a), veh/h	396	0	484	317	474	470	405	0	0	396	416	345
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.6	0.0	39.6	51.2	44.1	44.2	43.3	0.0	0.0	36.1	43.3	39.8
Incr Delay (d2), s/veh	16.0	0.0	22.5	3.7	3.8	4.1	182.2	0.0	0.0	0.3	250.6	5.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.2	0.0	14.1	2.5	6.0	6.0	31.2	0.0	0.0	2.7	39.9	6.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	61.6	0.0	62.1	54.8	47.9	48.2	225.5	0.0	0.0	36.4	293.9	45.3
LnGrp LOS	E	A	E	D	D	D	F	A	A	D	F	D
Approach Vol, veh/h		710			541			556			996	
Approach Delay, s/veh		61.9			49.2			225.5			203.0	
Approach LOS		E			D			F			F	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		30.0	14.5	37.1		30.0	25.7	26.0				
Change Period (Y+Rc), s		5.0	7.0	7.0		5.0	7.0	7.0				
Max Green Setting (Gmax), s		25.0	20.0	30.0		25.0	25.0	30.0				
Max Q Clear Time (g_c+I1), s		27.0	7.6	28.8		27.0	18.5	15.8				
Green Ext Time (p_c), s		0.0	0.1	0.3		0.0	0.2	2.0				

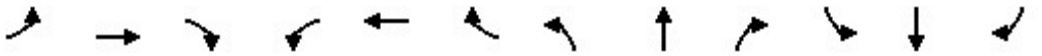
Intersection Summary												
HCM 6th Ctrl Delay			142.0									
HCM 6th LOS			F									

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary
28: Euclid Ave & Chino Ave

03/18/2024



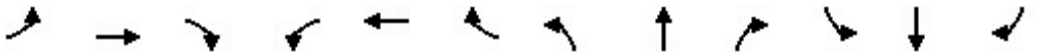
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	122	391	58	90	89	31	45	1349	283	27	1133	74
Future Volume (veh/h)	122	391	58	90	89	31	45	1349	283	27	1133	74
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.97	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	123	395	18	91	90	26	45	1363	221	27	1144	36
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	335	585	487	127	114	27	125	1077	466	302	1492	663
Arrive On Green	0.32	0.32	0.32	0.32	0.32	0.32	0.07	0.31	0.31	0.17	0.43	0.43
Sat Flow, veh/h	1256	1841	1532	236	359	86	1753	3497	1513	1753	3497	1554
Grp Volume(v), veh/h	123	395	18	207	0	0	45	1363	221	27	1144	36
Grp Sat Flow(s),veh/h/ln	1256	1841	1532	681	0	0	1753	1749	1513	1753	1749	1554
Q Serve(g_s), s	0.0	18.6	0.8	12.3	0.0	0.0	2.4	30.8	11.8	1.3	27.9	1.4
Cycle Q Clear(g_c), s	12.1	18.6	0.8	30.9	0.0	0.0	2.4	30.8	11.8	1.3	27.9	1.4
Prop In Lane	1.00		1.00	0.44		0.13	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	335	585	487	268	0	0	125	1077	466	302	1492	663
V/C Ratio(X)	0.37	0.67	0.04	0.77	0.00	0.00	0.36	1.27	0.47	0.09	0.77	0.05
Avail Cap(c_a), veh/h	335	585	487	268	0	0	280	1077	466	302	1492	663
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.4	29.6	23.5	37.8	0.0	0.0	44.3	34.6	28.0	34.8	24.4	16.8
Incr Delay (d2), s/veh	0.7	3.1	0.0	12.9	0.0	0.0	0.6	126.9	3.4	0.0	3.8	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.3	8.3	0.3	5.7	0.0	0.0	1.0	31.0	4.4	0.5	11.1	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	28.1	32.7	23.6	50.7	0.0	0.0	44.9	161.5	31.5	34.9	28.3	17.0
LnGrp LOS	C	C	C	D	A	A	D	F	C	C	C	B
Approach Vol, veh/h		536			207			1629			1207	
Approach Delay, s/veh		31.3			50.7			140.6			28.1	
Approach LOS		C			D			F			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	23.7	37.3		39.0	11.8	49.2		39.0				
Change Period (Y+Rc), s	6.5	* 6.5		7.2	* 4.7	6.5		7.2				
Max Green Setting (Gmax), s	16.0	* 31		31.8	* 16	33.8		31.8				
Max Q Clear Time (g_c+I1), s	3.3	32.8		20.6	4.4	29.9		32.9				
Green Ext Time (p_c), s	0.0	0.0		2.1	0.0	2.5		0.0				

Intersection Summary		
HCM 6th Ctrl Delay		81.1
HCM 6th LOS		F

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



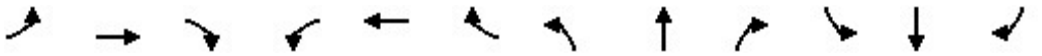
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	17	319	0	2	147	44	1	298	19	33	206	13
Future Volume (veh/h)	17	319	0	2	147	44	1	298	19	33	206	13
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		0.98	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781
Adj Flow Rate, veh/h	18	343	0	2	158	12	1	320	14	35	222	4
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	8	8	8	8	8	8	8	8	8	8	8	8
Cap, veh/h	45	705	0	6	330	273	3	842	36	78	393	322
Arrive On Green	0.03	0.21	0.00	0.00	0.19	0.19	0.00	0.18	0.18	0.05	0.22	0.22
Sat Flow, veh/h	1697	3474	0	1697	1781	1476	1697	4774	207	1697	1781	1458
Grp Volume(v), veh/h	18	343	0	2	158	12	1	216	118	35	222	4
Grp Sat Flow(s),veh/h/ln	1697	1692	0	1697	1781	1476	1697	1621	1739	1697	1781	1458
Q Serve(g_s), s	0.5	4.6	0.0	0.1	4.1	0.3	0.0	3.0	3.1	1.0	5.7	0.1
Cycle Q Clear(g_c), s	0.5	4.6	0.0	0.1	4.1	0.3	0.0	3.0	3.1	1.0	5.7	0.1
Prop In Lane	1.00		0.00	1.00		1.00	1.00		0.12	1.00		1.00
Lane Grp Cap(c), veh/h	45	705	0	6	330	273	3	572	307	78	393	322
V/C Ratio(X)	0.40	0.49	0.00	0.36	0.48	0.04	0.30	0.38	0.38	0.45	0.56	0.01
Avail Cap(c_a), veh/h	199	2610	0	199	1374	1138	199	2184	1171	199	1200	982
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.5	17.9	0.0	25.5	18.7	17.1	25.5	18.6	18.6	23.8	17.8	15.6
Incr Delay (d2), s/veh	5.7	0.6	0.0	34.8	1.3	0.1	44.5	0.5	0.9	4.0	1.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	1.5	0.0	0.1	1.5	0.1	0.1	1.0	1.1	0.4	2.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	30.2	18.5	0.0	60.3	20.0	17.2	70.0	19.1	19.6	27.8	19.3	15.6
LnGrp LOS	C	B	A	E	B	B	E	B	B	C	B	B
Approach Vol, veh/h		361			172			335			261	
Approach Delay, s/veh		19.1			20.2			19.4			20.4	
Approach LOS		B			C			B			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.4	16.5	7.2	18.2	7.1	18.8	8.4	17.0
Change Period (Y+Rc), s	7.0	7.5	7.0	7.5	7.0	7.5	7.0	7.5
Max Green Setting (Gmax), s	6.0	34.5	6.0	39.5	6.0	34.5	6.0	39.5
Max Q Clear Time (g_c+I1), s	3.0	5.1	2.1	6.6	2.0	7.7	2.5	6.1
Green Ext Time (p_c), s	0.0	2.2	0.0	2.5	0.0	1.3	0.0	1.0

Intersection Summary	
HCM 6th Ctrl Delay	19.7
HCM 6th LOS	B

HCM 6th Signalized Intersection Summary
33: Ontario Ave & Chino Ave

03/18/2024



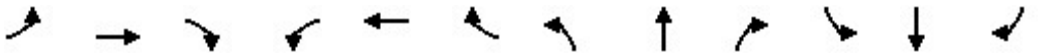
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	107	360	4	2	212	227	2	15	10	184	9	88
Future Volume (veh/h)	107	360	4	2	212	227	2	15	10	184	9	88
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.96	1.00		0.97	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781
Adj Flow Rate, veh/h	110	371	4	2	219	68	2	15	2	190	9	17
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	8	8	8	8	8	8	8	8	8	8	8	8
Cap, veh/h	165	874	9	6	544	233	6	76	10	217	95	179
Arrive On Green	0.10	0.25	0.25	0.00	0.16	0.16	0.00	0.05	0.05	0.13	0.17	0.17
Sat Flow, veh/h	1697	3429	37	1697	3385	1450	1697	1533	204	1697	543	1026
Grp Volume(v), veh/h	110	183	192	2	219	68	2	0	17	190	0	26
Grp Sat Flow(s),veh/h/ln	1697	1692	1773	1697	1692	1450	1697	0	1738	1697	0	1568
Q Serve(g_s), s	2.9	4.2	4.2	0.1	2.7	1.9	0.1	0.0	0.4	5.2	0.0	0.7
Cycle Q Clear(g_c), s	2.9	4.2	4.2	0.1	2.7	1.9	0.1	0.0	0.4	5.2	0.0	0.7
Prop In Lane	1.00		0.02	1.00		1.00	1.00		0.12	1.00		0.65
Lane Grp Cap(c), veh/h	165	431	452	6	544	233	6	0	86	217	0	273
V/C Ratio(X)	0.67	0.42	0.42	0.36	0.40	0.29	0.36	0.00	0.20	0.88	0.00	0.10
Avail Cap(c_a), veh/h	217	919	963	217	1838	787	217	0	1333	217	0	1203
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	20.5	14.6	14.6	23.3	17.7	17.3	23.3	0.0	21.4	20.1	0.0	16.3
Incr Delay (d2), s/veh	4.8	0.8	0.8	34.7	0.6	0.8	34.7	0.0	1.1	30.6	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	1.3	1.4	0.1	0.9	0.6	0.1	0.0	0.2	3.6	0.0	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	25.2	15.4	15.4	58.1	18.3	18.2	58.1	0.0	22.5	50.7	0.0	16.4
LnGrp LOS	C	B	B	E	B	B	E	A	C	D	A	B
Approach Vol, veh/h		485			289			19			216	
Approach Delay, s/veh		17.6			18.5			26.3			46.6	
Approach LOS		B			B			C			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.6	15.1	6.2	14.2	7.2	19.5	12.0	8.3
Change Period (Y+Rc), s	7.0	7.5	6.0	6.0	7.0	7.5	6.0	6.0
Max Green Setting (Gmax), s	6.0	25.5	6.0	36.0	6.0	25.5	6.0	36.0
Max Q Clear Time (g_c+I1), s	4.9	4.7	2.1	2.7	2.1	6.2	7.2	2.4
Green Ext Time (p_c), s	0.0	1.6	0.0	0.1	0.0	2.1	0.0	0.1

Intersection Summary	
HCM 6th Ctrl Delay	24.2
HCM 6th LOS	C

HCM 6th Signalized Intersection Summary
34: Archibald Ave & Chino Ave

03/18/2024



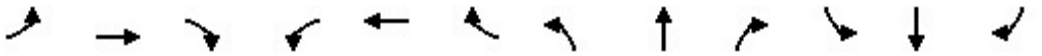
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	115	87	192	20	22	103	246	1158	29	107	1318	62
Future Volume (veh/h)	115	87	192	20	22	103	246	1158	29	107	1318	62
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781
Adj Flow Rate, veh/h	119	90	39	21	23	12	254	1194	30	110	1359	63
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	8	8	8	8	8	8	8	8	8	8	8	8
Cap, veh/h	146	271	110	44	101	84	284	2499	63	136	1400	65
Arrive On Green	0.09	0.12	0.12	0.03	0.06	0.06	0.17	0.51	0.51	0.08	0.43	0.43
Sat Flow, veh/h	1697	2326	945	1697	1781	1480	1697	4877	123	1697	3292	152
Grp Volume(v), veh/h	119	64	65	21	23	12	254	794	430	110	697	725
Grp Sat Flow(s),veh/h/ln	1697	1692	1579	1697	1781	1480	1697	1621	1757	1697	1692	1752
Q Serve(g_s), s	7.3	3.7	4.0	1.3	1.3	0.8	15.5	16.7	16.7	6.7	42.6	42.9
Cycle Q Clear(g_c), s	7.3	3.7	4.0	1.3	1.3	0.8	15.5	16.7	16.7	6.7	42.6	42.9
Prop In Lane	1.00		0.60	1.00		1.00	1.00		0.07	1.00		0.09
Lane Grp Cap(c), veh/h	146	197	184	44	101	84	284	1661	900	136	720	745
V/C Ratio(X)	0.81	0.32	0.35	0.47	0.23	0.14	0.89	0.48	0.48	0.81	0.97	0.97
Avail Cap(c_a), veh/h	321	560	522	321	590	490	401	1661	900	401	720	745
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.5	42.9	43.1	50.8	47.7	47.5	43.1	16.6	16.7	47.8	29.7	29.8
Incr Delay (d2), s/veh	4.1	1.3	1.6	2.9	1.6	1.1	13.6	0.3	0.6	4.2	26.1	26.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.2	1.6	1.6	0.6	0.6	0.3	7.2	5.6	6.1	2.9	20.7	21.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	51.7	44.2	44.7	53.7	49.3	48.6	56.7	17.0	17.2	52.1	55.8	56.1
LnGrp LOS	D	D	D	D	D	D	E	B	B	D	E	E
Approach Vol, veh/h		248			56			1478			1532	
Approach Delay, s/veh		47.9			50.8			23.9			55.7	
Approach LOS		D			D			C			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.0	61.7	9.3	18.8	25.2	52.5	15.6	12.5
Change Period (Y+Rc), s	7.5	7.5	6.5	6.5	7.5	7.5	6.5	6.5
Max Green Setting (Gmax), s	25.0	45.0	20.0	35.0	25.0	45.0	20.0	35.0
Max Q Clear Time (g_c+I1), s	8.7	18.7	3.3	6.0	17.5	44.9	9.3	3.3
Green Ext Time (p_c), s	0.1	11.7	0.0	0.9	0.2	0.1	0.1	0.2

Intersection Summary	
HCM 6th Ctrl Delay	40.8
HCM 6th LOS	D

HCM 6th Signalized Intersection Summary
35: Euclid Ave & Edison Ave

03/18/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	193	520	304	60	360	157	249	1163	95	123	1022	145
Future Volume (veh/h)	193	520	304	60	360	157	249	1163	95	123	1022	145
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.97	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	201	542	141	62	375	153	259	1211	51	128	1065	59
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	111	621	517	115	417	170	331	1368	593	165	1357	595
Arrive On Green	0.34	0.34	0.34	0.34	0.34	0.34	0.10	0.39	0.39	0.09	0.39	0.39
Sat Flow, veh/h	860	1841	1532	746	1235	504	3401	3497	1516	1753	3497	1534
Grp Volume(v), veh/h	201	542	141	62	0	528	259	1211	51	128	1065	59
Grp Sat Flow(s),veh/h/ln	860	1841	1532	746	0	1739	1700	1749	1516	1753	1749	1534
Q Serve(g_s), s	5.0	28.7	7.0	6.3	0.0	30.0	7.7	33.4	2.2	7.4	27.8	2.5
Cycle Q Clear(g_c), s	35.0	28.7	7.0	35.0	0.0	30.0	7.7	33.4	2.2	7.4	27.8	2.5
Prop In Lane	1.00		1.00	1.00		0.29	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	111	621	517	115	0	587	331	1368	593	165	1357	595
V/C Ratio(X)	1.81	0.87	0.27	0.54	0.00	0.90	0.78	0.88	0.09	0.78	0.78	0.10
Avail Cap(c_a), veh/h	111	621	517	115	0	587	820	1517	658	422	1517	665
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.9	32.3	25.1	49.6	0.0	32.7	45.8	29.4	19.9	45.9	27.9	20.2
Incr Delay (d2), s/veh	396.9	13.0	0.3	5.0	0.0	16.9	1.6	6.2	0.1	3.0	2.5	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	15.1	14.2	2.4	1.7	0.0	14.5	3.2	13.7	0.7	3.2	10.9	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	447.8	45.3	25.4	54.6	0.0	49.6	47.3	35.6	20.0	48.9	30.4	20.3
LnGrp LOS	F	D	C	D	A	D	D	D	B	D	C	C
Approach Vol, veh/h		884			590			1521			1252	
Approach Delay, s/veh		133.6			50.1			37.1			31.9	
Approach LOS		F			D			D			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	14.4	47.1		42.2	14.8	46.8		42.2				
Change Period (Y+Rc), s	* 4.7	6.5		7.2	* 4.7	6.5		7.2				
Max Green Setting (Gmax), s	* 25	45.0		30.0	* 25	45.0		35.0				
Max Q Clear Time (g_c+I1), s	9.4	35.4		37.0	9.7	29.8		37.0				
Green Ext Time (p_c), s	0.1	5.1		0.0	0.4	6.0		0.0				

Intersection Summary	
HCM 6th Ctrl Delay	57.4
HCM 6th LOS	E

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th Signalized Intersection Summary
37: Archibald Ave & Ontario Ranch Rd

03/18/2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	118	854	177	196	359	260	78	1002	295	240	1074	72
Future Volume (veh/h)	118	854	177	196	359	260	78	1002	295	240	1074	72
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	128	928	0	213	390	118	85	1089	0	261	1167	39
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	206	1027		311	597	497	113	1057		306	1442	626
Arrive On Green	0.06	0.29	0.00	0.09	0.32	0.32	0.06	0.30	0.00	0.17	0.41	0.41
Sat Flow, veh/h	3401	3497	1560	3401	1841	1532	1753	3497	1560	1753	3497	1517
Grp Volume(v), veh/h	128	928	0	213	390	118	85	1089	0	261	1167	39
Grp Sat Flow(s),veh/h/ln	1700	1749	1560	1700	1841	1532	1753	1749	1560	1753	1749	1517
Q Serve(g_s), s	4.3	29.5	0.0	7.0	21.0	6.5	5.5	35.0	0.0	16.7	34.1	1.8
Cycle Q Clear(g_c), s	4.3	29.5	0.0	7.0	21.0	6.5	5.5	35.0	0.0	16.7	34.1	1.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	206	1027		311	597	497	113	1057		306	1442	626
V/C Ratio(X)	0.62	0.90		0.69	0.65	0.24	0.75	1.03		0.85	0.81	0.06
Avail Cap(c_a), veh/h	1028	1057		1028	597	497	530	1057		530	1442	626
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.1	39.3	0.0	51.0	33.5	28.6	53.2	40.4	0.0	46.3	30.0	20.5
Incr Delay (d2), s/veh	6.4	11.3	0.0	5.6	3.5	0.5	19.0	35.7	0.0	13.1	4.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	13.6	0.0	3.1	9.5	2.4	2.9	19.2	0.0	8.0	13.8	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	59.4	50.7	0.0	56.6	37.0	29.2	72.3	76.1	0.0	59.5	34.0	20.6
LnGrp LOS	E	D		E	D	C	E	F		E	C	C
Approach Vol, veh/h		1056	A		721			1174	A		1467	
Approach Delay, s/veh		51.7			41.5			75.8			38.2	
Approach LOS		D			D			E			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	24.2	39.0	14.6	38.0	11.5	51.8	11.0	41.5
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0
Max Q Clear Time (g_c+I1), s	18.7	37.0	9.0	31.5	7.5	36.1	6.3	23.0
Green Ext Time (p_c), s	1.5	0.0	1.6	2.4	0.5	0.0	0.9	3.6

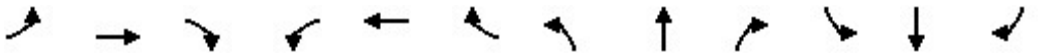
Intersection Summary	
HCM 6th Ctrl Delay	52.0
HCM 6th LOS	D

Notes

Unsignalized Delay for [NBR, EBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary
38: Haven Ave & Ontario Ranch Rd

03/18/2024



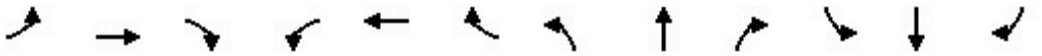
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	223	1187	50	366	896	225	35	276	195	216	505	75
Future Volume (veh/h)	223	1187	50	366	896	225	35	276	195	216	505	75
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.97	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	232	1236	16	381	933	66	36	288	45	225	526	72
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	258	1520	463	440	1802	430	72	380	315	252	954	130
Arrive On Green	0.15	0.30	0.30	0.13	0.28	0.28	0.04	0.21	0.21	0.14	0.31	0.31
Sat Flow, veh/h	1753	5025	1531	3401	6332	1511	1753	1841	1527	1753	3084	421
Grp Volume(v), veh/h	232	1236	16	381	933	66	36	288	45	225	297	301
Grp Sat Flow(s),veh/h/ln	1753	1675	1531	1700	1583	1511	1753	1841	1527	1753	1749	1756
Q Serve(g_s), s	15.5	27.2	0.9	13.1	14.8	3.9	2.4	17.6	2.9	15.1	16.9	17.0
Cycle Q Clear(g_c), s	15.5	27.2	0.9	13.1	14.8	3.9	2.4	17.6	2.9	15.1	16.9	17.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.24
Lane Grp Cap(c), veh/h	258	1520	463	440	1802	430	72	380	315	252	541	543
V/C Ratio(X)	0.90	0.81	0.03	0.87	0.52	0.15	0.50	0.76	0.14	0.89	0.55	0.55
Avail Cap(c_a), veh/h	294	1684	513	570	2122	506	294	725	601	294	688	691
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.0	38.5	29.3	50.9	35.8	31.9	56.1	44.5	38.7	50.2	34.3	34.4
Incr Delay (d2), s/veh	24.5	3.1	0.0	8.9	0.3	0.2	2.0	1.2	0.1	23.2	0.3	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.3	11.0	0.3	5.9	5.4	1.4	1.1	7.9	1.0	8.0	7.0	7.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	74.5	41.6	29.4	59.9	36.2	32.2	58.1	45.7	38.8	73.4	34.6	34.7
LnGrp LOS	E	D	C	E	D	C	E	D	D	E	C	C
Approach Vol, veh/h		1484			1380			369			823	
Approach Delay, s/veh		46.6			42.5			46.1			45.2	
Approach LOS		D			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	23.6	31.2	22.0	42.6	11.4	43.4	24.1	40.5
Change Period (Y+Rc), s	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
Max Green Setting (Gmax), s	20.0	47.0	20.0	40.0	20.0	47.0	20.0	40.0
Max Q Clear Time (g_c+I1), s	17.1	19.6	15.1	29.2	4.4	19.0	17.5	16.8
Green Ext Time (p_c), s	0.1	1.0	0.3	7.0	0.0	2.0	0.1	8.6

Intersection Summary	
HCM 6th Ctrl Delay	44.9
HCM 6th LOS	D

HCM 6th Signalized Intersection Summary
39: Hamner Ave & Ontario Ranch Rd

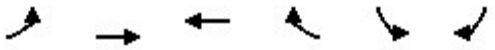
03/18/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	122	1180	292	675	1002	203	399	486	437	334	663	141
Future Volume (veh/h)	122	1180	292	675	1002	203	399	486	437	334	663	141
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	127	1229	103	703	1044	129	416	506	134	348	691	44
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	175	1152	350	747	1390	610	465	1191	362	399	761	333
Arrive On Green	0.05	0.23	0.23	0.22	0.40	0.40	0.14	0.24	0.24	0.12	0.22	0.22
Sat Flow, veh/h	3401	5025	1528	3401	3497	1534	3401	5025	1529	3401	3497	1528
Grp Volume(v), veh/h	127	1229	103	703	1044	129	416	506	134	348	691	44
Grp Sat Flow(s),veh/h/ln	1700	1675	1528	1700	1749	1534	1700	1675	1529	1700	1749	1528
Q Serve(g_s), s	5.6	35.0	8.5	31.0	39.1	8.4	18.4	13.0	11.2	15.4	29.4	3.5
Cycle Q Clear(g_c), s	5.6	35.0	8.5	31.0	39.1	8.4	18.4	13.0	11.2	15.4	29.4	3.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	175	1152	350	747	1390	610	465	1191	362	399	761	333
V/C Ratio(X)	0.73	1.07	0.29	0.94	0.75	0.21	0.89	0.42	0.37	0.87	0.91	0.13
Avail Cap(c_a), veh/h	780	1152	350	780	1390	610	557	1191	362	557	802	350
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	71.3	58.8	48.6	58.6	39.5	30.2	64.8	49.4	48.7	66.2	58.2	48.1
Incr Delay (d2), s/veh	4.2	46.2	0.6	18.8	2.4	0.2	14.5	0.3	0.7	9.7	13.9	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	19.2	3.2	14.8	16.5	3.1	8.7	5.4	4.3	7.1	14.1	1.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	75.6	105.0	49.2	77.3	41.9	30.4	79.2	49.7	49.4	75.9	72.1	48.3
LnGrp LOS	E	F	D	E	D	C	E	D	D	E	E	D
Approach Vol, veh/h		1459			1876			1056			1083	
Approach Delay, s/veh		98.5			54.4			61.3			72.3	
Approach LOS		F			D			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	41.0	42.5	28.4	40.7	15.3	68.2	25.4	43.7
Change Period (Y+Rc), s	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5
Max Green Setting (Gmax), s	35.0	35.0	25.0	35.0	35.0	35.0	25.0	25.0
Max Q Clear Time (g_c+I1), s	33.0	37.0	20.4	31.4	7.6	41.1	17.4	15.0
Green Ext Time (p_c), s	0.5	0.0	0.5	1.6	0.3	0.0	0.6	2.6

Intersection Summary	
HCM 6th Ctrl Delay	71.0
HCM 6th LOS	E



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑	↑↑		↰↰	↱
Traffic Volume (veh/h)	0	1403	893	0	291	1664
Future Volume (veh/h)	0	1403	893	0	291	1664
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	0	1841	1841	0	1841	1841
Adj Flow Rate, veh/h	0	1651	1051	0	342	1918
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	0	4	4	0	4	4
Cap, veh/h	0	1998	1390	0	749	1333
Arrive On Green	0.00	0.40	0.40	0.00	0.43	0.43
Sat Flow, veh/h	0	5356	3681	0	1753	3120
Grp Volume(v), veh/h	0	1651	1051	0	342	1918
Grp Sat Flow(s),veh/h/ln	0	1675	1749	0	1753	1560
Q Serve(g_s), s	0.0	20.7	18.2	0.0	9.7	30.0
Cycle Q Clear(g_c), s	0.0	20.7	18.2	0.0	9.7	30.0
Prop In Lane	0.00			0.00	1.00	1.00
Lane Grp Cap(c), veh/h	0	1998	1390	0	749	1333
V/C Ratio(X)	0.00	0.83	0.76	0.00	0.46	1.44
Avail Cap(c_a), veh/h	0	2147	1494	0	749	1333
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	19.0	18.2	0.0	14.3	20.1
Incr Delay (d2), s/veh	0.0	2.6	2.1	0.0	0.4	201.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	6.8	6.2	0.0	3.3	46.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.0	21.6	20.3	0.0	14.7	221.9
LnGrp LOS	A	C	C	A	B	F
Approach Vol, veh/h		1651	1051		2260	
Approach Delay, s/veh		21.6	20.3		190.5	
Approach LOS		C	C		F	

Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		34.7		35.5		34.7
Change Period (Y+Rc), s		6.8		5.5		6.8
Max Green Setting (Gmax), s		30.0		30.0		30.0
Max Q Clear Time (g_c+I1), s		22.7		32.0		20.2
Green Ext Time (p_c), s		5.2		0.0		4.5

Intersection Summary		
HCM 6th Ctrl Delay	98.3	
HCM 6th LOS	F	

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	615	1106	265	389	640	118
Future Volume (veh/h)	615	1106	265	389	640	118
Initial Q (Qb), veh	0	105	0	0	0	76
Ped-Bike Adj(A_pbT)		0.97	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	699	1157	301	442	727	58
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	4	4	4	4	4	4
Cap, veh/h	1716	1026	404	2656	1122	478
Arrive On Green	0.38	0.38	0.12	0.58	0.25	0.25
Sat Flow, veh/h	5191	1516	3401	5191	3506	1560
Grp Volume(v), veh/h	699	1157	301	442	727	58
Grp Sat Flow(s),veh/h/ln	1675	1516	1700	1675	1753	1560
Q Serve(g_s), s	7.9	30.0	6.7	3.2	15.4	2.3
Cycle Q Clear(g_c), s	7.9	30.0	6.7	3.2	15.4	2.3
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1716	1026	404	2656	1122	478
V/C Ratio(X)	0.41	1.13	0.75	0.17	0.65	0.12
Avail Cap(c_a), veh/h	1908	971	1292	2904	1332	592
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.2	10.0	37.5	10.8	25.6	27.5
Incr Delay (d2), s/veh	0.2	70.3	2.8	0.0	0.8	0.1
Initial Q Delay(d3),s/veh	0.0	368.6	0.0	0.0	0.0	207.4
%ile BackOfQ(50%),veh/ln	3.3	146.5	3.0	1.2	6.5	35.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	22.4	448.8	40.3	10.8	26.5	235.0
LnGrp LOS	C	F	D	B	C	F
Approach Vol, veh/h	1856			743	785	
Approach Delay, s/veh	288.2			22.8	41.9	
Approach LOS	F			C	D	

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	15.6	37.3				52.9	26.0
Change Period (Y+Rc), s	6.0	7.3				7.3	6.0
Max Green Setting (Gmax), s	30.0	30.0				30.0	30.0
Max Q Clear Time (g_c+I1), s	8.7	32.0				5.2	17.4
Green Ext Time (p_c), s	0.9	0.0				2.6	2.6

Intersection Summary	
HCM 6th Ctrl Delay	172.8
HCM 6th LOS	F

Notes

User approved pedestrian interval to be less than phase max green.
User approved volume balancing among the lanes for turning movement.

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	8	16	333	26	46	244
Future Volume (veh/h)	8	16	333	26	46	244
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		0.97	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	8	17	351	27	48	257
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	56	50	1183	355	101	2719
Arrive On Green	0.03	0.03	0.23	0.23	0.06	0.54
Sat Flow, veh/h	1767	1572	5233	1520	1767	5233
Grp Volume(v), veh/h	8	17	351	27	48	257
Grp Sat Flow(s),veh/h/ln	1767	1572	1689	1520	1767	1689
Q Serve(g_s), s	0.1	0.3	1.4	0.3	0.6	0.6
Cycle Q Clear(g_c), s	0.1	0.3	1.4	0.3	0.6	0.6
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	56	50	1183	355	101	2719
V/C Ratio(X)	0.14	0.34	0.30	0.08	0.48	0.09
Avail Cap(c_a), veh/h	2322	2067	4057	1217	508	6761
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	11.5	11.5	7.7	7.3	11.1	2.8
Incr Delay (d2), s/veh	1.1	3.9	0.1	0.1	3.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.1	0.2	0.0	0.2	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	12.6	15.4	7.8	7.4	14.6	2.8
LnGrp LOS	B	B	A	A	B	A
Approach Vol, veh/h	25		378			305
Approach Delay, s/veh	14.5		7.8			4.6
Approach LOS	B		A			A

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	7.4	11.7			19.1	5.3
Change Period (Y+Rc), s	6.0	6.0			6.0	4.5
Max Green Setting (Gmax), s	7.0	19.5			32.5	32.0
Max Q Clear Time (g_c+I1), s	2.6	3.4			2.6	2.3
Green Ext Time (p_c), s	0.0	1.9			1.5	0.0

Intersection Summary	
HCM 6th Ctrl Delay	6.7
HCM 6th LOS	A

Intersection	
Intersection Delay, s/veh	7.7
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	77	0	7	59	3	0	41	12	4	17	0
Future Vol, veh/h	0	77	0	7	59	3	0	41	12	4	17	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles, %	8	8	8	8	8	8	8	8	8	8	8	8
Mvmt Flow	0	82	0	7	63	3	0	44	13	4	18	0
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	7.7	7.7	7.6	7.6
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	0%	0%	10%	19%
Vol Thru, %	77%	100%	86%	81%
Vol Right, %	23%	0%	4%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	53	77	69	21
LT Vol	0	0	7	4
Through Vol	41	77	59	17
RT Vol	12	0	3	0
Lane Flow Rate	56	82	73	22
Geometry Grp	1	1	1	1
Degree of Util (X)	0.066	0.096	0.086	0.027
Departure Headway (Hd)	4.185	4.229	4.23	4.387
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	843	840	839	803
Service Time	2.276	2.293	2.296	2.486
HCM Lane V/C Ratio	0.066	0.098	0.087	0.027
HCM Control Delay	7.6	7.7	7.7	7.6
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.2	0.3	0.3	0.1

Intersection	
Intersection Delay, s/veh	11.9
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	35	100	22	35	102	21	7	146	162	49	129	24
Future Vol, veh/h	35	100	22	35	102	21	7	146	162	49	129	24
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	8	8	8	8	8	8	8	8	8	8	8	8
Mvmt Flow	38	109	24	38	111	23	8	159	176	53	140	26
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	11.1	11.1	12.9	11.5
HCM LOS	B	B	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	2%	22%	22%	24%
Vol Thru, %	46%	64%	65%	64%
Vol Right, %	51%	14%	13%	12%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	315	157	158	202
LT Vol	7	35	35	49
Through Vol	146	100	102	129
RT Vol	162	22	21	24
Lane Flow Rate	342	171	172	220
Geometry Grp	1	1	1	1
Degree of Util (X)	0.486	0.276	0.278	0.339
Departure Headway (Hd)	5.106	5.821	5.824	5.555
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	705	614	615	646
Service Time	3.152	3.877	3.878	3.606
HCM Lane V/C Ratio	0.485	0.279	0.28	0.341
HCM Control Delay	12.9	11.1	11.1	11.5
HCM Lane LOS	B	B	B	B
HCM 95th-tile Q	2.7	1.1	1.1	1.5

Intersection	
Intersection Delay, s/veh	157.1
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	52	716	33	57	407	17	85	32	83	20	14	24
Future Vol, veh/h	52	716	33	57	407	17	85	32	83	20	14	24
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles, %	4	4	4	4	4	4	4	4	4	4	4	4
Mvmt Flow	59	814	38	65	463	19	97	36	94	23	16	27
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	266.8	49.6	17.6	13.6
HCM LOS	F	E	C	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	42%	6%	12%	34%
Vol Thru, %	16%	89%	85%	24%
Vol Right, %	41%	4%	4%	41%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	200	801	481	58
LT Vol	85	52	57	20
Through Vol	32	716	407	14
RT Vol	83	33	17	24
Lane Flow Rate	227	910	547	66
Geometry Grp	1	1	1	1
Degree of Util (X)	0.45	1.536	0.928	0.144
Departure Headway (Hd)	8.117	6.075	6.865	9.101
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	448	601	530	397
Service Time	6.117	4.148	4.865	7.101
HCM Lane V/C Ratio	0.507	1.514	1.032	0.166
HCM Control Delay	17.6	266.8	49.6	13.6
HCM Lane LOS	C	F	E	B
HCM 95th-tile Q	2.3	46.5	11.4	0.5

Intersection	
Int Delay, s/veh	99

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	40	970	32	102	694	16	24	21	215	5	14	32
Future Vol, veh/h	40	970	32	102	694	16	24	21	215	5	14	32
Conflicting Peds, #/hr	5	0	5	5	0	5	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	127	-	-	143	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	42	1021	34	107	731	17	25	22	226	5	15	34

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	753	0	0	1060	0	0	1714	2094	1043	2205	2103	379
Stage 1	-	-	-	-	-	-	1127	1127	-	959	959	-
Stage 2	-	-	-	-	-	-	587	967	-	1246	1144	-
Critical Hdwy	4.145	-	-	4.145	-	-	7.345	6.545	6.245	7.345	6.545	6.945
Critical Hdwy Stg 1	-	-	-	-	-	-	6.145	5.545	-	6.545	5.545	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.545	5.545	-	6.145	5.545	-
Follow-up Hdwy	2.2285	-	-	2.2285	-	-	3.5285	4.0285	3.3285	3.5285	4.0285	3.3285
Pot Cap-1 Maneuver	849	-	-	650	-	-	64	51	276	28	51	617
Stage 1	-	-	-	-	-	-	246	277	-	275	333	-
Stage 2	-	-	-	-	-	-	462	330	-	211	272	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	845	-	-	647	-	-	37	40	275	~ 2	40	614
Mov Cap-2 Maneuver	-	-	-	-	-	-	37	40	-	~ 2	40	-
Stage 1	-	-	-	-	-	-	233	262	-	260	277	-
Stage 2	-	-	-	-	-	-	345	274	-	33	257	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.4	1.5	$ 555.9	$ 1334.7
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	133	845	-	-	647	-	-	18
HCM Lane V/C Ratio	2.058	0.05	-	-	0.166	-	-	2.982
HCM Control Delay (s)	$ 555.9	9.5	-	-	11.7	-	-	$ 1334.7
HCM Lane LOS	F	A	-	-	B	-	-	F
HCM 95th %tile Q(veh)	22.2	0.2	-	-	0.6	-	-	7.2

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	67.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	23	1048	164	50	683	23	94	16	87	12	2	23
Future Vol, veh/h	23	1048	164	50	683	23	94	16	87	12	2	23
Conflicting Peds, #/hr	5	0	5	5	0	5	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	69	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	98	98	98	98	98	98	98	98	98	98	98	98
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	23	1069	167	51	697	23	96	16	89	12	2	23

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	725	0	0	1241	0	0	1656	2031	1158	2067	2103	365
Stage 1	-	-	-	-	-	-	1204	1204	-	816	816	-
Stage 2	-	-	-	-	-	-	452	827	-	1251	1287	-
Critical Hdwy	4.145	-	-	4.145	-	-	7.345	6.545	6.245	7.345	6.545	6.945
Critical Hdwy Stg 1	-	-	-	-	-	-	6.145	5.545	-	6.545	5.545	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.545	5.545	-	6.145	5.545	-
Follow-up Hdwy	2.2285	-	-	2.2285	-	-	3.5285	4.0285	3.3285	3.5285	4.0285	3.3285
Pot Cap-1 Maneuver	870	-	-	555	-	-	~ 70	56	236	35	51	630
Stage 1	-	-	-	-	-	-	223	255	-	336	388	-
Stage 2	-	-	-	-	-	-	555	383	-	209	232	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	866	-	-	552	-	-	~ 59	49	235	15	45	627
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 59	49	-	15	45	-
Stage 1	-	-	-	-	-	-	216	247	-	326	350	-
Stage 2	-	-	-	-	-	-	482	346	-	118	225	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.2	0.8	$ 714.6	255.6
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	86	866	-	-	552	-	-	42
HCM Lane V/C Ratio	2.337	0.027	-	-	0.092	-	-	0.899
HCM Control Delay (s)	$ 714.6	9.3	-	-	12.2	-	-	255.6
HCM Lane LOS	F	A	-	-	B	-	-	F
HCM 95th %tile Q(veh)	18.5	0.1	-	-	0.3	-	-	3.5

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	3.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	18	1111	16	17	725	40	15	3	24	10	3	18
Future Vol, veh/h	18	1111	16	17	725	40	15	3	24	10	3	18
Conflicting Peds, #/hr	5	0	5	5	0	5	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	98	-	-	47	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	20	1208	17	18	788	43	16	3	26	11	3	20

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	836	0	0	1230	0	0	1694	2134	1222	2122	2121	421
Stage 1	-	-	-	-	-	-	1262	1262	-	851	851	-
Stage 2	-	-	-	-	-	-	432	872	-	1271	1270	-
Critical Hdwy	4.145	-	-	4.145	-	-	7.345	6.545	6.245	7.345	6.545	6.945
Critical Hdwy Stg 1	-	-	-	-	-	-	6.145	5.545	-	6.545	5.545	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.545	5.545	-	6.145	5.545	-
Follow-up Hdwy	2.2285	-	-	2.2285	-	-	3.5285	4.0285	3.3285	3.5285	4.0285	3.3285
Pot Cap-1 Maneuver	790	-	-	560	-	-	66	49	217	32	49	580
Stage 1	-	-	-	-	-	-	206	239	-	320	374	-
Stage 2	-	-	-	-	-	-	571	365	-	204	237	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	786	-	-	557	-	-	57	46	216	25	46	577
Mov Cap-2 Maneuver	-	-	-	-	-	-	57	46	-	25	46	-
Stage 1	-	-	-	-	-	-	200	232	-	310	360	-
Stage 2	-	-	-	-	-	-	529	351	-	172	230	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.2	0.3	72.7	117.7
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	96	786	-	-	557	-	-	62
HCM Lane V/C Ratio	0.476	0.025	-	-	0.033	-	-	0.543
HCM Control Delay (s)	72.7	9.7	-	-	11.7	-	-	117.7
HCM Lane LOS	F	A	-	-	B	-	-	F
HCM 95th %tile Q(veh)	2.1	0.1	-	-	0.1	-	-	2.2

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑			↱
Traffic Vol, veh/h	0	1578	947	22	5	12
Future Vol, veh/h	0	1578	947	22	5	12
Conflicting Peds, #/hr	5	0	0	5	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	0	1661	997	23	5	13

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	1845	515
Stage 1	-	-	-	-	1014	-
Stage 2	-	-	-	-	831	-
Critical Hdwy	-	-	-	-	6.86	6.96
Critical Hdwy Stg 1	-	-	-	-	5.86	-
Critical Hdwy Stg 2	-	-	-	-	5.86	-
Follow-up Hdwy	-	-	-	-	3.53	3.33
Pot Cap-1 Maneuver	0	-	-	-	66	502
Stage 1	0	-	-	-	309	-
Stage 2	0	-	-	-	386	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	65	500
Mov Cap-2 Maneuver	-	-	-	-	65	-
Stage 1	-	-	-	-	307	-
Stage 2	-	-	-	-	384	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	12.4
HCM LOS			B

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	500
HCM Lane V/C Ratio	-	-	-	0.025
HCM Control Delay (s)	-	-	-	12.4
HCM Lane LOS	-	-	-	B
HCM 95th %tile Q(veh)	-	-	-	0.1

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑			↱
Traffic Vol, veh/h	4	1578	952	16	2	18
Future Vol, veh/h	4	1578	952	16	2	18
Conflicting Peds, #/hr	5	0	0	5	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	4	1661	1002	17	2	19

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1024	0	-	0	1855	515
Stage 1	-	-	-	-	1016	-
Stage 2	-	-	-	-	839	-
Critical Hdwy	4.16	-	-	-	6.86	6.96
Critical Hdwy Stg 1	-	-	-	-	5.86	-
Critical Hdwy Stg 2	-	-	-	-	5.86	-
Follow-up Hdwy	2.23	-	-	-	3.53	3.33
Pot Cap-1 Maneuver	668	-	-	-	65	502
Stage 1	-	-	-	-	308	-
Stage 2	-	-	-	-	382	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	665	-	-	-	59	500
Mov Cap-2 Maneuver	-	-	-	-	174	-
Stage 1	-	-	-	-	282	-
Stage 2	-	-	-	-	380	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	12.5
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	665	-	-	-	500
HCM Lane V/C Ratio	0.006	-	-	-	0.038
HCM Control Delay (s)	10.4	-	-	-	12.5
HCM Lane LOS	B	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.1

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	2	1584	967	16	25	1
Future Vol, veh/h	2	1584	967	16	25	1
Conflicting Peds, #/hr	5	0	0	5	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	2	1633	997	16	26	1

Major/Minor	Major1			Major2		
Conflicting Flow All	1018	0	-	0	1831	512
Stage 1	-	-	-	-	1010	-
Stage 2	-	-	-	-	821	-
Critical Hdwy	4.16	-	-	-	6.86	6.96
Critical Hdwy Stg 1	-	-	-	-	5.86	-
Critical Hdwy Stg 2	-	-	-	-	5.86	-
Follow-up Hdwy	2.23	-	-	-	3.53	3.33
Pot Cap-1 Maneuver	671	-	-	-	67	504
Stage 1	-	-	-	-	310	-
Stage 2	-	-	-	-	390	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	668	-	-	-	66	502
Mov Cap-2 Maneuver	-	-	-	-	186	-
Stage 1	-	-	-	-	308	-
Stage 2	-	-	-	-	388	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	26.9
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	668	-	-	-	191
HCM Lane V/C Ratio	0.003	-	-	-	0.14
HCM Control Delay (s)	10.4	-	-	-	26.9
HCM Lane LOS	B	-	-	-	D
HCM 95th %tile Q(veh)	0	-	-	-	0.5

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	14	1598	973	30	34	11
Future Vol, veh/h	14	1598	973	30	34	11
Conflicting Peds, #/hr	5	0	0	5	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	350	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	15	1665	1014	31	35	11

Major/Minor	Major1			Major2			Minor2		
Conflicting Flow All	1050	0	-	0	1898	528			
Stage 1	-	-	-	-	1035	-			
Stage 2	-	-	-	-	863	-			
Critical Hdwy	4.16	-	-	-	6.86	6.96			
Critical Hdwy Stg 1	-	-	-	-	5.86	-			
Critical Hdwy Stg 2	-	-	-	-	5.86	-			
Follow-up Hdwy	2.23	-	-	-	3.53	3.33			
Pot Cap-1 Maneuver	653	-	-	-	60	492			
Stage 1	-	-	-	-	301	-			
Stage 2	-	-	-	-	371	-			
Platoon blocked, %		-	-	-					
Mov Cap-1 Maneuver	650	-	-	-	58	490			
Mov Cap-2 Maneuver	-	-	-	-	175	-			
Stage 1	-	-	-	-	293	-			
Stage 2	-	-	-	-	369	-			

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	27.3
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	650	-	-	-	208
HCM Lane V/C Ratio	0.022	-	-	-	0.225
HCM Control Delay (s)	10.7	-	-	-	27.3
HCM Lane LOS	B	-	-	-	D
HCM 95th %tile Q(veh)	0.1	-	-	-	0.8

Intersection	
Int Delay, s/veh	0.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	370	1	4	188	3	4
Future Vol, veh/h	370	1	4	188	3	4
Conflicting Peds, #/hr	0	5	5	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	150	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	8	8	8	8	8	8
Mvmt Flow	381	1	4	194	3	4

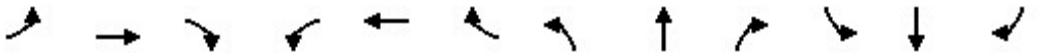
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	387	0	492	196
Stage 1	-	-	-	-	387	-
Stage 2	-	-	-	-	105	-
Critical Hdwy	-	-	4.26	-	6.96	7.06
Critical Hdwy Stg 1	-	-	-	-	5.96	-
Critical Hdwy Stg 2	-	-	-	-	5.96	-
Follow-up Hdwy	-	-	2.28	-	3.58	3.38
Pot Cap-1 Maneuver	-	-	1126	-	491	794
Stage 1	-	-	-	-	638	-
Stage 2	-	-	-	-	890	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1121	-	487	790
Mov Cap-2 Maneuver	-	-	-	-	487	-
Stage 1	-	-	-	-	635	-
Stage 2	-	-	-	-	886	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.2	10.8
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	624	-	-	1121	-
HCM Lane V/C Ratio	0.012	-	-	0.004	-
HCM Control Delay (s)	10.8	-	-	8.2	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0	-

HCM 6th Signalized Intersection Summary
1: Grove Ave & Mission Blvd

03/18/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	230	712	114	30	692	571	194	924	50	471	784	190
Future Volume (veh/h)	230	712	114	30	692	571	194	924	50	471	784	190
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	250	774	35	33	752	246	211	1004	52	512	852	84
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	299	910	403	146	752	333	215	1051	54	533	1990	607
Arrive On Green	0.09	0.26	0.26	0.04	0.22	0.22	0.12	0.22	0.22	0.30	0.40	0.40
Sat Flow, veh/h	3401	3497	1551	3401	3497	1549	1753	4886	253	1753	5025	1534
Grp Volume(v), veh/h	250	774	35	33	752	246	211	688	368	512	852	84
Grp Sat Flow(s),veh/h/ln	1700	1749	1551	1700	1749	1549	1753	1675	1789	1753	1675	1534
Q Serve(g_s), s	11.8	34.2	2.8	1.5	35.0	24.1	19.5	33.0	33.1	46.7	20.1	5.7
Cycle Q Clear(g_c), s	11.8	34.2	2.8	1.5	35.0	24.1	19.5	33.0	33.1	46.7	20.1	5.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.14	1.00		1.00
Lane Grp Cap(c), veh/h	299	910	403	146	752	333	215	720	385	533	1990	607
V/C Ratio(X)	0.84	0.85	0.09	0.23	1.00	0.74	0.98	0.95	0.96	0.96	0.43	0.14
Avail Cap(c_a), veh/h	627	910	403	418	752	333	215	720	385	592	1990	607
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	73.1	57.2	45.6	75.3	63.9	59.6	71.2	63.1	63.1	55.7	35.8	31.4
Incr Delay (d2), s/veh	4.6	7.9	0.1	0.6	32.8	8.7	55.2	23.2	34.9	26.0	0.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.3	15.9	1.1	0.7	18.5	10.0	11.9	16.0	18.4	24.0	8.2	2.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	77.7	65.1	45.7	75.9	96.7	68.3	126.4	86.3	98.1	81.7	36.0	31.6
LnGrp LOS	E	E	D	E	F	E	F	F	F	F	D	C
Approach Vol, veh/h		1059			1031			1267			1448	
Approach Delay, s/veh		67.4			89.3			96.4			51.9	
Approach LOS		E			F			F			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	56.5	42.0	14.5	49.8	27.0	71.5	21.8	42.5
Change Period (Y+Rc), s	7.0	7.0	7.5	7.5	7.0	7.0	7.5	7.5
Max Green Setting (Gmax), s	55.0	35.0	20.0	35.0	20.0	35.0	30.0	35.0
Max Q Clear Time (g_c+I1), s	48.7	35.1	3.5	36.2	21.5	22.1	13.8	37.0
Green Ext Time (p_c), s	0.7	0.0	0.0	0.0	0.0	6.0	0.5	0.0

Intersection Summary	
HCM 6th Ctrl Delay	75.1
HCM 6th LOS	E

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary
2: Vineyard Ave & Mission Blvd

03/18/2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	970	303	40	740	0	363	40	80	0	30	40
Future Volume (veh/h)	40	970	303	40	740	0	363	40	80	0	30	40
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	43	1054	167	43	804	0	395	43	25	0	33	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	98	1308	576	98	1308	0	467	972	428	100	972	
Arrive On Green	0.06	0.37	0.37	0.06	0.37	0.00	0.28	0.28	0.28	0.00	0.28	0.00
Sat Flow, veh/h	1753	3497	1539	1753	3589	0	1354	3497	1539	1312	3589	0
Grp Volume(v), veh/h	43	1054	167	43	804	0	395	43	25	0	33	0
Grp Sat Flow(s),veh/h/ln	1753	1749	1539	1753	1749	0	1354	1749	1539	1312	1749	0
Q Serve(g_s), s	1.7	19.4	5.5	1.7	13.4	0.0	19.5	0.6	0.9	0.0	0.5	0.0
Cycle Q Clear(g_c), s	1.7	19.4	5.5	1.7	13.4	0.0	20.0	0.6	0.9	0.0	0.5	0.0
Prop In Lane	1.00		1.00	1.00		0.00	1.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	98	1308	576	98	1308	0	467	972	428	100	972	
V/C Ratio(X)	0.44	0.81	0.29	0.44	0.61	0.00	0.85	0.04	0.06	0.00	0.03	
Avail Cap(c_a), veh/h	487	1458	642	487	1458	0	467	972	428	100	972	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	0.00	1.00	0.00
Uniform Delay (d), s/veh	32.9	20.2	15.8	32.9	18.3	0.0	26.9	19.0	19.1	0.0	18.9	0.0
Incr Delay (d2), s/veh	1.1	3.4	0.4	1.1	0.8	0.0	14.1	0.0	0.1	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	7.0	1.7	0.7	4.6	0.0	7.8	0.2	0.3	0.0	0.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	34.0	23.6	16.2	34.0	19.1	0.0	41.0	19.0	19.2	0.0	19.0	0.0
LnGrp LOS	C	C	B	C	B	A	D	B	B	A	B	
Approach Vol, veh/h		1264			847			463			33	A
Approach Delay, s/veh		22.9			19.9			37.8			19.0	
Approach LOS		C			B			D			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.0	33.9		27.0	11.0	33.9		27.0				
Change Period (Y+Rc), s	7.0	7.0		7.0	7.0	7.0		7.0				
Max Green Setting (Gmax), s	20.0	30.0		20.0	20.0	30.0		20.0				
Max Q Clear Time (g_c+I1), s	3.7	21.4		22.0	3.7	15.4		2.5				
Green Ext Time (p_c), s	0.0	5.5		0.0	0.0	5.6		0.1				

Intersection Summary			
HCM 6th Ctrl Delay		24.5	
HCM 6th LOS		C	

Notes

Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary
3: Vineyard Ave & Francis St

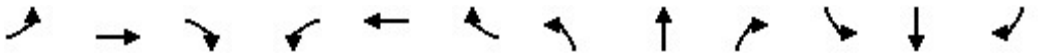
03/18/2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	240	91	110	170	40	42	363	30	20	433	10
Future Volume (veh/h)	20	240	91	110	170	40	42	363	30	20	433	10
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	22	261	66	120	185	29	46	395	29	22	471	11
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	382	509	126	368	724	111	314	847	62	318	817	19
Arrive On Green	0.03	0.18	0.18	0.09	0.24	0.24	0.05	0.26	0.26	0.03	0.23	0.23
Sat Flow, veh/h	1753	2764	684	1753	3028	466	1753	3299	241	1753	3491	81
Grp Volume(v), veh/h	22	163	164	120	105	109	46	209	215	22	236	246
Grp Sat Flow(s),veh/h/ln	1753	1749	1699	1753	1749	1746	1753	1749	1792	1753	1749	1824
Q Serve(g_s), s	0.6	5.1	5.3	3.3	3.0	3.1	1.2	6.1	6.2	0.6	7.3	7.3
Cycle Q Clear(g_c), s	0.6	5.1	5.3	3.3	3.0	3.1	1.2	6.1	6.2	0.6	7.3	7.3
Prop In Lane	1.00		0.40	1.00		0.27	1.00		0.13	1.00		0.04
Lane Grp Cap(c), veh/h	382	322	313	368	418	417	314	449	460	318	409	427
V/C Ratio(X)	0.06	0.51	0.52	0.33	0.25	0.26	0.15	0.46	0.47	0.07	0.58	0.58
Avail Cap(c_a), veh/h	774	1019	990	664	1019	1017	652	1004	1029	696	1004	1048
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.0	22.4	22.4	17.7	18.8	18.8	16.4	19.1	19.1	16.9	20.7	20.7
Incr Delay (d2), s/veh	0.1	1.8	1.9	0.5	0.4	0.5	0.3	1.1	1.1	0.1	1.8	1.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	2.0	2.0	1.2	1.1	1.1	0.4	2.3	2.3	0.2	2.8	2.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	19.1	24.1	24.4	18.2	19.2	19.3	16.6	20.2	20.2	17.0	22.5	22.4
LnGrp LOS	B	C	C	B	B	B	B	C	C	B	C	C
Approach Vol, veh/h		349			334			470			504	
Approach Delay, s/veh		23.9			18.9			19.8			22.2	
Approach LOS		C			B			B			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.9	22.6	11.7	17.7	10.2	21.3	8.4	21.1
Change Period (Y+Rc), s	7.0	7.0	6.5	6.5	7.0	7.0	6.5	6.5
Max Green Setting (Gmax), s	15.0	35.0	15.5	35.5	15.0	35.0	15.5	35.5
Max Q Clear Time (g_c+I1), s	2.6	8.2	5.3	7.3	3.2	9.3	2.6	5.1
Green Ext Time (p_c), s	0.0	3.3	0.2	2.5	0.1	3.8	0.0	1.6

Intersection Summary	
HCM 6th Ctrl Delay	21.2
HCM 6th LOS	C

Min green cannot be greater than Max Green.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	450	0	390	428	856	0	0	833	530
Future Volume (veh/h)	0	0	0	450	0	390	428	856	0	0	833	530
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		0.99
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1841	1841	1841	1841	1841	0	0	1841	1841
Adj Flow Rate, veh/h				530	0	132	446	892	0	0	868	185
Peak Hour Factor				0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %				4	4	4	4	4	0	0	4	4
Cap, veh/h				685	0	305	443	2240	0	0	1125	498
Arrive On Green				0.20	0.00	0.20	0.25	0.64	0.00	0.00	0.32	0.32
Sat Flow, veh/h				3506	0	1560	1753	3589	0	0	3589	1548
Grp Volume(v), veh/h				530	0	132	446	892	0	0	868	185
Grp Sat Flow(s),veh/h/ln				1753	0	1560	1753	1749	0	0	1749	1548
Q Serve(g_s), s				11.3	0.0	5.9	20.0	9.7	0.0	0.0	17.7	7.3
Cycle Q Clear(g_c), s				11.3	0.0	5.9	20.0	9.7	0.0	0.0	17.7	7.3
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				685	0	305	443	2240	0	0	1125	498
V/C Ratio(X)				0.77	0.00	0.43	1.01	0.40	0.00	0.00	0.77	0.37
Avail Cap(c_a), veh/h				886	0	394	443	2240	0	0	1326	587
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				30.2	0.0	28.0	29.6	6.9	0.0	0.0	24.2	20.7
Incr Delay (d2), s/veh				3.8	0.0	1.4	44.3	0.2	0.0	0.0	2.7	0.7
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				5.0	0.0	2.3	13.2	2.8	0.0	0.0	7.1	2.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				34.0	0.0	29.4	73.9	7.0	0.0	0.0	26.9	21.3
LnGrp LOS				C	A	C	F	A	A	A	C	C
Approach Vol, veh/h					662			1338			1053	
Approach Delay, s/veh					33.1			29.3			26.0	
Approach LOS					C			C			C	

Timer - Assigned Phs	2		5	6		8						
Phs Duration (G+Y+Rc), s	56.7		25.2	31.5		22.4						
Change Period (Y+Rc), s	6.0		* 5.2	6.0		7.0						
Max Green Setting (Gmax), s	30.0		* 20	30.0		20.0						
Max Q Clear Time (g_c+I1), s	11.7		22.0	19.7		13.3						
Green Ext Time (p_c), s	7.6		0.0	5.7		2.1						

Intersection Summary		
HCM 6th Ctrl Delay	29.0	
HCM 6th LOS	C	

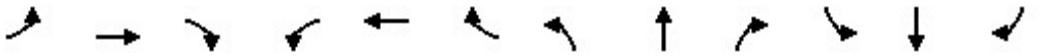
Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th Signalized Intersection Summary
6: Euclid Ave & SR-60 EB Ramps

03/18/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	240	0	374	0	0	0	0	1074	380	230	1023	0
Future Volume (veh/h)	240	0	374	0	0	0	0	1074	380	230	1023	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1841	0	1841				0	1841	1841	1841	1841	0
Adj Flow Rate, veh/h	242	0	283				0	1085	143	232	1033	0
Peak Hour Factor	0.99	0.99	0.99				0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	4	0	4				0	4	4	4	4	0
Cap, veh/h	383	0	341				0	1333	591	280	2115	0
Arrive On Green	0.22	0.00	0.22				0.00	0.38	0.38	0.16	0.60	0.00
Sat Flow, veh/h	1753	0	1560				0	3589	1550	1753	3589	0
Grp Volume(v), veh/h	242	0	283				0	1085	143	232	1033	0
Grp Sat Flow(s),veh/h/ln	1753	0	1560				0	1749	1550	1753	1749	0
Q Serve(g_s), s	9.2	0.0	12.7				0.0	20.5	4.6	9.4	12.2	0.0
Cycle Q Clear(g_c), s	9.2	0.0	12.7				0.0	20.5	4.6	9.4	12.2	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	383	0	341				0	1333	591	280	2115	0
V/C Ratio(X)	0.63	0.00	0.83				0.00	0.81	0.24	0.83	0.49	0.00
Avail Cap(c_a), veh/h	477	0	425				0	1428	633	477	2115	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	26.0	0.0	27.4				0.0	20.4	15.5	29.9	8.2	0.0
Incr Delay (d2), s/veh	2.5	0.0	12.0				0.0	3.9	0.4	6.3	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.9	0.0	5.7				0.0	8.0	1.5	4.2	3.5	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	28.6	0.0	39.4				0.0	24.3	15.9	36.2	8.4	0.0
LnGrp LOS	C	A	D				A	C	B	D	A	A
Approach Vol, veh/h		525						1228			1265	
Approach Delay, s/veh		34.4						23.4			13.5	
Approach LOS		C						C			B	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	16.4	34.0		23.1		50.4
Change Period (Y+Rc), s	* 4.7	6.0		7.0		6.0
Max Green Setting (Gmax), s	* 20	30.0		20.0		30.0
Max Q Clear Time (g_c+I1), s	11.4	22.5		14.7		14.2
Green Ext Time (p_c), s	0.4	5.6		1.3		8.2

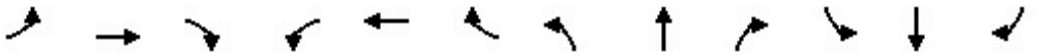
Intersection Summary	
HCM 6th Ctrl Delay	21.1
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th Signalized Intersection Summary
7: Vineyard Ave & SR-60 WB Ramps

03/18/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	247	0	130	414	566	0	0	795	470
Future Volume (veh/h)	0	0	0	247	0	130	414	566	0	0	795	470
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		0.97
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1841	1841	1841	1841	1841	0	0	1841	1841
Adj Flow Rate, veh/h				257	0	27	431	590	0	0	828	389
Peak Hour Factor				0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %				4	4	4	4	4	0	0	4	4
Cap, veh/h				305	0	271	394	2383	0	0	902	421
Arrive On Green				0.17	0.00	0.17	0.07	0.22	0.00	0.00	0.39	0.39
Sat Flow, veh/h				1753	0	1560	1753	3589	0	0	2383	1070
Grp Volume(v), veh/h				257	0	27	431	590	0	0	631	586
Grp Sat Flow(s),veh/h/ln				1753	0	1560	1753	1749	0	0	1749	1612
Q Serve(g_s), s				11.4	0.0	1.2	18.0	11.1	0.0	0.0	27.4	27.7
Cycle Q Clear(g_c), s				11.4	0.0	1.2	18.0	11.1	0.0	0.0	27.4	27.7
Prop In Lane				1.00		1.00	1.00		0.00	0.00		0.66
Lane Grp Cap(c), veh/h				305	0	271	394	2383	0	0	689	635
V/C Ratio(X)				0.84	0.00	0.10	1.09	0.25	0.00	0.00	0.92	0.92
Avail Cap(c_a), veh/h				403	0	359	394	2383	0	0	689	635
HCM Platoon Ratio				1.00	1.00	1.00	0.33	0.33	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.22	0.22	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				32.0	0.0	27.8	37.0	14.2	0.0	0.0	23.0	23.1
Incr Delay (d2), s/veh				10.8	0.0	0.1	51.3	0.1	0.0	0.0	19.0	21.2
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				5.6	0.0	0.4	13.9	4.3	0.0	0.0	13.5	12.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				42.8	0.0	27.9	88.4	14.2	0.0	0.0	42.0	44.3
LnGrp LOS				D	A	C	F	B	A	A	D	D
Approach Vol, veh/h					284			1021			1217	
Approach Delay, s/veh					41.4			45.5			43.1	
Approach LOS					D			D			D	

Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		60.3			23.0	37.3		19.7				
Change Period (Y+Rc), s		5.8			5.0	5.8		5.8				
Max Green Setting (Gmax), s		50.0			18.0	27.0		18.4				
Max Q Clear Time (g_c+I1), s		13.1			20.0	29.7		13.4				
Green Ext Time (p_c), s		3.2			0.0	0.0		0.6				

Intersection Summary												
HCM 6th Ctrl Delay			43.9									
HCM 6th LOS			D									

HCM 6th Signalized Intersection Summary
8: Vineyard Ave & SR-60 EB Ramps

03/18/2024

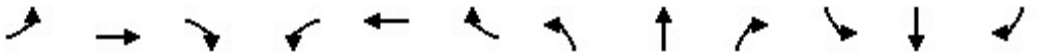
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	120	0	405	0	0	0	0	849	383	240	811	0
Future Volume (veh/h)	120	0	405	0	0	0	0	849	383	240	811	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		0.97	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841				0	1841	1841	1841	1841	0
Adj Flow Rate, veh/h	124	0	282				0	875	337	247	836	0
Peak Hour Factor	0.97	0.97	0.97				0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	4	4	4				0	4	4	4	4	0
Cap, veh/h	363	0	323				0	1043	400	280	2265	0
Arrive On Green	0.21	0.00	0.21				0.00	0.43	0.43	0.32	1.00	0.00
Sat Flow, veh/h	1753	0	1560				0	2542	939	1753	3589	0
Grp Volume(v), veh/h	124	0	282				0	623	589	247	836	0
Grp Sat Flow(s),veh/h/ln	1753	0	1560				0	1749	1640	1753	1749	0
Q Serve(g_s), s	4.8	0.0	14.0				0.0	25.5	25.7	10.7	0.0	0.0
Cycle Q Clear(g_c), s	4.8	0.0	14.0				0.0	25.5	25.7	10.7	0.0	0.0
Prop In Lane	1.00		1.00				0.00		0.57	1.00		0.00
Lane Grp Cap(c), veh/h	363	0	323				0	744	698	280	2265	0
V/C Ratio(X)	0.34	0.00	0.87				0.00	0.84	0.84	0.88	0.37	0.00
Avail Cap(c_a), veh/h	447	0	398				0	744	698	373	2265	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.09	0.09	0.00
Uniform Delay (d), s/veh	27.1	0.0	30.7				0.0	20.5	20.6	26.5	0.0	0.0
Incr Delay (d2), s/veh	0.4	0.0	15.3				0.0	10.9	11.9	1.6	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	0.0	6.5				0.0	11.1	10.8	3.5	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	27.5	0.0	46.0				0.0	31.4	32.4	28.1	0.0	0.0
LnGrp LOS	C	A	D				A	C	C	C	A	A
Approach Vol, veh/h		406						1212			1083	
Approach Delay, s/veh		40.4						31.9			6.4	
Approach LOS		D						C			A	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	17.8	39.8		22.4		57.6
Change Period (Y+Rc), s	5.0	5.8		5.8		5.8
Max Green Setting (Gmax), s	17.0	26.0		20.4		48.0
Max Q Clear Time (g_c+I1), s	12.7	27.7		16.0		2.0
Green Ext Time (p_c), s	0.1	0.0		0.6		4.9

Intersection Summary	
HCM 6th Ctrl Delay	23.0
HCM 6th LOS	C

HCM 6th Signalized Intersection Summary
9: Archibald Ave & SR-60 WB Ramps

03/18/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	898	0	230	490	422	0	0	1020	230
Future Volume (veh/h)	0	0	0	898	0	230	490	422	0	0	1020	230
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		0.97
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1781	1781	1781	1781	1781	0	0	1781	1781
Adj Flow Rate, veh/h				920	0	9	500	431	0	0	1041	57
Peak Hour Factor				0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %				8	8	8	8	8	0	0	8	8
Cap, veh/h				920	0	409	987	2918	0	0	1498	357
Arrive On Green				0.27	0.00	0.27	0.40	0.80	0.00	0.00	0.24	0.24
Sat Flow, veh/h				3393	0	1510	3291	5024	0	0	6378	1460
Grp Volume(v), veh/h				920	0	9	500	431	0	0	1041	57
Grp Sat Flow(s),veh/h/ln				1697	0	1510	1646	1621	0	0	1532	1460
Q Serve(g_s), s				24.4	0.0	0.4	10.3	1.8	0.0	0.0	13.9	2.8
Cycle Q Clear(g_c), s				24.4	0.0	0.4	10.3	1.8	0.0	0.0	13.9	2.8
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				920	0	409	987	2918	0	0	1498	357
V/C Ratio(X)				1.00	0.00	0.02	0.51	0.15	0.00	0.00	0.69	0.16
Avail Cap(c_a), veh/h				920	0	409	987	2918	0	0	1498	357
HCM Platoon Ratio				1.00	1.00	1.00	1.33	1.33	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.91	0.91	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				32.8	0.0	24.1	22.0	3.8	0.0	0.0	30.9	26.7
Incr Delay (d2), s/veh				29.7	0.0	0.1	1.7	0.1	0.0	0.0	2.7	1.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				13.5	0.0	0.4	3.7	0.5	0.0	0.0	5.1	1.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				62.5	0.0	24.1	23.7	3.9	0.0	0.0	33.6	27.7
LnGrp LOS				F	A	C	C	A	A	A	C	C
Approach Vol, veh/h					929			931			1098	
Approach Delay, s/veh					62.1			14.5			33.3	
Approach LOS					E			B			C	

Timer - Assigned Phs	2	4	5	6
Phs Duration (G+Y+Rc), s	59.8	30.2	32.0	27.8
Change Period (Y+Rc), s	5.8	5.8	5.0	5.8
Max Green Setting (Gmax), s	54.0	24.4	27.0	22.0
Max Q Clear Time (g_c+I1), s	3.8	26.4	12.3	15.9
Green Ext Time (p_c), s	2.9	0.0	0.8	3.3

Intersection Summary	
HCM 6th Ctrl Delay	36.5
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

User approved volume balancing among the lanes for turning movement.

HCM 6th Signalized Intersection Summary
10: Archibald Ave & SR 60 EB Ramps

03/18/2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	80	0	440	0	0	0	0	892	954	400	1508	0
Future Volume (veh/h)	80	0	440	0	0	0	0	892	954	400	1508	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		0.97	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1781	1781	1781				0	1781	1781	1781	1781	0
Adj Flow Rate, veh/h	55	0	351				0	920	526	412	1555	0
Peak Hour Factor	0.97	0.97	0.97				0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	8	8	8				0	8	8	8	8	0
Cap, veh/h	498	0	886				0	2111	505	585	2810	0
Arrive On Green	0.29	0.00	0.29				0.00	0.34	0.34	0.06	0.19	0.00
Sat Flow, veh/h	1697	0	3019				0	6378	1466	3291	5024	0
Grp Volume(v), veh/h	55	0	351				0	920	526	412	1555	0
Grp Sat Flow(s),veh/h/ln	1697	0	1510				0	1532	1466	1646	1621	0
Q Serve(g_s), s	2.1	0.0	8.4				0.0	10.4	31.0	11.1	26.0	0.0
Cycle Q Clear(g_c), s	2.1	0.0	8.4				0.0	10.4	31.0	11.1	26.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	498	0	886				0	2111	505	585	2810	0
V/C Ratio(X)	0.11	0.00	0.40				0.00	0.44	1.04	0.70	0.55	0.00
Avail Cap(c_a), veh/h	498	0	886				0	2111	505	585	2810	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	0.33	0.33	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.46	0.46	0.00
Uniform Delay (d), s/veh	23.2	0.0	25.4				0.0	22.8	29.5	40.0	25.9	0.0
Incr Delay (d2), s/veh	0.4	0.0	1.3				0.0	0.7	51.4	3.3	0.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	0.0	3.1				0.0	3.6	17.1	4.9	11.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.7	0.0	26.8				0.0	23.4	80.9	43.3	26.3	0.0
LnGrp LOS	C	A	C				A	C	F	D	C	A
Approach Vol, veh/h		406						1446			1967	
Approach Delay, s/veh		26.3						44.3			29.8	
Approach LOS		C						D			C	

Timer - Assigned Phs	1	2				6		8				
Phs Duration (G+Y+Rc), s	21.0	36.8				57.8		32.2				
Change Period (Y+Rc), s	5.0	5.8				5.8		5.8				
Max Green Setting (Gmax), s	16.0	31.0				52.0		26.4				
Max Q Clear Time (g_c+I1), s	13.1	33.0				28.0		10.4				
Green Ext Time (p_c), s	0.3	0.0				11.8		1.4				

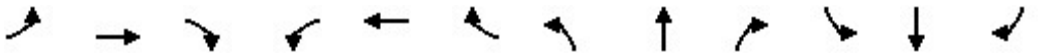
Intersection Summary			
HCM 6th Ctrl Delay			35.0
HCM 6th LOS			C

Notes

User approved volume balancing among the lanes for turning movement.

HCM 6th Signalized Intersection Summary
11: Archibald Ave & Walnut St

03/18/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	10	43	23	20	70	103	1546	43	80	1488	20
Future Volume (veh/h)	20	10	43	23	20	70	103	1546	43	80	1488	20
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.98		0.96	0.98		0.96	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781
Adj Flow Rate, veh/h	21	11	7	24	21	9	110	1645	45	85	1583	21
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	8	8	8	8	8	8	8	8	8	8	8	8
Cap, veh/h	262	134	85	271	156	67	140	2385	65	108	2332	31
Arrive On Green	0.13	0.13	0.13	0.13	0.13	0.13	0.08	0.49	0.49	0.06	0.47	0.47
Sat Flow, veh/h	1288	999	636	1300	1166	500	1697	4861	133	1697	4944	66
Grp Volume(v), veh/h	21	0	18	24	0	30	110	1097	593	85	1038	566
Grp Sat Flow(s),veh/h/ln	1288	0	1634	1300	0	1666	1697	1621	1752	1697	1621	1767
Q Serve(g_s), s	1.0	0.0	0.6	1.1	0.0	1.0	4.2	17.1	17.2	3.3	16.4	16.4
Cycle Q Clear(g_c), s	2.0	0.0	0.6	1.7	0.0	1.0	4.2	17.1	17.2	3.3	16.4	16.4
Prop In Lane	1.00		0.39	1.00		0.30	1.00		0.08	1.00		0.04
Lane Grp Cap(c), veh/h	262	0	219	271	0	223	140	1591	860	108	1530	834
V/C Ratio(X)	0.08	0.00	0.08	0.09	0.00	0.13	0.78	0.69	0.69	0.79	0.68	0.68
Avail Cap(c_a), veh/h	480	0	497	492	0	506	515	1970	1065	515	1970	1074
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.0	0.0	25.0	25.7	0.0	25.1	29.6	12.9	12.9	30.4	13.5	13.5
Incr Delay (d2), s/veh	0.1	0.0	0.1	0.1	0.0	0.2	3.6	0.9	1.6	4.7	0.7	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	0.2	0.3	0.0	0.4	1.7	4.8	5.3	1.4	4.8	5.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.1	0.0	25.1	25.8	0.0	25.3	33.2	13.8	14.5	35.0	14.3	14.9
LnGrp LOS	C	A	C	C	A	C	C	B	B	D	B	B
Approach Vol, veh/h		39			54			1800			1689	
Approach Delay, s/veh		25.6			25.5			15.2			15.5	
Approach LOS		C			C			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.7	38.8		16.3	11.9	37.6		16.3				
Change Period (Y+Rc), s	6.5	6.5		7.5	6.5	6.5		7.5				
Max Green Setting (Gmax), s	20.0	40.0		20.0	20.0	40.0		20.0				
Max Q Clear Time (g_c+I1), s	5.3	19.2		4.0	6.2	18.4		3.7				
Green Ext Time (p_c), s	0.1	12.8		0.1	0.1	12.7		0.1				

Intersection Summary			
HCM 6th Ctrl Delay		15.6	
HCM 6th LOS		B	

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary
12: Euclid Ave & Riverside Dr

03/18/2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	130	529	61	149	448	122	60	1043	253	157	900	150
Future Volume (veh/h)	130	529	61	149	448	122	60	1043	253	157	900	150
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.96	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	140	569	21	160	482	42	65	1122	156	169	968	85
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	164	586	484	185	1155	503	118	1035	442	194	1186	662
Arrive On Green	0.09	0.32	0.32	0.11	0.33	0.33	0.07	0.30	0.30	0.11	0.34	0.34
Sat Flow, veh/h	1753	1841	1521	1753	3497	1522	1753	3497	1493	1753	3497	1523
Grp Volume(v), veh/h	140	569	21	160	482	42	65	1122	156	169	968	85
Grp Sat Flow(s),veh/h/ln	1753	1841	1521	1753	1749	1522	1753	1749	1493	1753	1749	1523
Q Serve(g_s), s	10.6	41.2	1.3	12.1	14.5	2.6	4.9	40.0	11.1	12.8	34.2	4.5
Cycle Q Clear(g_c), s	10.6	41.2	1.3	12.1	14.5	2.6	4.9	40.0	11.1	12.8	34.2	4.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	164	586	484	185	1155	503	118	1035	442	194	1186	662
V/C Ratio(X)	0.85	0.97	0.04	0.86	0.42	0.08	0.55	1.08	0.35	0.87	0.82	0.13
Avail Cap(c_a), veh/h	261	586	484	419	1429	622	130	1035	442	244	1186	662
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	60.3	45.4	31.8	59.5	35.2	31.2	61.0	47.6	37.4	59.1	40.8	23.0
Incr Delay (d2), s/veh	8.3	30.0	0.1	4.6	0.3	0.1	3.9	53.5	0.5	23.3	4.5	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.0	23.0	0.5	5.5	6.0	0.9	2.3	24.7	4.0	6.9	15.1	1.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	68.7	75.5	31.9	64.1	35.5	31.3	64.9	101.1	37.9	82.4	45.4	23.1
LnGrp LOS	E	E	C	E	D	C	E	F	D	F	D	C
Approach Vol, veh/h		730			684			1343			1222	
Approach Delay, s/veh		72.9			41.9			92.0			48.9	
Approach LOS		E			D			F			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	20.1	46.0	19.0	50.0	14.3	51.8	17.4	51.6
Change Period (Y+Rc), s	* 5.2	6.0	* 4.7	7.0	* 5.2	6.0	* 4.7	7.0
Max Green Setting (Gmax), s	* 19	40.0	* 32	43.0	* 10	42.5	* 20	55.2
Max Q Clear Time (g_c+I1), s	14.8	42.0	14.1	43.2	6.9	36.2	12.6	16.5
Green Ext Time (p_c), s	0.1	0.0	0.2	0.0	0.0	3.4	0.1	4.7

Intersection Summary	
HCM 6th Ctrl Delay	66.7
HCM 6th LOS	E

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th Signalized Intersection Summary
13: Campus Ave & Riverside Dr

03/18/2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	120	809	40	33	608	83	20	370	83	93	130	100
Future Volume (veh/h)	120	809	40	33	608	83	20	370	83	93	130	100
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	1.00		0.97	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	126	852	18	35	640	76	21	389	80	98	137	32
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	165	688	567	95	1051	125	404	459	94	147	574	477
Arrive On Green	0.09	0.37	0.37	0.05	0.33	0.33	0.31	0.31	0.31	0.31	0.31	0.31
Sat Flow, veh/h	1767	1856	1528	1767	3167	376	1238	1484	305	914	1856	1544
Grp Volume(v), veh/h	126	852	18	35	356	360	21	0	469	98	137	32
Grp Sat Flow(s),veh/h/ln	1767	1856	1528	1767	1763	1780	1238	0	1789	914	1856	1544
Q Serve(g_s), s	5.6	30.0	0.6	1.5	13.7	13.7	1.0	0.0	19.8	5.2	4.5	1.2
Cycle Q Clear(g_c), s	5.6	30.0	0.6	1.5	13.7	13.7	5.5	0.0	19.8	25.0	4.5	1.2
Prop In Lane	1.00		1.00	1.00		0.21	1.00		0.17	1.00		1.00
Lane Grp Cap(c), veh/h	165	688	567	95	585	591	404	0	553	147	574	477
V/C Ratio(X)	0.77	1.24	0.03	0.37	0.61	0.61	0.05	0.00	0.85	0.66	0.24	0.07
Avail Cap(c_a), veh/h	437	688	567	437	654	660	404	0	553	147	574	477
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.8	25.4	16.2	36.9	22.6	22.6	22.9	0.0	26.1	38.9	20.8	19.7
Incr Delay (d2), s/veh	2.8	119.1	0.0	0.9	1.5	1.6	0.1	0.0	11.9	10.7	0.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	34.1	0.2	0.6	5.3	5.3	0.3	0.0	9.6	2.3	1.8	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	38.6	144.5	16.2	37.8	24.2	24.2	22.9	0.0	38.1	49.6	21.0	19.8
LnGrp LOS	D	F	B	D	C	C	C	A	D	D	C	B
Approach Vol, veh/h		996			751			490			267	
Approach Delay, s/veh		128.8			24.8			37.4			31.4	
Approach LOS		F			C			D			C	

Timer - Assigned Phs	2	3	4	6	7	8
Phs Duration (G+Y+Rc), s	31.5	11.9	37.5	31.5	15.0	34.3
Change Period (Y+Rc), s	6.5	7.5	7.5	6.5	7.5	7.5
Max Green Setting (Gmax), s	25.0	20.0	30.0	25.0	20.0	30.0
Max Q Clear Time (g_c+I1), s	21.8	3.5	32.0	27.0	7.6	15.7
Green Ext Time (p_c), s	1.0	0.0	0.0	0.0	0.1	4.0

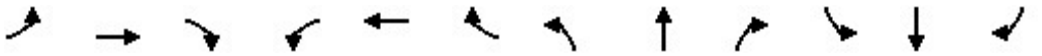
Intersection Summary	
HCM 6th Ctrl Delay	69.4
HCM 6th LOS	E

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary
15: Grove Ave & Riverside Dr

03/18/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	220	909	1	7	628	176	11	43	25	236	43	180
Future Volume (veh/h)	220	909	1	7	628	176	11	43	25	236	43	180
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.97	1.00		0.96	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	232	957	1	7	661	167	12	45	9	248	45	53
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	268	805	1	16	806	204	30	110	22	284	404	334
Arrive On Green	0.15	0.43	0.43	0.01	0.29	0.29	0.02	0.07	0.07	0.16	0.22	0.22
Sat Flow, veh/h	1767	1853	2	1767	2768	698	1767	1490	298	1767	1856	1536
Grp Volume(v), veh/h	232	0	958	7	421	407	12	0	54	248	45	53
Grp Sat Flow(s),veh/h/ln	1767	0	1855	1767	1763	1704	1767	0	1788	1767	1856	1536
Q Serve(g_s), s	11.9	0.0	40.4	0.4	20.7	20.7	0.6	0.0	2.7	12.8	1.8	2.6
Cycle Q Clear(g_c), s	11.9	0.0	40.4	0.4	20.7	20.7	0.6	0.0	2.7	12.8	1.8	2.6
Prop In Lane	1.00		0.00	1.00		0.41	1.00		0.17	1.00		1.00
Lane Grp Cap(c), veh/h	268	0	806	16	514	496	30	0	132	284	404	334
V/C Ratio(X)	0.86	0.00	1.19	0.45	0.82	0.82	0.39	0.00	0.41	0.87	0.11	0.16
Avail Cap(c_a), veh/h	379	0	806	379	662	640	379	0	576	379	598	495
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.6	0.0	26.3	45.9	30.7	30.7	45.3	0.0	41.2	38.2	29.2	29.5
Incr Delay (d2), s/veh	12.4	0.0	97.4	14.0	6.7	7.1	6.1	0.0	2.4	14.5	0.1	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.8	0.0	37.2	0.2	9.0	8.8	0.3	0.0	1.2	6.4	0.8	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	51.0	0.0	123.7	59.9	37.5	37.8	51.4	0.0	43.6	52.7	29.4	29.8
LnGrp LOS	D	A	F	E	D	D	D	A	D	D	C	C
Approach Vol, veh/h		1190			835			66			346	
Approach Delay, s/veh		109.6			37.8			45.0			46.1	
Approach LOS		F			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	21.6	34.6	9.1	27.8	8.3	47.9	22.5	14.4
Change Period (Y+Rc), s	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5
Max Green Setting (Gmax), s	20.0	35.0	20.0	30.0	20.0	35.0	20.0	30.0
Max Q Clear Time (g_c+I1), s	13.9	22.7	2.6	4.6	2.4	42.4	14.8	4.7
Green Ext Time (p_c), s	0.2	4.4	0.0	0.4	0.0	0.0	0.2	0.2

Intersection Summary	
HCM 6th Ctrl Delay	74.2
HCM 6th LOS	E

HCM 6th Signalized Intersection Summary
18: Vineyard Ave & Riverside Dr

03/18/2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	190	901	16	19	626	379	22	384	20	624	262	130
Future Volume (veh/h)	190	901	16	19	626	379	22	384	20	624	262	130
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	198	939	7	20	652	148	23	400	3	673	240	122
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	114	1070	469	84	929	407	284	566	246	895	292	148
Arrive On Green	0.06	0.30	0.30	0.02	0.26	0.26	0.16	0.16	0.16	0.25	0.25	0.25
Sat Flow, veh/h	1767	3526	1544	3428	3526	1542	1767	3526	1535	3534	1151	585
Grp Volume(v), veh/h	198	939	7	20	652	148	23	400	3	673	0	362
Grp Sat Flow(s),veh/h/ln	1767	1763	1544	1714	1763	1542	1767	1763	1535	1767	0	1736
Q Serve(g_s), s	7.5	29.4	0.4	0.7	19.4	9.1	1.3	12.5	0.2	20.4	0.0	22.9
Cycle Q Clear(g_c), s	7.5	29.4	0.4	0.7	19.4	9.1	1.3	12.5	0.2	20.4	0.0	22.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.34
Lane Grp Cap(c), veh/h	114	1070	469	84	929	407	284	566	246	895	0	440
V/C Ratio(X)	1.74	0.88	0.01	0.24	0.70	0.36	0.08	0.71	0.01	0.75	0.00	0.82
Avail Cap(c_a), veh/h	114	1153	505	177	1107	484	547	1092	475	1064	0	523
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	54.4	38.4	28.3	55.6	38.7	34.9	41.5	46.2	41.0	40.0	0.0	40.9
Incr Delay (d2), s/veh	365.0	7.7	0.0	1.1	1.8	0.7	0.1	2.0	0.0	2.7	0.0	9.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	14.8	13.0	0.1	0.3	8.1	3.3	0.6	5.4	0.1	8.9	0.0	10.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	419.4	46.1	28.3	56.7	40.4	35.5	41.6	48.2	41.1	42.7	0.0	50.2
LnGrp LOS	F	D	C	E	D	D	D	D	D	D	A	D
Approach Vol, veh/h		1144			820			426			1035	
Approach Delay, s/veh		110.6			39.9			47.8			45.4	
Approach LOS		F			D			D			D	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		26.1	10.4	42.8		36.9	15.0	38.1				
Change Period (Y+Rc), s		7.5	7.5	7.5		7.5	7.5	7.5				
Max Green Setting (Gmax), s		36.0	6.0	38.0		35.0	7.5	36.5				
Max Q Clear Time (g_c+I1), s		14.5	2.7	31.4		24.9	9.5	21.4				
Green Ext Time (p_c), s		2.8	0.0	3.4		4.1	0.0	3.3				

Intersection Summary	
HCM 6th Ctrl Delay	66.1
HCM 6th LOS	E

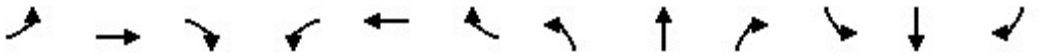
Notes

User approved pedestrian interval to be less than phase max green.

User approved volume balancing among the lanes for turning movement.

HCM 6th Signalized Intersection Summary
23: Street A/Whispering Lakes Golf Course Dwy & Riverside Dr

03/18/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	1383	204	146	833	10	213	0	149	10	0	20
Future Volume (veh/h)	10	1383	204	146	833	10	213	0	149	10	0	20
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	0.99		0.98	0.99		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	10	1441	142	152	868	10	222	0	49	10	0	4
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	26	1643	713	177	1968	23	363	0	317	320	0	317
Arrive On Green	0.01	0.47	0.47	0.10	0.55	0.55	0.21	0.00	0.21	0.21	0.00	0.21
Sat Flow, veh/h	1767	3526	1530	1767	3569	41	1391	0	1539	1337	0	1539
Grp Volume(v), veh/h	10	1441	142	152	429	449	222	0	49	10	0	4
Grp Sat Flow(s),veh/h/ln	1767	1763	1530	1767	1763	1847	1391	0	1539	1337	0	1539
Q Serve(g_s), s	0.5	33.2	4.9	7.6	13.0	13.0	13.6	0.0	2.3	0.6	0.0	0.2
Cycle Q Clear(g_c), s	0.5	33.2	4.9	7.6	13.0	13.0	13.8	0.0	2.3	2.9	0.0	0.2
Prop In Lane	1.00		1.00	1.00		0.02	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	26	1643	713	177	972	1018	363	0	317	320	0	317
V/C Ratio(X)	0.38	0.88	0.20	0.86	0.44	0.44	0.61	0.00	0.15	0.03	0.00	0.01
Avail Cap(c_a), veh/h	118	1746	758	177	972	1018	635	0	617	581	0	617
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	43.8	21.7	14.1	39.8	11.9	11.9	33.9	0.0	29.3	30.5	0.0	28.4
Incr Delay (d2), s/veh	9.0	5.3	0.2	32.0	0.4	0.4	1.7	0.0	0.2	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	12.6	1.5	4.6	4.2	4.4	4.7	0.0	0.9	0.2	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	52.8	27.0	14.3	71.8	12.3	12.3	35.6	0.0	29.5	30.5	0.0	28.4
LnGrp LOS	D	C	B	E	B	B	D	A	C	C	A	C
Approach Vol, veh/h		1593			1030			271			14	
Approach Delay, s/veh		26.0			21.1			34.5			29.9	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.3	57.0		24.5	16.0	49.4		24.5				
Change Period (Y+Rc), s	7.0	7.5		6.0	7.0	7.5		6.0				
Max Green Setting (Gmax), s	6.0	47.5		36.0	9.0	44.5		36.0				
Max Q Clear Time (g_c+I1), s	2.5	15.0		4.9	9.6	35.2		15.8				
Green Ext Time (p_c), s	0.0	6.5		0.0	0.0	6.7		0.9				

Intersection Summary			
HCM 6th Ctrl Delay		25.1	
HCM 6th LOS		C	

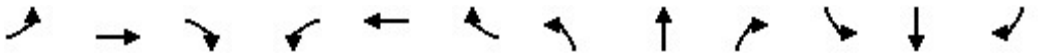
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1384	159	217	868	120	215
Future Volume (veh/h)	1384	159	217	868	120	215
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		0.97	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	1442	116	226	904	125	34
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	1774	770	265	2605	170	151
Arrive On Green	0.50	0.50	0.15	0.74	0.10	0.10
Sat Flow, veh/h	3618	1531	1767	3618	1767	1572
Grp Volume(v), veh/h	1442	116	226	904	125	34
Grp Sat Flow(s),veh/h/ln	1763	1531	1767	1763	1767	1572
Q Serve(g_s), s	28.1	3.3	10.2	7.4	5.6	1.6
Cycle Q Clear(g_c), s	28.1	3.3	10.2	7.4	5.6	1.6
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1774	770	265	2605	170	151
V/C Ratio(X)	0.81	0.15	0.85	0.35	0.74	0.23
Avail Cap(c_a), veh/h	2092	908	324	3041	778	693
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.1	10.9	33.8	3.7	35.9	34.1
Incr Delay (d2), s/veh	2.3	0.1	16.4	0.1	6.1	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.5	0.9	5.2	1.2	2.6	0.6
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	19.4	11.0	50.2	3.8	42.1	34.9
LnGrp LOS	B	B	D	A	D	C
Approach Vol, veh/h	1558			1130	159	
Approach Delay, s/veh	18.8			13.1	40.5	
Approach LOS	B			B	D	

Timer - Assigned Phs		2			5	6	8
Phs Duration (G+Y+Rc), s		67.9			19.3	48.6	13.8
Change Period (Y+Rc), s		7.5			7.0	7.5	6.0
Max Green Setting (Gmax), s		70.5			15.0	48.5	36.0
Max Q Clear Time (g_c+I1), s		9.4			12.2	30.1	7.6
Green Ext Time (p_c), s		8.2			0.2	11.0	0.4

Intersection Summary	
HCM 6th Ctrl Delay	17.7
HCM 6th LOS	B

HCM 6th Signalized Intersection Summary
25: Colonial Ave & Riverside Ave

03/18/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	33	1533	33	30	1059	20	13	0	30	0	0	23
Future Volume (veh/h)	33	1533	33	30	1059	20	13	0	30	0	0	23
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	0.98		1.00	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	37	1722	37	34	1190	22	15	0	0	0	0	4
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	96	2004	43	90	2000	37	210	0	0	0	0	97
Arrive On Green	0.05	0.57	0.57	0.05	0.57	0.57	0.06	0.00	0.00	0.00	0.00	0.06
Sat Flow, veh/h	1767	3527	76	1767	3539	65	1316	0	0	0	0	1529
Grp Volume(v), veh/h	37	858	901	34	593	619	15	0	0	0	0	4
Grp Sat Flow(s),veh/h/ln	1767	1763	1840	1767	1763	1842	1316	0	0	0	0	1529
Q Serve(g_s), s	1.1	23.3	23.5	1.1	12.5	12.5	0.6	0.0	0.0	0.0	0.0	0.1
Cycle Q Clear(g_c), s	1.1	23.3	23.5	1.1	12.5	12.5	0.7	0.0	0.0	0.0	0.0	0.1
Prop In Lane	1.00		0.04	1.00		0.04	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h	96	1002	1046	90	996	1041	210	0	0	0	0	97
V/C Ratio(X)	0.38	0.86	0.86	0.38	0.59	0.60	0.07	0.00	0.00	0.00	0.00	0.04
Avail Cap(c_a), veh/h	622	1087	1134	622	1087	1135	726	0	0	0	0	673
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	25.9	10.3	10.4	26.1	8.1	8.1	25.3	0.0	0.0	0.0	0.0	25.0
Incr Delay (d2), s/veh	2.5	6.5	6.6	2.6	0.8	0.7	0.1	0.0	0.0	0.0	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	6.5	6.9	0.5	3.0	3.1	0.2	0.0	0.0	0.0	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	28.4	16.8	16.9	28.6	8.9	8.8	25.4	0.0	0.0	0.0	0.0	25.1
LnGrp LOS	C	B	B	C	A	A	C	A	A	A	A	C
Approach Vol, veh/h		1796			1246			15			4	
Approach Delay, s/veh		17.1			9.4			25.4			25.1	
Approach LOS		B			A			C			C	

Timer - Assigned Phs	2	3	4	6	7	8
Phs Duration (G+Y+Rc), s	9.6	7.9	39.3	9.6	8.1	39.1
Change Period (Y+Rc), s	6.0	5.0	7.0	6.0	5.0	7.0
Max Green Setting (Gmax), s	25.0	20.0	35.0	25.0	20.0	35.0
Max Q Clear Time (g_c+I1), s	2.7	3.1	25.5	2.1	3.1	14.5
Green Ext Time (p_c), s	0.0	0.0	6.8	0.0	0.0	7.3

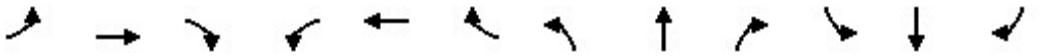
Intersection Summary	
HCM 6th Ctrl Delay	14.0
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary
26: Archibald Ave & Riverside Ave

03/18/2024



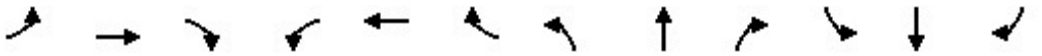
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	505	693	355	142	480	180	222	1026	62	200	916	418
Future Volume (veh/h)	505	693	355	142	480	180	222	1026	62	200	916	418
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.97	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781
Adj Flow Rate, veh/h	515	707	326	145	490	160	227	1047	60	204	935	376
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	8	8	8	8	8	8	8	8	8	8	8	8
Cap, veh/h	427	839	387	176	567	184	261	1248	71	238	850	341
Arrive On Green	0.25	0.38	0.38	0.10	0.23	0.23	0.15	0.27	0.27	0.14	0.25	0.25
Sat Flow, veh/h	1697	2233	1029	1697	2492	808	1697	4698	269	1697	3377	1356
Grp Volume(v), veh/h	515	536	497	145	332	318	227	722	385	204	897	414
Grp Sat Flow(s),veh/h/ln	1697	1692	1570	1697	1692	1607	1697	1621	1724	1697	1621	1491
Q Serve(g_s), s	35.0	40.2	40.2	11.6	26.2	26.5	18.2	29.3	29.3	16.3	35.0	35.0
Cycle Q Clear(g_c), s	35.0	40.2	40.2	11.6	26.2	26.5	18.2	29.3	29.3	16.3	35.0	35.0
Prop In Lane	1.00		0.66	1.00		0.50	1.00		0.16	1.00		0.91
Lane Grp Cap(c), veh/h	427	636	590	176	385	366	261	861	458	238	816	375
V/C Ratio(X)	1.21	0.84	0.84	0.82	0.86	0.87	0.87	0.84	0.84	0.86	1.10	1.10
Avail Cap(c_a), veh/h	427	636	590	427	426	405	427	861	458	427	816	375
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.0	39.7	39.7	61.1	51.6	51.7	57.4	48.2	48.3	58.4	52.0	52.0
Incr Delay (d2), s/veh	112.8	10.9	11.7	18.0	17.3	19.2	17.6	8.1	14.3	16.8	62.3	76.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	27.7	17.9	16.7	5.8	12.6	12.3	8.8	12.4	14.0	7.9	20.8	20.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	164.8	50.6	51.4	79.1	68.9	71.0	75.0	56.3	62.5	75.3	114.3	128.6
LnGrp LOS	F	D	D	E	E	E	E	E	E	E	F	F
Approach Vol, veh/h		1548			795			1334			1515	
Approach Delay, s/veh		88.9			71.6			61.3			112.9	
Approach LOS		F			E			E			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	23.5	40.9	18.4	56.2	25.4	39.0	39.0	35.6
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0
Max Q Clear Time (g_c+I1), s	18.3	31.3	13.6	42.2	20.2	37.0	37.0	28.5
Green Ext Time (p_c), s	1.1	2.8	0.8	0.0	1.2	0.0	0.0	3.1

Intersection Summary	
HCM 6th Ctrl Delay	86.2
HCM 6th LOS	F

HCM 6th Signalized Intersection Summary
27: Haven Ave & Riverside Dr

03/18/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	243	329	83	80	345	70	42	400	50	100	550	395
Future Volume (veh/h)	243	329	83	80	345	70	42	400	50	100	550	395
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	1.00		0.97	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	256	346	81	84	363	60	44	421	51	105	579	203
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	286	373	87	119	493	81	35	336	41	403	423	351
Arrive On Green	0.16	0.26	0.26	0.07	0.16	0.16	0.23	0.23	0.23	0.23	0.23	0.23
Sat Flow, veh/h	1767	1443	338	1767	3021	494	154	1475	179	1767	1856	1540
Grp Volume(v), veh/h	256	0	427	84	210	213	516	0	0	105	579	203
Grp Sat Flow(s),veh/h/ln	1767	0	1781	1767	1763	1752	1808	0	0	1767	1856	1540
Q Serve(g_s), s	15.6	0.0	25.7	5.1	12.4	12.7	25.0	0.0	0.0	5.3	25.0	12.9
Cycle Q Clear(g_c), s	15.6	0.0	25.7	5.1	12.4	12.7	25.0	0.0	0.0	5.3	25.0	12.9
Prop In Lane	1.00		0.19	1.00		0.28	0.09		0.10	1.00		1.00
Lane Grp Cap(c), veh/h	286	0	460	119	288	286	412	0	0	403	423	351
V/C Ratio(X)	0.89	0.00	0.93	0.71	0.73	0.74	1.25	0.00	0.00	0.26	1.37	0.58
Avail Cap(c_a), veh/h	403	0	487	322	482	479	412	0	0	403	423	351
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.0	0.0	39.7	50.1	43.6	43.7	42.3	0.0	0.0	34.8	42.3	37.7
Incr Delay (d2), s/veh	13.6	0.0	23.7	2.9	3.6	3.8	132.1	0.0	0.0	0.3	180.6	2.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.6	0.0	13.6	2.3	5.5	5.6	25.8	0.0	0.0	2.3	32.2	4.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	58.6	0.0	63.4	53.0	47.1	47.5	174.4	0.0	0.0	35.0	223.0	39.7
LnGrp LOS	E	A	E	D	D	D	F	A	A	D	F	D
Approach Vol, veh/h		683			507			516			887	
Approach Delay, s/veh		61.6			48.3			174.4			158.8	
Approach LOS		E			D			F			F	

Timer - Assigned Phs	2	3	4	6	7	8
Phs Duration (G+Y+Rc), s	30.0	14.4	35.3	30.0	24.8	24.9
Change Period (Y+Rc), s	5.0	7.0	7.0	5.0	7.0	7.0
Max Green Setting (Gmax), s	25.0	20.0	30.0	25.0	25.0	30.0
Max Q Clear Time (g_c+I1), s	27.0	7.1	27.7	27.0	17.6	14.7
Green Ext Time (p_c), s	0.0	0.1	0.6	0.0	0.2	1.9

Intersection Summary	
HCM 6th Ctrl Delay	114.7
HCM 6th LOS	F

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary
28: Euclid Ave & Chino Ave

03/18/2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	110	365	50	103	96	33	40	1223	260	21	1029	70
Future Volume (veh/h)	110	365	50	103	96	33	40	1223	260	21	1029	70
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.97	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	115	380	18	107	100	29	42	1274	219	22	1072	30
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	385	629	524	161	138	33	129	1388	602	83	1296	576
Arrive On Green	0.34	0.34	0.34	0.34	0.34	0.34	0.07	0.40	0.40	0.05	0.37	0.37
Sat Flow, veh/h	1239	1841	1532	294	404	98	1753	3497	1516	1753	3497	1554
Grp Volume(v), veh/h	115	380	18	236	0	0	42	1274	219	22	1072	30
Grp Sat Flow(s),veh/h/ln	1239	1841	1532	795	0	0	1753	1749	1516	1753	1749	1554
Q Serve(g_s), s	0.0	14.7	0.7	11.8	0.0	0.0	2.0	29.7	8.8	1.0	23.9	1.1
Cycle Q Clear(g_c), s	8.9	14.7	0.7	26.5	0.0	0.0	2.0	29.7	8.8	1.0	23.9	1.1
Prop In Lane	1.00		1.00	0.45		0.12	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	385	629	524	332	0	0	129	1388	602	83	1296	576
V/C Ratio(X)	0.30	0.60	0.03	0.71	0.00	0.00	0.33	0.92	0.36	0.26	0.83	0.05
Avail Cap(c_a), veh/h	466	749	624	417	0	0	306	1424	617	306	1424	632
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.6	23.5	18.8	30.3	0.0	0.0	37.8	24.6	18.3	39.5	24.6	17.4
Incr Delay (d2), s/veh	0.4	1.0	0.0	4.1	0.0	0.0	0.5	9.6	0.4	0.6	3.9	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	6.1	0.2	4.7	0.0	0.0	0.8	12.5	2.8	0.4	9.4	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	22.0	24.5	18.9	34.4	0.0	0.0	38.3	34.2	18.7	40.1	28.4	17.4
LnGrp LOS	C	C	B	C	A	A	D	C	B	D	C	B
Approach Vol, veh/h		513			236			1535			1124	
Approach Delay, s/veh		23.7			34.4			32.1			28.4	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.8	40.6		36.6	11.0	38.4		36.6				
Change Period (Y+Rc), s	* 4.7	6.5		7.2	* 4.7	6.5		7.2				
Max Green Setting (Gmax), s	* 15	35.0		35.0	* 15	35.0		35.0				
Max Q Clear Time (g_c+I1), s	3.0	31.7		16.7	4.0	25.9		28.5				
Green Ext Time (p_c), s	0.0	2.4		2.4	0.0	4.5		0.7				

Intersection Summary	
HCM 6th Ctrl Delay	29.8
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th Signalized Intersection Summary
31: Vineyard Ave & Chino Ave

03/18/2024

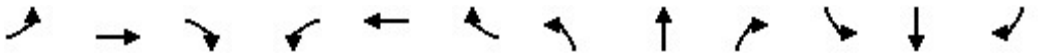
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	26	303	0	0	172	67	0	267	20	64	188	31
Future Volume (veh/h)	26	303	0	0	172	67	0	267	20	64	188	31
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		0.98	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781
Adj Flow Rate, veh/h	31	365	0	0	207	21	0	322	17	77	227	15
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Percent Heavy Veh, %	8	8	8	8	8	8	8	8	8	8	8	8
Cap, veh/h	69	1247	0	3	364	302	3	800	42	126	654	538
Arrive On Green	0.04	0.37	0.00	0.00	0.20	0.20	0.00	0.17	0.17	0.07	0.37	0.37
Sat Flow, veh/h	1697	3474	0	1697	1781	1477	1697	4726	247	1697	1781	1466
Grp Volume(v), veh/h	31	365	0	0	207	21	0	220	119	77	227	15
Grp Sat Flow(s),veh/h/ln	1697	1692	0	1697	1781	1477	1697	1621	1730	1697	1781	1466
Q Serve(g_s), s	1.0	4.3	0.0	0.0	5.9	0.7	0.0	3.4	3.5	2.5	5.2	0.4
Cycle Q Clear(g_c), s	1.0	4.3	0.0	0.0	5.9	0.7	0.0	3.4	3.5	2.5	5.2	0.4
Prop In Lane	1.00		0.00	1.00		1.00	1.00		0.14	1.00		1.00
Lane Grp Cap(c), veh/h	69	1247	0	3	364	302	3	549	293	126	654	538
V/C Ratio(X)	0.45	0.29	0.00	0.00	0.57	0.07	0.00	0.40	0.41	0.61	0.35	0.03
Avail Cap(c_a), veh/h	179	2327	0	179	1225	1016	179	1829	976	269	1099	905
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.6	12.7	0.0	0.0	20.3	18.2	0.0	21.0	21.0	25.5	13.0	11.5
Incr Delay (d2), s/veh	4.5	0.2	0.0	0.0	1.7	0.1	0.0	0.6	1.1	4.7	0.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	1.3	0.0	0.0	2.2	0.2	0.0	1.1	1.3	1.0	1.7	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	31.0	12.8	0.0	0.0	22.0	18.3	0.0	21.6	22.1	30.2	13.4	11.5
LnGrp LOS	C	B	A	A	C	B	A	C	C	C	B	B
Approach Vol, veh/h		396			228			339			319	
Approach Delay, s/veh		14.3			21.7			21.8			17.4	
Approach LOS		B			C			C			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.2	17.1	0.0	28.4	0.0	28.3	9.3	19.1
Change Period (Y+Rc), s	7.0	7.5	7.0	7.5	7.0	7.5	7.0	7.5
Max Green Setting (Gmax), s	9.0	32.0	6.0	39.0	6.0	35.0	6.0	39.0
Max Q Clear Time (g_c+I1), s	4.5	5.5	0.0	6.3	0.0	7.2	3.0	7.9
Green Ext Time (p_c), s	0.0	2.2	0.0	2.7	0.0	1.4	0.0	1.4

Intersection Summary	
HCM 6th Ctrl Delay	18.3
HCM 6th LOS	B

HCM 6th Signalized Intersection Summary
33: Ontario Ave & Chino Ave

03/18/2024



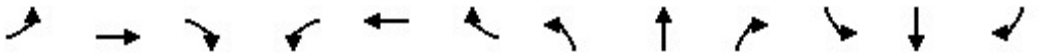
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	110	439	0	0	266	299	0	12	10	295	12	131
Future Volume (veh/h)	110	439	0	0	266	299	0	12	10	295	12	131
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.96	1.00		0.97	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781
Adj Flow Rate, veh/h	121	482	0	0	292	69	0	13	1	324	13	58
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	8	8	8	8	8	8	8	8	8	8	8	8
Cap, veh/h	153	1312	0	3	587	252	3	74	6	377	105	467
Arrive On Green	0.09	0.39	0.00	0.00	0.17	0.17	0.00	0.05	0.05	0.22	0.37	0.37
Sat Flow, veh/h	1697	3474	0	1697	3385	1452	1697	1629	125	1697	280	1250
Grp Volume(v), veh/h	121	482	0	0	292	69	0	0	14	324	0	71
Grp Sat Flow(s),veh/h/ln	1697	1692	0	1697	1692	1452	1697	0	1754	1697	0	1531
Q Serve(g_s), s	3.9	5.7	0.0	0.0	4.4	2.3	0.0	0.0	0.4	10.4	0.0	1.7
Cycle Q Clear(g_c), s	3.9	5.7	0.0	0.0	4.4	2.3	0.0	0.0	0.4	10.4	0.0	1.7
Prop In Lane	1.00		0.00	1.00		1.00	1.00		0.07	1.00		0.82
Lane Grp Cap(c), veh/h	153	1312	0	3	587	252	3	0	79	377	0	572
V/C Ratio(X)	0.79	0.37	0.00	0.00	0.50	0.27	0.00	0.00	0.18	0.86	0.00	0.12
Avail Cap(c_a), veh/h	180	1587	0	180	1587	681	180	0	1117	450	0	1218
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	25.2	12.4	0.0	0.0	21.1	20.3	0.0	0.0	26.0	21.1	0.0	11.6
Incr Delay (d2), s/veh	18.1	0.2	0.0	0.0	0.8	0.7	0.0	0.0	1.1	13.4	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	1.7	0.0	0.0	1.5	0.8	0.0	0.0	0.2	5.1	0.0	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	43.2	12.6	0.0	0.0	21.9	21.0	0.0	0.0	27.0	34.5	0.0	11.7
LnGrp LOS	D	B	A	A	C	C	A	A	C	C	A	B
Approach Vol, veh/h		603			361			14			395	
Approach Delay, s/veh		18.7			21.7			27.0			30.4	
Approach LOS		B			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.1	17.3	0.0	27.1	0.0	29.4	18.6	8.6
Change Period (Y+Rc), s	7.0	7.5	6.0	6.0	7.0	7.5	6.0	6.0
Max Green Setting (Gmax), s	6.0	26.5	6.0	45.0	6.0	26.5	15.0	36.0
Max Q Clear Time (g_c+I1), s	5.9	6.4	0.0	3.7	0.0	7.7	12.4	2.4
Green Ext Time (p_c), s	0.0	2.1	0.0	0.4	0.0	3.2	0.3	0.0

Intersection Summary	
HCM 6th Ctrl Delay	23.0
HCM 6th LOS	C

HCM 6th Signalized Intersection Summary
34: Archibald Ave & Chino Ave

03/18/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	118	83	321	20	23	92	317	1040	30	102	1194	68
Future Volume (veh/h)	118	83	321	20	23	92	317	1040	30	102	1194	68
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781
Adj Flow Rate, veh/h	130	91	65	22	25	11	348	1143	32	112	1312	73
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	8	8	8	8	8	8	8	8	8	8	8	8
Cap, veh/h	156	230	149	45	93	77	370	2577	72	137	1280	71
Arrive On Green	0.09	0.12	0.12	0.03	0.05	0.05	0.22	0.53	0.53	0.08	0.39	0.39
Sat Flow, veh/h	1697	1944	1260	1697	1781	1479	1697	4861	136	1697	3257	181
Grp Volume(v), veh/h	130	78	78	22	25	11	348	762	413	112	680	705
Grp Sat Flow(s),veh/h/ln	1697	1692	1512	1697	1781	1479	1697	1621	1754	1697	1692	1746
Q Serve(g_s), s	8.6	4.9	5.5	1.5	1.5	0.8	23.1	16.5	16.6	7.4	45.0	45.0
Cycle Q Clear(g_c), s	8.6	4.9	5.5	1.5	1.5	0.8	23.1	16.5	16.6	7.4	45.0	45.0
Prop In Lane	1.00		0.83	1.00		1.00	1.00		0.08	1.00		0.10
Lane Grp Cap(c), veh/h	156	200	179	45	93	77	370	1719	930	137	665	686
V/C Ratio(X)	0.83	0.39	0.44	0.49	0.27	0.14	0.94	0.44	0.44	0.82	1.02	1.03
Avail Cap(c_a), veh/h	296	517	462	296	544	452	370	1719	930	370	665	686
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	51.1	46.7	47.0	55.0	52.2	51.8	44.0	16.5	16.5	51.8	34.8	34.8
Incr Delay (d2), s/veh	4.3	1.8	2.4	3.1	2.2	1.2	31.3	0.3	0.5	4.4	41.0	41.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.8	2.1	2.2	0.7	0.7	0.3	12.5	5.6	6.1	3.2	24.6	25.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	55.4	48.5	49.4	58.1	54.3	53.0	75.4	16.8	17.0	56.2	75.8	76.3
LnGrp LOS	E	D	D	E	D	D	E	B	B	E	F	F
Approach Vol, veh/h		286			58			1523			1497	
Approach Delay, s/veh		51.9			55.5			30.2			74.5	
Approach LOS		D			E			C			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.8	68.2	9.5	20.0	32.5	52.5	17.1	12.5
Change Period (Y+Rc), s	7.5	7.5	6.5	6.5	7.5	7.5	6.5	6.5
Max Green Setting (Gmax), s	25.0	45.0	20.0	35.0	25.0	45.0	20.0	35.0
Max Q Clear Time (g_c+I1), s	9.4	18.6	3.5	7.5	25.1	47.0	10.6	3.5
Green Ext Time (p_c), s	0.1	11.1	0.0	1.2	0.0	0.0	0.1	0.2

Intersection Summary	
HCM 6th Ctrl Delay	52.2
HCM 6th LOS	D

HCM 6th Signalized Intersection Summary
35: Euclid Ave & Edison Ave

03/18/2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	186	469	270	60	330	140	220	1057	90	110	936	145
Future Volume (veh/h)	186	469	270	60	330	140	220	1057	90	110	936	145
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.97	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	196	494	113	63	347	136	232	1113	46	116	985	57
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	156	634	527	156	431	169	343	1306	566	170	1292	566
Arrive On Green	0.34	0.34	0.34	0.34	0.34	0.34	0.10	0.37	0.37	0.10	0.37	0.37
Sat Flow, veh/h	897	1841	1533	800	1252	491	3401	3497	1515	1753	3497	1533
Grp Volume(v), veh/h	196	494	113	63	0	483	232	1113	46	116	985	57
Grp Sat Flow(s),veh/h/ln	897	1841	1533	800	0	1742	1700	1749	1515	1753	1749	1533
Q Serve(g_s), s	9.2	23.8	5.2	7.6	0.0	24.9	6.5	29.0	1.9	6.3	24.5	2.4
Cycle Q Clear(g_c), s	34.1	23.8	5.2	31.4	0.0	24.9	6.5	29.0	1.9	6.3	24.5	2.4
Prop In Lane	1.00		1.00	1.00		0.28	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	156	634	527	156	0	600	343	1306	566	170	1292	566
V/C Ratio(X)	1.26	0.78	0.21	0.41	0.00	0.81	0.68	0.85	0.08	0.68	0.76	0.10
Avail Cap(c_a), veh/h	156	634	527	163	0	615	858	1588	688	442	1588	696
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.1	29.1	23.0	43.2	0.0	29.5	43.0	28.5	20.1	43.3	27.4	20.5
Incr Delay (d2), s/veh	158.0	6.2	0.2	1.7	0.0	7.6	0.9	4.0	0.1	1.8	1.8	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.6	10.9	1.8	1.5	0.0	10.9	2.6	11.5	0.6	2.7	9.5	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	205.1	35.3	23.2	44.9	0.0	37.1	43.9	32.5	20.1	45.1	29.2	20.5
LnGrp LOS	F	D	C	D	A	D	D	C	C	D	C	C
Approach Vol, veh/h		803			546			1391			1158	
Approach Delay, s/veh		75.1			38.0			34.0			30.4	
Approach LOS		E			D			C			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	14.3	43.5		41.3	14.7	43.1		41.3				
Change Period (Y+Rc), s	* 4.7	6.5		7.2	* 4.7	6.5		7.2				
Max Green Setting (Gmax), s	* 25	45.0		30.0	* 25	45.0		35.0				
Max Q Clear Time (g_c+I1), s	8.3	31.0		36.1	8.5	26.5		33.4				
Green Ext Time (p_c), s	0.1	6.0		0.0	0.3	6.0		0.5				

Intersection Summary	
HCM 6th Ctrl Delay	41.9
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th Signalized Intersection Summary
37: Archibald Ave & Ontario Ranch Rd

03/18/2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	110	778	160	180	327	317	70	920	270	333	1002	60
Future Volume (veh/h)	110	778	160	180	327	317	70	920	270	333	1002	60
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	115	810	0	188	341	104	73	958	0	347	1044	27
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	188	945		278	547	455	98	1019		390	1602	695
Arrive On Green	0.06	0.27	0.00	0.08	0.30	0.30	0.06	0.29	0.00	0.22	0.46	0.46
Sat Flow, veh/h	3401	3497	1560	3401	1841	1531	1753	3497	1560	1753	3497	1518
Grp Volume(v), veh/h	115	810	0	188	341	104	73	958	0	347	1044	27
Grp Sat Flow(s),veh/h/ln	1700	1749	1560	1700	1841	1531	1753	1749	1560	1753	1749	1518
Q Serve(g_s), s	3.9	26.2	0.0	6.4	19.1	6.1	4.9	31.9	0.0	22.9	27.5	1.2
Cycle Q Clear(g_c), s	3.9	26.2	0.0	6.4	19.1	6.1	4.9	31.9	0.0	22.9	27.5	1.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	188	945		278	547	455	98	1019		390	1602	695
V/C Ratio(X)	0.61	0.86		0.68	0.62	0.23	0.75	0.94		0.89	0.65	0.04
Avail Cap(c_a), veh/h	998	1027		998	547	455	515	1027		515	1602	695
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	55.1	41.3	0.0	53.2	36.2	31.6	55.5	41.3	0.0	44.9	25.0	17.8
Incr Delay (d2), s/veh	6.8	7.8	0.0	6.0	3.2	0.5	21.4	16.2	0.0	17.8	1.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	11.8	0.0	2.9	8.6	2.2	2.7	15.1	0.0	11.3	10.7	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	61.9	49.2	0.0	59.2	39.4	32.2	76.9	57.4	0.0	62.7	26.3	17.9
LnGrp LOS	E	D		E	D	C	E	E		E	C	B
Approach Vol, veh/h		925	A		633			1031	A		1418	
Approach Delay, s/veh		50.7			44.1			58.8			35.0	
Approach LOS		D			D			E			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	30.5	38.7	13.7	36.2	10.6	58.6	10.6	39.4
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0
Max Q Clear Time (g_c+I1), s	24.9	33.9	8.4	28.2	6.9	29.5	5.9	21.1
Green Ext Time (p_c), s	1.7	0.8	1.4	4.0	0.4	4.0	0.8	3.4

Intersection Summary	
HCM 6th Ctrl Delay	46.2
HCM 6th LOS	D

Notes

Unsignalized Delay for [NBR, EBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary
38: Haven Ave & Ontario Ranch Rd

03/18/2024

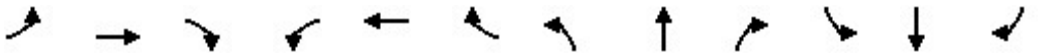
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	200	1176	55	330	880	211	44	251	180	204	459	70
Future Volume (veh/h)	200	1176	55	330	880	211	44	251	180	204	459	70
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.97	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	206	1212	18	340	907	63	45	259	40	210	473	65
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	235	1566	477	406	1879	449	83	362	300	239	881	120
Arrive On Green	0.13	0.31	0.31	0.12	0.30	0.30	0.05	0.20	0.20	0.14	0.29	0.29
Sat Flow, veh/h	1753	5025	1532	3401	6332	1512	1753	1841	1526	1753	3083	421
Grp Volume(v), veh/h	206	1212	18	340	907	63	45	259	40	210	267	271
Grp Sat Flow(s),veh/h/ln	1753	1675	1532	1700	1583	1512	1753	1841	1526	1753	1749	1755
Q Serve(g_s), s	12.7	24.1	0.9	10.8	13.0	3.4	2.8	14.5	2.4	13.0	14.2	14.4
Cycle Q Clear(g_c), s	12.7	24.1	0.9	10.8	13.0	3.4	2.8	14.5	2.4	13.0	14.2	14.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.24
Lane Grp Cap(c), veh/h	235	1566	477	406	1879	449	83	362	300	239	500	501
V/C Ratio(X)	0.87	0.77	0.04	0.84	0.48	0.14	0.54	0.72	0.13	0.88	0.53	0.54
Avail Cap(c_a), veh/h	318	1824	556	617	2298	549	318	785	651	318	746	749
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.8	34.4	26.4	47.5	31.8	28.4	51.3	41.4	36.5	46.7	33.2	33.3
Incr Delay (d2), s/veh	14.9	2.1	0.0	3.8	0.3	0.2	2.0	1.0	0.1	15.7	0.3	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.3	9.5	0.3	4.5	4.7	1.2	1.2	6.4	0.9	6.5	5.8	5.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	61.7	36.5	26.5	51.3	32.1	28.6	53.3	42.4	36.6	62.3	33.5	33.6
LnGrp LOS	E	D	C	D	C	C	D	D	D	E	C	C
Approach Vol, veh/h		1436			1310			344			748	
Approach Delay, s/veh		40.0			36.9			43.2			41.6	
Approach LOS		D			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	21.6	28.2	19.7	40.8	11.7	38.0	21.3	39.2
Change Period (Y+Rc), s	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
Max Green Setting (Gmax), s	20.0	47.0	20.0	40.0	20.0	47.0	20.0	40.0
Max Q Clear Time (g_c+I1), s	15.0	16.5	12.8	26.1	4.8	16.4	14.7	15.0
Green Ext Time (p_c), s	0.1	0.9	0.4	8.2	0.0	1.8	0.1	8.6

Intersection Summary	
HCM 6th Ctrl Delay	39.5
HCM 6th LOS	D

HCM 6th Signalized Intersection Summary
39: Hamner Ave & Ontario Ranch Rd

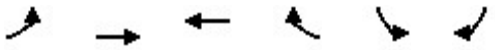
03/18/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	110	1165	284	610	968	180	372	440	390	300	600	130
Future Volume (veh/h)	110	1165	284	610	968	180	372	440	390	300	600	130
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	115	1214	99	635	1008	106	388	458	94	312	625	31
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	165	1229	374	695	1400	614	443	1173	357	367	739	323
Arrive On Green	0.05	0.24	0.24	0.20	0.40	0.40	0.13	0.23	0.23	0.11	0.21	0.21
Sat Flow, veh/h	3401	5025	1529	3401	3497	1534	3401	5025	1528	3401	3497	1527
Grp Volume(v), veh/h	115	1214	99	635	1008	106	388	458	94	312	625	31
Grp Sat Flow(s),veh/h/ln	1700	1675	1529	1700	1749	1534	1700	1675	1528	1700	1749	1527
Q Serve(g_s), s	4.8	34.4	7.5	26.1	34.7	6.4	16.0	11.0	7.2	12.9	24.6	2.3
Cycle Q Clear(g_c), s	4.8	34.4	7.5	26.1	34.7	6.4	16.0	11.0	7.2	12.9	24.6	2.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	165	1229	374	695	1400	614	443	1173	357	367	739	323
V/C Ratio(X)	0.70	0.99	0.26	0.91	0.72	0.17	0.88	0.39	0.26	0.85	0.85	0.10
Avail Cap(c_a), veh/h	832	1229	374	832	1400	614	594	1173	357	594	855	373
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	67.1	53.8	43.7	55.7	36.1	27.6	61.1	46.3	44.8	62.7	54.2	45.4
Incr Delay (d2), s/veh	3.9	22.7	0.5	12.5	1.9	0.2	10.1	0.2	0.4	5.2	7.3	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	16.5	2.8	12.0	14.4	2.3	7.4	4.5	2.7	5.7	11.2	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	71.0	76.5	44.1	68.3	38.1	27.8	71.2	46.5	45.2	67.9	61.5	45.6
LnGrp LOS	E	E	D	E	D	C	E	D	D	E	E	D
Approach Vol, veh/h		1428			1749			940			968	
Approach Delay, s/veh		73.8			48.4			56.6			63.0	
Approach LOS		E			D			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	36.7	42.5	26.1	37.7	14.4	64.8	23.0	40.9
Change Period (Y+Rc), s	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5
Max Green Setting (Gmax), s	35.0	35.0	25.0	35.0	35.0	35.0	25.0	25.0
Max Q Clear Time (g_c+I1), s	28.1	36.4	18.0	26.6	6.8	36.7	14.9	13.0
Green Ext Time (p_c), s	1.1	0.0	0.6	2.8	0.2	0.0	0.6	2.5

Intersection Summary	
HCM 6th Ctrl Delay	59.8
HCM 6th LOS	E



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	1294	865	0	260	1503
Future Volume (veh/h)	0	1294	865	0	260	1503
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	0	1841	1841	0	1841	1841
Adj Flow Rate, veh/h	0	1391	930	0	280	1558
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	4	4	0	4	4
Cap, veh/h	0	1852	1289	0	785	1397
Arrive On Green	0.00	0.37	0.37	0.00	0.45	0.45
Sat Flow, veh/h	0	5356	3681	0	1753	3120
Grp Volume(v), veh/h	0	1391	930	0	280	1558
Grp Sat Flow(s),veh/h/ln	0	1675	1749	0	1753	1560
Q Serve(g_s), s	0.0	16.2	15.3	0.0	7.0	30.0
Cycle Q Clear(g_c), s	0.0	16.2	15.3	0.0	7.0	30.0
Prop In Lane	0.00			0.00	1.00	1.00
Lane Grp Cap(c), veh/h	0	1852	1289	0	785	1397
V/C Ratio(X)	0.00	0.75	0.72	0.00	0.36	1.12
Avail Cap(c_a), veh/h	0	2250	1566	0	785	1397
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	18.5	18.2	0.0	12.2	18.5
Incr Delay (d2), s/veh	0.0	1.2	1.3	0.0	0.3	62.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	5.2	5.1	0.0	2.3	20.6
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.0	19.6	19.5	0.0	12.4	80.7
LnGrp LOS	A	B	B	A	B	F
Approach Vol, veh/h		1391	930		1838	
Approach Delay, s/veh		19.6	19.5		70.3	
Approach LOS		B	B		E	

Timer - Assigned Phs	2	4	6
Phs Duration (G+Y+Rc), s	31.5	35.5	31.5
Change Period (Y+Rc), s	6.8	5.5	6.8
Max Green Setting (Gmax), s	30.0	30.0	30.0
Max Q Clear Time (g_c+I1), s	18.2	32.0	17.3
Green Ext Time (p_c), s	6.5	0.0	4.6

Intersection Summary	
HCM 6th Ctrl Delay	42.0
HCM 6th LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	575	1009	240	365	630	110
Future Volume (veh/h)	575	1009	240	365	630	110
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		0.97	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	605	939	253	384	663	52
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	4	4	4
Cap, veh/h	2002	974	367	2944	833	370
Arrive On Green	0.40	0.40	0.11	0.59	0.24	0.24
Sat Flow, veh/h	5191	1516	3401	5191	3506	1560
Grp Volume(v), veh/h	605	939	253	384	663	52
Grp Sat Flow(s),veh/h/ln	1675	1516	1700	1675	1753	1560
Q Serve(g_s), s	6.2	30.0	5.4	2.6	13.4	2.0
Cycle Q Clear(g_c), s	6.2	30.0	5.4	2.6	13.4	2.0
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	2002	974	367	2944	833	370
V/C Ratio(X)	0.30	0.96	0.69	0.13	0.80	0.14
Avail Cap(c_a), veh/h	2002	974	1355	2944	1397	621
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	15.5	10.5	32.4	7.0	27.0	22.7
Incr Delay (d2), s/veh	0.1	20.5	2.3	0.0	1.8	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	21.4	2.1	0.6	5.6	0.7
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	15.6	31.0	34.7	7.0	28.8	22.8
LnGrp LOS	B	C	C	A	C	C
Approach Vol, veh/h	1544			637	715	
Approach Delay, s/veh	24.9			18.0	28.4	
Approach LOS	C			B	C	

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	14.1	37.3				51.4	23.9
Change Period (Y+Rc), s	6.0	7.3				7.3	6.0
Max Green Setting (Gmax), s	30.0	30.0				30.0	30.0
Max Q Clear Time (g_c+I1), s	7.4	32.0				4.6	15.4
Green Ext Time (p_c), s	0.8	0.0				2.2	2.5

Intersection Summary	
HCM 6th Ctrl Delay	24.3
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.
User approved volume balancing among the lanes for turning movement.

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	62	113	313	47	77	220
Future Volume (veh/h)	62	113	313	47	77	220
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		0.96	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	65	119	329	49	81	232
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	238	211	1035	310	147	2521
Arrive On Green	0.13	0.13	0.20	0.20	0.08	0.50
Sat Flow, veh/h	1767	1572	5233	1517	1767	5233
Grp Volume(v), veh/h	65	119	329	49	81	232
Grp Sat Flow(s),veh/h/ln	1767	1572	1689	1517	1767	1689
Q Serve(g_s), s	0.9	2.0	1.6	0.8	1.3	0.7
Cycle Q Clear(g_c), s	0.9	2.0	1.6	0.8	1.3	0.7
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	238	211	1035	310	147	2521
V/C Ratio(X)	0.27	0.56	0.32	0.16	0.55	0.09
Avail Cap(c_a), veh/h	1982	1763	3284	983	495	5769
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	11.1	11.6	9.7	9.3	12.6	3.8
Incr Delay (d2), s/veh	0.6	2.3	0.2	0.2	3.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.6	0.3	0.1	0.4	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	11.7	13.9	9.8	9.6	15.8	3.8
LnGrp LOS	B	B	A	A	B	A
Approach Vol, veh/h	184		378			313
Approach Delay, s/veh	13.1		9.8			6.9
Approach LOS	B		A			A

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	8.4	11.8			20.2	8.3
Change Period (Y+Rc), s	6.0	6.0			6.0	4.5
Max Green Setting (Gmax), s	8.0	18.5			32.5	32.0
Max Q Clear Time (g_c+I1), s	3.3	3.6			2.7	4.0
Green Ext Time (p_c), s	0.1	1.8			1.3	0.6

Intersection Summary	
HCM 6th Ctrl Delay	9.5
HCM 6th LOS	A

Intersection	
Intersection Delay, s/veh	7.9
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	86	0	13	91	4	0	35	15	4	17	0
Future Vol, veh/h	0	86	0	13	91	4	0	35	15	4	17	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	8	8	8	8	8	8	8	8	8	8	8	8
Mvmt Flow	0	93	0	14	99	4	0	38	16	4	18	0
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	7.9	8	7.7	7.8
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	0%	0%	12%	19%
Vol Thru, %	70%	100%	84%	81%
Vol Right, %	30%	0%	4%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	50	86	108	21
LT Vol	0	0	13	4
Through Vol	35	86	91	17
RT Vol	15	0	4	0
Lane Flow Rate	54	93	117	23
Geometry Grp	1	1	1	1
Degree of Util (X)	0.066	0.111	0.138	0.029
Departure Headway (Hd)	4.36	4.259	4.242	4.614
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	826	830	835	780
Service Time	2.361	2.342	2.32	2.615
HCM Lane V/C Ratio	0.065	0.112	0.14	0.029
HCM Control Delay	7.7	7.9	8	7.8
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.2	0.4	0.5	0.1

Intersection	
Intersection Delay, s/veh	11.6
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	30	114	20	34	139	20	10	130	144	40	120	20
Future Vol, veh/h	30	114	20	34	139	20	10	130	144	40	120	20
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles, %	8	8	8	8	8	8	8	8	8	8	8	8
Mvmt Flow	32	123	22	37	149	22	11	140	155	43	129	22
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	11	11.5	12.2	11.1
HCM LOS	B	B	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	4%	18%	18%	22%
Vol Thru, %	46%	70%	72%	67%
Vol Right, %	51%	12%	10%	11%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	284	164	193	180
LT Vol	10	30	34	40
Through Vol	130	114	139	120
RT Vol	144	20	20	20
Lane Flow Rate	305	176	208	194
Geometry Grp	1	1	1	1
Degree of Util (X)	0.439	0.281	0.327	0.302
Departure Headway (Hd)	5.177	5.729	5.68	5.613
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	693	626	631	639
Service Time	3.223	3.782	3.732	3.665
HCM Lane V/C Ratio	0.44	0.281	0.33	0.304
HCM Control Delay	12.2	11	11.5	11.1
HCM Lane LOS	B	B	B	B
HCM 95th-tile Q	2.2	1.1	1.4	1.3

Intersection	
Intersection Delay, s/veh	127.9
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	50	640	30	50	370	20	80	30	70	20	10	30
Future Vol, veh/h	50	640	30	50	370	20	80	30	70	20	10	30
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Heavy Vehicles, %	4	4	4	4	4	4	4	4	4	4	4	4
Mvmt Flow	60	762	36	60	440	24	95	36	83	24	12	36
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	218.4	41.1	16.6	13.2
HCM LOS	F	E	C	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	44%	7%	11%	33%
Vol Thru, %	17%	89%	84%	17%
Vol Right, %	39%	4%	5%	50%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	180	720	440	60
LT Vol	80	50	50	20
Through Vol	30	640	370	10
RT Vol	70	30	20	30
Lane Flow Rate	214	857	524	71
Geometry Grp	1	1	1	1
Degree of Util (X)	0.423	1.424	0.882	0.152
Departure Headway (Hd)	7.936	5.981	6.679	8.666
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	456	609	545	416
Service Time	5.936	4.051	4.679	6.666
HCM Lane V/C Ratio	0.469	1.407	0.961	0.171
HCM Control Delay	16.6	218.4	41.1	13.2
HCM Lane LOS	C	F	E	B
HCM 95th-tile Q	2.1	39.6	10	0.5

Intersection	
Int Delay, s/veh	63

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	40	914	30	93	694	13	20	20	193	3	10	30
Future Vol, veh/h	40	914	30	93	694	13	20	20	193	3	10	30
Conflicting Peds, #/hr	5	0	5	5	0	5	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	127	-	-	143	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	44	1004	33	102	763	14	22	22	212	3	11	33

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	782	0	0	1042	0	0	1705	2100	1026	2205	2109	394
Stage 1	-	-	-	-	-	-	1114	1114	-	979	979	-
Stage 2	-	-	-	-	-	-	591	986	-	1226	1130	-
Critical Hdwy	4.145	-	-	4.145	-	-	7.345	6.545	6.245	7.345	6.545	6.945
Critical Hdwy Stg 1	-	-	-	-	-	-	6.145	5.545	-	6.545	5.545	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.545	5.545	-	6.145	5.545	-
Follow-up Hdwy	2.2285	-	-	2.2285	-	-	3.5285	4.0285	3.3285	3.5285	4.0285	3.3285
Pot Cap-1 Maneuver	828	-	-	660	-	-	65	51	282	28	50	603
Stage 1	-	-	-	-	-	-	250	281	-	268	326	-
Stage 2	-	-	-	-	-	-	459	323	-	216	276	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	824	-	-	657	-	-	41	40	281	~ 3	40	600
Mov Cap-2 Maneuver	-	-	-	-	-	-	41	40	-	~ 3	40	-
Stage 1	-	-	-	-	-	-	236	265	-	252	274	-
Stage 2	-	-	-	-	-	-	352	272	-	46	260	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.4	1.3	$ 459.9	$ 493.6
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	139	824	-	-	657	-	-	33
HCM Lane V/C Ratio	1.842	0.053	-	-	0.156	-	-	1.432
HCM Control Delay (s)	$ 459.9	9.6	-	-	11.5	-	-	$ 493.6
HCM Lane LOS	F	A	-	-	B	-	-	F
HCM 95th %tile Q(veh)	19.5	0.2	-	-	0.5	-	-	5.2

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	40.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	20	999	150	50	700	23	80	10	80	13	0	20
Future Vol, veh/h	20	999	150	50	700	23	80	10	80	13	0	20
Conflicting Peds, #/hr	5	0	5	5	0	5	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	69	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	21	1030	155	52	722	24	82	10	82	13	0	21

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	751	0	0	1190	0	0	1620	2010	1113	2039	2075	378
Stage 1	-	-	-	-	-	-	1155	1155	-	843	843	-
Stage 2	-	-	-	-	-	-	465	855	-	1196	1232	-
Critical Hdwy	4.145	-	-	4.145	-	-	7.345	6.545	6.245	7.345	6.545	6.945
Critical Hdwy Stg 1	-	-	-	-	-	-	6.145	5.545	-	6.545	5.545	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.545	5.545	-	6.145	5.545	-
Follow-up Hdwy	2.2285	-	-	2.2285	-	-	3.5285	4.0285	3.3285	3.5285	4.0285	3.3285
Pot Cap-1 Maneuver	851	-	-	580	-	-	~ 75	58	251	37	53	618
Stage 1	-	-	-	-	-	-	237	269	-	324	377	-
Stage 2	-	-	-	-	-	-	545	372	-	225	247	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	847	-	-	577	-	-	~ 66	51	250	19	47	615
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 66	51	-	19	47	-
Stage 1	-	-	-	-	-	-	230	261	-	315	341	-
Stage 2	-	-	-	-	-	-	479	337	-	141	240	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.2	0.8	$ 466.1	196.4
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	98	847	-	-	577	-	-	46
HCM Lane V/C Ratio	1.788	0.024	-	-	0.089	-	-	0.74
HCM Control Delay (s)	$ 466.1	9.4	-	-	11.8	-	-	196.4
HCM Lane LOS	F	A	-	-	B	-	-	F
HCM 95th %tile Q(veh)	14.3	0.1	-	-	0.3	-	-	2.9

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	20	1062	10	13	743	33	10	0	23	13	0	20
Future Vol, veh/h	20	1062	10	13	743	33	10	0	23	13	0	20
Conflicting Peds, #/hr	5	0	5	5	0	5	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	98	-	-	47	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	21	1095	10	13	766	34	10	0	24	13	0	21

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	805	0	0	1110	0	0	1556	1978	1105	1968	1966	405
Stage 1	-	-	-	-	-	-	1147	1147	-	814	814	-
Stage 2	-	-	-	-	-	-	409	831	-	1154	1152	-
Critical Hdwy	4.145	-	-	4.145	-	-	7.345	6.545	6.245	7.345	6.545	6.945
Critical Hdwy Stg 1	-	-	-	-	-	-	6.145	5.545	-	6.545	5.545	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.545	5.545	-	6.145	5.545	-
Follow-up Hdwy	2.2285	-	-	2.2285	-	-	3.5285	4.0285	3.3285	3.5285	4.0285	3.3285
Pot Cap-1 Maneuver	812	-	-	622	-	-	83	61	254	42	62	594
Stage 1	-	-	-	-	-	-	240	271	-	337	389	-
Stage 2	-	-	-	-	-	-	589	382	-	238	270	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	808	-	-	619	-	-	77	58	253	37	59	591
Mov Cap-2 Maneuver	-	-	-	-	-	-	77	58	-	37	59	-
Stage 1	-	-	-	-	-	-	233	263	-	327	379	-
Stage 2	-	-	-	-	-	-	557	372	-	210	262	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.2	0.2	36.2	71.9
HCM LOS			E	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	149	808	-	-	619	-	-	86
HCM Lane V/C Ratio	0.228	0.026	-	-	0.022	-	-	0.396
HCM Control Delay (s)	36.2	9.6	-	-	10.9	-	-	71.9
HCM Lane LOS	E	A	-	-	B	-	-	F
HCM 95th %tile Q(veh)	0.8	0.1	-	-	0.1	-	-	1.6

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↱			↱
Traffic Vol, veh/h	0	1546	1014	20	0	10
Future Vol, veh/h	0	1546	1014	20	0	10
Conflicting Peds, #/hr	5	0	0	5	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	0	1627	1067	21	0	11

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	549
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.96
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.33
Pot Cap-1 Maneuver	0	-	-	-	0	477
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	475
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	12.8
HCM LOS			B

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	475
HCM Lane V/C Ratio	-	-	-	0.022
HCM Control Delay (s)	-	-	-	12.8
HCM Lane LOS	-	-	-	B
HCM 95th %tile Q(veh)	-	-	-	0.1

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑			↱
Traffic Vol, veh/h	0	1546	1014	10	0	20
Future Vol, veh/h	0	1546	1014	10	0	20
Conflicting Peds, #/hr	5	0	0	5	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	0	1645	1079	11	0	21

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	550
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.96
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.33
Pot Cap-1 Maneuver	0	-	-	-	0	476
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	474
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	13
HCM LOS			B

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	474
HCM Lane V/C Ratio	-	-	-	0.045
HCM Control Delay (s)	-	-	-	13
HCM Lane LOS	-	-	-	B
HCM 95th %tile Q(veh)	-	-	-	0.1

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	1556	1034	10	20	0
Future Vol, veh/h	0	1556	1034	10	20	0
Conflicting Peds, #/hr	5	0	0	5	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	0	1604	1066	10	21	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1081	0	-	0	1878	543
Stage 1	-	-	-	-	1076	-
Stage 2	-	-	-	-	802	-
Critical Hdwy	4.16	-	-	-	6.86	6.96
Critical Hdwy Stg 1	-	-	-	-	5.86	-
Critical Hdwy Stg 2	-	-	-	-	5.86	-
Follow-up Hdwy	2.23	-	-	-	3.53	3.33
Pot Cap-1 Maneuver	635	-	-	-	62	481
Stage 1	-	-	-	-	286	-
Stage 2	-	-	-	-	399	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	632	-	-	-	61	479
Mov Cap-2 Maneuver	-	-	-	-	178	-
Stage 1	-	-	-	-	285	-
Stage 2	-	-	-	-	397	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	27.9
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	632	-	-	-	178
HCM Lane V/C Ratio	-	-	-	-	0.116
HCM Control Delay (s)	0	-	-	-	27.9
HCM Lane LOS	A	-	-	-	D
HCM 95th %tile Q(veh)	0	-	-	-	0.4

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	10	1565	1033	32	32	10
Future Vol, veh/h	10	1565	1033	32	32	10
Conflicting Peds, #/hr	5	0	0	5	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	350	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	98	98	98	98	98	98
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	10	1597	1054	33	33	10

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1092	0	-	0	1895	549
Stage 1	-	-	-	-	1076	-
Stage 2	-	-	-	-	819	-
Critical Hdwy	4.16	-	-	-	6.86	6.96
Critical Hdwy Stg 1	-	-	-	-	5.86	-
Critical Hdwy Stg 2	-	-	-	-	5.86	-
Follow-up Hdwy	2.23	-	-	-	3.53	3.33
Pot Cap-1 Maneuver	629	-	-	-	61	477
Stage 1	-	-	-	-	286	-
Stage 2	-	-	-	-	391	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	626	-	-	-	59	475
Mov Cap-2 Maneuver	-	-	-	-	175	-
Stage 1	-	-	-	-	280	-
Stage 2	-	-	-	-	389	-

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	27
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	626	-	-	-	206
HCM Lane V/C Ratio	0.016	-	-	-	0.208
HCM Control Delay (s)	10.8	-	-	-	27
HCM Lane LOS	B	-	-	-	D
HCM 95th %tile Q(veh)	0.1	-	-	-	0.8

Intersection	
Int Delay, s/veh	0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	386	1	2	228	1	3
Future Vol, veh/h	386	1	2	228	1	3
Conflicting Peds, #/hr	0	5	5	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	150	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	8	8	8	8	8	8
Mvmt Flow	439	1	2	259	1	3

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	445	0	579	225
Stage 1	-	-	-	-	445	-
Stage 2	-	-	-	-	134	-
Critical Hdwy	-	-	4.26	-	6.96	7.06
Critical Hdwy Stg 1	-	-	-	-	5.96	-
Critical Hdwy Stg 2	-	-	-	-	5.96	-
Follow-up Hdwy	-	-	2.28	-	3.58	3.38
Pot Cap-1 Maneuver	-	-	1070	-	432	760
Stage 1	-	-	-	-	596	-
Stage 2	-	-	-	-	860	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1065	-	429	756
Mov Cap-2 Maneuver	-	-	-	-	429	-
Stage 1	-	-	-	-	593	-
Stage 2	-	-	-	-	858	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	10.7
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	635	-	-	1065	-
HCM Lane V/C Ratio	0.007	-	-	0.002	-
HCM Control Delay (s)	10.7	-	-	8.4	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0	-

HCM 6th Signalized Intersection Summary
1: Grove Ave & Mission Blvd

03/18/2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	200	640	104	20	620	509	173	823	40	421	694	170
Future Volume (veh/h)	200	640	104	20	620	509	173	823	40	421	694	170
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	217	696	35	22	674	191	188	895	42	458	754	71
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	271	930	413	124	779	345	211	1087	51	484	1895	578
Arrive On Green	0.08	0.27	0.27	0.04	0.22	0.22	0.12	0.22	0.22	0.28	0.38	0.38
Sat Flow, veh/h	3401	3497	1551	3401	3497	1549	1753	4914	230	1753	5025	1533
Grp Volume(v), veh/h	217	696	35	22	674	191	188	610	327	458	754	71
Grp Sat Flow(s),veh/h/ln	1700	1749	1551	1700	1749	1549	1753	1675	1794	1753	1675	1533
Q Serve(g_s), s	9.1	26.4	2.5	0.9	26.9	15.8	15.3	25.1	25.2	37.1	15.9	4.4
Cycle Q Clear(g_c), s	9.1	26.4	2.5	0.9	26.9	15.8	15.3	25.1	25.2	37.1	15.9	4.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.13	1.00		1.00
Lane Grp Cap(c), veh/h	271	930	413	124	779	345	211	741	397	484	1895	578
V/C Ratio(X)	0.80	0.75	0.08	0.18	0.87	0.55	0.89	0.82	0.83	0.95	0.40	0.12
Avail Cap(c_a), veh/h	705	930	413	470	846	375	242	810	434	666	1895	578
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	65.5	48.7	39.9	67.6	54.2	49.9	62.8	53.7	53.7	51.3	33.0	29.4
Incr Delay (d2), s/veh	4.1	3.5	0.1	0.5	9.1	1.8	28.1	6.8	12.3	17.9	0.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.0	11.7	0.9	0.4	12.4	6.1	8.3	11.0	12.4	18.2	6.4	1.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	69.5	52.2	40.0	68.1	63.2	51.7	90.9	60.5	66.0	69.2	33.2	29.6
LnGrp LOS	E	D	D	E	E	D	F	E	E	E	C	C
Approach Vol, veh/h		948			887			1125			1283	
Approach Delay, s/veh		55.7			60.9			67.2			45.9	
Approach LOS		E			E			E			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	47.0	39.0	12.8	46.0	24.4	61.6	19.1	39.7
Change Period (Y+Rc), s	7.0	7.0	7.5	7.5	7.0	7.0	7.5	7.5
Max Green Setting (Gmax), s	55.0	35.0	20.0	35.0	20.0	35.0	30.0	35.0
Max Q Clear Time (g_c+I1), s	39.1	27.2	2.9	28.4	17.3	17.9	11.1	28.9
Green Ext Time (p_c), s	0.9	4.1	0.0	2.7	0.1	6.3	0.5	2.7

Intersection Summary	
HCM 6th Ctrl Delay	56.9
HCM 6th LOS	E

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary
2: Vineyard Ave & Mission Blvd

03/18/2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	860	271	40	660	0	319	30	70	0	20	30
Future Volume (veh/h)	40	860	271	40	660	0	319	30	70	0	20	30
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	43	935	124	43	717	0	347	33	23	0	22	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	100	1241	546	100	1241	0	485	987	434	105	987	
Arrive On Green	0.06	0.35	0.35	0.06	0.35	0.00	0.28	0.28	0.28	0.00	0.28	0.00
Sat Flow, veh/h	1753	3497	1539	1753	3589	0	1368	3497	1539	1326	3589	0
Grp Volume(v), veh/h	43	935	124	43	717	0	347	33	23	0	22	0
Grp Sat Flow(s),veh/h/ln	1753	1749	1539	1753	1749	0	1368	1749	1539	1326	1749	0
Q Serve(g_s), s	1.6	16.2	3.9	1.6	11.4	0.0	16.9	0.5	0.7	0.0	0.3	0.0
Cycle Q Clear(g_c), s	1.6	16.2	3.9	1.6	11.4	0.0	17.2	0.5	0.7	0.0	0.3	0.0
Prop In Lane	1.00		1.00	1.00		0.00	1.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	100	1241	546	100	1241	0	485	987	434	105	987	
V/C Ratio(X)	0.43	0.75	0.23	0.43	0.58	0.00	0.72	0.03	0.05	0.00	0.02	
Avail Cap(c_a), veh/h	511	1528	673	511	1528	0	497	1019	448	117	1019	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	0.00	1.00	0.00
Uniform Delay (d), s/veh	31.3	19.5	15.5	31.3	18.0	0.0	24.0	17.8	17.9	0.0	17.8	0.0
Incr Delay (d2), s/veh	1.1	2.0	0.3	1.1	0.6	0.0	5.6	0.0	0.1	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	5.6	1.2	0.6	3.8	0.0	5.4	0.2	0.2	0.0	0.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	32.4	21.5	15.8	32.4	18.6	0.0	29.6	17.9	18.0	0.0	17.8	0.0
LnGrp LOS	C	C	B	C	B	A	C	B	B	A	B	
Approach Vol, veh/h		1102			760			403			22	A
Approach Delay, s/veh		21.3			19.4			27.9			17.8	
Approach LOS		C			B			C			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.9	31.4		26.4	10.9	31.4		26.4				
Change Period (Y+Rc), s	7.0	7.0		7.0	7.0	7.0		7.0				
Max Green Setting (Gmax), s	20.0	30.0		20.0	20.0	30.0		20.0				
Max Q Clear Time (g_c+I1), s	3.6	18.2		19.2	3.6	13.4		2.3				
Green Ext Time (p_c), s	0.0	6.2		0.2	0.0	5.3		0.1				

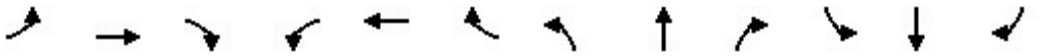
Intersection Summary			
HCM 6th Ctrl Delay		21.8	
HCM 6th LOS		C	

Notes

Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary
3: Vineyard Ave & Francis St

03/18/2024

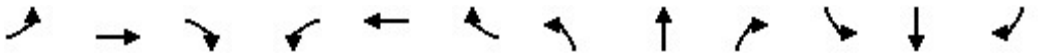


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	210	81	90	150	30	38	329	30	20	391	10
Future Volume (veh/h)	20	210	81	90	150	30	38	329	30	20	391	10
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	22	228	55	98	163	21	41	358	29	22	425	11
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	382	482	114	375	698	89	322	795	64	326	779	20
Arrive On Green	0.03	0.17	0.17	0.08	0.22	0.22	0.05	0.24	0.24	0.03	0.22	0.22
Sat Flow, veh/h	1753	2794	658	1753	3114	395	1753	3272	264	1753	3481	90
Grp Volume(v), veh/h	22	141	142	98	90	94	41	190	197	22	213	223
Grp Sat Flow(s),veh/h/ln	1753	1749	1704	1753	1749	1760	1753	1749	1787	1753	1749	1822
Q Serve(g_s), s	0.6	4.2	4.3	2.5	2.4	2.5	1.0	5.3	5.4	0.5	6.2	6.2
Cycle Q Clear(g_c), s	0.6	4.2	4.3	2.5	2.4	2.5	1.0	5.3	5.4	0.5	6.2	6.2
Prop In Lane	1.00		0.39	1.00		0.22	1.00		0.15	1.00		0.05
Lane Grp Cap(c), veh/h	382	302	294	375	392	395	322	425	434	326	391	408
V/C Ratio(X)	0.06	0.47	0.48	0.26	0.23	0.24	0.13	0.45	0.45	0.07	0.54	0.55
Avail Cap(c_a), veh/h	802	1082	1055	704	1082	1089	692	1067	1090	730	1067	1112
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	18.4	21.4	21.4	17.0	18.2	18.2	15.8	18.4	18.5	16.3	19.7	19.7
Incr Delay (d2), s/veh	0.1	1.6	1.8	0.4	0.4	0.4	0.2	1.1	1.1	0.1	1.7	1.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	1.6	1.6	0.9	0.9	0.9	0.4	1.9	2.0	0.2	2.3	2.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	18.5	22.9	23.2	17.4	18.6	18.7	16.0	19.5	19.5	16.4	21.4	21.3
LnGrp LOS	B	C	C	B	B	B	B	B	B	B	C	C
Approach Vol, veh/h		305			282			428			458	
Approach Delay, s/veh		22.7			18.2			19.2			21.1	
Approach LOS		C			B			B			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.8	20.9	11.2	16.4	9.9	19.8	8.3	19.4
Change Period (Y+Rc), s	7.0	7.0	6.5	6.5	7.0	7.0	6.5	6.5
Max Green Setting (Gmax), s	15.0	35.0	15.5	35.5	15.0	35.0	15.5	35.5
Max Q Clear Time (g_c+I1), s	2.5	7.4	4.5	6.3	3.0	8.2	2.6	4.5
Green Ext Time (p_c), s	0.0	3.0	0.1	2.1	0.1	3.4	0.0	1.3

Intersection Summary	
HCM 6th Ctrl Delay	20.3
HCM 6th LOS	C

Min green cannot be greater than Max Green.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	400	0	340	388	761	0	0	753	470
Future Volume (veh/h)	0	0	0	400	0	340	388	761	0	0	753	470
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		0.99
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1841	1841	1841	1841	1841	0	0	1841	1841
Adj Flow Rate, veh/h				445	0	71	400	785	0	0	776	160
Peak Hour Factor				0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %				4	4	4	4	4	0	0	4	4
Cap, veh/h				619	0	275	444	2239	0	0	1097	485
Arrive On Green				0.18	0.00	0.18	0.25	0.64	0.00	0.00	0.31	0.31
Sat Flow, veh/h				3506	0	1560	1753	3589	0	0	3589	1547
Grp Volume(v), veh/h				445	0	71	400	785	0	0	776	160
Grp Sat Flow(s),veh/h/ln				1753	0	1560	1753	1749	0	0	1749	1547
Q Serve(g_s), s				8.5	0.0	2.8	15.7	7.4	0.0	0.0	13.9	5.6
Cycle Q Clear(g_c), s				8.5	0.0	2.8	15.7	7.4	0.0	0.0	13.9	5.6
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				619	0	275	444	2239	0	0	1097	485
V/C Ratio(X)				0.72	0.00	0.26	0.90	0.35	0.00	0.00	0.71	0.33
Avail Cap(c_a), veh/h				988	0	440	494	2239	0	0	1478	654
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				27.6	0.0	25.2	25.6	5.9	0.0	0.0	21.5	18.6
Incr Delay (d2), s/veh				2.3	0.0	0.7	18.3	0.1	0.0	0.0	1.3	0.6
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				3.6	0.0	1.0	8.2	1.9	0.0	0.0	5.3	1.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				29.8	0.0	25.9	43.9	6.1	0.0	0.0	22.8	19.2
LnGrp LOS				C	A	C	D	A	A	A	C	B
Approach Vol, veh/h					516			1185			936	
Approach Delay, s/veh					29.3			18.8			22.2	
Approach LOS					C			B			C	

Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		51.4			23.2	28.3		19.5				
Change Period (Y+Rc), s		6.0			* 5.2	6.0		7.0				
Max Green Setting (Gmax), s		30.0			* 20	30.0		20.0				
Max Q Clear Time (g_c+I1), s		9.4			17.7	15.9		10.5				
Green Ext Time (p_c), s		7.0			0.3	6.4		2.0				

Intersection Summary		
HCM 6th Ctrl Delay	22.1	
HCM 6th LOS	C	

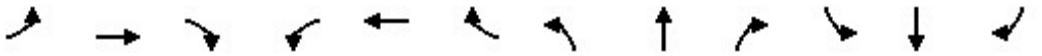
Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th Signalized Intersection Summary
6: Euclid Ave & SR-60 EB Ramps

03/18/2024



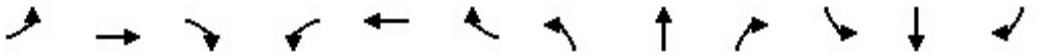
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	210	0	334	0	0	0	0	959	340	210	913	0
Future Volume (veh/h)	210	0	334	0	0	0	0	959	340	210	913	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1841	0	1841				0	1841	1841	1841	1841	0
Adj Flow Rate, veh/h	219	0	232				0	999	132	219	951	0
Peak Hour Factor	0.96	0.96	0.96				0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	4	0	4				0	4	4	4	4	0
Cap, veh/h	340	0	303				0	1353	599	270	2138	0
Arrive On Green	0.19	0.00	0.19				0.00	0.39	0.39	0.15	0.61	0.00
Sat Flow, veh/h	1753	0	1560				0	3589	1550	1753	3589	0
Grp Volume(v), veh/h	219	0	232				0	999	132	219	951	0
Grp Sat Flow(s),veh/h/ln	1753	0	1560				0	1749	1550	1753	1749	0
Q Serve(g_s), s	7.7	0.0	9.4				0.0	16.4	3.8	8.1	9.7	0.0
Cycle Q Clear(g_c), s	7.7	0.0	9.4				0.0	16.4	3.8	8.1	9.7	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	340	0	303				0	1353	599	270	2138	0
V/C Ratio(X)	0.64	0.00	0.77				0.00	0.74	0.22	0.81	0.44	0.00
Avail Cap(c_a), veh/h	525	0	467				0	1571	696	525	2138	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	24.8	0.0	25.5				0.0	17.6	13.7	27.3	6.9	0.0
Incr Delay (d2), s/veh	2.9	0.0	5.7				0.0	2.0	0.3	5.8	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.3	0.0	3.8				0.0	6.0	1.2	3.5	2.6	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	27.7	0.0	31.2				0.0	19.6	14.0	33.0	7.1	0.0
LnGrp LOS	C	A	C				A	B	B	C	A	A
Approach Vol, veh/h		451						1131			1170	
Approach Delay, s/veh		29.5						18.9			12.0	
Approach LOS		C						B			B	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	15.0	31.8		19.9		46.8
Change Period (Y+Rc), s	* 4.7	6.0		7.0		6.0
Max Green Setting (Gmax), s	* 20	30.0		20.0		30.0
Max Q Clear Time (g_c+I1), s	10.1	18.4		11.4		11.7
Green Ext Time (p_c), s	0.4	7.5		1.5		8.2

Intersection Summary			
HCM 6th Ctrl Delay			17.7
HCM 6th LOS			B

Notes

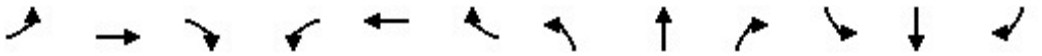
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	221	0	110	384	495	0	0	712	420
Future Volume (veh/h)	0	0	0	221	0	110	384	495	0	0	712	420
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		0.97
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1841	1841	1841	1841	1841	0	0	1841	1841
Adj Flow Rate, veh/h				240	0	22	417	538	0	0	774	377
Peak Hour Factor				0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %				4	4	4	4	4	0	0	4	4
Cap, veh/h				291	0	259	454	2441	0	0	859	417
Arrive On Green				0.17	0.00	0.17	0.26	0.70	0.00	0.00	0.38	0.38
Sat Flow, veh/h				1753	0	1560	1753	3589	0	0	2350	1096
Grp Volume(v), veh/h				240	0	22	417	538	0	0	599	552
Grp Sat Flow(s),veh/h/ln				1753	0	1560	1753	1749	0	0	1749	1606
Q Serve(g_s), s				11.3	0.0	1.0	19.7	4.7	0.0	0.0	27.5	27.7
Cycle Q Clear(g_c), s				11.3	0.0	1.0	19.7	4.7	0.0	0.0	27.5	27.7
Prop In Lane				1.00		1.00	1.00		0.00	0.00		0.68
Lane Grp Cap(c), veh/h				291	0	259	454	2441	0	0	665	611
V/C Ratio(X)				0.82	0.00	0.08	0.92	0.22	0.00	0.00	0.90	0.90
Avail Cap(c_a), veh/h				514	0	457	514	2441	0	0	718	659
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				34.3	0.0	30.1	30.7	4.6	0.0	0.0	24.9	24.9
Incr Delay (d2), s/veh				4.4	0.0	0.1	19.9	0.0	0.0	0.0	13.5	15.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				5.0	0.0	0.4	10.2	1.1	0.0	0.0	12.6	11.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				38.8	0.0	30.2	50.6	4.6	0.0	0.0	38.4	39.9
LnGrp LOS				D	A	C	D	A	A	A	D	D
Approach Vol, veh/h					262			955			1151	
Approach Delay, s/veh					38.0			24.7			39.1	
Approach LOS					D			C			D	

Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		65.3			27.1	38.2		20.0				
Change Period (Y+Rc), s		5.8			5.0	5.8		5.8				
Max Green Setting (Gmax), s		35.0			25.0	35.0		25.0				
Max Q Clear Time (g_c+I1), s		6.7			21.7	29.7		13.3				
Green Ext Time (p_c), s		2.8			0.3	2.7		0.9				

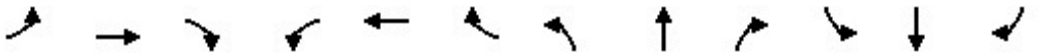
Intersection Summary												
HCM 6th Ctrl Delay			33.2									
HCM 6th LOS			C									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	110	0	375	0	0	0	0	769	334	210	723	0
Future Volume (veh/h)	110	0	375	0	0	0	0	769	334	210	723	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		0.97	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841				0	1841	1841	1841	1841	0
Adj Flow Rate, veh/h	116	0	210				0	809	310	221	761	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4				0	4	4	4	4	0
Cap, veh/h	306	0	272				0	994	380	273	2242	0
Arrive On Green	0.17	0.00	0.17				0.00	0.41	0.41	0.16	0.64	0.00
Sat Flow, veh/h	1753	0	1560				0	2543	938	1753	3589	0
Grp Volume(v), veh/h	116	0	210				0	577	542	221	761	0
Grp Sat Flow(s),veh/h/ln	1753	0	1560				0	1749	1640	1753	1749	0
Q Serve(g_s), s	3.7	0.0	8.1				0.0	18.4	18.4	7.6	6.3	0.0
Cycle Q Clear(g_c), s	3.7	0.0	8.1				0.0	18.4	18.4	7.6	6.3	0.0
Prop In Lane	1.00		1.00				0.00		0.57	1.00		0.00
Lane Grp Cap(c), veh/h	306	0	272				0	709	665	273	2242	0
V/C Ratio(X)	0.38	0.00	0.77				0.00	0.81	0.82	0.81	0.34	0.00
Avail Cap(c_a), veh/h	698	0	621				0	974	914	698	2242	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	22.9	0.0	24.7				0.0	16.6	16.6	25.6	5.2	0.0
Incr Delay (d2), s/veh	0.6	0.0	3.5				0.0	3.3	3.6	2.2	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	0.0	3.1				0.0	6.5	6.2	3.0	1.3	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.5	0.0	28.2				0.0	19.9	20.2	27.8	5.2	0.0
LnGrp LOS	C	A	C				A	B	C	C	A	A
Approach Vol, veh/h		326						1119			982	
Approach Delay, s/veh		26.5						20.1			10.3	
Approach LOS		C						C			B	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	14.8	31.3		16.8		46.1
Change Period (Y+Rc), s	5.0	5.8		5.8		5.8
Max Green Setting (Gmax), s	25.0	35.0		25.0		35.0
Max Q Clear Time (g_c+I1), s	9.6	20.4		10.1		8.3
Green Ext Time (p_c), s	0.2	5.0		0.9		4.1

Intersection Summary	
HCM 6th Ctrl Delay	17.0
HCM 6th LOS	B



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	828	0	200	430	381	0	0	911	200
Future Volume (veh/h)	0	0	0	828	0	200	430	381	0	0	911	200
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		0.97
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1781	1781	1781	1781	1781	0	0	1781	1781
Adj Flow Rate, veh/h				883	0	4	457	405	0	0	969	52
Peak Hour Factor				0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %				8	8	8	8	8	0	0	8	8
Cap, veh/h				920	0	409	987	2918	0	0	1498	357
Arrive On Green				0.27	0.00	0.27	0.40	0.80	0.00	0.00	0.24	0.24
Sat Flow, veh/h				3393	0	1510	3291	5024	0	0	6378	1460
Grp Volume(v), veh/h				883	0	4	457	405	0	0	969	52
Grp Sat Flow(s),veh/h/ln				1697	0	1510	1646	1621	0	0	1532	1460
Q Serve(g_s), s				23.1	0.0	0.2	9.2	1.7	0.0	0.0	12.8	2.5
Cycle Q Clear(g_c), s				23.1	0.0	0.2	9.2	1.7	0.0	0.0	12.8	2.5
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				920	0	409	987	2918	0	0	1498	357
V/C Ratio(X)				0.96	0.00	0.01	0.46	0.14	0.00	0.00	0.65	0.15
Avail Cap(c_a), veh/h				920	0	409	987	2918	0	0	1498	357
HCM Platoon Ratio				1.00	1.00	1.00	1.33	1.33	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.93	0.93	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				32.3	0.0	24.0	21.7	3.8	0.0	0.0	30.5	26.6
Incr Delay (d2), s/veh				21.4	0.0	0.0	1.5	0.1	0.0	0.0	2.2	0.9
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				11.9	0.0	0.2	3.3	0.5	0.0	0.0	4.6	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				53.7	0.0	24.0	23.2	3.9	0.0	0.0	32.7	27.5
LnGrp LOS				D	A	C	C	A	A	A	C	C
Approach Vol, veh/h					887			862			1021	
Approach Delay, s/veh					53.6			14.1			32.4	
Approach LOS					D			B			C	

Timer - Assigned Phs	2	4	5	6
Phs Duration (G+Y+Rc), s	59.8	30.2	32.0	27.8
Change Period (Y+Rc), s	5.8	5.8	5.0	5.8
Max Green Setting (Gmax), s	54.0	24.4	27.0	22.0
Max Q Clear Time (g_c+I1), s	3.7	25.1	11.2	14.8
Green Ext Time (p_c), s	2.7	0.0	0.8	3.6

Intersection Summary	
HCM 6th Ctrl Delay	33.5
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

User approved volume balancing among the lanes for turning movement.

HCM 6th Signalized Intersection Summary
10: Archibald Ave & SR 60 EB Ramps

03/18/2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	70	0	400	0	0	0	0	801	874	360	1369	0
Future Volume (veh/h)	70	0	400	0	0	0	0	801	874	360	1369	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		0.97	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1781	1781	1781				0	1781	1781	1781	1781	0
Adj Flow Rate, veh/h	50	0	323				0	861	481	387	1472	0
Peak Hour Factor	0.93	0.93	0.93				0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	8	8	8				0	8	8	8	8	0
Cap, veh/h	498	0	886				0	2111	505	585	2810	0
Arrive On Green	0.29	0.00	0.29				0.00	0.34	0.34	0.06	0.19	0.00
Sat Flow, veh/h	1697	0	3019				0	6378	1466	3291	5024	0
Grp Volume(v), veh/h	50	0	323				0	861	481	387	1472	0
Grp Sat Flow(s),veh/h/ln	1697	0	1510				0	1532	1466	1646	1621	0
Q Serve(g_s), s	1.9	0.0	7.6				0.0	9.6	28.8	10.4	24.5	0.0
Cycle Q Clear(g_c), s	1.9	0.0	7.6				0.0	9.6	28.8	10.4	24.5	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	498	0	886				0	2111	505	585	2810	0
V/C Ratio(X)	0.10	0.00	0.36				0.00	0.41	0.95	0.66	0.52	0.00
Avail Cap(c_a), veh/h	498	0	886				0	2111	505	585	2810	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	0.33	0.33	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.54	0.54	0.00
Uniform Delay (d), s/veh	23.2	0.0	25.2				0.0	22.5	28.8	39.7	25.3	0.0
Incr Delay (d2), s/veh	0.4	0.0	1.2				0.0	0.6	29.9	3.2	0.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.0	2.8				0.0	3.3	13.4	4.6	10.5	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.6	0.0	26.3				0.0	23.1	58.7	42.9	25.7	0.0
LnGrp LOS	C	A	C				A	C	E	D	C	A
Approach Vol, veh/h		373						1342			1859	
Approach Delay, s/veh		26.0						35.8			29.3	
Approach LOS		C						D			C	

Timer - Assigned Phs	1	2				6		8				
Phs Duration (G+Y+Rc), s	21.0	36.8				57.8		32.2				
Change Period (Y+Rc), s	5.0	5.8				5.8		5.8				
Max Green Setting (Gmax), s	16.0	31.0				52.0		26.4				
Max Q Clear Time (g_c+I1), s	12.4	30.8				26.5		9.6				
Green Ext Time (p_c), s	0.3	0.1				11.4		1.3				

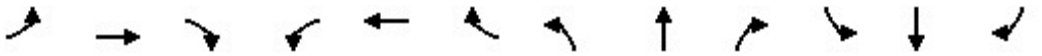
Intersection Summary			
HCM 6th Ctrl Delay			31.4
HCM 6th LOS			C

Notes

User approved volume balancing among the lanes for turning movement.

HCM 6th Signalized Intersection Summary
11: Archibald Ave & Walnut St

03/18/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	10	43	23	20	60	93	1405	32	70	1349	20
Future Volume (veh/h)	10	10	43	23	20	60	93	1405	32	70	1349	20
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.98		0.96	0.98		0.96	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781
Adj Flow Rate, veh/h	11	11	6	25	22	9	100	1511	33	75	1451	21
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	8	8	8	8	8	8	8	8	8	8	8	8
Cap, veh/h	270	144	79	281	160	65	128	2333	51	95	2257	33
Arrive On Green	0.14	0.14	0.14	0.14	0.14	0.14	0.08	0.48	0.48	0.06	0.46	0.46
Sat Flow, veh/h	1287	1066	581	1302	1185	485	1697	4893	107	1697	4936	71
Grp Volume(v), veh/h	11	0	17	25	0	31	100	1001	543	75	953	519
Grp Sat Flow(s),veh/h/ln	1287	0	1647	1302	0	1669	1697	1621	1758	1697	1621	1766
Q Serve(g_s), s	0.5	0.0	0.6	1.1	0.0	1.0	3.6	14.4	14.4	2.7	13.9	13.9
Cycle Q Clear(g_c), s	1.5	0.0	0.6	1.6	0.0	1.0	3.6	14.4	14.4	2.7	13.9	13.9
Prop In Lane	1.00		0.35	1.00		0.29	1.00		0.06	1.00		0.04
Lane Grp Cap(c), veh/h	270	0	222	281	0	226	128	1546	838	95	1483	807
V/C Ratio(X)	0.04	0.00	0.08	0.09	0.00	0.14	0.78	0.65	0.65	0.79	0.64	0.64
Avail Cap(c_a), veh/h	513	0	534	527	0	541	550	2103	1140	550	2103	1145
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.2	0.0	23.3	24.0	0.0	23.5	28.0	12.2	12.2	28.8	12.9	12.9
Incr Delay (d2), s/veh	0.0	0.0	0.1	0.1	0.0	0.2	3.9	0.6	1.0	5.5	0.6	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	0.2	0.3	0.0	0.4	1.4	3.9	4.3	1.1	4.0	4.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	24.2	0.0	23.4	24.1	0.0	23.7	32.0	12.8	13.2	34.3	13.4	13.9
LnGrp LOS	C	A	C	C	A	C	C	B	B	C	B	B
Approach Vol, veh/h		28			56			1644			1547	
Approach Delay, s/veh		23.7			23.9			14.1			14.6	
Approach LOS		C			C			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.9	35.9		15.8	11.1	34.7		15.8				
Change Period (Y+Rc), s	6.5	6.5		7.5	6.5	6.5		7.5				
Max Green Setting (Gmax), s	20.0	40.0		20.0	20.0	40.0		20.0				
Max Q Clear Time (g_c+I1), s	4.7	16.4		3.5	5.6	15.9		3.6				
Green Ext Time (p_c), s	0.1	12.5		0.0	0.1	12.3		0.1				

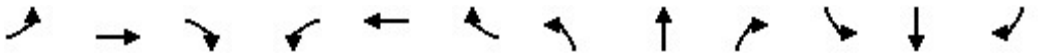
Intersection Summary			
HCM 6th Ctrl Delay		14.6	
HCM 6th LOS		B	

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary
12: Euclid Ave & Riverside Dr

03/18/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	110	468	61	130	399	109	51	931	233	149	798	130
Future Volume (veh/h)	110	468	61	130	399	109	51	931	233	149	798	130
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	1.00		0.96	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	112	478	19	133	407	34	52	950	124	152	814	63
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	175	536	443	177	1024	445	122	1080	461	181	1197	677
Arrive On Green	0.10	0.29	0.29	0.10	0.29	0.29	0.07	0.31	0.31	0.10	0.34	0.34
Sat Flow, veh/h	1753	1841	1520	1753	3497	1520	1753	3497	1495	1753	3497	1523
Grp Volume(v), veh/h	112	478	19	133	407	34	52	950	124	152	814	63
Grp Sat Flow(s),veh/h/ln	1753	1841	1520	1753	1749	1520	1753	1749	1495	1753	1749	1523
Q Serve(g_s), s	7.2	29.1	1.1	8.6	10.9	1.9	3.3	30.2	7.3	10.0	23.4	2.8
Cycle Q Clear(g_c), s	7.2	29.1	1.1	8.6	10.9	1.9	3.3	30.2	7.3	10.0	23.4	2.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	175	536	443	177	1024	445	122	1080	461	181	1197	677
V/C Ratio(X)	0.64	0.89	0.04	0.75	0.40	0.08	0.43	0.88	0.27	0.84	0.68	0.09
Avail Cap(c_a), veh/h	301	676	558	484	1649	717	150	1195	511	282	1270	709
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.7	39.7	29.8	51.2	33.1	29.9	52.2	38.4	30.5	51.5	33.0	19.0
Incr Delay (d2), s/veh	1.5	12.9	0.1	2.4	0.4	0.1	2.3	7.3	0.3	12.5	1.4	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.1	14.5	0.4	3.8	4.5	0.7	1.5	13.6	2.6	4.9	9.8	1.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	52.1	52.6	29.8	53.6	33.5	30.1	54.5	45.7	30.8	64.0	34.4	19.1
LnGrp LOS	D	D	C	D	C	C	D	D	C	E	C	B
Approach Vol, veh/h		609			574			1126			1029	
Approach Delay, s/veh		51.8			37.9			44.5			37.8	
Approach LOS		D			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.3	42.1	16.5	41.1	13.4	46.0	16.4	41.3
Change Period (Y+Rc), s	* 5.2	6.0	* 4.7	7.0	* 5.2	6.0	* 4.7	7.0
Max Green Setting (Gmax), s	* 19	40.0	* 32	43.0	* 10	42.5	* 20	55.2
Max Q Clear Time (g_c+I1), s	12.0	32.2	10.6	31.1	5.3	25.4	9.2	12.9
Green Ext Time (p_c), s	0.2	4.0	0.1	3.0	0.0	5.2	0.1	3.9

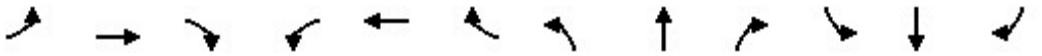
Intersection Summary	
HCM 6th Ctrl Delay	42.6
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th Signalized Intersection Summary
13: Campus Ave & Riverside Dr

03/18/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	110	740	30	33	547	73	20	330	73	83	110	90
Future Volume (veh/h)	110	740	30	33	547	73	20	330	73	83	110	90
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	1.00		0.97	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	116	779	12	35	576	66	21	347	70	87	116	30
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	162	688	567	95	1060	121	421	461	93	184	574	477
Arrive On Green	0.09	0.37	0.37	0.05	0.33	0.33	0.31	0.31	0.31	0.31	0.31	0.31
Sat Flow, veh/h	1767	1856	1528	1767	3181	364	1261	1490	301	959	1856	1544
Grp Volume(v), veh/h	116	779	12	35	318	324	21	0	417	87	116	30
Grp Sat Flow(s),veh/h/ln	1767	1856	1528	1767	1763	1782	1261	0	1790	959	1856	1544
Q Serve(g_s), s	5.2	30.0	0.4	1.5	11.9	12.0	1.0	0.0	17.0	7.3	3.7	1.1
Cycle Q Clear(g_c), s	5.2	30.0	0.4	1.5	11.9	12.0	4.7	0.0	17.0	24.2	3.7	1.1
Prop In Lane	1.00		1.00	1.00		0.20	1.00		0.17	1.00		1.00
Lane Grp Cap(c), veh/h	162	688	567	95	587	594	421	0	554	184	574	477
V/C Ratio(X)	0.72	1.13	0.02	0.37	0.54	0.54	0.05	0.00	0.75	0.47	0.20	0.06
Avail Cap(c_a), veh/h	437	688	567	437	654	661	421	0	554	184	574	477
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.7	25.4	16.1	36.9	21.9	22.0	22.3	0.0	25.2	36.1	20.6	19.7
Incr Delay (d2), s/veh	2.2	76.6	0.0	0.9	0.9	0.9	0.1	0.0	6.0	1.9	0.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	26.0	0.1	0.6	4.5	4.6	0.3	0.0	7.5	1.7	1.5	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	37.9	102.0	16.1	37.8	22.9	22.9	22.4	0.0	31.1	37.9	20.8	19.7
LnGrp LOS	D	F	B	D	C	C	C	A	C	D	C	B
Approach Vol, veh/h		907			677			438			233	
Approach Delay, s/veh		92.7			23.7			30.7			27.0	
Approach LOS		F			C			C			C	

Timer - Assigned Phs	2	3	4	6	7	8
Phs Duration (G+Y+Rc), s	31.5	11.9	37.5	31.5	14.9	34.4
Change Period (Y+Rc), s	6.5	7.5	7.5	6.5	7.5	7.5
Max Green Setting (Gmax), s	25.0	20.0	30.0	25.0	20.0	30.0
Max Q Clear Time (g_c+I1), s	19.0	3.5	32.0	26.2	7.2	14.0
Green Ext Time (p_c), s	1.5	0.0	0.0	0.0	0.1	3.7

Intersection Summary	
HCM 6th Ctrl Delay	53.1
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary
15: Grove Ave & Riverside Dr

03/18/2024

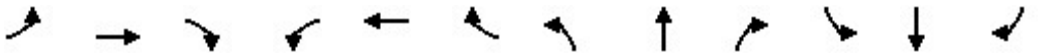
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	190	820	1	7	566	164	11	32	24	216	32	160
Future Volume (veh/h)	190	820	1	7	566	164	11	32	24	216	32	160
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.97	1.00		0.96	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	198	854	1	7	590	152	11	33	3	225	33	47
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	237	760	1	16	785	202	29	133	12	265	396	328
Arrive On Green	0.13	0.41	0.41	0.01	0.28	0.28	0.02	0.08	0.08	0.15	0.21	0.21
Sat Flow, veh/h	1767	1853	2	1767	2756	708	1767	1670	152	1767	1856	1536
Grp Volume(v), veh/h	198	0	855	7	377	365	11	0	36	225	33	47
Grp Sat Flow(s),veh/h/ln	1767	0	1855	1767	1763	1701	1767	0	1822	1767	1856	1536
Q Serve(g_s), s	9.3	0.0	35.0	0.3	16.6	16.7	0.5	0.0	1.6	10.6	1.2	2.1
Cycle Q Clear(g_c), s	9.3	0.0	35.0	0.3	16.6	16.7	0.5	0.0	1.6	10.6	1.2	2.1
Prop In Lane	1.00		0.00	1.00		0.42	1.00		0.08	1.00		1.00
Lane Grp Cap(c), veh/h	237	0	761	16	502	484	29	0	146	265	396	328
V/C Ratio(X)	0.83	0.00	1.12	0.44	0.75	0.75	0.39	0.00	0.25	0.85	0.08	0.14
Avail Cap(c_a), veh/h	414	0	761	414	723	697	414	0	640	414	652	540
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.0	0.0	25.2	42.1	27.8	27.8	41.6	0.0	36.9	35.4	26.9	27.2
Incr Delay (d2), s/veh	5.7	0.0	72.4	13.7	3.1	3.3	6.2	0.0	1.1	8.0	0.1	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.1	0.0	28.4	0.2	6.7	6.6	0.3	0.0	0.7	4.9	0.5	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	41.8	0.0	97.6	55.8	30.8	31.1	47.8	0.0	37.9	43.4	27.0	27.5
LnGrp LOS	D	A	F	E	C	C	D	A	D	D	C	C
Approach Vol, veh/h		1053			749			47			305	
Approach Delay, s/veh		87.1			31.2			40.2			39.2	
Approach LOS		F			C			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	19.0	31.8	8.9	25.7	8.3	42.5	20.3	14.3
Change Period (Y+Rc), s	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5
Max Green Setting (Gmax), s	20.0	35.0	20.0	30.0	20.0	35.0	20.0	30.0
Max Q Clear Time (g_c+I1), s	11.3	18.7	2.5	4.1	2.3	37.0	12.6	3.6
Green Ext Time (p_c), s	0.2	4.5	0.0	0.3	0.0	0.0	0.3	0.1

Intersection Summary	
HCM 6th Ctrl Delay	59.9
HCM 6th LOS	E

HCM 6th Signalized Intersection Summary
18: Vineyard Ave & Riverside Dr

03/18/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	170	827	10	17	568	364	16	329	17	581	228	110
Future Volume (veh/h)	170	827	10	17	568	364	16	329	17	581	228	110
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.97	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	175	853	4	18	586	113	16	339	4	599	235	102
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	143	1052	460	80	849	371	259	517	225	873	301	131
Arrive On Green	0.08	0.30	0.30	0.02	0.24	0.24	0.15	0.15	0.15	0.25	0.25	0.25
Sat Flow, veh/h	1767	3526	1544	3428	3526	1541	1767	3526	1533	3534	1219	529
Grp Volume(v), veh/h	175	853	4	18	586	113	16	339	4	599	0	337
Grp Sat Flow(s),veh/h/ln	1767	1763	1544	1714	1763	1541	1767	1763	1533	1767	0	1748
Q Serve(g_s), s	8.5	23.6	0.2	0.5	15.9	6.3	0.8	9.6	0.2	16.2	0.0	19.0
Cycle Q Clear(g_c), s	8.5	23.6	0.2	0.5	15.9	6.3	0.8	9.6	0.2	16.2	0.0	19.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.30
Lane Grp Cap(c), veh/h	143	1052	460	80	849	371	259	517	225	873	0	432
V/C Ratio(X)	1.23	0.81	0.01	0.23	0.69	0.30	0.06	0.66	0.02	0.69	0.00	0.78
Avail Cap(c_a), veh/h	143	1271	557	195	1188	519	604	1204	524	1174	0	580
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	48.4	34.2	26.0	50.5	36.4	32.8	38.7	42.5	38.5	36.0	0.0	37.0
Incr Delay (d2), s/veh	149.2	3.6	0.0	1.0	1.2	0.6	0.1	1.7	0.0	1.2	0.0	5.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.5	9.8	0.1	0.2	6.5	2.3	0.4	4.1	0.1	6.8	0.0	8.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	197.7	37.9	26.0	51.6	37.6	33.3	38.8	44.2	38.5	37.2	0.0	42.3
LnGrp LOS	F	D	C	D	D	C	D	D	D	D	A	D
Approach Vol, veh/h		1032			717			359			936	
Approach Delay, s/veh		64.9			37.3			43.9			39.0	
Approach LOS		E			D			D			D	

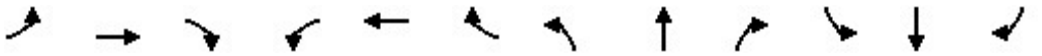
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		22.9	10.0	38.9		33.5	16.0	32.9				
Change Period (Y+Rc), s		7.5	7.5	7.5		7.5	7.5	7.5				
Max Green Setting (Gmax), s		36.0	6.0	38.0		35.0	8.5	35.5				
Max Q Clear Time (g_c+I1), s		11.6	2.5	25.6		21.0	10.5	17.9				
Green Ext Time (p_c), s		2.4	0.0	4.8		4.4	0.0	3.2				

Intersection Summary	
HCM 6th Ctrl Delay	48.0
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1255	213	158	760	10	211	0	161	10	0	10
Future Volume (veh/h)	0	1255	213	158	760	10	211	0	161	10	0	10
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	0.99		0.98	0.99		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	0	1379	148	174	835	11	232	0	68	11	0	3
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	2	1565	679	207	2274	30	373	0	326	311	0	326
Arrive On Green	0.00	0.44	0.44	0.12	0.64	0.64	0.21	0.00	0.21	0.21	0.00	0.21
Sat Flow, veh/h	1767	3526	1530	1767	3562	47	1393	0	1539	1315	0	1539
Grp Volume(v), veh/h	0	1379	148	174	413	433	232	0	68	11	0	3
Grp Sat Flow(s),veh/h/ln	1767	1763	1530	1767	1763	1846	1393	0	1539	1315	0	1539
Q Serve(g_s), s	0.0	32.3	5.4	8.7	10.0	10.0	14.3	0.0	3.3	0.6	0.0	0.1
Cycle Q Clear(g_c), s	0.0	32.3	5.4	8.7	10.0	10.0	14.4	0.0	3.3	3.9	0.0	0.1
Prop In Lane	1.00		1.00	1.00		0.03	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	2	1565	679	207	1126	1179	373	0	326	311	0	326
V/C Ratio(X)	0.00	0.88	0.22	0.84	0.37	0.37	0.62	0.00	0.21	0.04	0.00	0.01
Avail Cap(c_a), veh/h	117	1657	719	215	1126	1179	632	0	613	555	0	613
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	23.0	15.5	39.1	7.7	7.7	33.8	0.0	29.4	31.0	0.0	28.1
Incr Delay (d2), s/veh	0.0	5.8	0.2	24.0	0.2	0.2	1.7	0.0	0.3	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	12.5	1.7	4.9	2.8	2.9	4.9	0.0	1.2	0.2	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	28.7	15.7	63.1	8.0	7.9	35.5	0.0	29.7	31.0	0.0	28.1
LnGrp LOS	A	C	B	E	A	A	D	A	C	C	A	C
Approach Vol, veh/h		1527			1020			300			14	
Approach Delay, s/veh		27.5			17.4			34.2			30.4	
Approach LOS		C			B			C			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	0.0	65.2		25.2	17.6	47.6		25.2				
Change Period (Y+Rc), s	7.0	7.5		6.0	7.0	7.5		6.0				
Max Green Setting (Gmax), s	6.0	47.5		36.0	11.0	42.5		36.0				
Max Q Clear Time (g_c+I1), s	0.0	12.0		5.9	10.7	34.3		16.4				
Green Ext Time (p_c), s	0.0	6.2		0.0	0.0	5.8		1.0				

Intersection Summary			
HCM 6th Ctrl Delay		24.6	
HCM 6th LOS		C	

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1261	164	209	797	130	214
Future Volume (veh/h)	1261	164	209	797	130	214
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		0.97	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	1371	116	227	866	141	40
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	1661	721	267	2519	191	170
Arrive On Green	0.47	0.47	0.15	0.71	0.11	0.11
Sat Flow, veh/h	3618	1530	1767	3618	1767	1572
Grp Volume(v), veh/h	1371	116	227	866	141	40
Grp Sat Flow(s),veh/h/ln	1763	1530	1767	1763	1767	1572
Q Serve(g_s), s	25.6	3.3	9.5	7.1	5.9	1.8
Cycle Q Clear(g_c), s	25.6	3.3	9.5	7.1	5.9	1.8
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1661	721	267	2519	191	170
V/C Ratio(X)	0.83	0.16	0.85	0.34	0.74	0.24
Avail Cap(c_a), veh/h	1879	816	302	2806	837	745
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.4	11.5	31.4	4.1	32.9	31.0
Incr Delay (d2), s/veh	3.0	0.1	18.2	0.1	5.5	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.7	0.9	5.0	1.2	2.7	0.7
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	20.4	11.6	49.6	4.2	38.4	31.7
LnGrp LOS	C	B	D	A	D	C
Approach Vol, veh/h	1487			1093	181	
Approach Delay, s/veh	19.7			13.6	36.9	
Approach LOS	B			B	D	

Timer - Assigned Phs		2			5	6	8
Phs Duration (G+Y+Rc), s		61.8			18.5	43.3	14.2
Change Period (Y+Rc), s		7.5			7.0	7.5	6.0
Max Green Setting (Gmax), s		60.5			13.0	40.5	36.0
Max Q Clear Time (g_c+I1), s		9.1			11.5	27.6	7.9
Green Ext Time (p_c), s		7.6			0.1	8.2	0.5

Intersection Summary		
HCM 6th Ctrl Delay	18.4	
HCM 6th LOS	B	

HCM 6th Signalized Intersection Summary
25: Colonial Ave & Riverside Ave

03/18/2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	33	1410	33	30	990	10	13	0	30	0	0	23
Future Volume (veh/h)	33	1410	33	30	990	10	13	0	30	0	0	23
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	0.98		1.00	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	35	1516	35	32	1065	11	14	0	0	0	0	2
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	94	1914	44	88	1930	20	219	0	0	0	0	92
Arrive On Green	0.05	0.54	0.54	0.05	0.54	0.54	0.06	0.00	0.00	0.00	0.00	0.06
Sat Flow, veh/h	1767	3520	81	1767	3574	37	1341	0	0	0	0	1531
Grp Volume(v), veh/h	35	758	793	32	525	551	14	0	0	0	0	2
Grp Sat Flow(s),veh/h/ln	1767	1763	1838	1767	1763	1848	1341	0	0	0	0	1531
Q Serve(g_s), s	1.0	17.9	18.0	0.9	10.1	10.1	0.5	0.0	0.0	0.0	0.0	0.1
Cycle Q Clear(g_c), s	1.0	17.9	18.0	0.9	10.1	10.1	0.6	0.0	0.0	0.0	0.0	0.1
Prop In Lane	1.00		0.04	1.00		0.02	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h	94	958	1000	88	952	998	219	0	0	0	0	92
V/C Ratio(X)	0.37	0.79	0.79	0.36	0.55	0.55	0.06	0.00	0.00	0.00	0.00	0.02
Avail Cap(c_a), veh/h	680	1188	1239	680	1188	1245	796	0	0	0	0	737
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	23.7	9.5	9.5	23.9	7.8	7.8	23.3	0.0	0.0	0.0	0.0	23.0
Incr Delay (d2), s/veh	2.4	3.0	2.9	2.5	0.5	0.5	0.1	0.0	0.0	0.0	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	4.2	4.4	0.4	2.2	2.4	0.2	0.0	0.0	0.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.1	12.5	12.4	26.4	8.3	8.3	23.3	0.0	0.0	0.0	0.0	23.1
LnGrp LOS	C	B	B	C	A	A	C	A	A	A	A	C
Approach Vol, veh/h		1586			1108			14			2	
Approach Delay, s/veh		12.8			8.8			23.3			23.1	
Approach LOS		B			A			C			C	

Timer - Assigned Phs	2	3	4	6	7	8
Phs Duration (G+Y+Rc), s	9.1	7.6	35.2	9.1	7.8	35.1
Change Period (Y+Rc), s	6.0	5.0	7.0	6.0	5.0	7.0
Max Green Setting (Gmax), s	25.0	20.0	35.0	25.0	20.0	35.0
Max Q Clear Time (g_c+I1), s	2.6	2.9	20.0	2.1	3.0	12.1
Green Ext Time (p_c), s	0.0	0.0	8.3	0.0	0.0	6.5

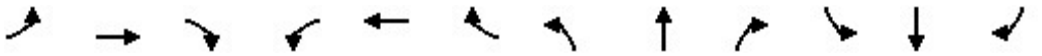
Intersection Summary	
HCM 6th Ctrl Delay	11.2
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary
26: Archibald Ave & Riverside Ave

03/18/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	478	628	314	131	434	160	202	902	51	180	810	405
Future Volume (veh/h)	478	628	314	131	434	160	202	902	51	180	810	405
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.97	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781
Adj Flow Rate, veh/h	503	661	297	138	457	145	213	949	51	189	853	369
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	8	8	8	8	8	8	8	8	8	8	8	8
Cap, veh/h	439	850	382	169	549	172	248	1289	69	223	853	368
Arrive On Green	0.26	0.38	0.38	0.10	0.22	0.22	0.15	0.27	0.27	0.13	0.26	0.26
Sat Flow, veh/h	1697	2253	1013	1697	2513	790	1697	4717	253	1697	3299	1421
Grp Volume(v), veh/h	503	496	462	138	306	296	213	652	348	189	838	384
Grp Sat Flow(s),veh/h/ln	1697	1692	1574	1697	1692	1610	1697	1621	1728	1697	1621	1478
Q Serve(g_s), s	35.0	35.0	35.0	10.8	23.4	23.8	16.6	24.7	24.8	14.7	35.0	35.0
Cycle Q Clear(g_c), s	35.0	35.0	35.0	10.8	23.4	23.8	16.6	24.7	24.8	14.7	35.0	35.0
Prop In Lane	1.00		0.64	1.00		0.49	1.00		0.15	1.00		0.96
Lane Grp Cap(c), veh/h	439	638	594	169	370	352	248	886	472	223	839	382
V/C Ratio(X)	1.15	0.78	0.78	0.81	0.83	0.84	0.86	0.74	0.74	0.85	1.00	1.00
Avail Cap(c_a), veh/h	439	638	594	439	438	416	439	886	472	439	839	382
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.2	37.1	37.1	59.7	50.5	50.6	56.4	44.7	44.8	57.4	50.2	50.2
Incr Delay (d2), s/veh	89.5	7.0	7.5	17.8	13.6	15.3	16.3	3.9	7.3	16.6	31.0	47.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	25.2	15.0	14.0	5.4	11.0	10.8	8.0	10.1	11.2	7.2	17.2	17.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	139.7	44.2	44.6	77.5	64.1	66.0	72.7	48.6	52.0	74.1	81.1	97.2
LnGrp LOS	F	D	D	E	E	E	E	D	D	E	F	F
Approach Vol, veh/h		1461			740			1213			1411	
Approach Delay, s/veh		77.2			67.3			53.8			84.6	
Approach LOS		E			E			D			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	21.8	41.0	17.5	55.0	23.8	39.0	39.0	33.6
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0
Max Q Clear Time (g_c+I1), s	16.7	26.8	12.8	37.0	18.6	37.0	37.0	25.8
Green Ext Time (p_c), s	1.1	5.3	0.8	0.0	1.2	0.0	0.0	3.8

Intersection Summary	
HCM 6th Ctrl Delay	72.0
HCM 6th LOS	E

HCM 6th Signalized Intersection Summary
27: Haven Ave & Riverside Dr

03/18/2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	224	290	75	70	303	60	42	360	40	90	490	350
Future Volume (veh/h)	224	290	75	70	303	60	42	360	40	90	490	350
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	1.00		0.97	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	233	302	72	73	316	48	44	375	41	94	510	156
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	265	337	80	118	463	70	41	349	38	417	438	364
Arrive On Green	0.15	0.23	0.23	0.07	0.15	0.15	0.24	0.24	0.24	0.24	0.24	0.24
Sat Flow, veh/h	1767	1437	343	1767	3062	460	173	1477	161	1767	1856	1541
Grp Volume(v), veh/h	233	0	374	73	180	184	460	0	0	94	510	156
Grp Sat Flow(s),veh/h/ln	1767	0	1780	1767	1763	1759	1811	0	0	1767	1856	1541
Q Serve(g_s), s	13.7	0.0	21.6	4.3	10.2	10.5	25.0	0.0	0.0	4.5	25.0	9.1
Cycle Q Clear(g_c), s	13.7	0.0	21.6	4.3	10.2	10.5	25.0	0.0	0.0	4.5	25.0	9.1
Prop In Lane	1.00		0.19	1.00		0.26	0.10		0.09	1.00		1.00
Lane Grp Cap(c), veh/h	265	0	417	118	267	266	428	0	0	417	438	364
V/C Ratio(X)	0.88	0.00	0.90	0.62	0.68	0.69	1.08	0.00	0.00	0.23	1.16	0.43
Avail Cap(c_a), veh/h	417	0	504	334	499	498	428	0	0	417	438	364
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.1	0.0	39.3	48.1	42.5	42.6	40.4	0.0	0.0	32.6	40.4	34.4
Incr Delay (d2), s/veh	8.1	0.0	16.5	2.0	3.0	3.2	65.2	0.0	0.0	0.2	96.2	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.3	0.0	10.8	1.9	4.5	4.6	18.3	0.0	0.0	1.9	22.5	3.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	52.2	0.0	55.7	50.1	45.5	45.8	105.7	0.0	0.0	32.8	136.6	35.0
LnGrp LOS	D	A	E	D	D	D	F	A	A	C	F	C
Approach Vol, veh/h		607			437			460			760	
Approach Delay, s/veh		54.4			46.4			105.7			102.9	
Approach LOS		D			D			F			F	

Timer - Assigned Phs	2	3	4	6	7	8
Phs Duration (G+Y+Rc), s	30.0	14.1	31.8	30.0	22.9	23.0
Change Period (Y+Rc), s	5.0	7.0	7.0	5.0	7.0	7.0
Max Green Setting (Gmax), s	25.0	20.0	30.0	25.0	25.0	30.0
Max Q Clear Time (g_c+I1), s	27.0	6.3	23.6	27.0	15.7	12.5
Green Ext Time (p_c), s	0.0	0.1	1.1	0.0	0.2	1.7

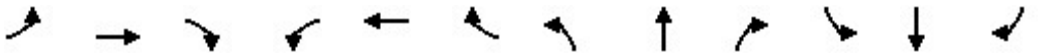
Intersection Summary	
HCM 6th Ctrl Delay	79.6
HCM 6th LOS	E

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary
28: Euclid Ave & Chino Ave

03/18/2024



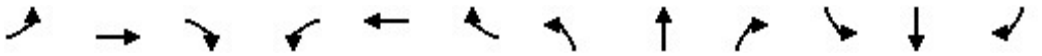
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	100	334	50	89	93	31	40	1093	237	19	920	60
Future Volume (veh/h)	100	334	50	89	93	31	40	1093	237	19	920	60
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.97	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	112	375	18	100	104	29	45	1228	213	21	1034	29
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	373	616	513	155	147	34	136	1389	602	81	1279	568
Arrive On Green	0.33	0.33	0.33	0.33	0.33	0.33	0.08	0.40	0.40	0.05	0.37	0.37
Sat Flow, veh/h	1234	1841	1532	279	440	102	1753	3497	1516	1753	3497	1554
Grp Volume(v), veh/h	112	375	18	233	0	0	45	1228	213	21	1034	29
Grp Sat Flow(s),veh/h/ln	1234	1841	1532	821	0	0	1753	1749	1516	1753	1749	1554
Q Serve(g_s), s	0.0	14.1	0.7	10.5	0.0	0.0	2.0	27.1	8.2	1.0	22.1	1.0
Cycle Q Clear(g_c), s	8.9	14.1	0.7	24.6	0.0	0.0	2.0	27.1	8.2	1.0	22.1	1.0
Prop In Lane	1.00		1.00	0.43		0.12	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	373	616	513	337	0	0	136	1389	602	81	1279	568
V/C Ratio(X)	0.30	0.61	0.04	0.69	0.00	0.00	0.33	0.88	0.35	0.26	0.81	0.05
Avail Cap(c_a), veh/h	480	776	646	452	0	0	317	1475	640	317	1475	655
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.3	23.1	18.6	28.9	0.0	0.0	36.2	23.2	17.5	38.2	23.7	17.0
Incr Delay (d2), s/veh	0.4	1.0	0.0	2.8	0.0	0.0	0.5	6.5	0.4	0.6	3.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	5.8	0.2	4.4	0.0	0.0	0.8	10.8	2.6	0.4	8.5	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	21.8	24.0	18.6	31.7	0.0	0.0	36.7	29.7	17.9	38.8	26.7	17.0
LnGrp LOS	C	C	B	C	A	A	D	C	B	D	C	B
Approach Vol, veh/h		505			233			1486			1084	
Approach Delay, s/veh		23.3			31.7			28.2			26.7	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.5	39.5		35.0	11.2	36.8		35.0				
Change Period (Y+Rc), s	* 4.7	6.5		7.2	* 4.7	6.5		7.2				
Max Green Setting (Gmax), s	* 15	35.0		35.0	* 15	35.0		35.0				
Max Q Clear Time (g_c+I1), s	3.0	29.1		16.1	4.0	24.1		26.6				
Green Ext Time (p_c), s	0.0	3.9		2.4	0.0	4.9		0.8				

Intersection Summary	
HCM 6th Ctrl Delay	27.2
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



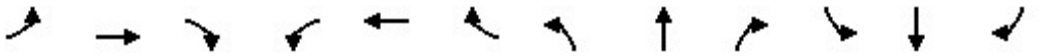
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	21	280	0	0	155	54	0	246	20	50	167	27
Future Volume (veh/h)	21	280	0	0	155	54	0	246	20	50	167	27
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		0.98	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781
Adj Flow Rate, veh/h	27	354	0	0	196	17	0	311	16	63	211	14
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79
Percent Heavy Veh, %	8	8	8	8	8	8	8	8	8	8	8	8
Cap, veh/h	63	1232	0	3	356	295	3	796	41	114	647	532
Arrive On Green	0.04	0.36	0.00	0.00	0.20	0.20	0.00	0.17	0.17	0.07	0.36	0.36
Sat Flow, veh/h	1697	3474	0	1697	1781	1477	1697	4733	241	1697	1781	1466
Grp Volume(v), veh/h	27	354	0	0	196	17	0	212	115	63	211	14
Grp Sat Flow(s),veh/h/ln	1697	1692	0	1697	1781	1477	1697	1621	1731	1697	1781	1466
Q Serve(g_s), s	0.9	4.1	0.0	0.0	5.4	0.5	0.0	3.2	3.3	2.0	4.7	0.3
Cycle Q Clear(g_c), s	0.9	4.1	0.0	0.0	5.4	0.5	0.0	3.2	3.3	2.0	4.7	0.3
Prop In Lane	1.00		0.00	1.00		1.00	1.00		0.14	1.00		1.00
Lane Grp Cap(c), veh/h	63	1232	0	3	356	295	3	546	291	114	647	532
V/C Ratio(X)	0.43	0.29	0.00	0.00	0.55	0.06	0.00	0.39	0.40	0.55	0.33	0.03
Avail Cap(c_a), veh/h	185	2402	0	185	1264	1048	185	1888	1008	278	1135	934
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.9	12.4	0.0	0.0	19.8	17.8	0.0	20.3	20.4	24.8	12.6	11.3
Incr Delay (d2), s/veh	4.6	0.2	0.0	0.0	1.6	0.1	0.0	0.5	1.0	4.1	0.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	1.2	0.0	0.0	2.0	0.2	0.0	1.1	1.2	0.8	1.5	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	30.5	12.6	0.0	0.0	21.4	17.9	0.0	20.9	21.4	28.9	13.0	11.3
LnGrp LOS	C	B	A	A	C	B	A	C	C	C	B	B
Approach Vol, veh/h		381			213			327			288	
Approach Delay, s/veh		13.8			21.1			21.1			16.4	
Approach LOS		B			C			C			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.7	16.7	0.0	27.5	0.0	27.5	9.0	18.5
Change Period (Y+Rc), s	7.0	7.5	7.0	7.5	7.0	7.5	7.0	7.5
Max Green Setting (Gmax), s	9.0	32.0	6.0	39.0	6.0	35.0	6.0	39.0
Max Q Clear Time (g_c+I1), s	4.0	5.3	0.0	6.1	0.0	6.7	2.9	7.4
Green Ext Time (p_c), s	0.0	2.2	0.0	2.6	0.0	1.3	0.0	1.3

Intersection Summary	
HCM 6th Ctrl Delay	17.7
HCM 6th LOS	B

HCM 6th Signalized Intersection Summary
33: Ontario Ave & Chino Ave

03/18/2024



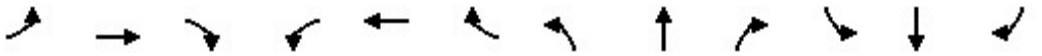
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	103	380	0	0	224	290	0	13	10	284	12	119
Future Volume (veh/h)	103	380	0	0	224	290	0	13	10	284	12	119
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.96	1.00		0.97	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781
Adj Flow Rate, veh/h	124	458	0	0	270	63	0	16	1	342	14	65
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Percent Heavy Veh, %	8	8	8	8	8	8	8	8	8	8	8	8
Cap, veh/h	157	1274	0	3	552	236	3	81	5	405	106	492
Arrive On Green	0.09	0.38	0.00	0.00	0.16	0.16	0.00	0.05	0.05	0.24	0.39	0.39
Sat Flow, veh/h	1697	3474	0	1697	3385	1450	1697	1656	103	1697	271	1258
Grp Volume(v), veh/h	124	458	0	0	270	63	0	0	17	342	0	79
Grp Sat Flow(s),veh/h/ln	1697	1692	0	1697	1692	1450	1697	0	1759	1697	0	1529
Q Serve(g_s), s	4.2	5.7	0.0	0.0	4.2	2.2	0.0	0.0	0.5	11.1	0.0	1.9
Cycle Q Clear(g_c), s	4.2	5.7	0.0	0.0	4.2	2.2	0.0	0.0	0.5	11.1	0.0	1.9
Prop In Lane	1.00		0.00	1.00		1.00	1.00		0.06	1.00		0.82
Lane Grp Cap(c), veh/h	157	1274	0	3	552	236	3	0	86	405	0	598
V/C Ratio(X)	0.79	0.36	0.00	0.00	0.49	0.27	0.00	0.00	0.20	0.84	0.00	0.13
Avail Cap(c_a), veh/h	263	1663	0	175	1488	637	175	0	1092	673	0	1397
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	25.8	13.0	0.0	0.0	22.1	21.2	0.0	0.0	26.5	21.1	0.0	11.3
Incr Delay (d2), s/veh	8.5	0.2	0.0	0.0	0.8	0.7	0.0	0.0	1.1	5.1	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	1.7	0.0	0.0	1.5	0.8	0.0	0.0	0.2	4.5	0.0	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	34.2	13.3	0.0	0.0	22.9	22.0	0.0	0.0	27.6	26.2	0.0	11.4
LnGrp LOS	C	B	A	A	C	C	A	A	C	C	A	B
Approach Vol, veh/h		582			333			17			421	
Approach Delay, s/veh		17.7			22.7			27.6			23.4	
Approach LOS		B			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.4	17.0	0.0	28.7	0.0	29.3	19.9	8.8
Change Period (Y+Rc), s	7.0	7.5	6.0	6.0	7.0	7.5	6.0	6.0
Max Green Setting (Gmax), s	9.0	25.5	6.0	53.0	6.0	28.5	23.0	36.0
Max Q Clear Time (g_c+I1), s	6.2	6.2	0.0	3.9	0.0	7.7	13.1	2.5
Green Ext Time (p_c), s	0.1	1.9	0.0	0.5	0.0	3.1	0.8	0.0

Intersection Summary	
HCM 6th Ctrl Delay	20.9
HCM 6th LOS	C

HCM 6th Signalized Intersection Summary
34: Archibald Ave & Chino Ave

03/18/2024



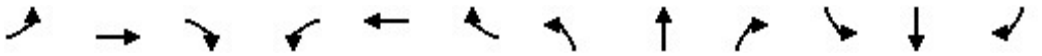
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	103	73	297	20	23	82	308	930	20	82	1053	51
Future Volume (veh/h)	103	73	297	20	23	82	308	930	20	82	1053	51
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781
Adj Flow Rate, veh/h	110	78	61	21	24	10	328	989	21	87	1120	53
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	8	8	8	8	8	8	8	8	8	8	8	8
Cap, veh/h	136	207	145	44	100	83	356	2620	56	110	1282	61
Arrive On Green	0.08	0.11	0.11	0.03	0.06	0.06	0.21	0.53	0.53	0.06	0.39	0.39
Sat Flow, veh/h	1697	1877	1314	1697	1781	1480	1697	4899	104	1697	3288	156
Grp Volume(v), veh/h	110	69	70	21	24	10	328	654	356	87	576	597
Grp Sat Flow(s),veh/h/ln	1697	1692	1498	1697	1781	1480	1697	1621	1761	1697	1692	1751
Q Serve(g_s), s	6.8	4.0	4.6	1.3	1.4	0.7	20.1	12.5	12.5	5.4	33.4	33.5
Cycle Q Clear(g_c), s	6.8	4.0	4.6	1.3	1.4	0.7	20.1	12.5	12.5	5.4	33.4	33.5
Prop In Lane	1.00		0.88	1.00		1.00	1.00		0.06	1.00		0.09
Lane Grp Cap(c), veh/h	136	187	165	44	100	83	356	1734	942	110	660	683
V/C Ratio(X)	0.81	0.37	0.42	0.47	0.24	0.12	0.92	0.38	0.38	0.79	0.87	0.87
Avail Cap(c_a), veh/h	320	558	494	320	588	488	400	1734	942	400	718	743
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	48.0	43.8	44.0	51.0	47.9	47.6	41.1	14.4	14.4	48.9	29.9	30.0
Incr Delay (d2), s/veh	4.3	1.7	2.4	2.9	1.7	0.9	23.8	0.2	0.4	4.8	11.4	11.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.0	1.7	1.8	0.6	0.6	0.3	10.3	4.1	4.5	2.3	14.5	15.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	52.3	45.5	46.4	53.9	49.6	48.5	64.9	14.6	14.7	53.7	41.4	41.1
LnGrp LOS	D	D	D	D	D	D	E	B	B	D	D	D
Approach Vol, veh/h		249			55			1338			1260	
Approach Delay, s/veh		48.8			51.0			27.0			42.1	
Approach LOS		D			D			C			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.4	64.3	9.3	18.2	29.8	48.9	15.0	12.5
Change Period (Y+Rc), s	7.5	7.5	6.5	6.5	7.5	7.5	6.5	6.5
Max Green Setting (Gmax), s	25.0	45.0	20.0	35.0	25.0	45.0	20.0	35.0
Max Q Clear Time (g_c+I1), s	7.4	14.5	3.3	6.6	22.1	35.5	8.8	3.4
Green Ext Time (p_c), s	0.1	9.8	0.0	1.0	0.2	5.9	0.1	0.1

Intersection Summary	
HCM 6th Ctrl Delay	35.9
HCM 6th LOS	D

HCM 6th Signalized Intersection Summary
35: Euclid Ave & Edison Ave

03/18/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	165	419	240	50	289	130	200	944	80	100	835	133
Future Volume (veh/h)	165	419	240	50	289	130	200	944	80	100	835	133
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.97	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	183	466	97	56	321	133	222	1049	39	111	928	55
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	170	616	513	169	412	171	368	1270	550	179	1249	548
Arrive On Green	0.33	0.33	0.33	0.33	0.33	0.33	0.11	0.36	0.36	0.10	0.36	0.36
Sat Flow, veh/h	921	1841	1532	833	1229	509	3401	3497	1515	1753	3497	1533
Grp Volume(v), veh/h	183	466	97	56	0	454	222	1049	39	111	928	55
Grp Sat Flow(s),veh/h/ln	921	1841	1532	833	0	1738	1700	1749	1515	1753	1749	1533
Q Serve(g_s), s	9.2	20.8	4.1	5.9	0.0	21.7	5.7	25.1	1.6	5.6	21.4	2.2
Cycle Q Clear(g_c), s	30.8	20.8	4.1	26.7	0.0	21.7	5.7	25.1	1.6	5.6	21.4	2.2
Prop In Lane	1.00		1.00	1.00		0.29	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	170	616	513	169	0	582	368	1270	550	179	1249	548
V/C Ratio(X)	1.08	0.76	0.19	0.33	0.00	0.78	0.60	0.83	0.07	0.62	0.74	0.10
Avail Cap(c_a), veh/h	170	616	513	207	0	660	923	1708	740	476	1708	749
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.6	27.3	21.8	39.2	0.0	27.6	39.2	26.7	19.2	39.6	25.9	19.7
Incr Delay (d2), s/veh	91.0	5.3	0.2	1.1	0.0	5.3	0.6	2.6	0.1	1.3	1.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.0	9.3	1.4	1.2	0.0	9.1	2.3	9.6	0.5	2.3	8.1	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	134.6	32.6	21.9	40.3	0.0	32.9	39.8	29.2	19.2	40.9	27.1	19.8
LnGrp LOS	F	C	C	D	A	C	D	C	B	D	C	B
Approach Vol, veh/h		746			510			1310			1094	
Approach Delay, s/veh		56.2			33.7			30.7			28.1	
Approach LOS		E			C			C			C	

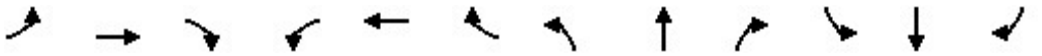
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	14.1	40.0		38.0	14.7	39.4		38.0				
Change Period (Y+Rc), s	* 4.7	6.5		7.2	* 4.7	6.5		7.2				
Max Green Setting (Gmax), s	* 25	45.0		30.0	* 25	45.0		35.0				
Max Q Clear Time (g_c+I1), s	7.6	27.1		32.8	7.7	23.4		28.7				
Green Ext Time (p_c), s	0.1	6.3		0.0	0.3	5.9		1.6				

Intersection Summary	
HCM 6th Ctrl Delay	35.6
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	90	687	140	160	286	298	60	820	240	310	890	60
Future Volume (veh/h)	90	687	140	160	286	298	60	820	240	310	890	60
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	95	723	0	168	301	89	63	863	0	326	937	27
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	166	923		263	538	448	85	1031		377	1614	700
Arrive On Green	0.05	0.26	0.00	0.08	0.29	0.29	0.05	0.29	0.00	0.21	0.46	0.46
Sat Flow, veh/h	3401	3497	1560	3401	1841	1531	1753	3497	1560	1753	3497	1518
Grp Volume(v), veh/h	95	723	0	168	301	89	63	863	0	326	937	27
Grp Sat Flow(s),veh/h/ln	1700	1749	1560	1700	1841	1531	1753	1749	1560	1753	1749	1518
Q Serve(g_s), s	2.9	20.6	0.0	5.2	14.9	4.7	3.8	24.8	0.0	19.3	21.2	1.0
Cycle Q Clear(g_c), s	2.9	20.6	0.0	5.2	14.9	4.7	3.8	24.8	0.0	19.3	21.2	1.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	166	923		263	538	448	85	1031		377	1614	700
V/C Ratio(X)	0.57	0.78		0.64	0.56	0.20	0.74	0.84		0.87	0.58	0.04
Avail Cap(c_a), veh/h	1108	1139		1108	600	499	571	1139		571	1614	700
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.0	36.7	0.0	48.1	32.2	28.6	50.5	35.5	0.0	40.7	21.3	15.9
Incr Delay (d2), s/veh	6.5	4.1	0.0	5.4	2.0	0.5	23.5	6.1	0.0	13.5	0.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	8.8	0.0	2.3	6.5	1.7	2.1	10.6	0.0	9.2	7.9	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	56.5	40.8	0.0	53.5	34.1	29.0	74.0	41.6	0.0	54.2	22.1	15.9
LnGrp LOS	E	D		D	C	C	E	D		D	C	B
Approach Vol, veh/h		818	A		558			926	A		1290	
Approach Delay, s/veh		42.6			39.1			43.8			30.1	
Approach LOS		D			D			D			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	27.1	35.7	12.3	32.4	9.2	53.6	9.2	35.4
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0
Max Q Clear Time (g_c+I1), s	21.3	26.8	7.2	22.6	5.8	23.2	4.9	16.9
Green Ext Time (p_c), s	1.8	4.9	1.2	5.8	0.3	7.1	0.6	3.3

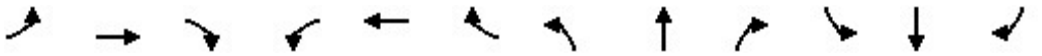
Intersection Summary	
HCM 6th Ctrl Delay	37.9
HCM 6th LOS	D

Notes

Unsignalized Delay for [NBR, EBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary
38: Haven Ave & Ontario Ranch Rd

03/18/2024



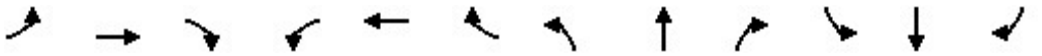
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	180	1054	53	290	801	181	33	231	160	185	410	60
Future Volume (veh/h)	180	1054	53	290	801	181	33	231	160	185	410	60
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.97	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	186	1087	17	299	826	52	34	238	36	191	423	56
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	219	1534	468	374	1839	439	76	353	292	224	856	113
Arrive On Green	0.12	0.31	0.31	0.11	0.29	0.29	0.04	0.19	0.19	0.13	0.28	0.28
Sat Flow, veh/h	1753	5025	1531	3401	6332	1512	1753	1841	1526	1753	3099	408
Grp Volume(v), veh/h	186	1087	17	299	826	52	34	238	36	191	237	242
Grp Sat Flow(s),veh/h/ln	1753	1675	1531	1700	1583	1512	1753	1841	1526	1753	1749	1758
Q Serve(g_s), s	10.2	18.8	0.8	8.4	10.4	2.5	1.9	11.8	1.9	10.5	11.1	11.3
Cycle Q Clear(g_c), s	10.2	18.8	0.8	8.4	10.4	2.5	1.9	11.8	1.9	10.5	11.1	11.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.23
Lane Grp Cap(c), veh/h	219	1534	468	374	1839	439	76	353	292	224	483	486
V/C Ratio(X)	0.85	0.71	0.04	0.80	0.45	0.12	0.45	0.67	0.12	0.85	0.49	0.50
Avail Cap(c_a), veh/h	358	2051	625	694	2584	617	358	883	732	358	839	843
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.0	30.2	23.9	42.6	28.4	25.6	45.8	36.8	32.8	41.8	29.7	29.8
Incr Delay (d2), s/veh	5.0	1.0	0.0	1.5	0.2	0.2	1.6	0.8	0.1	6.1	0.3	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.5	7.1	0.3	3.4	3.7	0.8	0.8	5.1	0.7	4.7	4.5	4.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	47.0	31.2	24.0	44.1	28.6	25.7	47.3	37.6	32.9	47.9	30.0	30.0
LnGrp LOS	D	C	C	D	C	C	D	D	C	D	C	C
Approach Vol, veh/h		1290			1177			308			670	
Approach Delay, s/veh		33.4			32.4			38.1			35.1	
Approach LOS		C			C			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	19.0	25.3	17.3	36.4	10.7	33.6	18.7	35.0
Change Period (Y+Rc), s	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
Max Green Setting (Gmax), s	20.0	47.0	20.0	40.0	20.0	47.0	20.0	40.0
Max Q Clear Time (g_c+I1), s	12.5	13.8	10.4	20.8	3.9	13.3	12.2	12.4
Green Ext Time (p_c), s	0.1	0.8	0.4	9.1	0.0	1.6	0.1	8.0

Intersection Summary	
HCM 6th Ctrl Delay	33.8
HCM 6th LOS	C

HCM 6th Signalized Intersection Summary
39: Hamner Ave & Ontario Ranch Rd

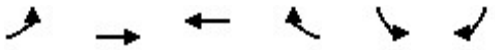
03/18/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	100	1045	254	540	876	160	336	390	350	270	530	110
Future Volume (veh/h)	100	1045	254	540	876	160	336	390	350	270	530	110
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	114	1188	95	614	995	99	382	443	90	307	602	26
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	168	1253	381	677	1395	612	439	1157	352	364	728	318
Arrive On Green	0.05	0.25	0.25	0.20	0.40	0.40	0.13	0.23	0.23	0.11	0.21	0.21
Sat Flow, veh/h	3401	5025	1529	3401	3497	1534	3401	5025	1528	3401	3497	1527
Grp Volume(v), veh/h	114	1188	95	614	995	99	382	443	90	307	602	26
Grp Sat Flow(s),veh/h/ln	1700	1675	1529	1700	1749	1534	1700	1675	1528	1700	1749	1527
Q Serve(g_s), s	4.6	32.5	7.0	24.7	33.4	5.8	15.4	10.4	6.7	12.4	23.0	1.9
Cycle Q Clear(g_c), s	4.6	32.5	7.0	24.7	33.4	5.8	15.4	10.4	6.7	12.4	23.0	1.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	168	1253	381	677	1395	612	439	1157	352	364	728	318
V/C Ratio(X)	0.68	0.95	0.25	0.91	0.71	0.16	0.87	0.38	0.26	0.84	0.83	0.08
Avail Cap(c_a), veh/h	851	1257	383	851	1395	612	608	1157	352	608	875	382
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	65.4	51.6	42.0	54.8	35.3	27.0	59.8	45.4	44.0	61.3	53.0	44.6
Incr Delay (d2), s/veh	3.5	14.8	0.4	10.9	1.8	0.1	9.0	0.2	0.4	4.3	5.9	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	14.8	2.6	11.2	13.8	2.1	7.0	4.2	2.5	5.4	10.4	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	68.9	66.4	42.4	65.7	37.1	27.2	68.8	45.7	44.4	65.6	58.9	44.7
LnGrp LOS	E	E	D	E	D	C	E	D	D	E	E	D
Approach Vol, veh/h		1397			1708			915			935	
Approach Delay, s/veh		65.0			46.8			55.2			60.7	
Approach LOS		E			D			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	35.3	42.4	25.5	36.6	14.4	63.3	22.5	39.7
Change Period (Y+Rc), s	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5
Max Green Setting (Gmax), s	35.0	35.0	25.0	35.0	35.0	35.0	25.0	25.0
Max Q Clear Time (g_c+I1), s	26.7	34.5	17.4	25.0	6.6	35.4	14.4	12.4
Green Ext Time (p_c), s	1.2	0.4	0.6	3.0	0.2	0.0	0.6	2.5

Intersection Summary	
HCM 6th Ctrl Delay	56.1
HCM 6th LOS	E



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑	↑↑		↰↰	↱
Traffic Volume (veh/h)	0	1148	774	0	230	1342
Future Volume (veh/h)	0	1148	774	0	230	1342
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	0	1841	1841	0	1841	1841
Adj Flow Rate, veh/h	0	1221	823	0	245	1345
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	4	4	0	4	4
Cap, veh/h	0	1731	1205	0	810	1441
Arrive On Green	0.00	0.34	0.34	0.00	0.46	0.46
Sat Flow, veh/h	0	5356	3681	0	1753	3120
Grp Volume(v), veh/h	0	1221	823	0	245	1345
Grp Sat Flow(s),veh/h/ln	0	1675	1749	0	1753	1560
Q Serve(g_s), s	0.0	13.4	12.8	0.0	5.6	25.9
Cycle Q Clear(g_c), s	0.0	13.4	12.8	0.0	5.6	25.9
Prop In Lane	0.00			0.00	1.00	1.00
Lane Grp Cap(c), veh/h	0	1731	1205	0	810	1441
V/C Ratio(X)	0.00	0.71	0.68	0.00	0.30	0.93
Avail Cap(c_a), veh/h	0	2373	1651	0	828	1473
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	18.0	17.9	0.0	10.7	16.2
Incr Delay (d2), s/veh	0.0	0.6	0.7	0.0	0.2	11.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	4.2	4.2	0.0	1.7	9.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.0	18.6	18.5	0.0	10.9	27.2
LnGrp LOS	A	B	B	A	B	C
Approach Vol, veh/h		1221	823		1590	
Approach Delay, s/veh		18.6	18.5		24.7	
Approach LOS		B	B		C	

Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		28.7		34.9		28.7
Change Period (Y+Rc), s		6.8		5.5		6.8
Max Green Setting (Gmax), s		30.0		30.0		30.0
Max Q Clear Time (g_c+I1), s		15.4		27.9		14.8
Green Ext Time (p_c), s		6.5		1.4		4.3

Intersection Summary		
HCM 6th Ctrl Delay	21.3	
HCM 6th LOS	C	

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	511	897	210	323	561	90
Future Volume (veh/h)	511	897	210	323	561	90
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		0.97	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	521	752	214	330	572	38
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	4	4	4	4	4	4
Cap, veh/h	2086	962	329	3002	747	332
Arrive On Green	0.42	0.42	0.10	0.60	0.21	0.21
Sat Flow, veh/h	5191	1517	3401	5191	3506	1560
Grp Volume(v), veh/h	521	752	214	330	572	38
Grp Sat Flow(s),veh/h/ln	1675	1517	1700	1675	1753	1560
Q Serve(g_s), s	4.7	25.7	4.3	2.0	10.8	1.4
Cycle Q Clear(g_c), s	4.7	25.7	4.3	2.0	10.8	1.4
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	2086	962	329	3002	747	332
V/C Ratio(X)	0.25	0.78	0.65	0.11	0.77	0.11
Avail Cap(c_a), veh/h	2148	981	1454	3002	1499	667
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	13.4	9.6	30.5	6.1	26.0	22.3
Incr Delay (d2), s/veh	0.1	4.1	2.2	0.0	1.7	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	12.1	1.6	0.5	4.5	0.5
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	13.5	13.7	32.7	6.1	27.6	22.4
LnGrp LOS	B	B	C	A	C	C
Approach Vol, veh/h	1273			544	610	
Approach Delay, s/veh	13.6			16.6	27.3	
Approach LOS	B			B	C	

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	12.8	36.4				49.2	21.0
Change Period (Y+Rc), s	6.0	7.3				7.3	6.0
Max Green Setting (Gmax), s	30.0	30.0				30.0	30.0
Max Q Clear Time (g_c+I1), s	6.3	27.7				4.0	12.8
Green Ext Time (p_c), s	0.6	1.4				1.9	2.2

Intersection Summary	
HCM 6th Ctrl Delay	17.7
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.
User approved volume balancing among the lanes for turning movement.

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	48	85	287	34	57	198
Future Volume (veh/h)	48	85	287	34	57	198
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		0.96	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	51	89	302	36	60	208
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	213	189	1028	308	119	2491
Arrive On Green	0.12	0.12	0.20	0.20	0.07	0.49
Sat Flow, veh/h	1767	1572	5233	1516	1767	5233
Grp Volume(v), veh/h	51	89	302	36	60	208
Grp Sat Flow(s),veh/h/ln	1767	1572	1689	1516	1767	1689
Q Serve(g_s), s	0.7	1.4	1.4	0.5	0.9	0.6
Cycle Q Clear(g_c), s	0.7	1.4	1.4	0.5	0.9	0.6
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	213	189	1028	308	119	2491
V/C Ratio(X)	0.24	0.47	0.29	0.12	0.51	0.08
Avail Cap(c_a), veh/h	2090	1860	3651	1093	457	6084
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	10.8	11.1	9.1	8.8	12.2	3.6
Incr Delay (d2), s/veh	0.6	1.8	0.2	0.2	3.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.4	0.2	0.1	0.3	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	11.4	12.9	9.3	9.0	15.5	3.7
LnGrp LOS	B	B	A	A	B	A
Approach Vol, veh/h	140		338			268
Approach Delay, s/veh	12.3		9.3			6.3
Approach LOS	B		A			A

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	7.8	11.5			19.3	7.8
Change Period (Y+Rc), s	6.0	6.0			6.0	4.5
Max Green Setting (Gmax), s	7.0	19.5			32.5	32.0
Max Q Clear Time (g_c+I1), s	2.9	3.4			2.6	3.4
Green Ext Time (p_c), s	0.0	1.6			1.2	0.4

Intersection Summary			
HCM 6th Ctrl Delay		8.8	
HCM 6th LOS		A	

Intersection	
Intersection Delay, s/veh	7.8
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	79	0	12	83	3	0	34	14	3	17	0
Future Vol, veh/h	0	79	0	12	83	3	0	34	14	3	17	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	8	8	8	8	8	8	8	8	8	8	8	8
Mvmt Flow	0	86	0	13	90	3	0	37	15	3	18	0
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	7.8	7.9	7.6	7.7
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	0%	0%	12%	15%
Vol Thru, %	71%	100%	85%	85%
Vol Right, %	29%	0%	3%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	48	79	98	20
LT Vol	0	0	12	3
Through Vol	34	79	83	17
RT Vol	14	0	3	0
Lane Flow Rate	52	86	107	22
Geometry Grp	1	1	1	1
Degree of Util (X)	0.063	0.101	0.125	0.028
Departure Headway (Hd)	4.321	4.245	4.235	4.559
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	834	834	837	790
Service Time	2.321	2.323	2.308	2.56
HCM Lane V/C Ratio	0.062	0.103	0.128	0.028
HCM Control Delay	7.6	7.8	7.9	7.7
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.2	0.3	0.4	0.1

Intersection	
Intersection Delay, s/veh	11.3
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	30	106	20	34	128	20	10	120	134	40	100	20
Future Vol, veh/h	30	106	20	34	128	20	10	120	134	40	100	20
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles, %	8	8	8	8	8	8	8	8	8	8	8	8
Mvmt Flow	34	119	22	38	144	22	11	135	151	45	112	22
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	10.8	11.3	11.9	10.8
HCM LOS	B	B	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	4%	19%	19%	25%
Vol Thru, %	45%	68%	70%	62%
Vol Right, %	51%	13%	11%	12%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	264	156	182	160
LT Vol	10	30	34	40
Through Vol	120	106	128	100
RT Vol	134	20	20	20
Lane Flow Rate	297	175	204	180
Geometry Grp	1	1	1	1
Degree of Util (X)	0.422	0.275	0.318	0.278
Departure Headway (Hd)	5.126	5.644	5.601	5.566
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	700	636	640	644
Service Time	3.166	3.688	3.644	3.611
HCM Lane V/C Ratio	0.424	0.275	0.319	0.28
HCM Control Delay	11.9	10.8	11.3	10.8
HCM Lane LOS	B	B	B	B
HCM 95th-tile Q	2.1	1.1	1.4	1.1

Intersection	
Intersection Delay, s/veh	49.1
Intersection LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	49	570	30	50	330	10	70	30	70	20	10	29
Future Vol, veh/h	49	570	30	50	330	10	70	30	70	20	10	29
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles, %	4	4	4	4	4	4	4	4	4	4	4	4
Mvmt Flow	53	613	32	54	355	11	75	32	75	22	11	31
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	78.8	20.9	13.6	11.5
HCM LOS	F	C	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	41%	8%	13%	34%
Vol Thru, %	18%	88%	85%	17%
Vol Right, %	41%	5%	3%	49%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	170	649	390	59
LT Vol	70	49	50	20
Through Vol	30	570	330	10
RT Vol	70	30	10	29
Lane Flow Rate	183	698	419	63
Geometry Grp	1	1	1	1
Degree of Util (X)	0.343	1.071	0.68	0.126
Departure Headway (Hd)	7.019	5.526	6.025	7.452
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	515	656	604	484
Service Time	5.019	3.579	4.025	5.452
HCM Lane V/C Ratio	0.355	1.064	0.694	0.13
HCM Control Delay	13.6	78.8	20.9	11.5
HCM Lane LOS	B	F	C	B
HCM 95th-tile Q	1.5	19.2	5.2	0.4

Intersection	
Int Delay, s/veh	25.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	30	835	30	83	632	13	20	20	173	3	10	30
Future Vol, veh/h	30	835	30	83	632	13	20	20	173	3	10	30
Conflicting Peds, #/hr	5	0	5	5	0	5	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	127	-	-	143	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	32	898	32	89	680	14	22	22	186	3	11	32

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	699	0	0	935	0	0	1507	1860	919	1952	1869	352
Stage 1	-	-	-	-	-	-	983	983	-	870	870	-
Stage 2	-	-	-	-	-	-	524	877	-	1082	999	-
Critical Hdwy	4.145	-	-	4.145	-	-	7.345	6.545	6.245	7.345	6.545	6.945
Critical Hdwy Stg 1	-	-	-	-	-	-	6.145	5.545	-	6.545	5.545	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.545	5.545	-	6.145	5.545	-
Follow-up Hdwy	2.2285	-	-	2.2285	-	-	3.5285	4.0285	3.3285	3.5285	4.0285	3.3285
Pot Cap-1 Maneuver	890	-	-	725	-	-	90	72	326	43	71	643
Stage 1	-	-	-	-	-	-	297	324	-	312	366	-
Stage 2	-	-	-	-	-	-	503	363	-	261	319	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	886	-	-	722	-	-	65	60	324	12	59	640
Mov Cap-2 Maneuver	-	-	-	-	-	-	65	60	-	12	59	-
Stage 1	-	-	-	-	-	-	285	311	-	299	320	-
Stage 2	-	-	-	-	-	-	405	317	-	100	306	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.3	1.2	206.6	78.4
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	181	886	-	-	722	-	-	92
HCM Lane V/C Ratio	1.265	0.036	-	-	0.124	-	-	0.503
HCM Control Delay (s)	206.6	9.2	-	-	10.7	-	-	78.4
HCM Lane LOS	F	A	-	-	B	-	-	F
HCM 95th %tile Q(veh)	12.7	0.1	-	-	0.4	-	-	2.2

Intersection	
Int Delay, s/veh	23.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	20	910	130	40	637	22	80	10	70	13	0	20
Future Vol, veh/h	20	910	130	40	637	22	80	10	70	13	0	20
Conflicting Peds, #/hr	5	0	5	5	0	5	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	69	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	21	938	134	41	657	23	82	10	72	13	0	21

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	685	0	0	1077	0	0	1463	1819	1010	1844	1875	345
Stage 1	-	-	-	-	-	-	1052	1052	-	756	756	-
Stage 2	-	-	-	-	-	-	411	767	-	1088	1119	-
Critical Hdwy	4.145	-	-	4.145	-	-	7.345	6.545	6.245	7.345	6.545	6.945
Critical Hdwy Stg 1	-	-	-	-	-	-	6.145	5.545	-	6.545	5.545	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.545	5.545	-	6.145	5.545	-
Follow-up Hdwy	2.2285	-	-	2.2285	-	-	3.5285	4.0285	3.3285	3.5285	4.0285	3.3285
Pot Cap-1 Maneuver	901	-	-	640	-	-	97	77	289	51	71	649
Stage 1	-	-	-	-	-	-	271	301	-	365	413	-
Stage 2	-	-	-	-	-	-	587	409	-	259	280	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	897	-	-	637	-	-	87	70	288	32	64	646
Mov Cap-2 Maneuver	-	-	-	-	-	-	87	70	-	32	64	-
Stage 1	-	-	-	-	-	-	263	293	-	355	385	-
Stage 2	-	-	-	-	-	-	532	381	-	183	272	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.2	0.6	264.5	87.9
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	123	897	-	-	637	-	-	75
HCM Lane V/C Ratio	1.341	0.023	-	-	0.065	-	-	0.454
HCM Control Delay (s)	264.5	9.1	-	-	11	-	-	87.9
HCM Lane LOS	F	A	-	-	B	-	-	F
HCM 95th %tile Q(veh)	10.9	0.1	-	-	0.2	-	-	1.8

Intersection	
Int Delay, s/veh	1.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	10	962	10	13	680	33	10	0	23	13	0	10
Future Vol, veh/h	10	962	10	13	680	33	10	0	23	13	0	10
Conflicting Peds, #/hr	5	0	5	5	0	5	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	98	-	-	47	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	11	1023	11	14	723	35	11	0	24	14	0	11

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	763	0	0	1039	0	0	1446	1847	1034	1837	1835	384
Stage 1	-	-	-	-	-	-	1056	1056	-	774	774	-
Stage 2	-	-	-	-	-	-	390	791	-	1063	1061	-
Critical Hdwy	4.145	-	-	4.145	-	-	7.345	6.545	6.245	7.345	6.545	6.945
Critical Hdwy Stg 1	-	-	-	-	-	-	6.145	5.545	-	6.545	5.545	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.545	5.545	-	6.145	5.545	-
Follow-up Hdwy	2.2285	-	-	2.2285	-	-	3.5285	4.0285	3.3285	3.5285	4.0285	3.3285
Pot Cap-1 Maneuver	842	-	-	662	-	-	100	74	279	52	75	613
Stage 1	-	-	-	-	-	-	270	299	-	356	405	-
Stage 2	-	-	-	-	-	-	604	398	-	268	298	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	838	-	-	659	-	-	95	71	278	46	72	610
Mov Cap-2 Maneuver	-	-	-	-	-	-	95	71	-	46	72	-
Stage 1	-	-	-	-	-	-	265	294	-	350	394	-
Stage 2	-	-	-	-	-	-	581	388	-	241	293	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.2	30.5	72.2
HCM LOS			D	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	176	838	-	-	659	-	-	77
HCM Lane V/C Ratio	0.199	0.013	-	-	0.021	-	-	0.318
HCM Control Delay (s)	30.5	9.4	-	-	10.6	-	-	72.2
HCM Lane LOS	D	A	-	-	B	-	-	F
HCM 95th %tile Q(veh)	0.7	0	-	-	0.1	-	-	1.2

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑			↱
Traffic Vol, veh/h	0	1425	939	20	0	10
Future Vol, veh/h	0	1425	939	20	0	10
Conflicting Peds, #/hr	5	0	0	5	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	0	1532	1010	22	0	11

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	521
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.96
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.33
Pot Cap-1 Maneuver	0	-	-	-	0	498
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	496
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	12.4
HCM LOS			B

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	496
HCM Lane V/C Ratio	-	-	-	0.022
HCM Control Delay (s)	-	-	-	12.4
HCM Lane LOS	-	-	-	B
HCM 95th %tile Q(veh)	-	-	-	0.1

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑			↱
Traffic Vol, veh/h	0	1425	949	10	0	10
Future Vol, veh/h	0	1425	949	10	0	10
Conflicting Peds, #/hr	5	0	0	5	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	0	1516	1010	11	0	11

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	516
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.96
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.33
Pot Cap-1 Maneuver	0	-	-	-	0	501
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	499
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	12.4
HCM LOS			B

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	499
HCM Lane V/C Ratio	-	-	-	0.021
HCM Control Delay (s)	-	-	-	12.4
HCM Lane LOS	-	-	-	B
HCM 95th %tile Q(veh)	-	-	-	0.1

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	1425	959	10	20	0
Future Vol, veh/h	0	1425	959	10	20	0
Conflicting Peds, #/hr	5	0	0	5	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	0	1532	1031	11	22	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1047	0	-	0	1808	526
Stage 1	-	-	-	-	1042	-
Stage 2	-	-	-	-	766	-
Critical Hdwy	4.16	-	-	-	6.86	6.96
Critical Hdwy Stg 1	-	-	-	-	5.86	-
Critical Hdwy Stg 2	-	-	-	-	5.86	-
Follow-up Hdwy	2.23	-	-	-	3.53	3.33
Pot Cap-1 Maneuver	654	-	-	-	69	494
Stage 1	-	-	-	-	299	-
Stage 2	-	-	-	-	417	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	651	-	-	-	68	492
Mov Cap-2 Maneuver	-	-	-	-	188	-
Stage 1	-	-	-	-	298	-
Stage 2	-	-	-	-	415	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	26.6
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	651	-	-	-	188
HCM Lane V/C Ratio	-	-	-	-	0.114
HCM Control Delay (s)	0	-	-	-	26.6
HCM Lane LOS	A	-	-	-	D
HCM 95th %tile Q(veh)	0	-	-	-	0.4

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	10	1435	959	22	33	10
Future Vol, veh/h	10	1435	959	22	33	10
Conflicting Peds, #/hr	5	0	0	5	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	350	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	11	1543	1031	24	35	11

Major/Minor	Major1			Major2			Minor2		
Conflicting Flow All	1060	0	-	0	1842	533			
Stage 1	-	-	-	-	1048	-			
Stage 2	-	-	-	-	794	-			
Critical Hdwy	4.16	-	-	-	6.86	6.96			
Critical Hdwy Stg 1	-	-	-	-	5.86	-			
Critical Hdwy Stg 2	-	-	-	-	5.86	-			
Follow-up Hdwy	2.23	-	-	-	3.53	3.33			
Pot Cap-1 Maneuver	647	-	-	-	66	489			
Stage 1	-	-	-	-	296	-			
Stage 2	-	-	-	-	403	-			
Platoon blocked, %		-	-	-					
Mov Cap-1 Maneuver	644	-	-	-	64	487			
Mov Cap-2 Maneuver	-	-	-	-	182	-			
Stage 1	-	-	-	-	289	-			
Stage 2	-	-	-	-	401	-			

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	26.5
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	644	-	-	-	213
HCM Lane V/C Ratio	0.017	-	-	-	0.217
HCM Control Delay (s)	10.7	-	-	-	26.5
HCM Lane LOS	B	-	-	-	D
HCM 95th %tile Q(veh)	0.1	-	-	-	0.8

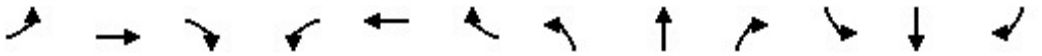
Intersection	
Int Delay, s/veh	0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	339	1	2	198	1	3
Future Vol, veh/h	339	1	2	198	1	3
Conflicting Peds, #/hr	0	5	5	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	150	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	76	76	76	76	76	76
Heavy Vehicles, %	8	8	8	8	8	8
Mvmt Flow	446	1	3	261	1	4

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	452	0	589	229
Stage 1	-	-	-	-	452	-
Stage 2	-	-	-	-	137	-
Critical Hdwy	-	-	4.26	-	6.96	7.06
Critical Hdwy Stg 1	-	-	-	-	5.96	-
Critical Hdwy Stg 2	-	-	-	-	5.96	-
Follow-up Hdwy	-	-	2.28	-	3.58	3.38
Pot Cap-1 Maneuver	-	-	1064	-	425	755
Stage 1	-	-	-	-	591	-
Stage 2	-	-	-	-	857	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1059	-	422	751
Mov Cap-2 Maneuver	-	-	-	-	422	-
Stage 1	-	-	-	-	588	-
Stage 2	-	-	-	-	854	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	10.8
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	629	-	-	1059	-
HCM Lane V/C Ratio	0.008	-	-	0.002	-
HCM Control Delay (s)	10.8	-	-	8.4	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0	-



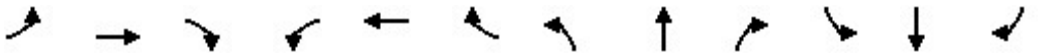
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	270	850	180	50	640	940	140	1030	40	990	1280	270
Future Volume (veh/h)	270	850	180	50	640	940	140	1030	40	990	1280	270
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	284	895	61	53	674	815	147	1084	40	1042	1347	137
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	220	1579	488	192	1537	475	170	1447	53	227	1626	496
Arrive On Green	0.06	0.31	0.31	0.06	0.31	0.31	0.10	0.29	0.29	0.13	0.32	0.32
Sat Flow, veh/h	3401	5025	1552	3401	5025	1552	1753	4970	183	1753	5025	1532
Grp Volume(v), veh/h	284	895	61	53	674	815	147	730	394	1042	1347	137
Grp Sat Flow(s),veh/h/ln	1700	1675	1552	1700	1675	1552	1753	1675	1804	1753	1675	1532
Q Serve(g_s), s	9.0	20.7	3.9	2.1	14.9	42.5	11.5	27.5	27.5	18.0	34.4	9.2
Cycle Q Clear(g_c), s	9.0	20.7	3.9	2.1	14.9	42.5	11.5	27.5	27.5	18.0	34.4	9.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.10	1.00		1.00
Lane Grp Cap(c), veh/h	220	1579	488	192	1537	475	170	975	525	227	1626	496
V/C Ratio(X)	1.29	0.57	0.13	0.28	0.44	1.72	0.86	0.75	0.75	4.59	0.83	0.28
Avail Cap(c_a), veh/h	220	1579	488	220	1537	475	202	1121	604	227	1754	535
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	65.0	39.8	34.0	62.8	38.7	48.2	61.8	44.6	44.7	60.5	43.4	34.9
Incr Delay (d2), s/veh	159.9	0.5	0.1	0.6	0.2	331.4	25.6	2.8	5.1	1625.0	3.5	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.7	8.4	1.4	0.9	5.9	59.3	6.2	11.4	12.6	110.3	14.3	3.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	224.8	40.3	34.2	63.4	38.9	379.6	87.5	47.4	49.7	1685.5	46.9	35.3
LnGrp LOS	F	D	C	E	D	F	F	D	D	F	D	D
Approach Vol, veh/h		1240			1542			1271			2526	
Approach Delay, s/veh		82.3			219.8			52.8			722.2	
Approach LOS		F			F			D			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	25.0	47.5	15.3	51.2	20.5	52.0	16.5	50.0
Change Period (Y+Rc), s	7.0	7.0	7.5	7.5	7.0	7.0	7.5	7.5
Max Green Setting (Gmax), s	18.0	46.5	9.0	42.5	16.0	48.5	9.0	42.5
Max Q Clear Time (g_c+I1), s	20.0	29.5	4.1	22.7	13.5	36.4	11.0	44.5
Green Ext Time (p_c), s	0.0	8.4	0.0	6.9	0.1	8.5	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	354.5
HCM 6th LOS	F

Notes

User approved pedestrian interval to be less than phase max green.



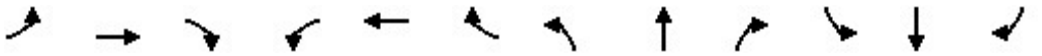
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	50	1400	230	130	1290	120	280	70	160	30	30	50
Future Volume (veh/h)	50	1400	230	130	1290	120	280	70	160	30	30	50
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	0.99		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	53	1474	89	137	1358	112	295	74	42	32	32	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	114	1724	526	172	1776	146	436	881	385	400	881	
Arrive On Green	0.06	0.34	0.34	0.10	0.38	0.38	0.25	0.25	0.25	0.25	0.25	0.00
Sat Flow, veh/h	1753	5025	1533	1753	4723	390	1348	3497	1529	1250	3589	0
Grp Volume(v), veh/h	53	1474	89	137	963	507	295	74	42	32	32	0
Grp Sat Flow(s),veh/h/ln	1753	1675	1533	1753	1675	1763	1348	1749	1529	1250	1749	0
Q Serve(g_s), s	2.0	18.6	2.8	5.2	17.2	17.2	14.5	1.1	1.4	1.4	0.5	0.0
Cycle Q Clear(g_c), s	2.0	18.6	2.8	5.2	17.2	17.2	14.9	1.1	1.4	2.5	0.5	0.0
Prop In Lane	1.00		1.00	1.00		0.22	1.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	114	1724	526	172	1259	663	436	881	385	400	881	
V/C Ratio(X)	0.47	0.86	0.17	0.80	0.76	0.76	0.68	0.08	0.11	0.08	0.04	
Avail Cap(c_a), veh/h	179	1764	538	179	1259	663	451	921	403	414	921	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	30.8	20.9	15.7	30.2	18.7	18.7	24.9	19.5	19.7	20.5	19.3	0.0
Incr Delay (d2), s/veh	1.1	4.5	0.2	19.3	3.0	5.7	4.7	0.1	0.2	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	6.6	0.8	2.9	5.8	6.6	4.6	0.4	0.5	0.4	0.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	31.9	25.3	15.9	49.5	21.7	24.3	29.7	19.6	19.9	20.6	19.3	0.0
LnGrp LOS	C	C	B	D	C	C	C	B	B	C	B	
Approach Vol, veh/h		1616			1607			411			64	A
Approach Delay, s/veh		25.0			24.9			26.9			20.0	
Approach LOS		C			C			C			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	13.7	30.4		24.2	11.4	32.7		24.2				
Change Period (Y+Rc), s	7.0	7.0		7.0	7.0	7.0		7.0				
Max Green Setting (Gmax), s	7.0	24.0		18.0	7.0	24.0		18.0				
Max Q Clear Time (g_c+I1), s	7.2	20.6		16.9	4.0	19.2		4.5				
Green Ext Time (p_c), s	0.0	2.8		0.3	0.0	3.8		0.2				

Intersection Summary	
HCM 6th Ctrl Delay	25.1
HCM 6th LOS	C

Notes

Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.

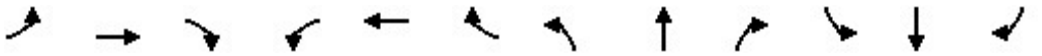


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	140	290	150	70	200	30	140	660	210	50	240	20
Future Volume (veh/h)	140	290	150	70	200	30	140	660	210	50	240	20
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	147	305	84	74	211	18	147	695	190	53	253	16
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	367	508	137	289	548	46	504	887	242	251	1010	63
Arrive On Green	0.08	0.19	0.19	0.06	0.17	0.17	0.08	0.33	0.33	0.05	0.30	0.30
Sat Flow, veh/h	1753	2707	731	1753	3257	275	1753	2702	738	1753	3337	210
Grp Volume(v), veh/h	147	195	194	74	112	117	147	450	435	53	132	137
Grp Sat Flow(s),veh/h/ln	1753	1749	1690	1753	1749	1783	1753	1749	1692	1753	1749	1798
Q Serve(g_s), s	5.0	7.5	7.8	2.5	4.2	4.3	4.2	17.1	17.1	1.5	4.2	4.2
Cycle Q Clear(g_c), s	5.0	7.5	7.8	2.5	4.2	4.3	4.2	17.1	17.1	1.5	4.2	4.2
Prop In Lane	1.00		0.43	1.00		0.15	1.00		0.44	1.00		0.12
Lane Grp Cap(c), veh/h	367	328	317	289	294	300	504	574	555	251	529	544
V/C Ratio(X)	0.40	0.59	0.61	0.26	0.38	0.39	0.29	0.78	0.78	0.21	0.25	0.25
Avail Cap(c_a), veh/h	367	644	622	323	644	657	508	684	662	300	684	704
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.7	27.3	27.4	23.0	27.2	27.2	15.5	22.4	22.4	17.4	19.4	19.4
Incr Delay (d2), s/veh	0.9	2.4	2.7	0.5	1.2	1.2	0.4	5.6	5.8	0.5	0.3	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	3.0	3.1	1.0	1.7	1.7	1.5	7.1	6.9	0.6	1.6	1.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.5	29.8	30.2	23.4	28.4	28.4	15.9	28.0	28.2	17.9	19.7	19.7
LnGrp LOS	C	C	C	C	C	C	B	C	C	B	B	B
Approach Vol, veh/h		536			303			1032			322	
Approach Delay, s/veh		28.2			27.2			26.4			19.4	
Approach LOS		C			C			C			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.0	31.2	11.2	20.3	12.9	29.3	12.6	18.9
Change Period (Y+Rc), s	7.0	7.0	6.5	6.5	7.0	7.0	6.5	6.5
Max Green Setting (Gmax), s	6.0	28.8	6.1	27.1	6.0	28.8	6.1	27.1
Max Q Clear Time (g_c+I1), s	3.5	19.1	4.5	9.8	6.2	6.2	7.0	6.3
Green Ext Time (p_c), s	0.0	4.7	0.0	2.6	0.0	1.9	0.0	1.5

Intersection Summary	
HCM 6th Ctrl Delay	25.9
HCM 6th LOS	C

Min green cannot be greater than Max Green.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	250	10	380	340	2380	0	0	1570	570
Future Volume (veh/h)	0	0	0	250	10	380	340	2380	0	0	1570	570
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1841	1841	1841	1841	1841	0	0	1841	1841
Adj Flow Rate, veh/h				375	0	207	358	2505	0	0	1653	272
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				4	4	4	4	4	0	0	4	4
Cap, veh/h				594	0	264	440	3448	0	0	2508	776
Arrive On Green				0.17	0.00	0.17	0.09	0.46	0.00	0.00	0.50	0.50
Sat Flow, veh/h				3506	0	1560	3401	5191	0	0	5191	1555
Grp Volume(v), veh/h				375	0	207	358	2505	0	0	1653	272
Grp Sat Flow(s),veh/h/ln				1753	0	1560	1700	1675	0	0	1675	1555
Q Serve(g_s), s				9.0	0.0	11.4	9.3	36.4	0.0	0.0	22.1	9.6
Cycle Q Clear(g_c), s				9.0	0.0	11.4	9.3	36.4	0.0	0.0	22.1	9.6
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				594	0	264	440	3448	0	0	2508	776
V/C Ratio(X)				0.63	0.00	0.78	0.81	0.73	0.00	0.00	0.66	0.35
Avail Cap(c_a), veh/h				779	0	347	521	3448	0	0	2508	776
HCM Platoon Ratio				1.00	1.00	1.00	0.67	0.67	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.23	0.23	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				34.8	0.0	35.8	40.0	17.5	0.0	0.0	16.8	13.7
Incr Delay (d2), s/veh				1.6	0.0	9.9	2.0	0.3	0.0	0.0	1.4	1.2
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				3.9	0.0	5.0	4.0	14.2	0.0	0.0	7.8	3.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				36.4	0.0	45.7	42.1	17.8	0.0	0.0	18.2	14.9
LnGrp LOS				D	A	D	D	B	A	A	B	B
Approach Vol, veh/h					582			2863			1925	
Approach Delay, s/veh					39.7			20.8			17.7	
Approach LOS					D			C			B	

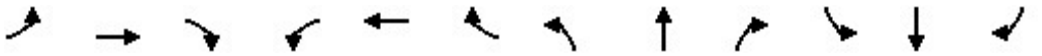
Timer - Assigned Phs	2		5	6		8
Phs Duration (G+Y+Rc), s	67.8		16.8	50.9		22.2
Change Period (Y+Rc), s	6.0		* 5.2	6.0		7.0
Max Green Setting (Gmax), s	57.0		* 14	38.0		20.0
Max Q Clear Time (g_c+I1), s	38.4		11.3	24.1		13.4
Green Ext Time (p_c), s	17.3		0.3	11.4		1.8

Intersection Summary	
HCM 6th Ctrl Delay	21.8
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



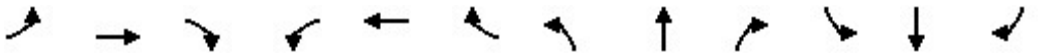
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	430	10	300	0	0	0	0	2290	350	380	1440	0
Future Volume (veh/h)	430	10	300	0	0	0	0	2290	350	380	1440	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841				0	1841	1841	1841	1841	0
Adj Flow Rate, veh/h	453	11	273				0	2411	183	400	1516	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4				0	4	4	4	4	0
Cap, veh/h	605	11	268				0	2490	771	442	3406	0
Arrive On Green	0.18	0.18	0.18				0.00	0.50	0.50	0.17	0.90	0.00
Sat Flow, veh/h	3401	61	1508				0	5191	1555	3401	5191	0
Grp Volume(v), veh/h	453	0	284				0	2411	183	400	1516	0
Grp Sat Flow(s),veh/h/ln	1700	0	1569				0	1675	1555	1700	1675	0
Q Serve(g_s), s	11.4	0.0	16.0				0.0	41.9	6.1	10.4	4.5	0.0
Cycle Q Clear(g_c), s	11.4	0.0	16.0				0.0	41.9	6.1	10.4	4.5	0.0
Prop In Lane	1.00		0.96				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	605	0	279				0	2490	771	442	3406	0
V/C Ratio(X)	0.75	0.00	1.02				0.00	0.97	0.24	0.90	0.45	0.00
Avail Cap(c_a), veh/h	605	0	279				0	2490	771	442	3406	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.33	1.33	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.61	0.61	0.00
Uniform Delay (d), s/veh	35.1	0.0	37.0				0.0	22.0	13.0	36.7	1.6	0.0
Incr Delay (d2), s/veh	5.5	0.0	58.6				0.0	12.0	0.7	14.9	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.1	0.0	10.5				0.0	17.1	2.1	4.9	0.9	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	40.6	0.0	95.6				0.0	34.0	13.7	51.6	1.9	0.0
LnGrp LOS	D	A	F				A	C	B	D	A	A
Approach Vol, veh/h		737						2594			1916	
Approach Delay, s/veh		61.8						32.6			12.3	
Approach LOS		E						C			B	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	16.4	50.6		23.0		67.0
Change Period (Y+Rc), s	* 4.7	6.0		7.0		6.0
Max Green Setting (Gmax), s	* 12	44.6		16.0		61.0
Max Q Clear Time (g_c+I1), s	12.4	43.9		18.0		6.5
Green Ext Time (p_c), s	0.0	0.7		0.0		23.7

Intersection Summary	
HCM 6th Ctrl Delay	29.3
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



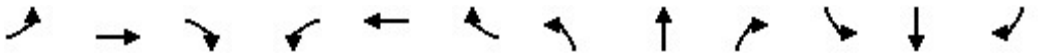
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	140	10	300	260	1570	0	0	470	160
Future Volume (veh/h)	0	0	0	140	10	300	260	1570	0	0	470	160
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		0.97
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1841	1841	1841	1841	1841	0	0	1841	1841
Adj Flow Rate, veh/h				155	0	227	274	1653	0	0	495	73
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				4	4	4	4	4	0	0	4	4
Cap, veh/h				438	0	390	309	2553	0	0	1719	746
Arrive On Green				0.12	0.00	0.12	0.35	1.00	0.00	0.00	0.49	0.49
Sat Flow, veh/h				3506	0	3120	1753	3589	0	0	3589	1519
Grp Volume(v), veh/h				155	0	227	274	1653	0	0	495	73
Grp Sat Flow(s),veh/h/ln				1753	0	1560	1753	1749	0	0	1749	1519
Q Serve(g_s), s				3.2	0.0	5.5	11.8	0.0	0.0	0.0	6.7	2.1
Cycle Q Clear(g_c), s				3.2	0.0	5.5	11.8	0.0	0.0	0.0	6.7	2.1
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				438	0	390	309	2553	0	0	1719	746
V/C Ratio(X)				0.35	0.00	0.58	0.89	0.65	0.00	0.00	0.29	0.10
Avail Cap(c_a), veh/h				622	0	554	460	2553	0	0	1719	746
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.09	0.09	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				32.0	0.0	33.0	25.2	0.0	0.0	0.0	12.1	10.9
Incr Delay (d2), s/veh				0.4	0.0	1.0	1.3	0.1	0.0	0.0	0.4	0.3
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				1.4	0.0	2.1	3.7	0.0	0.0	0.0	2.3	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				32.4	0.0	34.1	26.5	0.1	0.0	0.0	12.5	11.1
LnGrp LOS				C	A	C	C	A	A	A	B	B
Approach Vol, veh/h					382			1927			568	
Approach Delay, s/veh					33.4			3.9			12.3	
Approach LOS					C			A			B	

Timer - Assigned Phs	2		5	6		8						
Phs Duration (G+Y+Rc), s	64.2		19.1	45.1		15.8						
Change Period (Y+Rc), s	5.8		5.0	5.8		5.8						
Max Green Setting (Gmax), s	54.2		21.0	28.2		14.2						
Max Q Clear Time (g_c+I1), s	2.0		13.8	8.7		7.5						
Green Ext Time (p_c), s	14.5		0.3	2.0		0.7						

Intersection Summary		
HCM 6th Ctrl Delay	9.4	
HCM 6th LOS	A	

Notes

User approved volume balancing among the lanes for turning movement.



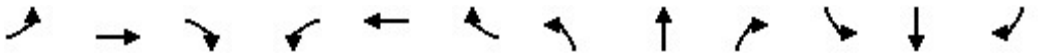
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	520	10	250	0	0	0	0	1310	430	160	450	0
Future Volume (veh/h)	520	10	250	0	0	0	0	1310	430	160	450	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		0.97	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841				0	1841	1841	1841	1841	0
Adj Flow Rate, veh/h	547	37	28				0	1379	413	168	474	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4				0	4	4	4	4	0
Cap, veh/h	579	304	257				0	1346	387	214	2413	0
Arrive On Green	0.16	0.16	0.16				0.00	0.51	0.51	0.04	0.23	0.00
Sat Flow, veh/h	3506	1841	1560				0	2755	765	1753	3589	0
Grp Volume(v), veh/h	547	37	28				0	885	907	168	474	0
Grp Sat Flow(s),veh/h/ln	1753	1841	1560				0	1749	1679	1753	1749	0
Q Serve(g_s), s	12.3	1.4	1.2				0.0	40.4	40.4	7.6	8.8	0.0
Cycle Q Clear(g_c), s	12.3	1.4	1.2				0.0	40.4	40.4	7.6	8.8	0.0
Prop In Lane	1.00		1.00				0.00		0.46	1.00		0.00
Lane Grp Cap(c), veh/h	579	304	257				0	884	849	214	2413	0
V/C Ratio(X)	0.95	0.12	0.11				0.00	1.00	1.07	0.79	0.20	0.00
Avail Cap(c_a), veh/h	579	304	257				0	884	849	219	2413	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	0.33	0.33	1.00
Upstream Filter(I)	1.00	1.00	1.00				0.00	1.00	1.00	0.95	0.95	0.00
Uniform Delay (d), s/veh	33.0	28.5	28.4				0.0	19.8	19.8	37.4	13.0	0.0
Incr Delay (d2), s/veh	24.5	0.1	0.1				0.0	30.7	50.8	14.5	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.0	0.6	0.5				0.0	20.8	24.7	4.1	3.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	57.6	28.6	28.5				0.0	50.5	70.6	51.9	13.1	0.0
LnGrp LOS	E	C	C				A	F	F	D	B	A
Approach Vol, veh/h		612						1792			642	
Approach Delay, s/veh		54.5						60.7			23.3	
Approach LOS		D						E			C	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	14.8	46.2		19.0		61.0
Change Period (Y+Rc), s	5.0	5.8		5.8		5.8
Max Green Setting (Gmax), s	10.0	40.2		13.2		55.2
Max Q Clear Time (g_c+I1), s	9.6	42.4		14.3		10.8
Green Ext Time (p_c), s	0.0	0.0		0.0		2.5

Intersection Summary	
HCM 6th Ctrl Delay	51.5
HCM 6th LOS	D

Notes

User approved volume balancing among the lanes for turning movement.



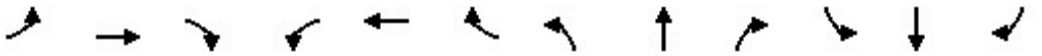
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	320	10	530	710	1850	0	0	880	200
Future Volume (veh/h)	0	0	0	320	10	530	710	1850	0	0	880	200
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		0.97
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1841	1841	1841	1841	1841	0	0	1841	1841
Adj Flow Rate, veh/h				507	0	294	747	1947	0	0	926	79
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				4	4	4	4	4	0	0	4	4
Cap, veh/h				732	0	326	794	3328	0	0	2364	566
Arrive On Green				0.21	0.00	0.21	0.23	0.66	0.00	0.00	0.37	0.37
Sat Flow, veh/h				3506	0	1560	3401	5191	0	0	6590	1515
Grp Volume(v), veh/h				507	0	294	747	1947	0	0	926	79
Grp Sat Flow(s),veh/h/ln				1753	0	1560	1700	1675	0	0	1583	1515
Q Serve(g_s), s				12.0	0.0	16.5	19.4	19.2	0.0	0.0	9.7	3.1
Cycle Q Clear(g_c), s				12.0	0.0	16.5	19.4	19.2	0.0	0.0	9.7	3.1
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				732	0	326	794	3328	0	0	2364	566
V/C Ratio(X)				0.69	0.00	0.90	0.94	0.59	0.00	0.00	0.39	0.14
Avail Cap(c_a), veh/h				732	0	326	794	3328	0	0	2364	566
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.47	0.47	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				32.9	0.0	34.7	33.9	8.4	0.0	0.0	20.7	18.6
Incr Delay (d2), s/veh				5.3	0.0	30.2	11.8	0.4	0.0	0.0	0.5	0.5
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				5.5	0.0	15.9	8.8	5.3	0.0	0.0	3.4	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				38.2	0.0	64.9	45.7	8.7	0.0	0.0	21.2	19.2
LnGrp LOS				D	A	E	D	A	A	A	C	B
Approach Vol, veh/h					801			2694			1005	
Approach Delay, s/veh					48.0			19.0			21.0	
Approach LOS					D			B			C	

Timer - Assigned Phs	2	4	5	6
Phs Duration (G+Y+Rc), s	65.4	24.6	26.0	39.4
Change Period (Y+Rc), s	5.8	5.8	5.0	5.8
Max Green Setting (Gmax), s	59.6	18.8	21.0	33.6
Max Q Clear Time (g_c+I1), s	21.2	18.5	21.4	11.7
Green Ext Time (p_c), s	20.1	0.1	0.0	6.4

Intersection Summary	
HCM 6th Ctrl Delay	24.6
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.
User approved volume balancing among the lanes for turning movement.



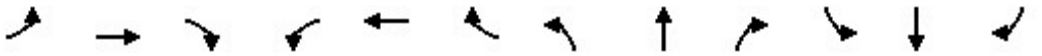
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	410	10	430	0	0	0	0	2150	430	320	880	0
Future Volume (veh/h)	410	10	430	0	0	0	0	2150	430	320	880	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		0.97	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841				0	1841	1841	1841	1841	0
Adj Flow Rate, veh/h	527	0	198				0	2263	197	337	926	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4				0	4	4	4	4	0
Cap, veh/h	904	0	402				0	2758	661	416	3082	0
Arrive On Green	0.26	0.00	0.26				0.00	0.44	0.44	0.04	0.20	0.00
Sat Flow, veh/h	3506	0	1560				0	6590	1517	3401	5191	0
Grp Volume(v), veh/h	527	0	198				0	2263	197	337	926	0
Grp Sat Flow(s),veh/h/ln	1753	0	1560				0	1583	1517	1700	1675	0
Q Serve(g_s), s	11.8	0.0	9.7				0.0	28.3	7.6	8.8	14.1	0.0
Cycle Q Clear(g_c), s	11.8	0.0	9.7				0.0	28.3	7.6	8.8	14.1	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	904	0	402				0	2758	661	416	3082	0
V/C Ratio(X)	0.58	0.00	0.49				0.00	0.82	0.30	0.81	0.30	0.00
Avail Cap(c_a), veh/h	904	0	402				0	2758	661	416	3082	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	0.33	0.33	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.85	0.85	0.00
Uniform Delay (d), s/veh	29.2	0.0	28.4				0.0	22.3	16.5	42.2	19.5	0.0
Incr Delay (d2), s/veh	2.7	0.0	4.3				0.0	2.9	1.2	13.6	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.2	0.0	4.0				0.0	9.8	2.6	4.6	6.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	31.9	0.0	32.7				0.0	25.2	17.6	55.7	19.7	0.0
LnGrp LOS	C	A	C				A	C	B	E	B	A
Approach Vol, veh/h		725						2460			1263	
Approach Delay, s/veh		32.1						24.6			29.3	
Approach LOS		C						C			C	

Timer - Assigned Phs	1	2				6		8				
Phs Duration (G+Y+Rc), s	16.0	45.0				61.0		29.0				
Change Period (Y+Rc), s	5.0	5.8				5.8		5.8				
Max Green Setting (Gmax), s	11.0	39.2				55.2		23.2				
Max Q Clear Time (g_c+I1), s	10.8	30.3				16.1		13.8				
Green Ext Time (p_c), s	0.0	7.9				7.0		2.0				

Intersection Summary			
HCM 6th Ctrl Delay			27.2
HCM 6th LOS			C

Notes

User approved volume balancing among the lanes for turning movement.



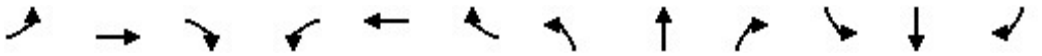
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	20	40	120	40	200	140	2210	60	70	910	60
Future Volume (veh/h)	40	20	40	120	40	200	140	2210	60	70	910	60
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.97	0.99		0.97	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	42	21	8	126	42	102	147	2326	62	74	958	58
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	223	248	95	327	92	223	88	2665	71	78	2536	153
Arrive On Green	0.20	0.20	0.20	0.20	0.20	0.20	0.05	0.53	0.53	0.04	0.52	0.52
Sat Flow, veh/h	1212	1257	479	1340	465	1128	1753	5028	133	1753	4835	292
Grp Volume(v), veh/h	42	0	29	126	0	144	147	1546	842	74	663	353
Grp Sat Flow(s),veh/h/ln	1212	0	1736	1340	0	1593	1753	1675	1811	1753	1675	1776
Q Serve(g_s), s	2.8	0.0	1.2	7.6	0.0	7.2	4.5	36.3	36.7	3.8	10.6	10.6
Cycle Q Clear(g_c), s	10.0	0.0	1.2	8.8	0.0	7.2	4.5	36.3	36.7	3.8	10.6	10.6
Prop In Lane	1.00		0.28	1.00		0.71	1.00		0.07	1.00		0.16
Lane Grp Cap(c), veh/h	223	0	343	327	0	315	88	1776	960	78	1757	932
V/C Ratio(X)	0.19	0.00	0.08	0.39	0.00	0.46	1.68	0.87	0.88	0.95	0.38	0.38
Avail Cap(c_a), veh/h	482	0	714	613	0	655	88	1776	960	78	1757	932
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.3	0.0	29.5	33.1	0.0	31.8	42.8	18.5	18.6	42.9	12.7	12.7
Incr Delay (d2), s/veh	0.3	0.0	0.1	0.6	0.0	0.8	349.1	6.2	11.1	84.0	0.6	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	0.0	0.5	2.5	0.0	2.8	10.3	13.0	15.5	3.4	3.6	4.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	36.6	0.0	29.5	33.6	0.0	32.6	391.8	24.6	29.7	126.9	13.3	13.9
LnGrp LOS	D	A	C	C	A	C	F	C	C	F	B	B
Approach Vol, veh/h		71			270			2535			1090	
Approach Delay, s/veh		33.7			33.1			47.6			21.2	
Approach LOS		C			C			D			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.5	54.2		25.3	11.0	53.7		25.3				
Change Period (Y+Rc), s	6.5	6.5		7.5	6.5	6.5		7.5				
Max Green Setting (Gmax), s	4.0	28.5		37.0	4.5	28.0		37.0				
Max Q Clear Time (g_c+I1), s	5.8	38.7		12.0	6.5	12.6		10.8				
Green Ext Time (p_c), s	0.0	0.0		0.2	0.0	6.4		1.0				

Intersection Summary			
HCM 6th Ctrl Delay		39.1	
HCM 6th LOS		D	

Notes

User approved pedestrian interval to be less than phase max green.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	260	500	500	220	1310	350	520	1760	130	190	1280	130
Future Volume (veh/h)	260	500	500	220	1310	350	520	1760	130	190	1280	130
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		0.98	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	274	526	0	232	1379	308	547	1853	102	200	1347	55
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	221	1042		255	1110	590	441	1657	729	235	1352	605
Arrive On Green	0.13	0.30	0.00	0.15	0.32	0.32	0.13	0.33	0.33	0.07	0.27	0.27
Sat Flow, veh/h	1753	3497	1560	1753	3497	1521	3401	5025	1522	3401	5025	1518
Grp Volume(v), veh/h	274	526	0	232	1379	308	547	1853	102	200	1347	55
Grp Sat Flow(s),veh/h/ln	1753	1749	1560	1753	1749	1521	1700	1675	1522	1700	1675	1518
Q Serve(g_s), s	18.3	18.0	0.0	18.9	46.0	22.6	18.8	47.8	5.5	8.4	38.8	3.3
Cycle Q Clear(g_c), s	18.3	18.0	0.0	18.9	46.0	22.6	18.8	47.8	5.5	8.4	38.8	3.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	221	1042		255	1110	590	441	1657	729	235	1352	605
V/C Ratio(X)	1.24	0.50		0.91	1.24	0.52	1.24	1.12	0.14	0.85	1.00	0.09
Avail Cap(c_a), veh/h	221	1042		366	1110	590	441	1657	729	235	1352	605
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	63.4	42.1	0.0	61.0	49.5	34.2	63.1	48.6	21.4	66.8	52.9	27.5
Incr Delay (d2), s/veh	139.7	0.6	0.0	16.4	117.1	1.1	126.3	62.2	0.1	24.9	23.6	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	16.6	7.7	0.0	9.3	37.3	8.3	15.8	29.0	1.9	4.4	19.0	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	203.1	42.6	0.0	77.4	166.6	35.4	189.4	110.8	21.5	91.6	76.6	27.6
LnGrp LOS	F	D		E	F	D	F	F	C	F	E	C
Approach Vol, veh/h		800	A		1919			2502			1602	
Approach Delay, s/veh		97.6			134.7			124.3			76.8	
Approach LOS		F			F			F			E	

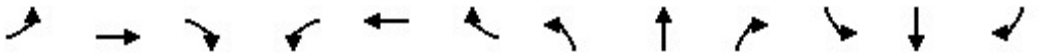
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.2	53.8	25.8	50.2	24.0	45.0	23.0	53.0
Change Period (Y+Rc), s	* 5.2	6.0	* 4.7	7.0	* 5.2	6.0	* 4.7	7.0
Max Green Setting (Gmax), s	* 10	47.8	* 30	34.0	* 19	39.0	* 18	46.0
Max Q Clear Time (g_c+I1), s	10.4	49.8	20.9	20.0	20.8	40.8	20.3	48.0
Green Ext Time (p_c), s	0.0	0.0	0.2	3.6	0.0	0.0	0.0	0.0

Intersection Summary		
HCM 6th Ctrl Delay		112.9
HCM 6th LOS		F

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



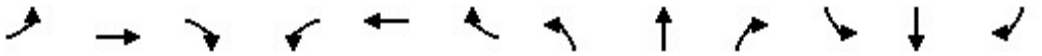
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	170	620	30	80	1390	380	130	800	240	170	370	160
Future Volume (veh/h)	170	620	30	80	1390	380	130	800	240	170	370	160
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	179	653	13	84	1463	259	137	842	126	179	389	135
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	174	1489	653	104	1349	592	159	800	350	174	603	206
Arrive On Green	0.10	0.42	0.42	0.06	0.38	0.38	0.09	0.23	0.23	0.10	0.24	0.24
Sat Flow, veh/h	1767	3526	1547	1767	3526	1546	1767	3526	1540	1767	2563	877
Grp Volume(v), veh/h	179	653	13	84	1463	259	137	842	126	179	266	258
Grp Sat Flow(s),veh/h/ln	1767	1763	1547	1767	1763	1546	1767	1763	1540	1767	1763	1676
Q Serve(g_s), s	14.3	19.0	0.7	6.8	55.5	18.0	11.1	32.9	10.0	14.3	19.7	20.2
Cycle Q Clear(g_c), s	14.3	19.0	0.7	6.8	55.5	18.0	11.1	32.9	10.0	14.3	19.7	20.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.52
Lane Grp Cap(c), veh/h	174	1489	653	104	1349	592	159	800	350	174	415	395
V/C Ratio(X)	1.03	0.44	0.02	0.81	1.08	0.44	0.86	1.05	0.36	1.03	0.64	0.65
Avail Cap(c_a), veh/h	174	1489	653	166	1349	592	186	800	350	174	415	395
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	65.3	29.7	24.4	67.4	44.8	33.2	65.1	56.0	47.2	65.3	49.9	50.1
Incr Delay (d2), s/veh	75.5	0.2	0.0	6.3	50.7	0.6	25.4	46.6	0.8	75.5	3.3	3.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.9	7.8	0.3	3.2	32.5	6.7	6.1	19.5	3.8	10.0	9.0	8.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	140.8	29.9	24.4	73.7	95.5	33.8	90.4	102.6	47.9	140.8	53.2	54.0
LnGrp LOS	F	C	C	E	F	C	F	F	D	F	D	D
Approach Vol, veh/h		845			1806			1105			703	
Approach Delay, s/veh		53.3			85.6			94.9			75.8	
Approach LOS		D			F			F			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	20.8	39.4	16.0	68.8	19.6	40.6	21.8	63.0
Change Period (Y+Rc), s	6.5	6.5	7.5	7.5	6.5	6.5	7.5	7.5
Max Green Setting (Gmax), s	14.3	32.9	13.6	56.2	15.3	31.9	14.3	55.5
Max Q Clear Time (g_c+I1), s	16.3	34.9	8.8	21.0	13.1	22.2	16.3	57.5
Green Ext Time (p_c), s	0.0	0.0	0.0	4.3	0.0	2.1	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	80.2
HCM 6th LOS	F

Notes

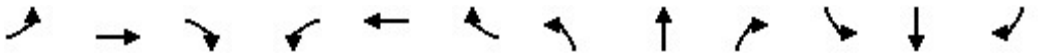
User approved pedestrian interval to be less than phase max green.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	110	940	30	190	1590	120	80	60	150	10	30	80
Future Volume (veh/h)	110	940	30	190	1590	120	80	60	150	10	30	80
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	116	989	32	200	1674	123	84	63	76	11	32	12
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	144	1874	61	237	1966	143	199	87	105	117	146	55
Arrive On Green	0.08	0.54	0.54	0.13	0.59	0.59	0.11	0.11	0.11	0.11	0.11	0.11
Sat Flow, veh/h	1767	3482	113	1767	3326	242	1351	758	915	1240	1280	480
Grp Volume(v), veh/h	116	501	520	200	879	918	84	0	139	11	0	44
Grp Sat Flow(s),veh/h/ln	1767	1763	1832	1767	1763	1805	1351	0	1673	1240	0	1760
Q Serve(g_s), s	6.2	17.6	17.6	10.6	39.2	40.8	5.8	0.0	7.7	0.8	0.0	2.2
Cycle Q Clear(g_c), s	6.2	17.6	17.6	10.6	39.2	40.8	8.0	0.0	7.7	8.6	0.0	2.2
Prop In Lane	1.00		0.06	1.00		0.13	1.00		0.55	1.00		0.27
Lane Grp Cap(c), veh/h	144	949	986	237	1042	1067	199	0	191	117	0	201
V/C Ratio(X)	0.80	0.53	0.53	0.84	0.84	0.86	0.42	0.00	0.73	0.09	0.00	0.22
Avail Cap(c_a), veh/h	165	949	986	422	1163	1191	493	0	556	388	0	585
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	43.4	14.3	14.3	40.7	16.1	16.4	42.3	0.0	41.2	45.3	0.0	38.7
Incr Delay (d2), s/veh	21.9	0.6	0.6	7.9	5.5	6.3	1.4	0.0	5.2	0.3	0.0	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.4	6.0	6.2	4.8	13.7	14.8	2.0	0.0	3.5	0.3	0.0	1.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	65.3	15.0	14.9	48.6	21.6	22.7	43.8	0.0	46.3	45.6	0.0	39.3
LnGrp LOS	E	B	B	D	C	C	D	A	D	D	A	D
Approach Vol, veh/h		1137			1997			223			55	
Approach Delay, s/veh		20.1			24.8			45.4			40.5	
Approach LOS		C			C			D			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	14.9	64.4		17.0	19.9	59.3		17.0				
Change Period (Y+Rc), s	7.0	7.5		6.0	7.0	7.5		6.0				
Max Green Setting (Gmax), s	9.0	63.5		32.0	23.0	49.5		32.0				
Max Q Clear Time (g_c+I1), s	8.2	42.8		10.6	12.6	19.6		10.0				
Green Ext Time (p_c), s	0.0	14.1		0.2	0.4	7.8		1.1				

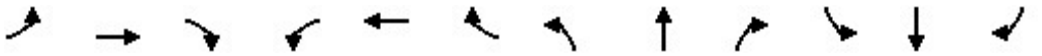
Intersection Summary			
HCM 6th Ctrl Delay		24.8	
HCM 6th LOS		C	



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	320	890	10	60	1270	470	20	720	50	300	320	170
Future Volume (veh/h)	320	890	10	60	1270	470	20	720	50	300	320	170
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	337	937	11	63	1337	369	21	758	51	316	337	135
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	309	1409	17	80	1234	541	41	681	46	277	828	325
Arrive On Green	0.09	0.39	0.39	0.05	0.35	0.35	0.02	0.20	0.20	0.16	0.34	0.34
Sat Flow, veh/h	3428	3568	42	1767	3526	1545	1767	3347	225	1767	2459	965
Grp Volume(v), veh/h	337	463	485	63	1337	369	21	399	410	316	240	232
Grp Sat Flow(s),veh/h/ln	1714	1763	1847	1767	1763	1545	1767	1763	1809	1767	1763	1661
Q Serve(g_s), s	13.5	32.3	32.3	5.3	52.5	30.6	1.8	30.5	30.5	23.5	15.7	16.2
Cycle Q Clear(g_c), s	13.5	32.3	32.3	5.3	52.5	30.6	1.8	30.5	30.5	23.5	15.7	16.2
Prop In Lane	1.00		0.02	1.00		1.00	1.00		0.12	1.00		0.58
Lane Grp Cap(c), veh/h	309	696	729	80	1234	541	41	358	368	277	593	559
V/C Ratio(X)	1.09	0.67	0.67	0.79	1.08	0.68	0.51	1.11	1.11	1.14	0.40	0.42
Avail Cap(c_a), veh/h	309	696	729	112	1234	541	72	358	368	277	593	559
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	68.3	37.3	37.3	70.9	48.7	41.6	72.4	59.8	59.8	63.2	38.2	38.4
Incr Delay (d2), s/veh	78.2	2.6	2.4	18.7	51.4	3.7	7.0	81.8	81.5	97.8	0.5	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.1	13.9	14.6	2.8	30.9	12.0	0.9	21.5	22.0	17.9	6.8	6.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	146.4	39.8	39.7	89.6	100.2	45.3	79.4	141.6	141.3	161.0	38.7	39.0
LnGrp LOS	F	D	D	F	F	D	E	F	F	F	D	D
Approach Vol, veh/h		1285			1769			830			788	
Approach Delay, s/veh		67.7			88.4			139.8			87.8	
Approach LOS		E			F			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	21.0	60.0	11.0	58.0	14.3	66.7	31.0	38.0
Change Period (Y+Rc), s	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5
Max Green Setting (Gmax), s	13.5	52.5	6.1	47.9	9.5	56.5	23.5	30.5
Max Q Clear Time (g_c+I1), s	15.5	54.5	3.8	18.2	7.3	34.3	25.5	32.5
Green Ext Time (p_c), s	0.0	0.0	0.0	3.3	0.0	6.6	0.0	0.0

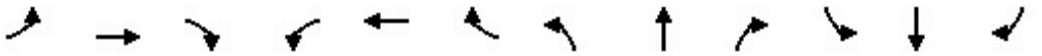
Intersection Summary	
HCM 6th Ctrl Delay	91.7
HCM 6th LOS	F



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	70	930	240	100	1490	80	270	20	180	20	10	100
Future Volume (veh/h)	70	930	240	100	1490	80	270	20	180	20	10	100
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	74	979	233	105	1568	82	284	21	64	21	11	28
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	98	1312	311	132	1657	86	396	418	350	152	88	164
Arrive On Green	0.06	0.47	0.47	0.07	0.49	0.49	0.23	0.23	0.23	0.23	0.23	0.23
Sat Flow, veh/h	1767	2810	667	1767	3406	177	1358	1856	1551	441	391	728
Grp Volume(v), veh/h	74	613	599	105	808	842	284	21	64	60	0	0
Grp Sat Flow(s),veh/h/ln	1767	1763	1714	1767	1763	1820	1358	1856	1551	1560	0	0
Q Serve(g_s), s	3.8	26.3	26.4	5.4	40.1	40.8	15.3	0.8	3.1	0.0	0.0	0.0
Cycle Q Clear(g_c), s	3.8	26.3	26.4	5.4	40.1	40.8	17.9	0.8	3.1	2.6	0.0	0.0
Prop In Lane	1.00		0.39	1.00		0.10	1.00		1.00	0.35		0.47
Lane Grp Cap(c), veh/h	98	823	800	132	858	886	396	418	350	404	0	0
V/C Ratio(X)	0.76	0.74	0.75	0.79	0.94	0.95	0.72	0.05	0.18	0.15	0.00	0.00
Avail Cap(c_a), veh/h	115	830	807	153	868	897	560	643	537	589	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	43.0	20.1	20.2	42.0	22.5	22.7	34.3	28.0	28.9	28.7	0.0	0.0
Incr Delay (d2), s/veh	21.4	3.7	3.9	21.6	18.0	19.1	2.6	0.0	0.2	0.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	9.9	9.8	3.0	18.0	19.1	6.0	0.3	1.1	1.1	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	64.4	23.8	24.0	63.7	40.5	41.7	36.9	28.1	29.1	28.9	0.0	0.0
LnGrp LOS	E	C	C	E	D	D	D	C	C	C	A	A
Approach Vol, veh/h		1286			1755			369			60	
Approach Delay, s/veh		26.2			42.5			35.1			28.9	
Approach LOS		C			D			D			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	12.1	52.4		27.8	13.9	50.6		27.8				
Change Period (Y+Rc), s	7.0	7.5		7.0	7.0	7.5		7.0				
Max Green Setting (Gmax), s	6.0	45.5		32.0	8.0	43.5		32.0				
Max Q Clear Time (g_c+I1), s	5.8	42.8		4.6	7.4	28.4		19.9				
Green Ext Time (p_c), s	0.0	2.1		0.3	0.0	6.3		0.9				

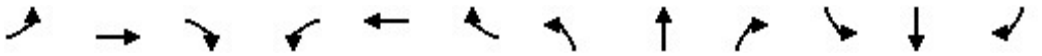
Intersection Summary												
HCM 6th Ctrl Delay			35.4									
HCM 6th LOS			D									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	940	150	110	1300	30	330	30	370	40	30	40
Future Volume (veh/h)	40	940	150	110	1300	30	330	30	370	40	30	40
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	1.00		0.98	1.00		0.95
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	42	989	151	116	1368	32	347	32	262	42	32	5
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	69	1250	191	143	1586	37	379	39	323	69	87	14
Arrive On Green	0.04	0.41	0.41	0.08	0.45	0.45	0.21	0.23	0.23	0.04	0.06	0.06
Sat Flow, veh/h	1767	3053	466	1767	3519	82	1767	171	1399	1767	1555	243
Grp Volume(v), veh/h	42	571	569	116	685	715	347	0	294	42	0	37
Grp Sat Flow(s),veh/h/ln	1767	1763	1756	1767	1763	1838	1767	0	1570	1767	0	1798
Q Serve(g_s), s	2.6	31.3	31.3	7.1	38.6	38.7	21.2	0.0	19.6	2.6	0.0	2.2
Cycle Q Clear(g_c), s	2.6	31.3	31.3	7.1	38.6	38.7	21.2	0.0	19.6	2.6	0.0	2.2
Prop In Lane	1.00		0.27	1.00		0.04	1.00		0.89	1.00		0.14
Lane Grp Cap(c), veh/h	69	721	719	143	794	828	379	0	363	69	0	100
V/C Ratio(X)	0.60	0.79	0.79	0.81	0.86	0.86	0.92	0.00	0.81	0.60	0.00	0.37
Avail Cap(c_a), veh/h	96	837	834	176	916	956	447	0	724	144	0	520
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	52.3	28.5	28.6	50.0	27.3	27.3	42.5	0.0	40.2	52.3	0.0	50.3
Incr Delay (d2), s/veh	8.2	4.8	4.8	20.6	7.9	7.7	21.3	0.0	4.4	8.2	0.0	2.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	12.9	12.9	3.8	16.1	16.8	11.5	0.0	8.0	1.3	0.0	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	60.5	33.3	33.4	70.7	35.2	35.0	63.8	0.0	44.6	60.5	0.0	52.6
LnGrp LOS	E	C	C	E	D	C	E	A	D	E	A	D
Approach Vol, veh/h		1182			1516			641			79	
Approach Delay, s/veh		34.3			37.8			55.0			56.8	
Approach LOS		C			D			D			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.3	57.3	29.7	12.2	15.9	52.8	10.3	31.6
Change Period (Y+Rc), s	7.0	7.5	6.0	6.0	7.0	7.5	6.0	6.0
Max Green Setting (Gmax), s	6.0	57.5	28.0	32.0	11.0	52.5	9.0	51.0
Max Q Clear Time (g_c+I1), s	4.6	40.7	23.2	4.2	9.1	33.3	4.6	21.6
Green Ext Time (p_c), s	0.0	9.1	0.5	0.1	0.0	7.8	0.0	2.2

Intersection Summary	
HCM 6th Ctrl Delay	40.2
HCM 6th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	370	920	60	210	1327	300	7	578	152	77	366	106
Future Volume (veh/h)	370	920	60	210	1327	300	7	578	152	77	366	106
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	389	968	22	221	1397	272	7	608	35	81	385	95
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	274	1233	550	169	1125	761	358	715	319	301	489	119
Arrive On Green	0.08	0.35	0.35	0.05	0.32	0.32	0.20	0.20	0.20	0.17	0.17	0.17
Sat Flow, veh/h	3428	3526	1572	3428	3526	1544	1767	3526	1572	1767	2876	701
Grp Volume(v), veh/h	389	968	22	221	1397	272	7	608	35	81	247	233
Grp Sat Flow(s),veh/h/ln	1714	1763	1572	1714	1763	1544	1767	1763	1572	1767	1856	1722
Q Serve(g_s), s	10.5	32.4	1.2	6.5	42.0	14.4	0.4	21.9	2.4	5.2	16.7	17.1
Cycle Q Clear(g_c), s	10.5	32.4	1.2	6.5	42.0	14.4	0.4	21.9	2.4	5.2	16.7	17.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.41
Lane Grp Cap(c), veh/h	274	1233	550	169	1125	761	358	715	319	301	316	293
V/C Ratio(X)	1.42	0.79	0.04	1.30	1.24	0.36	0.02	0.85	0.11	0.27	0.78	0.80
Avail Cap(c_a), veh/h	274	1233	550	169	1125	761	437	871	388	403	423	393
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	60.5	38.4	28.2	62.5	44.8	20.8	42.0	50.5	42.8	47.5	52.2	52.4
Incr Delay (d2), s/veh	209.9	3.5	0.0	173.2	116.3	0.3	0.0	7.2	0.2	0.6	7.3	8.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.4	13.8	0.4	6.8	35.4	7.0	0.2	10.0	0.9	2.3	8.3	7.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	270.4	41.9	28.3	235.8	161.1	21.2	42.0	57.7	42.9	48.1	59.5	61.2
LnGrp LOS	F	D	C	F	F	C	D	E	D	D	E	E
Approach Vol, veh/h		1379			1890			650			561	
Approach Delay, s/veh		106.1			149.7			56.7			58.5	
Approach LOS		F			F			E			E	

Timer - Assigned Phs	2	3	4	6	7	8
Phs Duration (G+Y+Rc), s	34.2	14.0	53.5	29.9	18.0	49.5
Change Period (Y+Rc), s	7.5	7.5	7.5	7.5	7.5	7.5
Max Green Setting (Gmax), s	32.5	6.5	46.0	30.0	10.5	42.0
Max Q Clear Time (g_c+I1), s	23.9	8.5	34.4	19.1	12.5	44.0
Green Ext Time (p_c), s	2.8	0.0	5.3	2.5	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	111.4
HCM 6th LOS	F

Notes

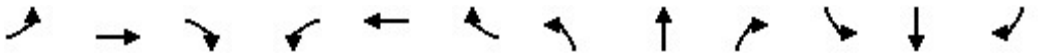
User approved pedestrian interval to be less than phase max green.

User approved volume balancing among the lanes for turning movement.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1109	30	80	1687	140	80
Future Volume (veh/h)	1109	30	80	1687	140	80
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		0.97	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	1167	16	84	1776	147	17
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	1528	663	141	2268	203	180
Arrive On Green	0.43	0.43	0.08	0.64	0.11	0.11
Sat Flow, veh/h	3618	1529	1767	3618	1767	1572
Grp Volume(v), veh/h	1167	16	84	1776	147	17
Grp Sat Flow(s),veh/h/ln	1763	1529	1767	1763	1767	1572
Q Serve(g_s), s	15.1	0.3	2.5	19.5	4.3	0.5
Cycle Q Clear(g_c), s	15.1	0.3	2.5	19.5	4.3	0.5
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1528	663	141	2268	203	180
V/C Ratio(X)	0.76	0.02	0.60	0.78	0.72	0.09
Avail Cap(c_a), veh/h	1771	768	197	2623	1052	936
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	12.9	8.7	23.9	6.9	23.0	21.3
Incr Delay (d2), s/veh	1.9	0.0	4.0	1.5	4.9	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.3	0.1	1.0	2.8	1.9	0.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	14.8	8.7	27.9	8.4	27.8	21.5
LnGrp LOS	B	A	C	A	C	C
Approach Vol, veh/h	1183			1860	164	
Approach Delay, s/veh	14.7			9.2	27.2	
Approach LOS	B			A	C	

Timer - Assigned Phs		2			5	6	8
Phs Duration (G+Y+Rc), s		42.1			11.3	30.8	11.7
Change Period (Y+Rc), s		7.5			7.0	7.5	5.5
Max Green Setting (Gmax), s		40.0			6.0	27.0	32.0
Max Q Clear Time (g_c+I1), s		21.5			4.5	17.1	6.3
Green Ext Time (p_c), s		13.1			0.0	5.7	0.4

Intersection Summary	
HCM 6th Ctrl Delay	12.2
HCM 6th LOS	B



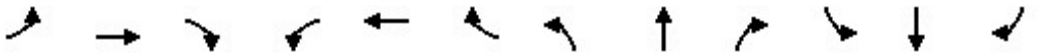
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	80	1099	10	80	1657	30	60	10	230	20	10	50
Future Volume (veh/h)	80	1099	10	80	1657	30	60	10	230	20	10	50
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	0.99		0.98	0.99		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	84	1157	11	84	1744	32	63	11	107	21	11	10
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	128	1945	18	128	1925	35	128	34	149	166	85	58
Arrive On Green	0.07	0.54	0.54	0.07	0.54	0.54	0.17	0.17	0.17	0.17	0.17	0.17
Sat Flow, veh/h	1767	3577	34	1767	3540	65	418	203	898	604	511	348
Grp Volume(v), veh/h	84	570	598	84	866	910	181	0	0	42	0	0
Grp Sat Flow(s),veh/h/ln	1767	1763	1848	1767	1763	1842	1519	0	0	1463	0	0
Q Serve(g_s), s	3.8	18.0	18.0	3.8	36.4	36.8	6.6	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	3.8	18.0	18.0	3.8	36.4	36.8	9.2	0.0	0.0	1.7	0.0	0.0
Prop In Lane	1.00		0.02	1.00		0.04	0.35		0.59	0.50		0.24
Lane Grp Cap(c), veh/h	128	959	1005	128	959	1002	311	0	0	308	0	0
V/C Ratio(X)	0.66	0.59	0.59	0.66	0.90	0.91	0.58	0.00	0.00	0.14	0.00	0.00
Avail Cap(c_a), veh/h	150	959	1005	214	1002	1047	568	0	0	557	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	37.3	12.7	12.7	37.3	16.9	17.0	32.5	0.0	0.0	29.4	0.0	0.0
Incr Delay (d2), s/veh	8.0	1.0	1.0	5.6	11.1	11.1	1.3	0.0	0.0	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	5.7	6.0	1.7	14.3	15.1	3.5	0.0	0.0	0.7	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	45.3	13.7	13.7	42.9	28.0	28.1	33.8	0.0	0.0	29.6	0.0	0.0
LnGrp LOS	D	B	B	D	C	C	C	A	A	C	A	A
Approach Vol, veh/h		1252			1860			181			42	
Approach Delay, s/veh		15.8			28.7			33.8			29.6	
Approach LOS		B			C			C			C	

Timer - Assigned Phs	2	3	4	6	7	8
Phs Duration (G+Y+Rc), s	19.7	11.0	51.9	19.7	11.0	51.9
Change Period (Y+Rc), s	6.0	5.0	7.0	6.0	5.0	7.0
Max Green Setting (Gmax), s	28.0	10.0	44.0	28.0	7.0	47.0
Max Q Clear Time (g_c+I1), s	11.2	5.8	20.0	3.7	5.8	38.8
Green Ext Time (p_c), s	0.8	0.1	7.1	0.1	0.0	6.1

Intersection Summary	
HCM 6th Ctrl Delay	24.2
HCM 6th LOS	C

Notes

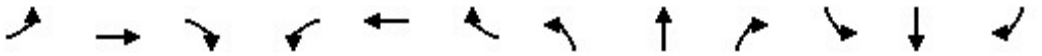
User approved pedestrian interval to be less than phase max green.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	360	799	190	450	1037	230	460	1860	120	110	640	270
Future Volume (veh/h)	360	799	190	450	1037	230	460	1860	120	110	640	270
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	1.00		0.98	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	379	841	199	474	1092	146	484	1958	106	116	674	204
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	280	793	344	432	968	129	374	1787	96	93	788	234
Arrive On Green	0.16	0.23	0.23	0.25	0.31	0.31	0.21	0.37	0.37	0.05	0.21	0.21
Sat Flow, veh/h	1753	3497	1518	1753	3090	412	1753	4873	263	1753	3812	1132
Grp Volume(v), veh/h	379	841	199	474	617	621	484	1344	720	116	591	287
Grp Sat Flow(s),veh/h/ln	1753	1749	1518	1753	1749	1754	1753	1675	1786	1753	1675	1594
Q Serve(g_s), s	24.0	34.0	17.5	37.0	47.0	47.0	32.0	55.0	55.0	8.0	25.5	26.2
Cycle Q Clear(g_c), s	24.0	34.0	17.5	37.0	47.0	47.0	32.0	55.0	55.0	8.0	25.5	26.2
Prop In Lane	1.00		1.00	1.00		0.24	1.00		0.15	1.00		0.71
Lane Grp Cap(c), veh/h	280	793	344	432	548	550	374	1228	655	93	692	329
V/C Ratio(X)	1.35	1.06	0.58	1.10	1.13	1.13	1.29	1.09	1.10	1.24	0.85	0.87
Avail Cap(c_a), veh/h	280	793	344	432	548	550	374	1228	655	93	692	329
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	63.0	58.0	51.6	56.5	51.5	51.5	59.0	47.5	47.5	71.0	57.3	57.6
Incr Delay (d2), s/veh	179.7	49.4	3.8	71.8	78.0	79.4	150.9	55.3	65.6	171.1	10.9	23.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	24.4	20.0	6.9	24.5	31.7	32.0	29.5	31.4	35.3	8.0	11.5	12.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	242.7	107.4	55.5	128.3	129.5	130.9	209.9	102.8	113.1	242.1	68.2	80.5
LnGrp LOS	F	F	E	F	F	F	F	F	F	F	E	F
Approach Vol, veh/h		1419			1712			2548			994	
Approach Delay, s/veh		136.2			129.7			126.1			92.1	
Approach LOS		F			F			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.0	59.0	41.0	38.0	36.0	35.0	28.0	51.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	8.0	55.0	37.0	34.0	32.0	31.0	24.0	47.0
Max Q Clear Time (g_c+I1), s	10.0	57.0	39.0	36.0	34.0	28.2	26.0	49.0
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	1.9	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	124.1
HCM 6th LOS	F



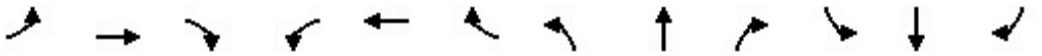
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	250	749	30	500	957	390	170	710	220	310	530	390
Future Volume (veh/h)	250	749	30	500	957	390	170	710	220	310	530	390
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	263	788	18	526	1007	398	179	747	108	326	558	324
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	240	716	16	481	964	422	204	808	117	350	734	426
Arrive On Green	0.07	0.20	0.20	0.14	0.27	0.27	0.12	0.26	0.26	0.20	0.34	0.34
Sat Flow, veh/h	3428	3521	80	3428	3526	1543	1767	3082	445	1767	2133	1237
Grp Volume(v), veh/h	263	394	412	526	1007	398	179	427	428	326	461	421
Grp Sat Flow(s),veh/h/ln	1714	1763	1839	1714	1763	1543	1767	1763	1765	1767	1763	1607
Q Serve(g_s), s	10.0	29.0	29.0	20.0	39.0	36.0	14.2	33.6	33.7	25.9	33.1	33.2
Cycle Q Clear(g_c), s	10.0	29.0	29.0	20.0	39.0	36.0	14.2	33.6	33.7	25.9	33.1	33.2
Prop In Lane	1.00		0.04	1.00		1.00	1.00		0.25	1.00		0.77
Lane Grp Cap(c), veh/h	240	359	374	481	964	422	204	462	462	350	607	553
V/C Ratio(X)	1.09	1.10	1.10	1.09	1.04	0.94	0.88	0.92	0.93	0.93	0.76	0.76
Avail Cap(c_a), veh/h	240	359	374	481	964	422	409	495	495	409	607	553
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	66.3	56.8	56.8	61.3	51.8	50.7	62.0	51.2	51.2	56.2	41.5	41.5
Incr Delay (d2), s/veh	85.3	77.2	76.3	68.9	41.1	29.8	8.6	22.3	22.4	25.5	5.3	5.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.1	20.2	21.0	13.1	22.1	16.9	6.8	17.3	17.4	13.7	14.9	13.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	151.6	133.9	133.1	130.2	92.9	80.5	70.7	73.5	73.6	81.7	46.9	47.4
LnGrp LOS	F	F	F	F	F	F	E	E	E	F	D	D
Approach Vol, veh/h		1069			1931			1034			1208	
Approach Delay, s/veh		138.0			100.5			73.0			56.4	
Approach LOS		F			F			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	35.2	44.4	27.0	36.0	23.5	56.1	17.0	46.0
Change Period (Y+Rc), s	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Max Green Setting (Gmax), s	33.0	40.0	20.0	29.0	33.0	40.0	10.0	39.0
Max Q Clear Time (g_c+I1), s	27.9	35.7	22.0	31.0	16.2	35.2	12.0	41.0
Green Ext Time (p_c), s	0.3	1.7	0.0	0.0	0.3	1.9	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	92.6
HCM 6th LOS	F

Notes

User approved pedestrian interval to be less than phase max green.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	120	570	100	280	1140	190	390	2100	230	160	1750	120
Future Volume (veh/h)	120	570	100	280	1140	190	390	2100	230	160	1750	120
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	126	600	96	295	1200	200	411	2211	235	168	1842	110
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	88	934	149	88	928	154	340	1893	458	1176	5620	1382
Arrive On Green	0.05	0.31	0.31	0.05	0.31	0.31	0.10	0.30	0.30	0.67	0.89	0.89
Sat Flow, veh/h	1753	3012	481	1753	2993	496	3401	6332	1531	1753	6332	1557
Grp Volume(v), veh/h	126	348	348	295	698	702	411	2211	235	168	1842	110
Grp Sat Flow(s),veh/h/ln	1753	1749	1744	1753	1749	1741	1700	1583	1531	1753	1583	1557
Q Serve(g_s), s	5.0	17.1	17.2	5.0	31.0	31.0	10.0	29.9	20.3	3.5	4.6	0.9
Cycle Q Clear(g_c), s	5.0	17.1	17.2	5.0	31.0	31.0	10.0	29.9	20.3	3.5	4.6	0.9
Prop In Lane	1.00		0.28	1.00		0.28	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	88	542	541	88	542	540	340	1893	458	1176	5620	1382
V/C Ratio(X)	1.44	0.64	0.64	3.37	1.29	1.30	1.21	1.17	0.51	0.14	0.33	0.08
Avail Cap(c_a), veh/h	88	542	541	88	542	540	340	1893	458	1176	5620	1382
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.5	29.7	29.7	47.5	34.5	34.5	45.0	35.0	73.8	6.0	0.9	0.7
Incr Delay (d2), s/veh	250.0	2.6	2.6	1092.9	142.8	148.6	118.2	81.6	4.1	0.0	0.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.2	7.2	7.3	28.7	33.6	34.3	9.6	21.3	8.1	1.0	0.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	297.5	32.3	32.4	1140.4	177.3	183.1	163.2	116.7	77.8	6.0	1.0	0.8
LnGrp LOS	F	C	C	F	F	F	F	F	E	A	A	A
Approach Vol, veh/h		822			1695			2857			2120	
Approach Delay, s/veh		73.0			347.4			120.2			1.4	
Approach LOS		E			F			F			A	

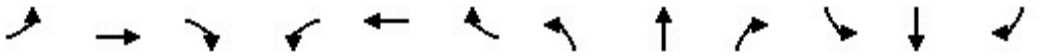
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	75.3	36.4	10.7	38.2	14.7	97.0	10.7	38.2
Change Period (Y+Rc), s	6.5	* 6.5	* 5.7	7.2	* 4.7	6.5	* 5.7	7.2
Max Green Setting (Gmax), s	10.0	* 30	* 5	31.0	* 10	29.9	* 5	31.0
Max Q Clear Time (g_c+I1), s	5.5	31.9	7.0	19.2	12.0	6.6	7.0	33.0
Green Ext Time (p_c), s	0.1	0.0	0.0	3.2	0.0	14.1	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	132.8
HCM 6th LOS	F

Notes

User approved pedestrian interval to be less than phase max green.

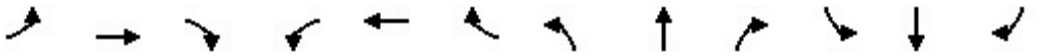
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	170	790	120	140	1170	30	70	590	80	70	260	60
Future Volume (veh/h)	170	790	120	140	1170	30	70	590	80	70	260	60
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	179	832	117	147	1232	32	74	621	77	74	274	47
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	190	1172	165	174	1295	34	88	733	91	88	700	118
Arrive On Green	0.11	0.38	0.38	0.10	0.37	0.37	0.05	0.23	0.23	0.05	0.23	0.23
Sat Flow, veh/h	1767	3096	435	1767	3509	91	1767	3149	390	1767	3006	508
Grp Volume(v), veh/h	179	474	475	147	619	645	74	347	351	74	159	162
Grp Sat Flow(s),veh/h/ln	1767	1763	1768	1767	1763	1837	1767	1763	1776	1767	1763	1752
Q Serve(g_s), s	12.1	27.5	27.5	9.9	41.1	41.2	5.0	22.7	22.8	5.0	9.2	9.4
Cycle Q Clear(g_c), s	12.1	27.5	27.5	9.9	41.1	41.2	5.0	22.7	22.8	5.0	9.2	9.4
Prop In Lane	1.00		0.25	1.00		0.05	1.00		0.22	1.00		0.29
Lane Grp Cap(c), veh/h	190	668	670	174	651	678	88	410	414	88	410	408
V/C Ratio(X)	0.94	0.71	0.71	0.85	0.95	0.95	0.84	0.85	0.85	0.84	0.39	0.40
Avail Cap(c_a), veh/h	190	668	670	205	658	685	88	468	471	88	468	465
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.4	31.8	31.8	53.5	37.0	37.0	56.8	44.2	44.2	56.8	39.0	39.1
Incr Delay (d2), s/veh	48.1	3.7	3.6	23.7	23.6	23.1	48.7	12.6	12.8	48.7	0.7	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.7	11.7	11.7	5.4	20.8	21.6	3.4	10.9	11.0	3.4	3.9	4.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	101.5	35.5	35.5	77.2	60.6	60.1	105.5	56.8	57.0	105.5	39.7	39.9
LnGrp LOS	F	D	D	E	E	E	F	E	E	F	D	D
Approach Vol, veh/h		1128			1411			772			395	
Approach Delay, s/veh		46.0			62.1			61.6			52.1	
Approach LOS		D			E			E			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	20.0	52.0	13.0	35.6	18.8	53.2	13.0	35.6
Change Period (Y+Rc), s	7.0	7.5	7.0	7.5	7.0	7.5	7.0	7.5
Max Green Setting (Gmax), s	13.0	45.0	6.0	32.0	14.0	44.0	6.0	32.0
Max Q Clear Time (g_c+I1), s	14.1	43.2	7.0	11.4	11.9	29.5	7.0	24.8
Green Ext Time (p_c), s	0.0	1.3	0.0	1.8	0.1	5.6	0.0	2.6

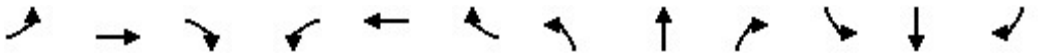
Intersection Summary	
HCM 6th Ctrl Delay	56.0
HCM 6th LOS	E



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	100	820	80	90	1150	50	30	310	80	50	260	60
Future Volume (veh/h)	100	820	80	90	1150	50	30	310	80	50	260	60
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	105	863	79	95	1211	52	32	326	62	53	274	44
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	130	1321	121	121	1375	59	64	511	96	84	561	89
Arrive On Green	0.07	0.41	0.41	0.07	0.40	0.40	0.04	0.17	0.17	0.05	0.18	0.18
Sat Flow, veh/h	1767	3260	298	1767	3441	148	1767	2950	553	1767	3038	481
Grp Volume(v), veh/h	105	467	475	95	620	643	32	193	195	53	157	161
Grp Sat Flow(s),veh/h/ln	1767	1763	1796	1767	1763	1826	1767	1763	1741	1767	1763	1756
Q Serve(g_s), s	5.5	20.3	20.3	5.0	30.9	30.9	1.7	9.6	9.9	2.8	7.6	7.8
Cycle Q Clear(g_c), s	5.5	20.3	20.3	5.0	30.9	30.9	1.7	9.6	9.9	2.8	7.6	7.8
Prop In Lane	1.00		0.17	1.00		0.08	1.00		0.32	1.00		0.27
Lane Grp Cap(c), veh/h	130	714	728	121	704	730	64	305	301	84	326	324
V/C Ratio(X)	0.80	0.65	0.65	0.79	0.88	0.88	0.50	0.63	0.65	0.63	0.48	0.50
Avail Cap(c_a), veh/h	130	723	737	168	760	788	112	597	589	112	597	594
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.2	22.8	22.8	43.5	26.4	26.4	44.9	36.4	36.5	44.3	34.6	34.7
Incr Delay (d2), s/veh	29.6	2.2	2.2	15.3	11.3	11.1	6.0	2.6	2.8	7.5	1.3	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.4	8.0	8.1	2.6	13.7	14.2	0.8	4.1	4.2	1.3	3.2	3.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	72.8	25.0	25.0	58.8	37.6	37.4	50.9	39.0	39.3	51.9	35.9	36.1
LnGrp LOS	E	C	C	E	D	D	D	D	D	D	D	D
Approach Vol, veh/h		1047			1358			420			371	
Approach Delay, s/veh		29.8			39.0			40.1			38.3	
Approach LOS		C			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.0	45.4	10.4	25.0	13.5	45.9	11.5	23.9
Change Period (Y+Rc), s	7.0	7.5	7.0	7.5	7.0	7.5	7.0	7.5
Max Green Setting (Gmax), s	7.0	40.9	6.0	32.1	9.0	38.9	6.0	32.1
Max Q Clear Time (g_c+I1), s	7.5	32.9	3.7	9.8	7.0	22.3	4.8	11.9
Green Ext Time (p_c), s	0.0	4.9	0.0	1.9	0.0	5.9	0.0	2.3

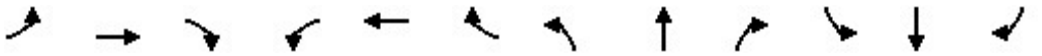
Intersection Summary	
HCM 6th Ctrl Delay	36.1
HCM 6th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	160	774	30	50	1090	20	30	557	20	90	474	72
Future Volume (veh/h)	160	774	30	50	1090	20	30	557	20	90	474	72
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	168	815	31	53	1147	21	32	586	18	95	499	58
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	161	1429	54	82	1305	24	63	944	29	107	976	112
Arrive On Green	0.09	0.41	0.41	0.05	0.37	0.37	0.04	0.19	0.19	0.06	0.21	0.21
Sat Flow, veh/h	1767	3460	132	1767	3540	65	1767	5046	154	1767	4599	526
Grp Volume(v), veh/h	168	415	431	53	571	597	32	391	213	95	364	193
Grp Sat Flow(s),veh/h/ln	1767	1763	1829	1767	1763	1843	1767	1689	1824	1767	1689	1748
Q Serve(g_s), s	9.0	17.9	17.9	2.9	30.0	30.0	1.8	10.6	10.6	5.3	9.4	9.7
Cycle Q Clear(g_c), s	9.0	17.9	17.9	2.9	30.0	30.0	1.8	10.6	10.6	5.3	9.4	9.7
Prop In Lane	1.00		0.07	1.00		0.04	1.00		0.08	1.00		0.30
Lane Grp Cap(c), veh/h	161	728	756	82	650	679	63	632	341	107	716	371
V/C Ratio(X)	1.05	0.57	0.57	0.65	0.88	0.88	0.51	0.62	0.62	0.89	0.51	0.52
Avail Cap(c_a), veh/h	161	728	756	161	694	726	107	1091	589	107	1091	565
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.0	22.3	22.3	46.4	29.2	29.2	46.9	37.0	37.0	46.2	34.5	34.5
Incr Delay (d2), s/veh	83.8	1.2	1.1	8.2	12.1	11.7	6.3	1.2	2.2	53.2	0.7	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.5	7.0	7.2	1.4	13.7	14.2	0.9	4.2	4.7	3.8	3.7	4.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	128.8	23.5	23.5	54.6	41.3	40.9	53.2	38.2	39.3	99.4	35.1	35.9
LnGrp LOS	F	C	C	D	D	D	D	D	D	F	D	D
Approach Vol, veh/h		1014			1221			636			652	
Approach Delay, s/veh		40.9			41.7			39.3			44.7	
Approach LOS		D			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.0	26.0	11.6	48.4	10.5	28.5	16.0	44.0
Change Period (Y+Rc), s	7.0	7.5	7.0	7.5	7.0	7.5	7.0	7.5
Max Green Setting (Gmax), s	6.0	32.0	9.0	39.0	6.0	32.0	9.0	39.0
Max Q Clear Time (g_c+I1), s	7.3	12.6	4.9	19.9	3.8	11.7	11.0	32.0
Green Ext Time (p_c), s	0.0	3.9	0.0	5.5	0.0	3.6	0.0	4.2

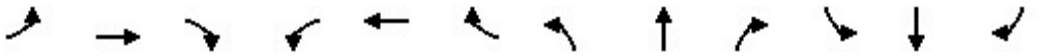
Intersection Summary	
HCM 6th Ctrl Delay	41.6
HCM 6th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	50	884	10	50	980	90	70	150	110	80	50	60
Future Volume (veh/h)	50	884	10	50	980	90	70	150	110	80	50	60
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	53	931	0	53	1032	64	74	158	113	84	53	37
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	94	1329	0	94	1269	79	111	308	205	116	323	202
Arrive On Green	0.05	0.38	0.00	0.05	0.38	0.38	0.06	0.15	0.15	0.07	0.16	0.16
Sat Flow, veh/h	1767	3618	0	1767	3368	209	1767	2004	1335	1767	2059	1290
Grp Volume(v), veh/h	53	931	0	53	540	556	74	138	133	84	45	45
Grp Sat Flow(s),veh/h/ln	1767	1763	0	1767	1763	1814	1767	1763	1576	1767	1763	1586
Q Serve(g_s), s	2.2	16.9	0.0	2.2	20.8	20.8	3.1	5.4	5.9	3.5	1.7	1.9
Cycle Q Clear(g_c), s	2.2	16.9	0.0	2.2	20.8	20.8	3.1	5.4	5.9	3.5	1.7	1.9
Prop In Lane	1.00		0.00	1.00		0.12	1.00		0.85	1.00		0.81
Lane Grp Cap(c), veh/h	94	1329	0	94	664	684	111	271	242	116	277	249
V/C Ratio(X)	0.56	0.70	0.00	0.56	0.81	0.81	0.67	0.51	0.55	0.72	0.16	0.18
Avail Cap(c_a), veh/h	140	1608	0	140	804	827	140	746	667	140	746	671
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.0	20.0	0.0	35.0	21.2	21.2	34.7	29.4	29.6	34.7	27.6	27.7
Incr Delay (d2), s/veh	5.2	1.2	0.0	5.2	5.7	5.5	8.1	1.5	1.9	13.6	0.3	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	6.1	0.0	1.0	8.3	8.5	1.5	2.2	2.2	1.9	0.7	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	40.1	21.1	0.0	40.1	26.9	26.7	42.8	30.8	31.5	48.2	27.9	28.0
LnGrp LOS	D	C	A	D	C	C	D	C	C	D	C	C
Approach Vol, veh/h		984			1149			345			174	
Approach Delay, s/veh		22.2			27.4			33.7			37.7	
Approach LOS		C			C			C			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.0	36.0	10.7	17.9	11.0	36.0	11.0	17.6
Change Period (Y+Rc), s	7.0	7.5	6.0	6.0	7.0	7.5	6.0	6.0
Max Green Setting (Gmax), s	6.0	34.5	6.0	32.0	6.0	34.5	6.0	32.0
Max Q Clear Time (g_c+I1), s	4.2	22.8	5.1	3.9	4.2	18.9	5.5	7.9
Green Ext Time (p_c), s	0.0	5.7	0.0	0.4	0.0	6.1	0.0	1.4

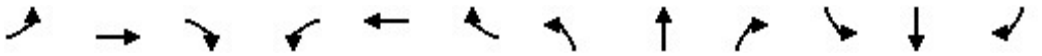
Intersection Summary	
HCM 6th Ctrl Delay	27.0
HCM 6th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	270	724	180	140	510	210	370	1960	100	120	1020	240
Future Volume (veh/h)	270	724	180	140	510	210	370	1960	100	120	1020	240
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.99	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	284	762	129	147	537	186	389	2063	13	126	1074	175
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	248	751	127	139	482	166	333	2114	13	115	1243	202
Arrive On Green	0.14	0.25	0.25	0.08	0.19	0.19	0.19	0.41	0.41	0.07	0.29	0.29
Sat Flow, veh/h	1753	2982	505	1753	2540	876	1753	5152	32	1753	4345	707
Grp Volume(v), veh/h	284	447	444	147	369	354	389	1341	735	126	828	421
Grp Sat Flow(s),veh/h/ln	1753	1749	1738	1753	1749	1668	1753	1675	1834	1753	1675	1702
Q Serve(g_s), s	20.5	36.5	36.5	11.5	27.5	27.5	27.5	57.1	57.1	9.5	34.0	34.0
Cycle Q Clear(g_c), s	20.5	36.5	36.5	11.5	27.5	27.5	27.5	57.1	57.1	9.5	34.0	34.0
Prop In Lane	1.00		0.29	1.00		0.53	1.00		0.02	1.00		0.42
Lane Grp Cap(c), veh/h	248	440	438	139	332	316	333	1374	753	115	959	487
V/C Ratio(X)	1.15	1.01	1.02	1.06	1.11	1.12	1.17	0.98	0.98	1.10	0.86	0.86
Avail Cap(c_a), veh/h	248	440	438	139	332	316	333	1375	753	115	959	487
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	62.2	54.2	54.2	66.7	58.7	58.7	58.7	42.0	42.1	67.7	49.1	49.1
Incr Delay (d2), s/veh	102.2	46.7	46.9	92.4	83.2	86.7	103.9	18.7	27.0	112.4	8.5	15.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	16.1	21.5	21.4	8.7	19.6	19.1	21.4	25.9	30.1	7.7	14.9	16.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	164.5	100.9	101.2	159.1	141.9	145.4	162.6	60.8	69.1	180.2	57.5	64.4
LnGrp LOS	F	F	F	F	F	F	F	E	E	F	E	E
Approach Vol, veh/h		1175			870			2465			1375	
Approach Delay, s/veh		116.4			146.3			79.3			70.9	
Approach LOS		F			F			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.0	67.0	18.0	43.0	35.0	49.0	27.0	34.0
Change Period (Y+Rc), s	7.5	7.5	6.5	6.5	7.5	7.5	6.5	6.5
Max Green Setting (Gmax), s	9.5	59.5	11.5	36.5	27.5	41.5	20.5	27.5
Max Q Clear Time (g_c+I1), s	11.5	59.1	13.5	38.5	29.5	36.0	22.5	29.5
Green Ext Time (p_c), s	0.0	0.3	0.0	0.0	0.0	3.9	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	94.6
HCM 6th LOS	F



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	140	820	220	280	1620	700	170	1540	140	540	1520	120
Future Volume (veh/h)	140	820	220	280	1620	700	170	1540	140	540	1520	120
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	147	863	172	295	1705	702	179	1621	55	568	1600	48
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	245	1464	558	304	1552	679	245	2029	491	449	2409	583
Arrive On Green	0.07	0.29	0.29	0.09	0.31	0.31	0.07	0.32	0.32	0.13	0.38	0.38
Sat Flow, veh/h	3401	5025	1531	3401	5025	1532	3401	6332	1532	3401	6332	1533
Grp Volume(v), veh/h	147	863	172	295	1705	702	179	1621	55	568	1600	48
Grp Sat Flow(s),veh/h/ln	1700	1675	1531	1700	1675	1532	1700	1583	1532	1700	1583	1533
Q Serve(g_s), s	5.8	20.4	11.2	12.0	42.8	42.8	7.1	32.4	3.5	18.3	29.0	2.8
Cycle Q Clear(g_c), s	5.8	20.4	11.2	12.0	42.8	42.8	7.1	32.4	3.5	18.3	29.0	2.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	245	1464	558	304	1552	679	245	2029	491	449	2409	583
V/C Ratio(X)	0.60	0.59	0.31	0.97	1.10	1.03	0.73	0.80	0.11	1.26	0.66	0.08
Avail Cap(c_a), veh/h	245	1465	559	304	1552	679	324	2321	562	449	2554	619
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	62.4	42.0	31.6	62.9	47.9	38.9	63.0	43.0	33.2	60.1	35.6	27.5
Incr Delay (d2), s/veh	2.9	0.6	0.3	42.9	54.8	43.5	3.4	1.8	0.1	135.9	0.6	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	8.3	4.1	6.9	25.1	30.1	3.1	12.3	1.3	16.1	10.7	1.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	65.2	42.6	31.9	105.8	102.7	82.4	66.4	44.8	33.3	196.0	36.2	27.5
LnGrp LOS	E	D	C	F	F	F	E	D	C	F	D	C
Approach Vol, veh/h		1182			2702			1855			2216	
Approach Delay, s/veh		43.9			97.8			46.6			77.0	
Approach LOS		D			F			D			E	

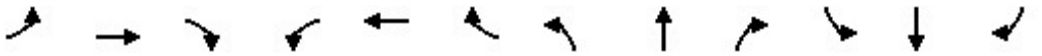
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	23.0	50.9	17.1	47.6	14.7	59.2	14.7	50.0
Change Period (Y+Rc), s	* 4.7	6.5	* 4.7	7.2	* 4.7	6.5	* 4.7	7.2
Max Green Setting (Gmax), s	* 18	50.8	* 12	40.4	* 13	55.9	* 10	42.8
Max Q Clear Time (g_c+I1), s	20.3	34.4	14.0	22.4	9.1	31.0	7.8	44.8
Green Ext Time (p_c), s	0.0	9.5	0.0	5.8	0.1	11.9	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	72.0
HCM 6th LOS	E

Notes

User approved pedestrian interval to be less than phase max green.

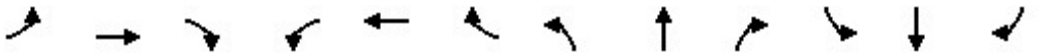
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	240	1500	140	190	2200	100	50	300	30	70	290	140
Future Volume (veh/h)	240	1500	140	190	2200	100	50	300	30	70	290	140
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	253	1579	60	200	2316	40	53	316	27	74	305	100
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	239	2466	597	227	2424	587	74	595	50	90	496	159
Arrive On Green	0.14	0.39	0.39	0.13	0.38	0.38	0.04	0.18	0.18	0.05	0.19	0.19
Sat Flow, veh/h	1753	6332	1534	1753	6332	1533	1753	3256	276	1753	2588	830
Grp Volume(v), veh/h	253	1579	60	200	2316	40	53	169	174	74	204	201
Grp Sat Flow(s),veh/h/ln	1753	1583	1534	1753	1583	1533	1753	1749	1784	1753	1749	1669
Q Serve(g_s), s	16.0	23.8	2.9	13.2	41.8	1.9	3.5	10.2	10.4	4.9	12.5	13.0
Cycle Q Clear(g_c), s	16.0	23.8	2.9	13.2	41.8	1.9	3.5	10.2	10.4	4.9	12.5	13.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.15	1.00		0.50
Lane Grp Cap(c), veh/h	239	2466	597	227	2424	587	74	320	326	90	335	320
V/C Ratio(X)	1.06	0.64	0.10	0.88	0.96	0.07	0.72	0.53	0.53	0.83	0.61	0.63
Avail Cap(c_a), veh/h	239	2466	597	254	2427	588	90	730	744	90	730	697
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.7	29.2	22.8	50.2	35.2	23.0	55.6	43.4	43.5	55.2	43.4	43.6
Incr Delay (d2), s/veh	74.6	0.6	0.1	26.0	9.9	0.1	19.5	1.6	1.6	44.3	2.1	2.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.7	8.6	1.0	7.2	16.6	0.7	1.9	4.4	4.6	3.2	5.4	5.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	125.3	29.8	22.9	76.2	45.2	23.0	75.1	45.0	45.1	99.5	45.5	46.0
LnGrp LOS	F	C	C	E	D	C	E	D	D	F	D	D
Approach Vol, veh/h		1892			2556			396			479	
Approach Delay, s/veh		42.3			47.2			49.1			54.1	
Approach LOS		D			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	23.0	52.5	11.9	30.0	22.2	53.2	13.0	29.0
Change Period (Y+Rc), s	7.0	7.5	7.0	7.5	7.0	7.5	7.0	7.5
Max Green Setting (Gmax), s	16.0	45.0	6.0	49.0	17.0	44.0	6.0	49.0
Max Q Clear Time (g_c+I1), s	18.0	43.8	5.5	15.0	15.2	25.8	6.9	12.4
Green Ext Time (p_c), s	0.0	1.2	0.0	2.7	0.1	11.5	0.0	2.2

Intersection Summary	
HCM 6th Ctrl Delay	46.2
HCM 6th LOS	D



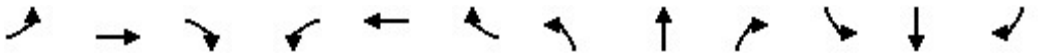
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	390	1560	300	420	1538	310	280	1470	350	200	670	470
Future Volume (veh/h)	390	1560	300	420	1538	310	280	1470	350	200	670	470
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	411	1642	0	442	1619	286	295	1547	0	211	705	313
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	416	1829		416	1570	277	366	1508		195	1524	465
Arrive On Green	0.12	0.29	0.00	0.12	0.29	0.29	0.11	0.30	0.00	0.11	0.30	0.30
Sat Flow, veh/h	3401	6332	1560	3401	5435	960	3401	5025	1560	1753	5025	1531
Grp Volume(v), veh/h	411	1642	0	442	1415	490	295	1547	0	211	705	313
Grp Sat Flow(s),veh/h/ln	1700	1583	1560	1700	1583	1646	1700	1675	1560	1753	1675	1531
Q Serve(g_s), s	10.9	22.4	0.0	11.0	26.0	26.0	7.6	27.0	0.0	10.0	10.2	16.1
Cycle Q Clear(g_c), s	10.9	22.4	0.0	11.0	26.0	26.0	7.6	27.0	0.0	10.0	10.2	16.1
Prop In Lane	1.00		1.00	1.00		0.58	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	416	1829		416	1372	476	366	1508		195	1524	465
V/C Ratio(X)	0.99	0.90		1.06	1.03	1.03	0.80	1.03		1.08	0.46	0.67
Avail Cap(c_a), veh/h	416	1829		416	1372	476	378	1508		195	1524	465
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.4	30.7	0.0	39.5	32.0	32.0	39.2	31.5	0.0	40.0	25.4	27.4
Incr Delay (d2), s/veh	41.2	6.7	0.0	62.0	32.6	49.5	13.4	30.1	0.0	88.4	0.5	5.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.6	8.6	0.0	7.9	13.1	15.9	3.6	13.9	0.0	8.8	3.7	6.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	80.6	37.4	0.0	101.5	64.6	81.5	52.7	61.6	0.0	128.4	25.9	32.5
LnGrp LOS	F	D		F	F	F	D	F		F	C	C
Approach Vol, veh/h		2053	A		2347			1842	A		1229	
Approach Delay, s/veh		46.1			75.1			60.2			45.2	
Approach LOS		D			E			E			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.0	31.0	15.0	30.0	13.7	31.3	15.0	30.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	10.0	27.0	11.0	26.0	10.0	27.0	11.0	26.0
Max Q Clear Time (g_c+I1), s	12.0	29.0	13.0	24.4	9.6	18.1	12.9	28.0
Green Ext Time (p_c), s	0.0	0.0	0.0	1.5	0.1	5.5	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	58.5
HCM 6th LOS	E

Notes

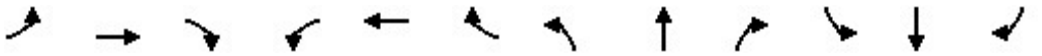
Unsignalized Delay for [NBR, EBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	400	1630	80	170	1738	300	100	310	110	420	310	270
Future Volume (veh/h)	400	1630	80	170	1738	300	100	310	110	420	310	270
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	421	1716	81	179	1829	134	105	326	88	442	326	164
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	371	2097	99	231	1868	452	129	489	130	361	705	346
Arrive On Green	0.11	0.34	0.34	0.07	0.29	0.29	0.07	0.18	0.18	0.21	0.31	0.31
Sat Flow, veh/h	3401	6236	294	3401	6332	1531	1753	2719	721	1753	2257	1109
Grp Volume(v), veh/h	421	1307	490	179	1829	134	105	208	206	442	251	239
Grp Sat Flow(s),veh/h/ln	1700	1583	1781	1700	1583	1531	1753	1749	1691	1753	1749	1617
Q Serve(g_s), s	13.5	31.2	31.2	6.4	35.4	8.4	7.3	13.7	14.1	25.5	14.3	14.8
Cycle Q Clear(g_c), s	13.5	31.2	31.2	6.4	35.4	8.4	7.3	13.7	14.1	25.5	14.3	14.8
Prop In Lane	1.00		0.17	1.00		1.00	1.00		0.43	1.00		0.69
Lane Grp Cap(c), veh/h	371	1597	599	231	1868	452	129	314	304	361	546	505
V/C Ratio(X)	1.13	0.82	0.82	0.78	0.98	0.30	0.81	0.66	0.68	1.22	0.46	0.47
Avail Cap(c_a), veh/h	371	1597	599	234	1868	452	237	685	663	361	810	749
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	55.1	37.6	37.6	56.8	43.2	33.7	56.5	47.2	47.4	49.1	34.2	34.3
Incr Delay (d2), s/veh	88.6	3.6	9.1	13.6	16.2	0.5	4.6	0.9	1.0	122.9	0.2	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.2	12.0	14.4	3.1	15.1	3.0	3.3	5.9	5.9	23.1	5.9	5.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	143.7	41.2	46.7	70.3	59.4	34.2	61.1	48.1	48.4	172.0	34.4	34.6
LnGrp LOS	F	D	D	E	E	C	E	D	D	F	C	C
Approach Vol, veh/h		2218			2142			519			932	
Approach Delay, s/veh		61.9			58.8			50.9			99.7	
Approach LOS		E			E			D			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	32.0	28.7	14.9	48.1	15.6	45.1	20.0	43.0
Change Period (Y+Rc), s	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
Max Green Setting (Gmax), s	25.5	48.5	8.5	41.5	16.7	57.3	13.5	36.5
Max Q Clear Time (g_c+I1), s	27.5	16.1	8.4	33.2	9.3	16.8	15.5	37.4
Green Ext Time (p_c), s	0.0	1.4	0.0	6.9	0.1	1.7	0.0	0.0

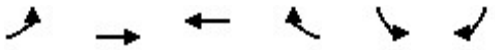
Intersection Summary	
HCM 6th Ctrl Delay	65.8
HCM 6th LOS	E



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	316	1662	150	373	1837	270	170	1184	508	280	407	191
Future Volume (veh/h)	316	1662	150	373	1837	270	170	1184	508	280	407	191
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	333	1749	149	393	1934	160	179	1246	382	295	428	49
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	329	2104	179	429	1916	585	225	1189	362	290	1286	391
Arrive On Green	0.10	0.35	0.35	0.13	0.38	0.38	0.07	0.24	0.24	0.09	0.26	0.26
Sat Flow, veh/h	3401	5978	509	3401	5025	1533	3401	5025	1529	3401	5025	1530
Grp Volume(v), veh/h	333	1389	509	393	1934	160	179	1246	382	295	428	49
Grp Sat Flow(s),veh/h/ln	1700	1583	1738	1700	1675	1533	1700	1675	1529	1700	1675	1530
Q Serve(g_s), s	14.5	40.2	40.2	17.1	57.2	10.8	7.8	35.5	35.5	12.8	10.4	3.7
Cycle Q Clear(g_c), s	14.5	40.2	40.2	17.1	57.2	10.8	7.8	35.5	35.5	12.8	10.4	3.7
Prop In Lane	1.00		0.29	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	329	1672	612	429	1916	585	225	1189	362	290	1286	391
V/C Ratio(X)	1.01	0.83	0.83	0.92	1.01	0.27	0.80	1.05	1.06	1.02	0.33	0.13
Avail Cap(c_a), veh/h	329	1672	612	429	1916	585	304	1189	362	290	1286	391
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	67.8	44.5	44.5	64.8	46.4	32.1	69.1	57.3	57.3	68.6	45.4	42.9
Incr Delay (d2), s/veh	52.9	3.8	9.6	24.2	22.8	0.3	8.9	39.5	62.8	57.1	0.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.5	15.7	18.2	8.6	26.5	4.0	3.6	18.9	19.6	7.7	4.3	1.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	120.7	48.3	54.2	89.0	69.2	32.4	77.9	96.8	120.1	125.7	45.6	43.1
LnGrp LOS	F	D	D	F	F	C	E	F	F	F	D	D
Approach Vol, veh/h		2231			2487			1807			772	
Approach Delay, s/veh		60.4			70.0			99.8			76.0	
Approach LOS		E			E			F			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	26.4	60.3	17.4	45.9	22.0	64.7	20.3	43.0
Change Period (Y+Rc), s	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5
Max Green Setting (Gmax), s	18.9	52.8	13.4	34.9	14.5	57.2	12.8	35.5
Max Q Clear Time (g_c+I1), s	19.1	42.2	9.8	12.4	16.5	59.2	14.8	37.5
Green Ext Time (p_c), s	0.0	8.2	0.1	3.2	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	75.1
HCM 6th LOS	E



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	1720	810	220	230	1760
Future Volume (veh/h)	0	1720	810	220	230	1760
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	0	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	0	1811	853	0	242	1817
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	4	4	4	4	4
Cap, veh/h	0	1747	1216		978	1740
Arrive On Green	0.00	0.35	0.35	0.00	0.56	0.56
Sat Flow, veh/h	0	5356	3589	1560	1753	3120
Grp Volume(v), veh/h	0	1811	853	0	242	1817
Grp Sat Flow(s),veh/h/ln	0	1675	1749	1560	1753	1560
Q Serve(g_s), s	0.0	45.2	27.4	0.0	9.2	72.5
Cycle Q Clear(g_c), s	0.0	45.2	27.4	0.0	9.2	72.5
Prop In Lane	0.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	0	1747	1216		978	1740
V/C Ratio(X)	0.00	1.04	0.70		0.25	1.04
Avail Cap(c_a), veh/h	0	1747	1216		978	1740
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	42.4	36.6	0.0	14.8	28.8
Incr Delay (d2), s/veh	0.0	31.6	1.8	0.0	0.1	34.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	22.6	11.3	0.0	3.5	32.7
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.0	74.0	38.4	0.0	14.9	62.9
LnGrp LOS	A	F	D		B	F
Approach Vol, veh/h		1811	853	A	2059	
Approach Delay, s/veh		74.0	38.4		57.3	
Approach LOS		E	D		E	

Timer - Assigned Phs	2	4	6
Phs Duration (G+Y+Rc), s	52.0	78.0	52.0
Change Period (Y+Rc), s	6.8	5.5	6.8
Max Green Setting (Gmax), s	45.2	72.5	45.2
Max Q Clear Time (g_c+I1), s	47.2	74.5	29.4
Green Ext Time (p_c), s	0.0	0.0	4.6

Intersection Summary	
HCM 6th Ctrl Delay	60.3
HCM 6th LOS	E

Notes

User approved volume balancing among the lanes for turning movement.

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	740	1210	180	440	590	560
Future Volume (veh/h)	740	1210	180	440	590	560
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		0.97	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	779	1270	189	463	656	329
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	4	4	4
Cap, veh/h	1711	1864	216	3159	711	316
Arrive On Green	0.49	0.49	0.06	0.63	0.20	0.20
Sat Flow, veh/h	3589	2673	3401	5191	3506	1560
Grp Volume(v), veh/h	779	1270	189	463	656	329
Grp Sat Flow(s),veh/h/ln	1749	1336	1700	1675	1753	1560
Q Serve(g_s), s	11.5	22.0	4.3	3.0	14.5	16.0
Cycle Q Clear(g_c), s	11.5	22.0	4.3	3.0	14.5	16.0
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1711	1864	216	3159	711	316
V/C Ratio(X)	0.46	0.68	0.88	0.15	0.92	1.04
Avail Cap(c_a), veh/h	2425	2410	216	4185	711	316
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	13.2	7.1	36.6	6.0	30.8	31.4
Incr Delay (d2), s/veh	0.2	0.5	30.8	0.0	17.6	61.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.6	8.8	2.6	0.7	7.7	11.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	13.4	7.7	67.5	6.0	48.5	92.8
LnGrp LOS	B	A	E	A	D	F
Approach Vol, veh/h	2049			652	985	
Approach Delay, s/veh	9.9			23.8	63.3	
Approach LOS	A			C	E	

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	11.0	45.9				56.9	22.0
Change Period (Y+Rc), s	6.0	7.3				7.3	6.0
Max Green Setting (Gmax), s	5.0	54.7				65.7	16.0
Max Q Clear Time (g_c+I1), s	6.3	24.0				5.0	18.0
Green Ext Time (p_c), s	0.0	13.7				2.9	0.0

Intersection Summary	
HCM 6th Ctrl Delay	26.6
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.
User approved volume balancing among the lanes for turning movement.

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	1149	1797	30	0	20
Future Vol, veh/h	0	1149	1797	30	0	20
Conflicting Peds, #/hr	5	0	0	5	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	0	1209	1892	32	0	21

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	967
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.96
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.33
Pot Cap-1 Maneuver	0	-	-	-	0	252
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	251
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	20.7
HCM LOS			C

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	251
HCM Lane V/C Ratio	-	-	-	0.084
HCM Control Delay (s)	-	-	-	20.7
HCM Lane LOS	-	-	-	C
HCM 95th %tile Q(veh)	-	-	-	0.3

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	1149	1807	20	0	20
Future Vol, veh/h	0	1149	1807	20	0	20
Conflicting Peds, #/hr	0	0	0	5	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	0	1209	1902	21	0	21

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	967
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.96
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.33
Pot Cap-1 Maneuver	0	-	-	-	0	252
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	251
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	20.7
HCM LOS			C

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	251
HCM Lane V/C Ratio	-	-	-	0.084
HCM Control Delay (s)	-	-	-	20.7
HCM Lane LOS	-	-	-	C
HCM 95th %tile Q(veh)	-	-	-	0.3

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	20	1129	1817	20	10	10
Future Vol, veh/h	20	1129	1817	20	10	10
Conflicting Peds, #/hr	5	0	0	5	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	21	1188	1913	21	11	11

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1939	0	-	0	2565	972
Stage 1	-	-	-	-	1929	-
Stage 2	-	-	-	-	636	-
Critical Hdwy	4.16	-	-	-	6.86	6.96
Critical Hdwy Stg 1	-	-	-	-	5.86	-
Critical Hdwy Stg 2	-	-	-	-	5.86	-
Follow-up Hdwy	2.23	-	-	-	3.53	3.33
Pot Cap-1 Maneuver	295	-	-	-	21	250
Stage 1	-	-	-	-	98	-
Stage 2	-	-	-	-	487	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	294	-	-	-	19	249
Mov Cap-2 Maneuver	-	-	-	-	74	-
Stage 1	-	-	-	-	91	-
Stage 2	-	-	-	-	485	-

Approach	EB	WB	SB
HCM Control Delay, s	0.3	0	43.6
HCM LOS			E

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	294	-	-	-	114
HCM Lane V/C Ratio	0.072	-	-	-	0.185
HCM Control Delay (s)	18.2	-	-	-	43.6
HCM Lane LOS	C	-	-	-	E
HCM 95th %tile Q(veh)	0.2	-	-	-	0.6

Intersection	
Int Delay, s/veh	1.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	40	1109	1807	20	30	30
Future Vol, veh/h	40	1109	1807	20	30	30
Conflicting Peds, #/hr	5	0	0	5	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	350	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	42	1167	1902	21	32	32

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1928	0	-	0	2586	967
Stage 1	-	-	-	-	1918	-
Stage 2	-	-	-	-	668	-
Critical Hdwy	4.16	-	-	-	6.86	6.96
Critical Hdwy Stg 1	-	-	-	-	5.86	-
Critical Hdwy Stg 2	-	-	-	-	5.86	-
Follow-up Hdwy	2.23	-	-	-	3.53	3.33
Pot Cap-1 Maneuver	298	-	-	-	~ 20	252
Stage 1	-	-	-	-	100	-
Stage 2	-	-	-	-	469	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	297	-	-	-	~ 17	251
Mov Cap-2 Maneuver	-	-	-	-	70	-
Stage 1	-	-	-	-	86	-
Stage 2	-	-	-	-	467	-

Approach	EB	WB	SB
HCM Control Delay, s	0.7	0	75.9
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	297	-	-	-	109
HCM Lane V/C Ratio	0.142	-	-	-	0.579
HCM Control Delay (s)	19.1	-	-	-	75.9
HCM Lane LOS	C	-	-	-	F
HCM 95th %tile Q(veh)	0.5	-	-	-	2.8

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	7.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	30	1109	1797	30	30	30
Future Vol, veh/h	30	1109	1797	30	30	30
Conflicting Peds, #/hr	5	0	0	5	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	175	-	-	-	0	76
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	32	1167	1892	32	32	32

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1929	0	-	0	2561	967
Stage 1	-	-	-	-	1913	-
Stage 2	-	-	-	-	648	-
Critical Hdwy	4.16	-	-	-	6.86	6.96
Critical Hdwy Stg 1	-	-	-	-	5.86	-
Critical Hdwy Stg 2	-	-	-	-	5.86	-
Follow-up Hdwy	2.23	-	-	-	3.53	3.33
Pot Cap-1 Maneuver	298	-	-	-	~ 21	252
Stage 1	-	-	-	-	100	-
Stage 2	-	-	-	-	480	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	297	-	-	-	~ 19	251
Mov Cap-2 Maneuver	-	-	-	-	~ 19	-
Stage 1	-	-	-	-	89	-
Stage 2	-	-	-	-	478	-

Approach	EB	WB	SB
HCM Control Delay, s	0.5	0	$ 384.8
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	297	-	-	-	19	251
HCM Lane V/C Ratio	0.106	-	-	-	1.662	0.126
HCM Control Delay (s)	18.6	-	-	-	$ 748.3	21.4
HCM Lane LOS	C	-	-	-	F	C
HCM 95th %tile Q(veh)	0.4	-	-	-	4.3	0.4

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	14

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	854	30	30	1070	90	90
Future Vol, veh/h	854	30	30	1070	90	90
Conflicting Peds, #/hr	0	5	5	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	100	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	899	32	32	1126	95	95

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	936	0	1547	471
Stage 1	-	-	-	-	920	-
Stage 2	-	-	-	-	627	-
Critical Hdwy	-	-	4.16	-	6.86	6.96
Critical Hdwy Stg 1	-	-	-	-	5.86	-
Critical Hdwy Stg 2	-	-	-	-	5.86	-
Follow-up Hdwy	-	-	2.23	-	3.53	3.33
Pot Cap-1 Maneuver	-	-	721	-	104	536
Stage 1	-	-	-	-	346	-
Stage 2	-	-	-	-	492	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	718	-	99	533
Mov Cap-2 Maneuver	-	-	-	-	99	-
Stage 1	-	-	-	-	344	-
Stage 2	-	-	-	-	470	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.3	166
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	167	-	-	718	-
HCM Lane V/C Ratio	1.135	-	-	0.044	-
HCM Control Delay (s)	166	-	-	10.2	-
HCM Lane LOS	F	-	-	B	-
HCM 95th %tile Q(veh)	9.9	-	-	0.1	-

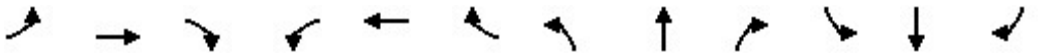
Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	5	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	150	150	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	0	0	0	0	0	0

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	5	5	0	0	5	0
Stage 1	5	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Critical Hdwy	5.76	7.16	-	-	5.36	-
Critical Hdwy Stg 1	6.66	-	-	-	-	-
Critical Hdwy Stg 2	6.06	-	-	-	-	-
Follow-up Hdwy	3.83	3.93	-	-	3.13	-
Pot Cap-1 Maneuver	935	909	-	-	1144	-
Stage 1	934	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	930	905	-	-	1139	-
Mov Cap-2 Maneuver	930	-	-	-	-	-
Stage 1	929	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	-	-	1139	-
HCM Lane V/C Ratio	-	-	-	-	-	-
HCM Control Delay (s)	-	-	0	0	0	-
HCM Lane LOS	-	-	A	A	A	-
HCM 95th %tile Q(veh)	-	-	-	-	0	-



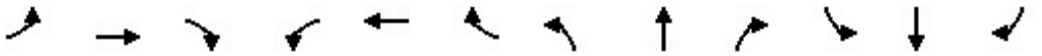
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	290	690	110	30	790	1010	210	1250	60	1050	1080	200
Future Volume (veh/h)	290	690	110	30	790	1010	210	1250	60	1050	1080	200
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	305	726	38	32	832	895	221	1316	61	1105	1137	93
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	249	1543	477	154	1402	433	183	1504	70	245	1712	522
Arrive On Green	0.07	0.31	0.31	0.05	0.28	0.28	0.10	0.31	0.31	0.14	0.34	0.34
Sat Flow, veh/h	3401	5025	1552	3401	5025	1552	1753	4917	228	1753	5025	1532
Grp Volume(v), veh/h	305	726	38	32	832	895	221	897	480	1105	1137	93
Grp Sat Flow(s),veh/h/ln	1700	1675	1552	1700	1675	1552	1753	1675	1795	1753	1675	1532
Q Serve(g_s), s	10.5	16.8	2.5	1.3	20.5	40.0	15.0	36.4	36.4	20.0	27.6	6.1
Cycle Q Clear(g_c), s	10.5	16.8	2.5	1.3	20.5	40.0	15.0	36.4	36.4	20.0	27.6	6.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.13	1.00		1.00
Lane Grp Cap(c), veh/h	249	1543	477	154	1402	433	183	1024	549	245	1712	522
V/C Ratio(X)	1.22	0.47	0.08	0.21	0.59	2.07	1.20	0.88	0.88	4.52	0.66	0.18
Avail Cap(c_a), veh/h	249	1543	477	214	1402	433	183	1063	570	245	1771	540
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	66.4	40.2	35.3	66.0	44.6	51.7	64.2	47.2	47.2	61.7	40.3	33.2
Incr Delay (d2), s/veh	131.2	0.3	0.1	0.5	0.7	488.1	132.3	8.4	14.4	1592.2	1.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.0	6.8	0.9	0.6	8.3	73.5	13.3	15.8	17.8	116.9	11.3	2.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	197.6	40.5	35.4	66.4	45.4	539.7	196.4	55.5	61.5	1653.8	41.3	33.4
LnGrp LOS	F	D	D	E	D	F	F	E	E	F	D	C
Approach Vol, veh/h		1069			1759			1598			2335	
Approach Delay, s/veh		85.1			297.3			76.8			804.1	
Approach LOS		F			F			E			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	27.0	50.8	14.0	51.5	22.0	55.8	18.0	47.5
Change Period (Y+Rc), s	7.0	7.0	7.5	7.5	7.0	7.0	7.5	7.5
Max Green Setting (Gmax), s	20.0	45.5	9.0	41.5	15.0	50.5	10.5	40.0
Max Q Clear Time (g_c+I1), s	22.0	38.4	3.3	18.8	17.0	29.6	12.5	42.0
Green Ext Time (p_c), s	0.0	5.2	0.0	5.7	0.0	10.6	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	386.7
HCM 6th LOS	F

Notes

User approved pedestrian interval to be less than phase max green.



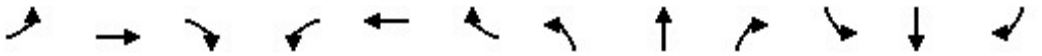
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	50	1460	350	300	1500	40	330	40	140	80	50	50
Future Volume (veh/h)	50	1460	350	300	1500	40	330	40	140	80	50	50
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	53	1537	176	316	1579	40	347	42	41	84	53	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	100	1563	479	312	2175	55	435	971	427	428	971	
Arrive On Green	0.06	0.31	0.31	0.18	0.43	0.43	0.28	0.28	0.28	0.28	0.28	0.00
Sat Flow, veh/h	1753	5025	1539	1753	5038	128	1330	3497	1539	1294	3589	0
Grp Volume(v), veh/h	53	1537	176	316	1050	569	347	42	41	84	53	0
Grp Sat Flow(s),veh/h/ln	1753	1675	1539	1753	1675	1816	1330	1749	1539	1294	1749	0
Q Serve(g_s), s	2.6	27.3	8.0	16.0	23.3	23.3	23.3	0.8	1.8	4.6	1.0	0.0
Cycle Q Clear(g_c), s	2.6	27.3	8.0	16.0	23.3	23.3	24.3	0.8	1.8	5.4	1.0	0.0
Prop In Lane	1.00		1.00	1.00		0.07	1.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	100	1563	479	312	1447	784	435	971	427	428	971	
V/C Ratio(X)	0.53	0.98	0.37	1.01	0.73	0.73	0.80	0.04	0.10	0.20	0.05	
Avail Cap(c_a), veh/h	136	1563	479	312	1447	784	435	971	427	428	971	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	41.3	30.8	24.1	37.0	21.2	21.2	32.7	23.8	24.1	25.7	23.8	0.0
Incr Delay (d2), s/veh	1.6	18.8	0.7	54.6	2.0	3.7	10.9	0.0	0.2	0.4	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	12.5	2.7	11.0	8.2	9.3	8.2	0.3	0.6	1.4	0.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	42.9	49.6	24.8	91.6	23.2	24.8	43.7	23.8	24.3	26.1	23.9	0.0
LnGrp LOS	D	D	C	F	C	C	D	C	C	C	C	
Approach Vol, veh/h		1766			1935			430			137	A
Approach Delay, s/veh		46.9			34.8			39.9			25.2	
Approach LOS		D			C			D			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	23.0	35.0		32.0	12.1	45.9		32.0				
Change Period (Y+Rc), s	7.0	7.0		7.0	7.0	7.0		7.0				
Max Green Setting (Gmax), s	16.0	28.0		25.0	7.0	37.0		25.0				
Max Q Clear Time (g_c+I1), s	18.0	29.3		26.3	4.6	25.3		7.4				
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	8.6		0.7				

Intersection Summary		
HCM 6th Ctrl Delay		40.0
HCM 6th LOS		D

Notes

Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.

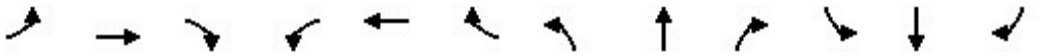


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	360	160	190	520	70	130	355	40	50	675	200
Future Volume (veh/h)	30	360	160	190	520	70	130	355	40	50	675	200
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	32	379	113	200	547	63	137	374	35	53	711	184
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	228	556	164	293	791	91	257	1074	100	412	852	220
Arrive On Green	0.04	0.21	0.21	0.08	0.25	0.25	0.07	0.33	0.33	0.05	0.31	0.31
Sat Flow, veh/h	1753	2650	779	1753	3154	362	1753	3229	300	1753	2738	708
Grp Volume(v), veh/h	32	248	244	200	303	307	137	202	207	53	454	441
Grp Sat Flow(s),veh/h/ln	1753	1749	1681	1753	1749	1767	1753	1749	1780	1753	1749	1698
Q Serve(g_s), s	1.2	10.8	11.1	6.5	12.9	13.0	4.3	7.2	7.3	1.6	19.9	19.9
Cycle Q Clear(g_c), s	1.2	10.8	11.1	6.5	12.9	13.0	4.3	7.2	7.3	1.6	19.9	19.9
Prop In Lane	1.00		0.46	1.00		0.20	1.00		0.17	1.00		0.42
Lane Grp Cap(c), veh/h	228	367	353	293	439	443	257	582	592	412	544	528
V/C Ratio(X)	0.14	0.68	0.69	0.68	0.69	0.69	0.53	0.35	0.35	0.13	0.83	0.84
Avail Cap(c_a), veh/h	289	572	550	293	583	589	257	604	615	449	604	587
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.4	30.0	30.1	26.0	28.0	28.0	20.1	20.8	20.8	17.5	26.4	26.4
Incr Delay (d2), s/veh	0.3	3.1	3.4	6.4	3.0	3.0	2.4	0.5	0.5	0.2	9.7	10.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	4.5	4.4	3.3	5.2	5.3	1.7	2.8	2.8	0.6	9.0	8.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	24.7	33.1	33.5	32.3	31.0	31.0	22.5	21.3	21.3	17.7	36.1	36.4
LnGrp LOS	C	C	C	C	C	C	C	C	C	B	D	D
Approach Vol, veh/h		524			810			546			948	
Approach Delay, s/veh		32.8			31.3			21.6			35.2	
Approach LOS		C			C			C			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.2	34.4	13.0	23.8	13.0	32.7	9.6	27.2
Change Period (Y+Rc), s	7.0	7.0	6.5	6.5	7.0	7.0	6.5	6.5
Max Green Setting (Gmax), s	6.0	28.5	6.5	27.0	6.0	28.5	6.0	27.5
Max Q Clear Time (g_c+I1), s	3.6	9.3	8.5	13.1	6.3	21.9	3.2	15.0
Green Ext Time (p_c), s	0.0	2.9	0.0	3.1	0.0	3.6	0.0	3.6

Intersection Summary	
HCM 6th Ctrl Delay	31.0
HCM 6th LOS	C

Min green cannot be greater than Max Green.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	450	20	490	250	1660	0	0	2330	950
Future Volume (veh/h)	0	0	0	450	20	490	250	1660	0	0	2330	950
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1841	1841	1841	1841	1841	0	0	1841	1841
Adj Flow Rate, veh/h				611	0	283	263	1747	0	0	2453	678
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				4	4	4	4	4	0	0	4	4
Cap, veh/h				701	0	312	377	3295	0	0	2447	757
Arrive On Green				0.20	0.00	0.20	0.11	0.66	0.00	0.00	0.49	0.49
Sat Flow, veh/h				3506	0	1560	3401	5191	0	0	5191	1555
Grp Volume(v), veh/h				611	0	283	263	1747	0	0	2453	678
Grp Sat Flow(s),veh/h/ln				1753	0	1560	1700	1675	0	0	1675	1555
Q Serve(g_s), s				15.2	0.0	16.0	6.7	16.5	0.0	0.0	43.8	35.7
Cycle Q Clear(g_c), s				15.2	0.0	16.0	6.7	16.5	0.0	0.0	43.8	35.7
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				701	0	312	377	3295	0	0	2447	757
V/C Ratio(X)				0.87	0.00	0.91	0.70	0.53	0.00	0.00	1.00	0.90
Avail Cap(c_a), veh/h				701	0	312	378	3295	0	0	2447	757
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.53	0.53	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				34.9	0.0	35.2	38.5	8.2	0.0	0.0	23.1	21.0
Incr Delay (d2), s/veh				11.9	0.0	29.1	3.0	0.3	0.0	0.0	18.7	15.3
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				7.5	0.0	8.4	2.9	4.8	0.0	0.0	19.3	14.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				46.8	0.0	64.3	41.5	8.5	0.0	0.0	41.8	36.3
LnGrp LOS				D	A	E	D	A	A	A	F	D
Approach Vol, veh/h					894			2010			3131	
Approach Delay, s/veh					52.4			12.8			40.6	
Approach LOS					D			B			D	

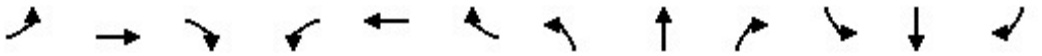
Timer - Assigned Phs	2		5	6		8						
Phs Duration (G+Y+Rc), s	65.0		15.2	49.8		25.0						
Change Period (Y+Rc), s	6.0		* 5.2	6.0		7.0						
Max Green Setting (Gmax), s	59.0		* 10	43.8		18.0						
Max Q Clear Time (g_c+I1), s	18.5		8.7	45.8		18.0						
Green Ext Time (p_c), s	24.9		0.1	0.0		0.0						

Intersection Summary		
HCM 6th Ctrl Delay	33.1	
HCM 6th LOS	C	

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	270	10	300	0	0	0	0	1640	320	410	2370	0
Future Volume (veh/h)	270	10	300	0	0	0	0	1640	320	410	2370	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841				0	1841	1841	1841	1841	0
Adj Flow Rate, veh/h	284	11	314				0	1726	137	432	2495	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4				0	4	4	4	4	0
Cap, veh/h	770	12	343				0	2143	663	511	3161	0
Arrive On Green	0.23	0.23	0.23				0.00	0.43	0.43	0.10	0.42	0.00
Sat Flow, veh/h	3401	53	1515				0	5191	1554	3401	5191	0
Grp Volume(v), veh/h	284	0	325				0	1726	137	432	2495	0
Grp Sat Flow(s),veh/h/ln	1700	0	1568				0	1675	1554	1700	1675	0
Q Serve(g_s), s	6.3	0.0	18.2				0.0	27.0	5.0	11.2	38.7	0.0
Cycle Q Clear(g_c), s	6.3	0.0	18.2				0.0	27.0	5.0	11.2	38.7	0.0
Prop In Lane	1.00		0.97				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	770	0	355				0	2143	663	511	3161	0
V/C Ratio(X)	0.37	0.00	0.92				0.00	0.81	0.21	0.84	0.79	0.00
Avail Cap(c_a), veh/h	831	0	383				0	2143	663	563	3161	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	0.67	0.67	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.09	0.09	0.00
Uniform Delay (d), s/veh	29.4	0.0	34.0				0.0	22.5	16.2	39.4	20.9	0.0
Incr Delay (d2), s/veh	0.4	0.0	25.8				0.0	3.3	0.7	1.1	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	0.0	9.3				0.0	10.3	1.8	4.8	15.3	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	29.8	0.0	59.7				0.0	25.9	16.9	40.5	21.1	0.0
LnGrp LOS	C	A	E				A	C	B	D	C	A
Approach Vol, veh/h		609						1863			2927	
Approach Delay, s/veh		45.8						25.2			23.9	
Approach LOS		D						C			C	

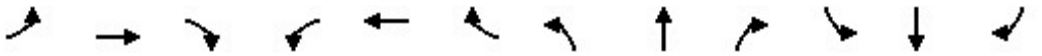
Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	18.2	44.4		27.4		62.6
Change Period (Y+Rc), s	* 4.7	6.0		7.0		6.0
Max Green Setting (Gmax), s	* 15	35.4		22.0		55.0
Max Q Clear Time (g_c+I1), s	13.2	29.0		20.2		40.7
Green Ext Time (p_c), s	0.3	5.8		0.2		13.5

Intersection Summary	
HCM 6th Ctrl Delay	26.8
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	530	10	140	190	530	0	0	1450	510
Future Volume (veh/h)	0	0	0	530	10	140	190	530	0	0	1450	510
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		0.97
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1841	1841	1841	1841	1841	0	0	1841	1841
Adj Flow Rate, veh/h				566	0	28	200	558	0	0	1526	376
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				4	4	4	4	4	0	0	4	4
Cap, veh/h				645	0	574	219	2347	0	0	1691	734
Arrive On Green				0.18	0.00	0.18	0.25	1.00	0.00	0.00	0.48	0.48
Sat Flow, veh/h				3506	0	3120	1753	3589	0	0	3589	1518
Grp Volume(v), veh/h				566	0	28	200	558	0	0	1526	376
Grp Sat Flow(s),veh/h/ln				1753	0	1560	1753	1749	0	0	1749	1518
Q Serve(g_s), s				12.6	0.0	0.6	8.9	0.0	0.0	0.0	32.0	13.6
Cycle Q Clear(g_c), s				12.6	0.0	0.6	8.9	0.0	0.0	0.0	32.0	13.6
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				645	0	574	219	2347	0	0	1691	734
V/C Ratio(X)				0.88	0.00	0.05	0.91	0.24	0.00	0.00	0.90	0.51
Avail Cap(c_a), veh/h				666	0	593	219	2347	0	0	1691	734
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.73	0.73	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				31.8	0.0	26.9	29.6	0.0	0.0	0.0	18.9	14.2
Incr Delay (d2), s/veh				12.2	0.0	0.0	30.2	0.2	0.0	0.0	8.3	2.5
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				6.2	0.0	0.2	4.9	0.1	0.0	0.0	12.7	4.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				44.0	0.0	26.9	59.8	0.2	0.0	0.0	27.2	16.7
LnGrp LOS				D	A	C	E	A	A	A	C	B
Approach Vol, veh/h					594			758			1902	
Approach Delay, s/veh					43.2			15.9			25.1	
Approach LOS					D			B			C	

Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		59.5			15.0	44.5		20.5				
Change Period (Y+Rc), s		5.8			5.0	5.8		5.8				
Max Green Setting (Gmax), s		53.2			10.0	38.2		15.2				
Max Q Clear Time (g_c+I1), s		2.0			10.9	34.0		14.6				
Green Ext Time (p_c), s		3.0			0.0	2.8		0.2				

Intersection Summary		
HCM 6th Ctrl Delay	26.3	
HCM 6th LOS	C	

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	150	10	260	0	0	0	0	570	310	390	1590	0
Future Volume (veh/h)	150	10	260	0	0	0	0	570	310	390	1590	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		0.97	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841				0	1841	1841	1841	1841	0
Adj Flow Rate, veh/h	158	0	146				0	600	241	411	1674	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4				0	4	4	4	4	0
Cap, veh/h	438	0	390				0	992	398	450	2554	0
Arrive On Green	0.12	0.00	0.12				0.00	0.41	0.41	0.26	0.73	0.00
Sat Flow, veh/h	3506	0	3120				0	2506	968	1753	3589	0
Grp Volume(v), veh/h	158	0	146				0	434	407	411	1674	0
Grp Sat Flow(s),veh/h/ln	1753	0	1560				0	1749	1634	1753	1749	0
Q Serve(g_s), s	3.3	0.0	3.4				0.0	15.6	15.6	18.2	19.8	0.0
Cycle Q Clear(g_c), s	3.3	0.0	3.4				0.0	15.6	15.6	18.2	19.8	0.0
Prop In Lane	1.00		1.00				0.00		0.59	1.00		0.00
Lane Grp Cap(c), veh/h	438	0	390				0	719	672	450	2554	0
V/C Ratio(X)	0.36	0.00	0.37				0.00	0.60	0.61	0.91	0.66	0.00
Avail Cap(c_a), veh/h	447	0	398				0	719	672	548	2554	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.28	0.28	0.00
Uniform Delay (d), s/veh	32.1	0.0	32.1				0.0	18.5	18.5	28.9	5.6	0.0
Incr Delay (d2), s/veh	0.4	0.0	0.4				0.0	3.7	4.0	5.6	0.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	0.0	1.3				0.0	6.2	5.9	7.7	4.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	32.5	0.0	32.6				0.0	22.2	22.5	34.5	6.0	0.0
LnGrp LOS	C	A	C				A	C	C	C	A	A
Approach Vol, veh/h		304						841			2085	
Approach Delay, s/veh		32.5						22.3			11.6	
Approach LOS		C						C			B	

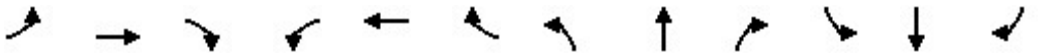
Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	25.5	38.7		15.8		64.2
Change Period (Y+Rc), s	5.0	5.8		5.8		5.8
Max Green Setting (Gmax), s	25.0	28.2		10.2		58.2
Max Q Clear Time (g_c+I1), s	20.2	17.6		5.4		21.8
Green Ext Time (p_c), s	0.3	3.1		0.4		13.5

Intersection Summary	
HCM 6th Ctrl Delay	16.4
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.

User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	490	10	340	460	750	0	0	1990	250
Future Volume (veh/h)	0	0	0	490	10	340	460	750	0	0	1990	250
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		0.97
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1841	1841	1841	1841	1841	0	0	1841	1841
Adj Flow Rate, veh/h				579	0	129	484	789	0	0	2095	160
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				4	4	4	4	4	0	0	4	4
Cap, veh/h				865	0	385	605	3138	0	0	2477	593
Arrive On Green				0.25	0.00	0.25	0.36	1.00	0.00	0.00	0.39	0.39
Sat Flow, veh/h				3506	0	1560	3401	5191	0	0	6590	1516
Grp Volume(v), veh/h				579	0	129	484	789	0	0	2095	160
Grp Sat Flow(s),veh/h/ln				1753	0	1560	1700	1675	0	0	1583	1516
Q Serve(g_s), s				13.4	0.0	6.1	11.5	0.0	0.0	0.0	27.1	6.5
Cycle Q Clear(g_c), s				13.4	0.0	6.1	11.5	0.0	0.0	0.0	27.1	6.5
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				865	0	385	605	3138	0	0	2477	593
V/C Ratio(X)				0.67	0.00	0.34	0.80	0.25	0.00	0.00	0.85	0.27
Avail Cap(c_a), veh/h				865	0	385	605	3138	0	0	2477	593
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.87	0.87	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				30.6	0.0	27.8	27.6	0.0	0.0	0.0	24.9	18.7
Incr Delay (d2), s/veh				4.1	0.0	2.3	9.4	0.2	0.0	0.0	3.8	1.1
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				6.0	0.0	5.9	4.4	0.0	0.0	0.0	9.8	2.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				34.7	0.0	30.2	37.0	0.2	0.0	0.0	28.7	19.8
LnGrp LOS				C	A	C	D	A	A	A	C	B
Approach Vol, veh/h					708			1273			2255	
Approach Delay, s/veh					33.9			14.2			28.1	
Approach LOS					C			B			C	

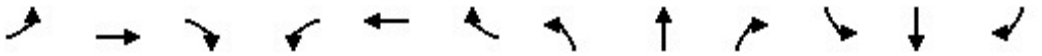
Timer - Assigned Phs	2	4	5	6
Phs Duration (G+Y+Rc), s	62.0	28.0	21.0	41.0
Change Period (Y+Rc), s	5.8	5.8	5.0	5.8
Max Green Setting (Gmax), s	56.2	22.2	16.0	35.2
Max Q Clear Time (g_c+I1), s	2.0	15.4	13.5	29.1
Green Ext Time (p_c), s	5.8	1.6	0.3	5.3

Intersection Summary	
HCM 6th Ctrl Delay	24.9
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

User approved volume balancing among the lanes for turning movement.

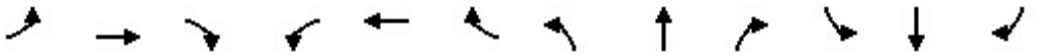


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	180	10	430	0	0	0	0	1030	490	500	1980	0
Future Volume (veh/h)	180	10	430	0	0	0	0	1030	490	500	1980	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		0.97	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841				0	1841	1841	1841	1841	0
Adj Flow Rate, veh/h	130	0	453				0	1084	133	526	2084	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4				0	4	4	4	4	0
Cap, veh/h	452	0	804				0	2195	525	718	3082	0
Arrive On Green	0.26	0.00	0.26				0.00	0.35	0.35	0.07	0.20	0.00
Sat Flow, veh/h	1753	0	3120				0	6590	1514	3401	5191	0
Grp Volume(v), veh/h	130	0	453				0	1084	133	526	2084	0
Grp Sat Flow(s),veh/h/ln	1753	0	1560				0	1583	1514	1700	1675	0
Q Serve(g_s), s	5.4	0.0	11.3				0.0	12.1	5.7	13.6	34.5	0.0
Cycle Q Clear(g_c), s	5.4	0.0	11.3				0.0	12.1	5.7	13.6	34.5	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	452	0	804				0	2195	525	718	3082	0
V/C Ratio(X)	0.29	0.00	0.56				0.00	0.49	0.25	0.73	0.68	0.00
Avail Cap(c_a), veh/h	452	0	804				0	2195	525	718	3082	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	0.33	0.33	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.43	0.43	0.00
Uniform Delay (d), s/veh	26.8	0.0	29.0				0.0	23.2	21.1	39.4	27.6	0.0
Incr Delay (d2), s/veh	1.6	0.0	2.8				0.0	0.8	1.2	2.9	0.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	0.0	4.5				0.0	4.3	2.0	6.4	15.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	28.4	0.0	31.8				0.0	24.0	22.2	42.3	28.2	0.0
LnGrp LOS	C	A	C				A	C	C	D	C	A
Approach Vol, veh/h		583						1217			2610	
Approach Delay, s/veh		31.1						23.8			31.0	
Approach LOS		C						C			C	

Timer - Assigned Phs	1	2				6		8				
Phs Duration (G+Y+Rc), s	24.0	37.0				61.0		29.0				
Change Period (Y+Rc), s	5.0	5.8				5.8		5.8				
Max Green Setting (Gmax), s	19.0	31.2				55.2		23.2				
Max Q Clear Time (g_c+I1), s	15.6	14.1				36.5		13.3				
Green Ext Time (p_c), s	0.4	7.0				13.7		1.7				

Intersection Summary		
HCM 6th Ctrl Delay		29.0
HCM 6th LOS		C

Notes
User approved pedestrian interval to be less than phase max green.
User approved volume balancing among the lanes for turning movement.



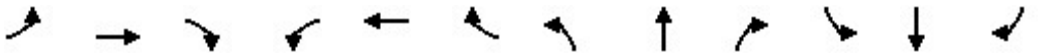
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	80	10	50	30	30	70	160	1370	40	120	2030	70
Future Volume (veh/h)	80	10	50	30	30	70	160	1370	40	120	2030	70
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.98		0.96	0.98		0.96	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	84	11	7	32	32	10	168	1442	40	126	2137	72
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	232	141	90	251	181	57	189	2746	76	156	2633	88
Arrive On Green	0.14	0.14	0.14	0.14	0.14	0.14	0.11	0.55	0.55	0.09	0.53	0.53
Sat Flow, veh/h	1317	1032	657	1344	1329	415	1753	5021	139	1753	4987	167
Grp Volume(v), veh/h	84	0	18	32	0	42	168	962	520	126	1433	776
Grp Sat Flow(s),veh/h/ln	1317	0	1689	1344	0	1745	1753	1675	1810	1753	1675	1804
Q Serve(g_s), s	5.4	0.0	0.8	1.9	0.0	1.9	8.5	16.4	16.4	6.3	31.8	32.1
Cycle Q Clear(g_c), s	7.3	0.0	0.8	2.8	0.0	1.9	8.5	16.4	16.4	6.3	31.8	32.1
Prop In Lane	1.00		0.39	1.00		0.24	1.00		0.08	1.00		0.09
Lane Grp Cap(c), veh/h	232	0	230	251	0	238	189	1832	990	156	1769	953
V/C Ratio(X)	0.36	0.00	0.08	0.13	0.00	0.18	0.89	0.53	0.53	0.81	0.81	0.81
Avail Cap(c_a), veh/h	377	0	417	399	0	430	189	1832	990	189	1769	953
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.6	0.0	33.9	35.1	0.0	34.4	39.6	13.0	13.0	40.2	17.5	17.6
Incr Delay (d2), s/veh	0.7	0.0	0.1	0.2	0.0	0.3	35.5	1.1	2.0	15.9	4.1	7.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	0.0	0.4	0.6	0.0	0.8	5.3	5.4	6.0	3.3	11.3	13.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	38.3	0.0	34.0	35.3	0.0	34.6	75.2	14.0	15.0	56.1	21.7	25.2
LnGrp LOS	D	A	C	D	A	C	E	B	B	E	C	C
Approach Vol, veh/h		102			74			1650			2335	
Approach Delay, s/veh		37.6			34.9			20.6			24.7	
Approach LOS		D			C			C			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	14.5	55.7		19.8	16.2	54.0		19.8				
Change Period (Y+Rc), s	6.5	6.5		7.5	6.5	6.5		7.5				
Max Green Setting (Gmax), s	9.7	37.6		22.2	9.7	37.6		22.2				
Max Q Clear Time (g_c+I1), s	8.3	18.4		9.3	10.5	34.1		4.8				
Green Ext Time (p_c), s	0.0	10.5		0.2	0.0	3.3		0.2				

Intersection Summary			
HCM 6th Ctrl Delay		23.6	
HCM 6th LOS		C	

Notes

User approved pedestrian interval to be less than phase max green.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	130	1210	800	140	1080	210	520	1490	630	220	2080	330
Future Volume (veh/h)	130	1210	800	140	1080	210	520	1490	630	220	2080	330
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.97	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	137	1274	0	147	1137	184	547	1568	627	232	2189	308
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	145	989		145	989	557	417	1985	732	277	1778	668
Arrive On Green	0.08	0.28	0.00	0.08	0.28	0.28	0.12	0.39	0.39	0.08	0.35	0.35
Sat Flow, veh/h	1753	3497	1560	1753	3497	1519	3401	5025	1525	3401	5025	1523
Grp Volume(v), veh/h	137	1274	0	147	1137	184	547	1568	627	232	2189	308
Grp Sat Flow(s),veh/h/ln	1753	1749	1560	1753	1749	1519	1700	1675	1525	1700	1675	1523
Q Serve(g_s), s	11.3	41.0	0.0	12.0	41.0	12.7	17.8	39.8	52.9	9.7	51.3	20.7
Cycle Q Clear(g_c), s	11.3	41.0	0.0	12.0	41.0	12.7	17.8	39.8	52.9	9.7	51.3	20.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	145	989		145	989	557	417	1985	732	277	1778	668
V/C Ratio(X)	0.94	1.29		1.01	1.15	0.33	1.31	0.79	0.86	0.84	1.23	0.46
Avail Cap(c_a), veh/h	145	989		145	989	557	417	1985	732	300	1778	668
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	66.2	52.0	0.0	66.5	52.0	33.3	63.6	38.6	33.6	65.6	46.8	28.8
Incr Delay (d2), s/veh	57.4	137.4	0.0	78.2	79.3	0.5	155.9	2.2	9.9	17.3	109.2	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.3	36.3	0.0	8.4	28.2	4.6	16.6	16.4	20.4	4.9	38.8	7.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	123.6	189.4	0.0	144.7	131.3	33.8	219.5	40.8	43.5	82.9	156.0	29.3
LnGrp LOS	F	F		F	F	C	F	D	D	F	F	C
Approach Vol, veh/h		1411	A		1468			2742			2729	
Approach Delay, s/veh		183.0			120.4			77.1			135.5	
Approach LOS		F			F			E			F	

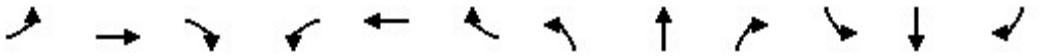
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.0	63.3	16.7	48.0	23.0	57.3	16.7	48.0
Change Period (Y+Rc), s	* 5.2	6.0	* 4.7	7.0	* 5.2	6.0	* 4.7	7.0
Max Green Setting (Gmax), s	* 13	56.3	* 12	41.0	* 18	51.3	* 12	41.0
Max Q Clear Time (g_c+I1), s	11.7	54.9	14.0	43.0	19.8	53.3	13.3	43.0
Green Ext Time (p_c), s	0.1	1.3	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	121.7
HCM 6th LOS	F

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



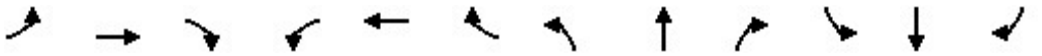
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	200	1530	130	240	1020	110	20	580	110	180	630	290
Future Volume (veh/h)	200	1530	130	240	1020	110	20	580	110	180	630	290
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	211	1611	56	253	1074	42	21	611	28	189	663	269
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	230	1349	592	205	1300	570	42	765	334	155	683	277
Arrive On Green	0.13	0.38	0.38	0.12	0.37	0.37	0.02	0.22	0.22	0.09	0.28	0.28
Sat Flow, veh/h	1767	3526	1546	1767	3526	1545	1767	3526	1540	1767	2432	987
Grp Volume(v), veh/h	211	1611	56	253	1074	42	21	611	28	189	481	451
Grp Sat Flow(s),veh/h/ln	1767	1763	1546	1767	1763	1545	1767	1763	1540	1767	1763	1656
Q Serve(g_s), s	16.8	54.5	3.3	16.5	39.4	2.5	1.7	23.4	2.1	12.5	38.4	38.4
Cycle Q Clear(g_c), s	16.8	54.5	3.3	16.5	39.4	2.5	1.7	23.4	2.1	12.5	38.4	38.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.60
Lane Grp Cap(c), veh/h	230	1349	592	205	1300	570	42	765	334	155	495	465
V/C Ratio(X)	0.92	1.19	0.09	1.24	0.83	0.07	0.50	0.80	0.08	1.22	0.97	0.97
Avail Cap(c_a), veh/h	230	1349	592	205	1300	570	74	829	362	155	495	465
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	61.2	43.9	28.1	62.9	40.8	29.2	68.7	52.8	44.5	64.9	50.6	50.6
Incr Delay (d2), s/veh	37.4	94.8	0.1	140.7	4.6	0.1	3.4	5.4	0.1	142.8	32.8	34.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.7	40.3	1.2	15.2	17.2	0.9	0.8	10.8	0.8	11.7	21.1	20.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	98.6	138.7	28.2	203.6	45.4	29.2	72.0	58.2	44.6	207.7	83.4	84.7
LnGrp LOS	F	F	C	F	D	C	E	E	D	F	F	F
Approach Vol, veh/h		1878			1369			660			1121	
Approach Delay, s/veh		130.9			74.2			58.1			104.9	
Approach LOS		F			E			E			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	19.0	37.4	24.0	62.0	9.9	46.5	26.0	60.0
Change Period (Y+Rc), s	6.5	6.5	7.5	7.5	6.5	6.5	7.5	7.5
Max Green Setting (Gmax), s	12.5	33.5	16.5	54.5	6.0	40.0	18.5	52.5
Max Q Clear Time (g_c+I1), s	14.5	25.4	18.5	56.5	3.7	40.4	18.8	41.4
Green Ext Time (p_c), s	0.0	2.7	0.0	0.0	0.0	0.0	0.0	5.6

Intersection Summary	
HCM 6th Ctrl Delay	100.1
HCM 6th LOS	F

Notes

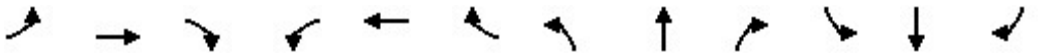
User approved pedestrian interval to be less than phase max green.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	1570	110	210	1140	30	80	30	210	50	70	50
Future Volume (veh/h)	40	1570	110	210	1140	30	80	30	210	50	70	50
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	0.99		0.98	0.99		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	42	1653	114	221	1200	32	84	32	89	53	74	33
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	64	1837	126	245	2286	61	177	64	179	159	182	81
Arrive On Green	0.04	0.55	0.55	0.14	0.65	0.65	0.15	0.15	0.15	0.15	0.15	0.15
Sat Flow, veh/h	1767	3342	228	1767	3505	93	1268	425	1182	1252	1205	537
Grp Volume(v), veh/h	42	865	902	221	603	629	84	0	121	53	0	107
Grp Sat Flow(s),veh/h/ln	1767	1763	1807	1767	1763	1836	1268	0	1607	1252	0	1743
Q Serve(g_s), s	3.0	55.5	57.4	15.7	23.1	23.2	8.2	0.0	8.8	5.2	0.0	7.1
Cycle Q Clear(g_c), s	3.0	55.5	57.4	15.7	23.1	23.2	15.3	0.0	8.8	14.0	0.0	7.1
Prop In Lane	1.00		0.13	1.00		0.05	1.00		0.74	1.00		0.31
Lane Grp Cap(c), veh/h	64	969	994	245	1150	1198	177	0	243	159	0	263
V/C Ratio(X)	0.65	0.89	0.91	0.90	0.52	0.53	0.47	0.00	0.50	0.33	0.00	0.41
Avail Cap(c_a), veh/h	124	1027	1053	249	1151	1198	303	0	402	283	0	436
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	60.8	25.4	25.9	54.2	11.8	11.8	56.0	0.0	49.8	56.3	0.0	49.1
Incr Delay (d2), s/veh	10.7	9.8	11.1	32.1	0.5	0.5	2.0	0.0	1.6	1.2	0.0	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	23.0	24.6	8.9	7.8	8.1	2.7	0.0	3.7	1.7	0.0	3.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	71.5	35.2	37.0	86.3	12.3	12.3	58.0	0.0	51.4	57.5	0.0	50.1
LnGrp LOS	E	D	D	F	B	B	E	A	D	E	A	D
Approach Vol, veh/h		1809			1453			205			160	
Approach Delay, s/veh		37.0			23.5			54.1			52.6	
Approach LOS		D			C			D			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.7	90.9		25.3	24.8	77.8		25.3				
Change Period (Y+Rc), s	7.0	7.5		6.0	7.0	7.5		6.0				
Max Green Setting (Gmax), s	9.0	83.5		32.0	18.0	74.5		32.0				
Max Q Clear Time (g_c+I1), s	5.0	25.2		16.0	17.7	59.4		17.3				
Green Ext Time (p_c), s	0.0	11.8		0.6	0.0	10.9		0.8				

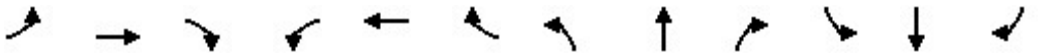
Intersection Summary			
HCM 6th Ctrl Delay		33.2	
HCM 6th LOS		C	



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	210	1460	60	30	1090	380	50	300	30	460	810	200
Future Volume (veh/h)	210	1460	60	30	1090	380	50	300	30	460	810	200
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.98	1.00		0.97	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	221	1537	62	32	1147	276	53	316	28	484	853	197
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	250	1423	57	44	1284	563	68	404	36	415	908	210
Arrive On Green	0.07	0.41	0.41	0.02	0.36	0.36	0.04	0.12	0.12	0.24	0.32	0.32
Sat Flow, veh/h	3428	3452	139	1767	3526	1545	1767	3269	288	1767	2835	655
Grp Volume(v), veh/h	221	782	817	32	1147	276	53	169	175	484	530	520
Grp Sat Flow(s),veh/h/ln	1714	1763	1828	1767	1763	1545	1767	1763	1794	1767	1763	1727
Q Serve(g_s), s	9.4	60.5	60.5	2.6	45.0	20.3	4.4	13.7	13.9	34.5	42.9	42.9
Cycle Q Clear(g_c), s	9.4	60.5	60.5	2.6	45.0	20.3	4.4	13.7	13.9	34.5	42.9	42.9
Prop In Lane	1.00		0.08	1.00		1.00	1.00		0.16	1.00		0.38
Lane Grp Cap(c), veh/h	250	727	754	44	1284	563	68	218	222	415	564	553
V/C Ratio(X)	0.88	1.08	1.08	0.73	0.89	0.49	0.78	0.78	0.79	1.17	0.94	0.94
Avail Cap(c_a), veh/h	250	727	754	60	1316	577	76	240	244	415	579	567
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	67.4	43.1	43.1	71.1	44.0	36.1	70.0	62.4	62.5	56.1	48.5	48.5
Incr Delay (d2), s/veh	28.6	56.0	57.7	20.2	8.1	0.8	34.7	14.3	15.1	97.6	23.3	23.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.0	36.2	37.9	1.4	20.3	7.6	2.6	6.9	7.2	26.3	22.0	21.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	96.0	99.1	100.8	91.3	52.1	36.9	104.7	76.6	77.6	153.7	71.8	72.3
LnGrp LOS	F	F	F	F	D	D	F	E	E	F	E	E
Approach Vol, veh/h		1820			1455			397			1534	
Approach Delay, s/veh		99.5			50.1			80.8			97.8	
Approach LOS		F			D			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.2	60.9	13.1	54.5	11.1	68.0	42.0	25.6
Change Period (Y+Rc), s	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5
Max Green Setting (Gmax), s	10.7	54.8	6.3	48.2	5.0	60.5	34.5	20.0
Max Q Clear Time (g_c+I1), s	11.4	47.0	6.4	44.9	4.6	62.5	36.5	15.9
Green Ext Time (p_c), s	0.0	4.3	0.0	2.0	0.0	0.0	0.0	0.8

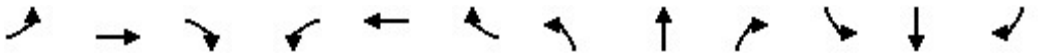
Intersection Summary	
HCM 6th Ctrl Delay	83.8
HCM 6th LOS	F



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	1600	170	120	1210	20	240	20	70	10	10	50
Future Volume (veh/h)	30	1600	170	120	1210	20	240	20	70	10	10	50
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.97	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	32	1684	174	126	1274	21	253	21	15	11	11	12
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	57	1792	182	140	2137	35	333	363	303	120	120	110
Arrive On Green	0.03	0.56	0.56	0.08	0.60	0.60	0.20	0.20	0.20	0.20	0.20	0.20
Sat Flow, veh/h	1767	3225	328	1767	3548	58	1377	1856	1550	423	611	564
Grp Volume(v), veh/h	32	908	950	126	633	662	253	21	15	34	0	0
Grp Sat Flow(s),veh/h/ln	1767	1763	1790	1767	1763	1843	1377	1856	1550	1598	0	0
Q Serve(g_s), s	2.3	59.8	63.6	9.0	28.2	28.2	20.2	1.2	1.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	2.3	59.8	63.6	9.0	28.2	28.2	22.2	1.2	1.0	2.0	0.0	0.0
Prop In Lane	1.00		0.18	1.00		0.03	1.00		1.00	0.32		0.35
Lane Grp Cap(c), veh/h	57	979	995	140	1062	1110	333	363	303	351	0	0
V/C Ratio(X)	0.57	0.93	0.96	0.90	0.60	0.60	0.76	0.06	0.05	0.10	0.00	0.00
Avail Cap(c_a), veh/h	84	995	1011	140	1062	1110	411	469	392	440	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	60.4	25.8	26.7	57.8	15.6	15.6	49.6	41.4	41.4	41.8	0.0	0.0
Incr Delay (d2), s/veh	8.6	14.1	18.3	48.3	0.9	0.9	6.4	0.1	0.1	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	25.6	28.6	5.7	10.1	10.6	8.5	0.6	0.4	0.9	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	69.0	39.9	44.9	106.1	16.5	16.5	56.1	41.5	41.4	41.9	0.0	0.0
LnGrp LOS	E	D	D	F	B	B	E	D	D	D	A	A
Approach Vol, veh/h		1890			1421			289			34	
Approach Delay, s/veh		42.9			24.5			54.2			41.9	
Approach LOS		D			C			D			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.1	83.8		31.8	17.0	77.8		31.8				
Change Period (Y+Rc), s	7.0	7.5		7.0	7.0	7.5		7.0				
Max Green Setting (Gmax), s	6.0	75.5		32.0	10.0	71.5		32.0				
Max Q Clear Time (g_c+I1), s	4.3	30.2		24.2	11.0	65.6		4.0				
Green Ext Time (p_c), s	0.0	9.5		0.6	0.0	4.7		0.1				

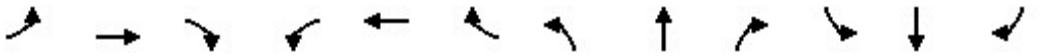
Intersection Summary			
HCM 6th Ctrl Delay		36.6	
HCM 6th LOS		D	



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	1300	350	320	1120	10	200	30	180	40	40	30
Future Volume (veh/h)	30	1300	350	320	1120	10	200	30	180	40	40	30
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	1.00		0.97	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	32	1368	354	337	1179	11	211	32	28	42	42	12
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	57	1294	325	282	2125	20	183	113	99	65	81	23
Arrive On Green	0.03	0.47	0.47	0.16	0.59	0.59	0.10	0.13	0.13	0.04	0.06	0.06
Sat Flow, veh/h	1767	2774	696	1767	3578	33	1767	900	788	1767	1372	392
Grp Volume(v), veh/h	32	854	868	337	581	609	211	0	60	42	0	54
Grp Sat Flow(s),veh/h/ln	1767	1763	1708	1767	1763	1849	1767	0	1688	1767	0	1764
Q Serve(g_s), s	2.2	58.5	58.5	20.0	25.0	25.0	13.0	0.0	4.0	2.9	0.0	3.7
Cycle Q Clear(g_c), s	2.2	58.5	58.5	20.0	25.0	25.0	13.0	0.0	4.0	2.9	0.0	3.7
Prop In Lane	1.00		0.41	1.00		0.02	1.00		0.47	1.00		0.22
Lane Grp Cap(c), veh/h	57	823	797	282	1047	1098	183	0	212	65	0	104
V/C Ratio(X)	0.56	1.04	1.09	1.20	0.55	0.55	1.15	0.00	0.28	0.65	0.00	0.52
Avail Cap(c_a), veh/h	99	823	797	282	1047	1098	183	0	485	127	0	450
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	59.8	33.4	33.4	52.7	15.4	15.4	56.2	0.0	49.7	59.6	0.0	57.3
Incr Delay (d2), s/veh	8.5	41.7	59.1	117.2	0.7	0.7	113.2	0.0	0.7	10.3	0.0	4.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	32.0	34.8	17.6	9.0	9.4	11.6	0.0	1.8	1.5	0.0	1.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	68.3	75.1	92.5	169.9	16.1	16.1	169.3	0.0	50.4	69.8	0.0	61.3
LnGrp LOS	E	F	F	F	B	B	F	A	D	E	A	E
Approach Vol, veh/h		1754			1527			271			96	
Approach Delay, s/veh		83.6			50.1			143.0			65.0	
Approach LOS		F			D			F			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.0	82.0	19.0	13.4	27.0	66.0	10.6	21.8
Change Period (Y+Rc), s	7.0	7.5	6.0	6.0	7.0	7.5	6.0	6.0
Max Green Setting (Gmax), s	7.0	71.5	13.0	32.0	20.0	58.5	9.0	36.0
Max Q Clear Time (g_c+I1), s	4.2	27.0	15.0	5.7	22.0	60.5	4.9	6.0
Green Ext Time (p_c), s	0.0	10.7	0.0	0.2	0.0	0.0	0.0	0.3

Intersection Summary	
HCM 6th Ctrl Delay	73.5
HCM 6th LOS	E



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	350	1058	112	190	1096	250	69	436	7	366	901	285
Future Volume (veh/h)	350	1058	112	190	1096	250	69	436	7	366	901	285
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	368	1114	39	200	1154	222	73	459	2	385	948	282
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	266	1199	535	152	1082	840	284	566	252	412	640	190
Arrive On Green	0.08	0.34	0.34	0.04	0.31	0.31	0.16	0.16	0.16	0.23	0.23	0.23
Sat Flow, veh/h	3428	3526	1572	3428	3526	1544	1767	3526	1572	1767	2745	813
Grp Volume(v), veh/h	368	1114	39	200	1154	222	73	459	2	385	640	590
Grp Sat Flow(s),veh/h/ln	1714	1763	1572	1714	1763	1544	1767	1763	1572	1767	1856	1703
Q Serve(g_s), s	10.5	41.2	2.3	6.0	41.5	10.4	4.9	17.0	0.1	28.9	31.5	31.5
Cycle Q Clear(g_c), s	10.5	41.2	2.3	6.0	41.5	10.4	4.9	17.0	0.1	28.9	31.5	31.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.48
Lane Grp Cap(c), veh/h	266	1199	535	152	1082	840	284	566	252	412	432	397
V/C Ratio(X)	1.38	0.93	0.07	1.31	1.07	0.26	0.26	0.81	0.01	0.94	1.48	1.49
Avail Cap(c_a), veh/h	266	1199	535	152	1082	840	412	821	366	412	432	397
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	62.4	43.0	30.2	64.6	46.9	16.7	49.7	54.8	47.7	50.9	51.9	51.9
Incr Delay (d2), s/veh	193.7	12.6	0.1	180.4	46.9	0.2	0.6	4.5	0.0	28.7	228.0	232.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.6	19.0	0.8	6.3	24.2	5.8	2.2	7.7	0.1	15.7	41.6	38.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	256.0	55.6	30.2	245.0	93.8	16.9	50.3	59.3	47.7	79.6	279.8	284.5
LnGrp LOS	F	E	C	F	F	B	D	E	D	E	F	F
Approach Vol, veh/h		1521			1576			534			1615	
Approach Delay, s/veh		103.4			102.1			58.0			233.8	
Approach LOS		F			F			E			F	

Timer - Assigned Phs	2	3	4	6	7	8
Phs Duration (G+Y+Rc), s	29.2	13.5	53.5	39.0	18.0	49.0
Change Period (Y+Rc), s	7.5	7.5	7.5	7.5	7.5	7.5
Max Green Setting (Gmax), s	31.5	6.0	46.0	31.5	10.5	41.5
Max Q Clear Time (g_c+I1), s	19.0	8.0	43.2	33.5	12.5	43.5
Green Ext Time (p_c), s	2.7	0.0	1.9	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	138.6
HCM 6th LOS	F

Notes

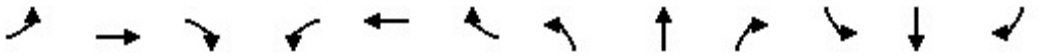
User approved pedestrian interval to be less than phase max green.

User approved volume balancing among the lanes for turning movement.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1311	140	210	1476	50	60
Future Volume (veh/h)	1311	140	210	1476	50	60
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		0.97	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	1380	96	221	1554	53	7
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	1754	762	265	2644	106	94
Arrive On Green	0.50	0.50	0.15	0.75	0.06	0.06
Sat Flow, veh/h	3618	1531	1767	3618	1767	1572
Grp Volume(v), veh/h	1380	96	221	1554	53	7
Grp Sat Flow(s),veh/h/ln	1763	1531	1767	1763	1767	1572
Q Serve(g_s), s	22.1	2.3	8.3	13.5	2.0	0.3
Cycle Q Clear(g_c), s	22.1	2.3	8.3	13.5	2.0	0.3
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1754	762	265	2644	106	94
V/C Ratio(X)	0.79	0.13	0.83	0.59	0.50	0.07
Avail Cap(c_a), veh/h	2116	919	310	3097	828	737
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	14.2	9.2	28.2	3.8	31.1	30.3
Incr Delay (d2), s/veh	1.8	0.1	15.5	0.3	3.7	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.7	0.6	4.2	1.1	0.9	0.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	16.0	9.3	43.7	4.1	34.8	30.7
LnGrp LOS	B	A	D	A	C	C
Approach Vol, veh/h	1476			1775	60	
Approach Delay, s/veh	15.5			9.0	34.3	
Approach LOS	B			A	C	

Timer - Assigned Phs	2			5	6	8
Phs Duration (G+Y+Rc), s	58.7			17.2	41.5	9.6
Change Period (Y+Rc), s	7.5			7.0	7.5	5.5
Max Green Setting (Gmax), s	60.0			12.0	41.0	32.0
Max Q Clear Time (g_c+I1), s	15.5			10.3	24.1	4.0
Green Ext Time (p_c), s	18.4			0.1	9.9	0.1

Intersection Summary	
HCM 6th Ctrl Delay	12.4
HCM 6th LOS	B



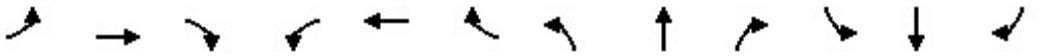
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	90	1241	40	100	1566	20	20	10	100	30	10	100
Future Volume (veh/h)	90	1241	40	100	1566	20	20	10	100	30	10	100
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	0.99		0.97	0.99		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	95	1306	41	105	1648	21	21	11	17	32	11	17
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	153	1812	57	159	1863	24	132	69	66	158	57	52
Arrive On Green	0.09	0.52	0.52	0.09	0.52	0.52	0.12	0.12	0.12	0.12	0.12	0.12
Sat Flow, veh/h	1767	3486	109	1767	3563	45	454	572	545	625	475	435
Grp Volume(v), veh/h	95	660	687	105	814	855	49	0	0	60	0	0
Grp Sat Flow(s),veh/h/ln	1767	1763	1832	1767	1763	1846	1572	0	0	1535	0	0
Q Serve(g_s), s	3.5	19.2	19.2	3.8	27.3	27.5	0.0	0.0	0.0	0.4	0.0	0.0
Cycle Q Clear(g_c), s	3.5	19.2	19.2	3.8	27.3	27.5	1.7	0.0	0.0	2.2	0.0	0.0
Prop In Lane	1.00		0.06	1.00		0.02	0.43		0.35	0.53		0.28
Lane Grp Cap(c), veh/h	153	916	953	159	922	965	267	0	0	268	0	0
V/C Ratio(X)	0.62	0.72	0.72	0.66	0.88	0.89	0.18	0.00	0.00	0.22	0.00	0.00
Avail Cap(c_a), veh/h	185	977	1016	185	977	1023	717	0	0	709	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	29.4	12.3	12.3	29.4	14.1	14.2	26.6	0.0	0.0	26.7	0.0	0.0
Incr Delay (d2), s/veh	4.4	2.4	2.4	6.8	9.3	9.1	0.2	0.0	0.0	0.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	5.8	6.0	1.8	10.0	10.5	0.7	0.0	0.0	0.9	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	33.8	14.7	14.7	36.2	23.4	23.3	26.8	0.0	0.0	27.0	0.0	0.0
LnGrp LOS	C	B	B	D	C	C	C	A	A	C	A	A
Approach Vol, veh/h		1442			1774			49			60	
Approach Delay, s/veh		16.0			24.1			26.8			27.0	
Approach LOS		B			C			C			C	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		14.1	11.0	41.7		14.1	10.8	41.9				
Change Period (Y+Rc), s		6.0	5.0	7.0		6.0	5.0	7.0				
Max Green Setting (Gmax), s		28.0	7.0	37.0		28.0	7.0	37.0				
Max Q Clear Time (g_c+I1), s		3.7	5.8	21.2		4.2	5.5	29.5				
Green Ext Time (p_c), s		0.2	0.0	7.2		0.2	0.0	5.4				

Intersection Summary		
HCM 6th Ctrl Delay		20.7
HCM 6th LOS		C

Notes

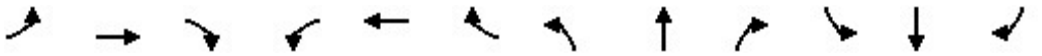
User approved pedestrian interval to be less than phase max green.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	300	901	370	230	1096	190	290	1080	40	210	1530	300
Future Volume (veh/h)	300	901	370	230	1096	190	290	1080	40	210	1530	300
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.97	1.00		0.97	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	316	948	386	242	1154	58	305	1137	17	221	1611	225
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	216	995	433	256	1041	52	202	1552	23	249	1470	205
Arrive On Green	0.12	0.28	0.28	0.15	0.31	0.31	0.12	0.30	0.30	0.14	0.33	0.33
Sat Flow, veh/h	1753	3497	1523	1753	3384	170	1753	5099	76	1753	4443	618
Grp Volume(v), veh/h	316	948	386	242	596	616	305	747	407	221	1213	623
Grp Sat Flow(s),veh/h/ln	1753	1749	1523	1753	1749	1805	1753	1675	1825	1753	1675	1711
Q Serve(g_s), s	16.0	34.6	31.6	17.8	40.0	40.0	15.0	26.0	26.0	16.1	43.0	43.0
Cycle Q Clear(g_c), s	16.0	34.6	31.6	17.8	40.0	40.0	15.0	26.0	26.0	16.1	43.0	43.0
Prop In Lane	1.00		1.00	1.00		0.09	1.00		0.04	1.00		0.36
Lane Grp Cap(c), veh/h	216	995	433	256	538	555	202	1020	555	249	1108	566
V/C Ratio(X)	1.46	0.95	0.89	0.94	1.11	1.11	1.51	0.73	0.73	0.89	1.09	1.10
Avail Cap(c_a), veh/h	216	995	433	256	538	555	202	1020	555	283	1108	566
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	57.0	45.6	44.6	55.0	45.0	45.0	57.5	40.5	40.5	54.8	43.5	43.5
Incr Delay (d2), s/veh	232.7	18.4	20.9	42.0	71.7	71.7	252.4	3.4	6.0	28.3	56.8	68.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	20.8	16.9	13.9	10.6	27.2	28.1	20.6	10.7	12.1	8.8	25.6	27.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	289.7	64.1	65.5	96.9	116.7	116.7	309.9	43.8	46.5	83.0	100.3	111.6
LnGrp LOS	F	E	E	F	F	F	F	D	D	F	F	F
Approach Vol, veh/h		1650			1454			1459			2057	
Approach Delay, s/veh		107.6			113.4			100.2			101.9	
Approach LOS		F			F			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	22.4	43.6	23.0	41.0	19.0	47.0	20.0	44.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	21.0	37.0	19.0	37.0	15.0	43.0	16.0	40.0
Max Q Clear Time (g_c+I1), s	18.1	28.0	19.8	36.6	17.0	45.0	18.0	42.0
Green Ext Time (p_c), s	0.4	6.4	0.0	0.3	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	105.5
HCM 6th LOS	F



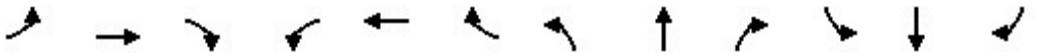
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	420	731	50	250	796	170	30	700	260	330	900	690
Future Volume (veh/h)	420	731	50	250	796	170	30	700	260	330	900	690
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	442	769	38	263	838	159	32	737	150	347	947	624
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	383	836	41	264	739	323	62	854	174	334	923	581
Arrive On Green	0.11	0.24	0.24	0.08	0.21	0.21	0.04	0.29	0.29	0.19	0.45	0.45
Sat Flow, veh/h	3428	3415	169	3428	3526	1539	1767	2907	592	1767	2062	1297
Grp Volume(v), veh/h	442	397	410	263	838	159	32	447	440	347	803	768
Grp Sat Flow(s),veh/h/ln	1714	1763	1821	1714	1763	1539	1767	1763	1736	1767	1763	1597
Q Serve(g_s), s	16.0	31.4	31.4	11.0	30.0	13.0	2.5	34.3	34.3	27.0	64.0	64.0
Cycle Q Clear(g_c), s	16.0	31.4	31.4	11.0	30.0	13.0	2.5	34.3	34.3	27.0	64.0	64.0
Prop In Lane	1.00		0.09	1.00		1.00	1.00		0.34	1.00		0.81
Lane Grp Cap(c), veh/h	383	431	446	264	739	323	62	518	510	334	789	714
V/C Ratio(X)	1.15	0.92	0.92	1.00	1.13	0.49	0.51	0.86	0.86	1.04	1.02	1.07
Avail Cap(c_a), veh/h	383	431	446	264	739	323	86	542	534	334	789	714
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	63.5	52.7	52.7	66.0	56.5	49.8	67.8	47.8	47.8	58.0	39.5	39.5
Incr Delay (d2), s/veh	94.4	24.8	24.4	54.7	76.3	1.2	4.8	12.7	12.9	60.1	36.7	55.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.8	16.4	16.9	6.7	20.8	5.0	1.2	16.5	16.3	17.4	34.3	34.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	158.0	77.5	77.0	120.7	132.8	51.0	72.6	60.5	60.7	118.1	76.2	95.1
LnGrp LOS	F	E	E	F	F	D	E	E	E	F	F	F
Approach Vol, veh/h		1249			1260			919			1918	
Approach Delay, s/veh		105.8			119.9			61.0			91.4	
Approach LOS		F			F			E			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	34.0	49.0	18.0	42.0	12.0	71.0	23.0	37.0
Change Period (Y+Rc), s	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Max Green Setting (Gmax), s	27.0	44.0	11.0	35.0	7.0	64.0	16.0	30.0
Max Q Clear Time (g_c+I1), s	29.0	36.3	13.0	33.4	4.5	66.0	18.0	32.0
Green Ext Time (p_c), s	0.0	2.6	0.0	0.7	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	96.3
HCM 6th LOS	F

Notes

User approved pedestrian interval to be less than phase max green.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	280	910	170	70	670	160	280	2060	320	180	2460	140
Future Volume (veh/h)	280	910	170	70	670	160	280	2060	320	180	2460	140
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	295	958	175	74	705	161	295	2168	261	189	2589	120
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	88	910	166	89	873	199	340	1893	458	1199	5705	1403
Arrive On Green	0.05	0.31	0.31	0.05	0.31	0.31	0.10	0.30	0.30	0.68	0.90	0.90
Sat Flow, veh/h	1753	2944	537	1753	2817	643	3401	6332	1531	1753	6332	1557
Grp Volume(v), veh/h	295	569	564	74	438	428	295	2168	261	189	2589	120
Grp Sat Flow(s),veh/h/ln	1753	1749	1732	1753	1749	1711	1700	1583	1531	1753	1583	1557
Q Serve(g_s), s	5.0	30.9	30.9	4.2	23.0	23.1	8.5	29.9	23.2	3.8	6.8	0.8
Cycle Q Clear(g_c), s	5.0	30.9	30.9	4.2	23.0	23.1	8.5	29.9	23.2	3.8	6.8	0.8
Prop In Lane	1.00		0.31	1.00		0.38	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	88	540	535	89	542	530	340	1893	458	1199	5705	1403
V/C Ratio(X)	3.37	1.05	1.05	0.83	0.81	0.81	0.87	1.15	0.57	0.16	0.45	0.09
Avail Cap(c_a), veh/h	88	540	535	89	542	530	340	1893	458	1199	5705	1403
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.5	34.6	34.6	47.0	31.7	31.8	44.3	35.0	77.0	5.6	0.8	0.5
Incr Delay (d2), s/veh	1092.9	53.3	54.0	42.6	8.8	9.0	19.7	72.1	5.1	0.0	0.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	28.7	20.4	20.3	2.8	10.3	10.1	4.4	20.1	9.3	1.1	0.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	1140.4	87.8	88.5	89.6	40.5	40.8	64.0	107.1	82.0	5.6	1.1	0.7
LnGrp LOS	F	F	F	F	D	D	E	F	F	A	A	A
Approach Vol, veh/h		1428			940			2724			2898	
Approach Delay, s/veh		305.5			44.5			100.1			1.4	
Approach LOS		F			D			F			A	

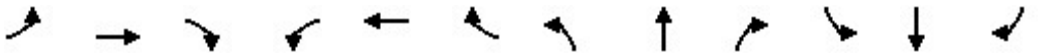
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	76.6	36.4	10.8	38.1	14.7	98.3	10.7	38.2
Change Period (Y+Rc), s	6.5	* 6.5	* 5.7	7.2	* 4.7	6.5	* 5.7	7.2
Max Green Setting (Gmax), s	10.0	* 30	* 5.1	30.9	* 10	29.9	* 5	31.0
Max Q Clear Time (g_c+I1), s	5.8	31.9	6.2	32.9	10.5	8.8	7.0	25.1
Green Ext Time (p_c), s	0.1	0.0	0.0	0.0	0.0	17.9	0.0	2.5

Intersection Summary	
HCM 6th Ctrl Delay	94.5
HCM 6th LOS	F

Notes

User approved pedestrian interval to be less than phase max green.

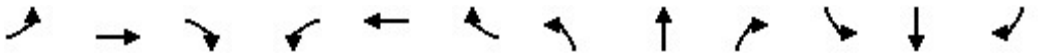
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	70	980	90	230	670	90	100	280	170	120	520	180
Future Volume (veh/h)	70	980	90	230	670	90	100	280	170	120	520	180
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	74	1032	91	242	705	88	105	295	103	126	547	162
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	94	1054	93	234	1262	157	117	594	203	131	640	189
Arrive On Green	0.05	0.32	0.32	0.13	0.40	0.40	0.07	0.23	0.23	0.07	0.24	0.24
Sat Flow, veh/h	1767	3272	288	1767	3147	393	1767	2565	875	1767	2670	787
Grp Volume(v), veh/h	74	556	567	242	395	398	105	201	197	126	360	349
Grp Sat Flow(s),veh/h/ln	1767	1763	1797	1767	1763	1777	1767	1763	1677	1767	1763	1695
Q Serve(g_s), s	5.0	37.8	37.8	16.0	20.9	20.9	7.1	11.9	12.4	8.6	23.6	23.8
Cycle Q Clear(g_c), s	5.0	37.8	37.8	16.0	20.9	20.9	7.1	11.9	12.4	8.6	23.6	23.8
Prop In Lane	1.00		0.16	1.00		0.22	1.00		0.52	1.00		0.46
Lane Grp Cap(c), veh/h	94	568	579	234	707	713	117	408	388	131	423	406
V/C Ratio(X)	0.78	0.98	0.98	1.04	0.56	0.56	0.90	0.49	0.51	0.96	0.85	0.86
Avail Cap(c_a), veh/h	161	568	579	234	707	713	117	466	443	131	481	462
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	56.6	40.6	40.6	52.5	28.0	28.0	56.1	40.3	40.5	55.8	44.0	44.0
Incr Delay (d2), s/veh	13.2	32.2	32.1	68.5	1.1	1.1	53.2	1.1	1.2	65.6	13.0	14.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	20.5	20.9	11.3	8.5	8.6	4.8	5.1	5.1	6.1	11.4	11.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	69.8	72.8	72.7	121.0	29.1	29.1	109.3	41.4	41.7	121.5	56.9	58.0
LnGrp LOS	E	E	E	F	C	C	F	D	D	F	E	E
Approach Vol, veh/h		1197			1035			503			835	
Approach Delay, s/veh		72.6			50.6			55.7			67.1	
Approach LOS		E			D			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.5	56.0	15.0	36.5	23.0	46.5	16.0	35.5
Change Period (Y+Rc), s	7.0	7.5	7.0	7.5	7.0	7.5	7.0	7.5
Max Green Setting (Gmax), s	11.0	44.0	8.0	33.0	16.0	39.0	9.0	32.0
Max Q Clear Time (g_c+I1), s	7.0	22.9	9.1	25.8	18.0	39.8	10.6	14.4
Green Ext Time (p_c), s	0.0	5.3	0.0	2.6	0.0	0.0	0.0	2.3

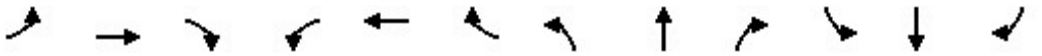
Intersection Summary	
HCM 6th Ctrl Delay	62.5
HCM 6th LOS	E



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	70	1050	150	110	860	20	30	240	150	50	150	100
Future Volume (veh/h)	70	1050	150	110	860	20	30	240	150	50	150	100
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	74	1105	150	116	905	21	32	253	61	53	158	21
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	98	1252	170	145	1509	35	64	434	102	85	519	68
Arrive On Green	0.06	0.40	0.40	0.08	0.43	0.43	0.04	0.15	0.15	0.05	0.17	0.17
Sat Flow, veh/h	1767	3112	422	1767	3520	82	1767	2815	664	1767	3125	408
Grp Volume(v), veh/h	74	625	630	116	453	473	32	156	158	53	88	91
Grp Sat Flow(s),veh/h/ln	1767	1763	1771	1767	1763	1839	1767	1763	1716	1767	1763	1770
Q Serve(g_s), s	3.8	30.3	30.5	6.0	18.3	18.3	1.6	7.6	7.9	2.7	4.0	4.2
Cycle Q Clear(g_c), s	3.8	30.3	30.5	6.0	18.3	18.3	1.6	7.6	7.9	2.7	4.0	4.2
Prop In Lane	1.00		0.24	1.00		0.04	1.00		0.39	1.00		0.23
Lane Grp Cap(c), veh/h	98	709	712	145	756	789	64	272	265	85	293	294
V/C Ratio(X)	0.76	0.88	0.88	0.80	0.60	0.60	0.50	0.58	0.60	0.62	0.30	0.31
Avail Cap(c_a), veh/h	134	761	764	153	780	814	115	612	596	115	612	615
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.1	25.6	25.6	41.7	20.3	20.3	43.7	36.3	36.4	43.2	33.8	33.9
Incr Delay (d2), s/veh	15.2	11.4	11.7	24.7	1.3	1.3	5.9	2.3	2.6	7.2	0.7	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	13.4	13.6	3.4	6.9	7.2	0.8	3.2	3.3	1.3	1.7	1.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	58.3	37.0	37.4	66.4	21.7	21.6	49.6	38.6	39.0	50.4	34.5	34.6
LnGrp LOS	E	D	D	E	C	C	D	D	D	D	C	C
Approach Vol, veh/h		1329			1042			346			232	
Approach Delay, s/veh		38.4			26.6			39.8			38.2	
Approach LOS		D			C			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.1	47.1	10.4	22.8	14.6	44.7	11.5	21.7
Change Period (Y+Rc), s	7.0	7.5	7.0	7.5	7.0	7.5	7.0	7.5
Max Green Setting (Gmax), s	7.0	40.9	6.0	32.1	8.0	39.9	6.0	32.1
Max Q Clear Time (g_c+I1), s	5.8	20.3	3.6	6.2	8.0	32.5	4.7	9.9
Green Ext Time (p_c), s	0.0	6.3	0.0	1.0	0.0	4.7	0.0	1.9

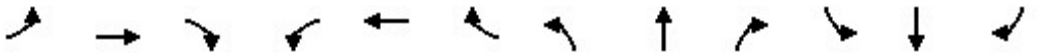
Intersection Summary	
HCM 6th Ctrl Delay	34.4
HCM 6th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	160	960	80	80	680	120	30	232	29	152	776	275
Future Volume (veh/h)	160	960	80	80	680	120	30	232	29	152	776	275
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	168	1011	80	84	716	113	32	244	17	160	817	233
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	120	1166	92	103	1046	165	62	1162	80	120	1072	303
Arrive On Green	0.07	0.35	0.35	0.06	0.34	0.34	0.03	0.24	0.24	0.07	0.27	0.27
Sat Flow, veh/h	1767	3304	261	1767	3048	481	1767	4836	331	1767	3922	1110
Grp Volume(v), veh/h	168	539	552	84	414	415	32	169	92	160	703	347
Grp Sat Flow(s),veh/h/ln	1767	1763	1803	1767	1763	1767	1767	1689	1790	1767	1689	1656
Q Serve(g_s), s	7.0	29.4	29.5	4.9	20.8	20.8	1.8	4.1	4.2	7.0	19.7	19.9
Cycle Q Clear(g_c), s	7.0	29.4	29.5	4.9	20.8	20.8	1.8	4.1	4.2	7.0	19.7	19.9
Prop In Lane	1.00		0.14	1.00		0.27	1.00		0.19	1.00		0.67
Lane Grp Cap(c), veh/h	120	622	636	103	605	606	62	812	430	120	923	452
V/C Ratio(X)	1.40	0.87	0.87	0.82	0.68	0.68	0.52	0.21	0.21	1.34	0.76	0.77
Avail Cap(c_a), veh/h	120	683	699	103	666	667	103	1079	572	120	1112	545
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	48.1	31.1	31.2	48.1	29.1	29.1	49.0	31.4	31.4	48.1	34.4	34.5
Incr Delay (d2), s/veh	223.4	11.0	10.8	38.3	2.8	2.8	6.6	0.2	0.3	196.8	2.8	5.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.4	13.4	13.7	3.1	8.6	8.6	0.9	1.6	1.8	9.6	8.3	8.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	271.5	42.1	41.9	86.4	31.9	31.9	55.6	31.5	31.7	244.9	37.2	40.3
LnGrp LOS	F	D	D	F	C	C	E	C	C	F	D	D
Approach Vol, veh/h		1259			913			293			1210	
Approach Delay, s/veh		72.6			36.9			34.2			65.5	
Approach LOS		E			D			C			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.0	32.3	13.0	43.9	10.6	35.7	14.0	42.9
Change Period (Y+Rc), s	7.0	7.5	7.0	7.5	7.0	7.5	7.0	7.5
Max Green Setting (Gmax), s	7.0	33.0	6.0	40.0	6.0	34.0	7.0	39.0
Max Q Clear Time (g_c+I1), s	9.0	6.2	6.9	31.5	3.8	21.9	9.0	22.8
Green Ext Time (p_c), s	0.0	1.7	0.0	4.6	0.0	6.3	0.0	5.0

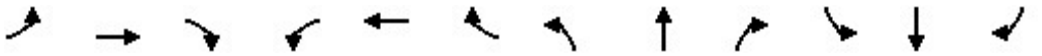
Intersection Summary	
HCM 6th Ctrl Delay	58.4
HCM 6th LOS	E



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	50	1065	70	120	870	70	50	60	80	70	70	50
Future Volume (veh/h)	50	1065	70	120	870	70	50	60	80	70	70	50
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	0.99		0.97	0.99		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	53	1121	47	126	916	66	53	63	70	74	74	50
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	94	1341	56	158	1419	102	295	199	173	291	254	155
Arrive On Green	0.05	0.39	0.39	0.09	0.43	0.43	0.05	0.11	0.11	0.06	0.12	0.12
Sat Flow, veh/h	1767	3443	144	1767	3330	240	1767	1763	1527	1767	2077	1271
Grp Volume(v), veh/h	53	574	594	126	485	497	53	63	70	74	62	62
Grp Sat Flow(s),veh/h/ln	1767	1763	1825	1767	1763	1808	1767	1763	1527	1767	1763	1584
Q Serve(g_s), s	2.2	22.6	22.6	5.4	16.7	16.7	2.0	2.5	3.3	2.8	2.4	2.8
Cycle Q Clear(g_c), s	2.2	22.6	22.6	5.4	16.7	16.7	2.0	2.5	3.3	2.8	2.4	2.8
Prop In Lane	1.00		0.08	1.00		0.13	1.00		1.00	1.00		0.80
Lane Grp Cap(c), veh/h	94	687	711	158	751	770	295	199	173	291	215	194
V/C Ratio(X)	0.57	0.84	0.84	0.80	0.65	0.65	0.18	0.32	0.41	0.25	0.29	0.32
Avail Cap(c_a), veh/h	138	771	798	161	794	814	340	736	638	319	736	662
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.4	21.2	21.2	34.2	17.4	17.4	27.5	31.3	31.6	27.3	30.6	30.7
Incr Delay (d2), s/veh	5.3	7.5	7.3	23.4	1.8	1.8	0.3	0.9	1.5	0.5	0.7	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	9.3	9.6	3.1	6.0	6.2	0.8	1.0	1.2	1.1	1.0	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	40.7	28.7	28.5	57.6	19.2	19.2	27.8	32.2	33.1	27.7	31.3	31.7
LnGrp LOS	D	C	C	E	B	B	C	C	C	C	C	C
Approach Vol, veh/h		1221			1108			186			198	
Approach Delay, s/veh		29.1			23.6			31.3			30.1	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.1	40.2	10.1	15.4	13.9	37.4	10.8	14.7
Change Period (Y+Rc), s	7.0	7.5	6.0	6.0	7.0	7.5	6.0	6.0
Max Green Setting (Gmax), s	6.0	34.5	6.0	32.0	7.0	33.5	6.0	32.0
Max Q Clear Time (g_c+I1), s	4.2	18.7	4.0	4.8	7.4	24.6	4.8	5.3
Green Ext Time (p_c), s	0.0	6.0	0.0	0.6	0.0	5.0	0.0	0.6

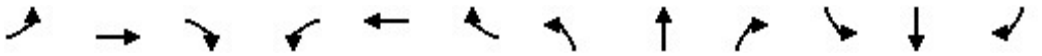
Intersection Summary	
HCM 6th Ctrl Delay	27.1
HCM 6th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	200	700	270	70	680	120	220	1090	170	100	1910	120
Future Volume (veh/h)	200	700	270	70	680	120	220	1090	170	100	1910	120
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.99	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	211	737	216	74	716	90	232	1147	105	105	2011	58
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	199	723	212	91	656	82	212	1921	176	126	1817	52
Arrive On Green	0.11	0.27	0.27	0.05	0.21	0.21	0.12	0.41	0.41	0.07	0.36	0.36
Sat Flow, veh/h	1753	2654	778	1753	3120	392	1753	4677	428	1753	5018	144
Grp Volume(v), veh/h	211	486	467	74	401	405	232	821	431	105	1341	728
Grp Sat Flow(s),veh/h/ln	1753	1749	1683	1753	1749	1764	1753	1675	1755	1753	1675	1812
Q Serve(g_s), s	16.5	39.5	39.5	6.1	30.5	30.5	17.5	27.8	27.8	8.6	52.5	52.5
Cycle Q Clear(g_c), s	16.5	39.5	39.5	6.1	30.5	30.5	17.5	27.8	27.8	8.6	52.5	52.5
Prop In Lane	1.00		0.46	1.00		0.22	1.00		0.24	1.00		0.08
Lane Grp Cap(c), veh/h	199	476	458	91	368	371	212	1376	721	126	1213	656
V/C Ratio(X)	1.06	1.02	1.02	0.82	1.09	1.09	1.10	0.60	0.60	0.83	1.11	1.11
Avail Cap(c_a), veh/h	199	476	458	91	368	371	212	1376	721	174	1213	656
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	64.3	52.8	52.8	68.1	57.3	57.3	63.8	33.4	33.4	66.4	46.3	46.3
Incr Delay (d2), s/veh	79.8	46.2	47.0	39.5	73.4	73.6	90.1	0.9	1.6	15.7	60.0	68.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.7	23.1	22.3	3.7	20.8	21.0	12.9	11.0	11.7	4.3	30.9	35.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	144.0	99.0	99.8	107.5	130.6	130.9	153.8	34.2	35.0	82.1	106.2	115.1
LnGrp LOS	F	F	F	F	F	F	F	C	C	F	F	F
Approach Vol, veh/h		1164			880			1484			2174	
Approach Delay, s/veh		107.5			128.8			53.1			108.0	
Approach LOS		F			F			D			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.0	67.0	14.0	46.0	25.0	60.0	23.0	37.0
Change Period (Y+Rc), s	7.5	7.5	6.5	6.5	7.5	7.5	6.5	6.5
Max Green Setting (Gmax), s	14.4	55.6	7.5	39.5	17.5	52.5	16.5	30.5
Max Q Clear Time (g_c+I1), s	10.6	29.8	8.1	41.5	19.5	54.5	18.5	32.5
Green Ext Time (p_c), s	0.0	11.9	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	96.8
HCM 6th LOS	F



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	170	1650	220	200	1070	540	230	1710	210	690	1650	110
Future Volume (veh/h)	170	1650	220	200	1070	540	230	1710	210	690	1650	110
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	179	1737	164	211	1126	532	242	1800	147	726	1737	48
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	239	1450	442	239	1450	665	291	2125	514	486	2489	603
Arrive On Green	0.07	0.29	0.29	0.07	0.29	0.29	0.09	0.34	0.34	0.14	0.39	0.39
Sat Flow, veh/h	3401	5025	1531	3401	5025	1531	3401	6332	1532	3401	6332	1534
Grp Volume(v), veh/h	179	1737	164	211	1126	532	242	1800	147	726	1737	48
Grp Sat Flow(s),veh/h/ln	1700	1675	1531	1700	1675	1531	1700	1583	1532	1700	1583	1534
Q Serve(g_s), s	7.3	41.0	12.1	8.7	29.2	41.0	10.0	37.5	10.0	20.3	32.6	2.8
Cycle Q Clear(g_c), s	7.3	41.0	12.1	8.7	29.2	41.0	10.0	37.5	10.0	20.3	32.6	2.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	239	1450	442	239	1450	665	291	2125	514	486	2489	603
V/C Ratio(X)	0.75	1.20	0.37	0.88	0.78	0.80	0.83	0.85	0.29	1.49	0.70	0.08
Avail Cap(c_a), veh/h	239	1450	442	239	1450	665	405	2255	546	486	2489	603
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	64.8	50.5	40.3	65.5	46.3	35.2	64.0	43.8	34.7	60.9	36.1	27.0
Incr Delay (d2), s/veh	10.9	96.0	0.5	28.5	2.7	6.9	7.3	3.1	0.3	233.0	0.9	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.5	29.6	4.6	4.7	12.2	16.7	4.5	14.4	3.7	24.2	12.1	1.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	75.8	146.5	40.8	94.0	49.1	42.1	71.3	46.9	35.0	293.9	36.9	27.1
LnGrp LOS	E	F	D	F	D	D	E	D	C	F	D	C
Approach Vol, veh/h		2080			1869			2189			2511	
Approach Delay, s/veh		132.1			52.1			48.8			111.1	
Approach LOS		F			D			D			F	

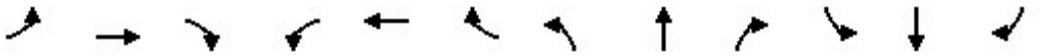
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	25.0	54.2	14.7	48.2	16.8	62.3	14.7	48.2
Change Period (Y+Rc), s	* 4.7	6.5	* 4.7	7.2	* 4.7	6.5	* 4.7	7.2
Max Green Setting (Gmax), s	* 20	50.6	* 10	41.0	* 17	54.0	* 10	41.0
Max Q Clear Time (g_c+I1), s	22.3	39.5	10.7	43.0	12.0	34.6	9.3	31.2
Green Ext Time (p_c), s	0.0	8.0	0.0	0.0	0.2	11.4	0.0	3.8

Intersection Summary	
HCM 6th Ctrl Delay	87.6
HCM 6th LOS	F

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	180	2280	70	120	1750	110	70	250	170	90	300	250
Future Volume (veh/h)	180	2280	70	120	1750	110	70	250	170	90	300	250
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	189	2400	32	126	1842	42	74	263	81	95	316	140
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	216	2675	648	132	2372	574	94	531	159	103	487	211
Arrive On Green	0.12	0.42	0.42	0.08	0.37	0.37	0.05	0.20	0.20	0.06	0.21	0.21
Sat Flow, veh/h	1753	6332	1534	1753	6332	1533	1753	2635	792	1753	2359	1020
Grp Volume(v), veh/h	189	2400	32	126	1842	42	74	172	172	95	232	224
Grp Sat Flow(s),veh/h/ln	1753	1583	1534	1753	1583	1533	1753	1749	1678	1753	1749	1631
Q Serve(g_s), s	12.7	42.2	1.5	8.6	30.7	2.1	5.0	10.4	10.9	6.5	14.5	15.1
Cycle Q Clear(g_c), s	12.7	42.2	1.5	8.6	30.7	2.1	5.0	10.4	10.9	6.5	14.5	15.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.47	1.00		0.63
Lane Grp Cap(c), veh/h	216	2675	648	132	2372	574	94	352	338	103	361	337
V/C Ratio(X)	0.88	0.90	0.05	0.96	0.78	0.07	0.79	0.49	0.51	0.93	0.64	0.66
Avail Cap(c_a), veh/h	234	2699	654	132	2372	574	103	716	687	103	716	668
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	51.6	32.1	20.4	55.1	33.0	24.1	56.0	42.3	42.5	56.1	43.4	43.6
Incr Delay (d2), s/veh	27.6	4.5	0.0	64.5	1.7	0.1	30.7	1.3	1.4	65.5	2.3	2.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.0	15.7	0.5	6.0	11.3	0.7	2.9	4.5	4.5	4.6	6.3	6.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	79.1	36.6	20.4	119.7	34.7	24.1	86.7	43.6	43.9	121.6	45.7	46.4
LnGrp LOS	E	D	C	F	C	C	F	D	D	F	D	D
Approach Vol, veh/h		2621			2010			418			551	
Approach Delay, s/veh		39.5			39.8			51.3			59.1	
Approach LOS		D			D			D			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	21.7	52.3	13.4	32.2	16.0	58.0	14.0	31.6
Change Period (Y+Rc), s	7.0	7.5	7.0	7.5	7.0	7.5	7.0	7.5
Max Green Setting (Gmax), s	16.0	44.0	7.0	49.0	9.0	51.0	7.0	49.0
Max Q Clear Time (g_c+I1), s	14.7	32.7	7.0	17.1	10.6	44.2	8.5	12.9
Green Ext Time (p_c), s	0.1	8.9	0.0	3.1	0.0	6.4	0.0	2.3

Intersection Summary	
HCM 6th Ctrl Delay	42.4
HCM 6th LOS	D

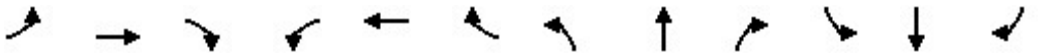
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	560	1720	390	390	1600	170	230	900	480	230	1160	480
Future Volume (veh/h)	560	1720	390	390	1600	170	230	900	480	230	1160	480
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	589	1811	0	411	1684	161	242	947	0	242	1221	367
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	552	1989		448	1677	160	276	1307		231	1562	476
Arrive On Green	0.16	0.31	0.00	0.13	0.28	0.28	0.08	0.26	0.00	0.13	0.31	0.31
Sat Flow, veh/h	3401	6332	1560	3401	5910	565	3401	5025	1560	1753	5025	1532
Grp Volume(v), veh/h	589	1811	0	411	1353	492	242	947	0	242	1221	367
Grp Sat Flow(s),veh/h/ln	1700	1583	1560	1700	1583	1726	1700	1675	1560	1753	1675	1532
Q Serve(g_s), s	16.0	27.1	0.0	11.8	28.0	28.0	6.9	17.0	0.0	13.0	21.8	21.4
Cycle Q Clear(g_c), s	16.0	27.1	0.0	11.8	28.0	28.0	6.9	17.0	0.0	13.0	21.8	21.4
Prop In Lane	1.00		1.00	1.00		0.33	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	552	1989		448	1348	490	276	1307		231	1562	476
V/C Ratio(X)	1.07	0.91		0.92	1.00	1.00	0.88	0.72		1.05	0.78	0.77
Avail Cap(c_a), veh/h	552	1989		448	1348	490	276	1375		231	1630	497
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.3	32.5	0.0	42.3	35.3	35.3	44.8	33.3	0.0	42.8	31.0	30.8
Incr Delay (d2), s/veh	57.7	7.1	0.0	24.5	25.5	41.7	27.2	2.4	0.0	72.3	2.9	8.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.7	10.5	0.0	6.2	13.1	16.5	3.8	6.6	0.0	9.9	8.4	8.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	99.1	39.6	0.0	66.8	60.8	77.0	72.1	35.6	0.0	115.1	33.9	39.3
LnGrp LOS	F	D		E	F	F	E	D		F	C	D
Approach Vol, veh/h		2400	A		2256			1189	A		1830	
Approach Delay, s/veh		54.2			65.4			43.1			45.7	
Approach LOS		D			E			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.0	29.7	17.0	35.0	12.0	34.7	20.0	32.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	13.0	27.0	13.0	31.0	8.0	32.0	16.0	28.0
Max Q Clear Time (g_c+I1), s	15.0	19.0	13.8	29.1	8.9	23.8	18.0	30.0
Green Ext Time (p_c), s	0.0	5.1	0.0	1.8	0.0	6.8	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	53.7
HCM 6th LOS	D

Notes

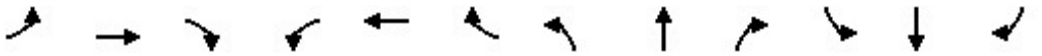
Unsignalized Delay for [NBR, EBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	460	1910	60	230	1860	380	60	250	80	360	360	300
Future Volume (veh/h)	460	1910	60	230	1860	380	60	250	80	360	360	300
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	484	2011	61	242	1958	185	63	263	60	379	379	200
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	434	2380	72	238	2005	485	89	443	99	324	644	334
Arrive On Green	0.13	0.37	0.37	0.07	0.32	0.32	0.05	0.16	0.16	0.19	0.29	0.29
Sat Flow, veh/h	3401	6358	193	3401	6332	1532	1753	2825	632	1753	2210	1147
Grp Volume(v), veh/h	484	1502	570	242	1958	185	63	161	162	379	299	280
Grp Sat Flow(s),veh/h/ln	1700	1583	1802	1700	1583	1532	1753	1749	1709	1753	1749	1609
Q Serve(g_s), s	15.5	35.2	35.2	8.5	37.2	11.4	4.3	10.4	10.8	22.5	17.7	18.2
Cycle Q Clear(g_c), s	15.5	35.2	35.2	8.5	37.2	11.4	4.3	10.4	10.8	22.5	17.7	18.2
Prop In Lane	1.00		0.11	1.00		1.00	1.00		0.37	1.00		0.71
Lane Grp Cap(c), veh/h	434	1777	674	238	2005	485	89	274	268	324	509	468
V/C Ratio(X)	1.12	0.85	0.85	1.02	0.98	0.38	0.71	0.59	0.61	1.17	0.59	0.60
Avail Cap(c_a), veh/h	434	1777	674	238	2005	485	174	683	668	324	833	766
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.0	34.8	34.8	56.5	41.1	32.3	56.8	47.6	47.7	49.5	36.8	37.0
Incr Delay (d2), s/veh	78.8	4.1	10.0	63.0	14.9	0.7	3.8	0.7	0.8	103.7	0.4	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.1	13.4	16.3	5.6	15.6	4.1	2.0	4.5	4.5	18.9	7.4	7.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	131.8	38.9	44.8	119.5	56.0	33.0	60.7	48.3	48.6	153.3	37.2	37.4
LnGrp LOS	F	D	D	F	E	C	E	D	D	F	D	D
Approach Vol, veh/h		2556			2385			386			958	
Approach Delay, s/veh		57.8			60.7			50.4			83.2	
Approach LOS		E			E			D			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	29.0	25.6	15.0	52.0	12.7	41.9	22.0	45.0
Change Period (Y+Rc), s	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
Max Green Setting (Gmax), s	22.5	47.5	8.5	45.5	12.1	57.9	15.5	38.5
Max Q Clear Time (g_c+I1), s	24.5	12.8	10.5	37.2	6.3	20.2	17.5	39.2
Green Ext Time (p_c), s	0.0	1.1	0.0	7.4	0.0	2.1	0.0	0.0

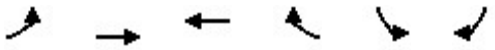
Intersection Summary	
HCM 6th Ctrl Delay	62.3
HCM 6th LOS	E



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	385	1695	270	713	1865	300	320	658	478	500	1170	285
Future Volume (veh/h)	385	1695	270	713	1865	300	320	658	478	500	1170	285
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	405	1784	265	751	1963	179	337	693	275	526	1232	148
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	351	1715	255	624	1943	593	283	905	274	442	1139	346
Arrive On Green	0.10	0.31	0.31	0.18	0.39	0.39	0.08	0.18	0.18	0.13	0.23	0.23
Sat Flow, veh/h	3401	5592	830	3401	5025	1534	3401	5025	1525	3401	5025	1528
Grp Volume(v), veh/h	405	1515	534	751	1963	179	337	693	275	526	1232	148
Grp Sat Flow(s),veh/h/ln	1700	1583	1673	1700	1675	1534	1700	1675	1525	1700	1675	1528
Q Serve(g_s), s	15.5	46.0	46.0	27.5	58.0	12.2	12.5	19.7	27.0	19.5	34.0	12.4
Cycle Q Clear(g_c), s	15.5	46.0	46.0	27.5	58.0	12.2	12.5	19.7	27.0	19.5	34.0	12.4
Prop In Lane	1.00		0.50	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	351	1456	513	624	1943	593	283	905	274	442	1139	346
V/C Ratio(X)	1.15	1.04	1.04	1.20	1.01	0.30	1.19	0.77	1.00	1.19	1.08	0.43
Avail Cap(c_a), veh/h	351	1456	513	624	1943	593	283	905	274	442	1139	346
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	67.3	52.0	52.0	61.2	46.0	31.9	68.8	58.5	61.5	65.3	58.0	49.7
Incr Delay (d2), s/veh	96.2	34.8	50.7	106.7	23.0	0.3	114.7	4.0	54.8	105.9	51.6	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.2	22.1	25.6	20.7	26.9	4.5	9.8	8.5	14.4	14.8	19.4	4.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	163.5	86.8	102.7	167.9	69.0	32.3	183.5	62.5	116.3	171.2	109.6	50.7
LnGrp LOS	F	F	F	F	F	C	F	E	F	F	F	D
Approach Vol, veh/h		2454			2893			1305			1906	
Approach Delay, s/veh		102.9			92.4			105.1			122.0	
Approach LOS		F			F			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	35.0	53.5	20.0	41.5	23.0	65.5	27.0	34.5
Change Period (Y+Rc), s	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5
Max Green Setting (Gmax), s	27.5	46.0	12.5	34.0	15.5	58.0	19.5	27.0
Max Q Clear Time (g_c+I1), s	29.5	48.0	14.5	36.0	17.5	60.0	21.5	29.0
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	103.9
HCM 6th LOS	F



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	1980	1500	460	320	1490
Future Volume (veh/h)	0	1980	1500	460	320	1490
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	0	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	0	2084	1579	0	337	1564
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	4	4	4	4	4
Cap, veh/h	0	2430	1691		759	1350
Arrive On Green	0.00	0.48	0.48	0.00	0.43	0.43
Sat Flow, veh/h	0	5356	3589	1560	1753	3120
Grp Volume(v), veh/h	0	2084	1579	0	337	1564
Grp Sat Flow(s),veh/h/ln	0	1675	1749	1560	1753	1560
Q Serve(g_s), s	0.0	53.7	62.4	0.0	19.8	63.5
Cycle Q Clear(g_c), s	0.0	53.7	62.4	0.0	19.8	63.5
Prop In Lane	0.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	0	2430	1691		759	1350
V/C Ratio(X)	0.00	0.86	0.93		0.44	1.16
Avail Cap(c_a), veh/h	0	2541	1768		759	1350
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	33.4	35.7	0.0	29.2	41.6
Incr Delay (d2), s/veh	0.0	3.1	9.5	0.0	0.4	80.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	20.9	26.7	0.0	8.2	38.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.0	36.5	45.2	0.0	29.6	121.7
LnGrp LOS	A	D	D		C	F
Approach Vol, veh/h		2084	1579	A	1901	
Approach Delay, s/veh		36.5	45.2		105.4	
Approach LOS		D	D		F	

Timer - Assigned Phs	2	4	6
Phs Duration (G+Y+Rc), s	77.8	69.0	77.8
Change Period (Y+Rc), s	6.8	5.5	6.8
Max Green Setting (Gmax), s	74.2	63.5	74.2
Max Q Clear Time (g_c+I1), s	55.7	65.5	64.4
Green Ext Time (p_c), s	13.1	0.0	6.6

Intersection Summary	
HCM 6th Ctrl Delay	62.5
HCM 6th LOS	E

Notes

User approved volume balancing among the lanes for turning movement.

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	700	1600	260	760	1200	150
Future Volume (veh/h)	700	1600	260	760	1200	150
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		0.97	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	737	1680	274	800	1263	79
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	4	4	4
Cap, veh/h	1439	2097	278	2702	1275	567
Arrive On Green	0.41	0.41	0.08	0.54	0.36	0.36
Sat Flow, veh/h	3589	2669	3401	5191	3506	1560
Grp Volume(v), veh/h	737	1680	274	800	1263	79
Grp Sat Flow(s),veh/h/ln	1749	1335	1700	1675	1753	1560
Q Serve(g_s), s	21.2	51.5	10.8	11.8	48.3	4.6
Cycle Q Clear(g_c), s	21.2	51.5	10.8	11.8	48.3	4.6
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1439	2097	278	2702	1275	567
V/C Ratio(X)	0.51	0.80	0.99	0.30	0.99	0.14
Avail Cap(c_a), veh/h	1446	2102	278	2711	1275	567
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.6	9.2	61.8	17.1	42.6	28.7
Incr Delay (d2), s/veh	0.3	2.3	50.2	0.1	22.9	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.5	28.7	6.5	4.2	24.9	1.8
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	29.9	11.5	112.0	17.2	65.5	28.8
LnGrp LOS	C	B	F	B	E	C
Approach Vol, veh/h	2417			1074	1342	
Approach Delay, s/veh	17.1			41.4	63.4	
Approach LOS	B			D	E	

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	17.0	62.7			79.7	55.0
Change Period (Y+Rc), s	6.0	7.3			7.3	6.0
Max Green Setting (Gmax), s	11.0	55.7			72.7	49.0
Max Q Clear Time (g_c+I1), s	12.8	53.5			13.8	50.3
Green Ext Time (p_c), s	0.0	2.0			5.5	0.0

Intersection Summary	
HCM 6th Ctrl Delay	35.3
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

User approved volume balancing among the lanes for turning movement.

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↱			↱
Traffic Vol, veh/h	0	1431	1496	30	0	20
Future Vol, veh/h	0	1431	1496	30	0	20
Conflicting Peds, #/hr	5	0	0	5	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	0	1506	1575	32	0	21

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	809
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.96
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.33
Pot Cap-1 Maneuver	0	-	-	-	0	321
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	319
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	17.1
HCM LOS			C

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	319
HCM Lane V/C Ratio	-	-	-	0.066
HCM Control Delay (s)	-	-	-	17.1
HCM Lane LOS	-	-	-	C
HCM 95th %tile Q(veh)	-	-	-	0.2

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑			↱
Traffic Vol, veh/h	0	1431	1506	20	0	20
Future Vol, veh/h	0	1431	1506	20	0	20
Conflicting Peds, #/hr	5	0	0	5	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	0	1506	1585	21	0	21

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	808
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.96
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.33
Pot Cap-1 Maneuver	0	-	-	-	0	322
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	320
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	17
HCM LOS			C

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	320
HCM Lane V/C Ratio	-	-	-	0.066
HCM Control Delay (s)	-	-	-	17
HCM Lane LOS	-	-	-	C
HCM 95th %tile Q(veh)	-	-	-	0.2

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	20	1411	1516	20	30	10
Future Vol, veh/h	20	1411	1516	20	30	10
Conflicting Peds, #/hr	5	0	0	5	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	21	1485	1596	21	32	11

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1622	0	-	0	2397	814
Stage 1	-	-	-	-	1612	-
Stage 2	-	-	-	-	785	-
Critical Hdwy	4.16	-	-	-	6.86	6.96
Critical Hdwy Stg 1	-	-	-	-	5.86	-
Critical Hdwy Stg 2	-	-	-	-	5.86	-
Follow-up Hdwy	2.23	-	-	-	3.53	3.33
Pot Cap-1 Maneuver	393	-	-	-	~ 28	319
Stage 1	-	-	-	-	147	-
Stage 2	-	-	-	-	407	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	391	-	-	-	~ 26	317
Mov Cap-2 Maneuver	-	-	-	-	103	-
Stage 1	-	-	-	-	138	-
Stage 2	-	-	-	-	405	-

Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	48.3
HCM LOS			E

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	391	-	-	-	124
HCM Lane V/C Ratio	0.054	-	-	-	0.34
HCM Control Delay (s)	14.7	-	-	-	48.3
HCM Lane LOS	B	-	-	-	E
HCM 95th %tile Q(veh)	0.2	-	-	-	1.4

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	2.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	30	1401	1496	30	50	40
Future Vol, veh/h	30	1401	1496	30	50	40
Conflicting Peds, #/hr	5	0	0	5	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	350	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	32	1475	1575	32	53	42

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1612	0	-	0	2398	809
Stage 1	-	-	-	-	1596	-
Stage 2	-	-	-	-	802	-
Critical Hdwy	4.16	-	-	-	6.86	6.96
Critical Hdwy Stg 1	-	-	-	-	5.86	-
Critical Hdwy Stg 2	-	-	-	-	5.86	-
Follow-up Hdwy	2.23	-	-	-	3.53	3.33
Pot Cap-1 Maneuver	396	-	-	-	~ 27	321
Stage 1	-	-	-	-	150	-
Stage 2	-	-	-	-	399	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	394	-	-	-	~ 25	319
Mov Cap-2 Maneuver	-	-	-	-	101	-
Stage 1	-	-	-	-	137	-
Stage 2	-	-	-	-	397	-

Approach	EB	WB	SB
HCM Control Delay, s	0.3	0	67.5
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	394	-	-	-	145
HCM Lane V/C Ratio	0.08	-	-	-	0.653
HCM Control Delay (s)	14.9	-	-	-	67.5
HCM Lane LOS	B	-	-	-	F
HCM 95th %tile Q(veh)	0.3	-	-	-	3.6

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	5.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	30	1421	1496	30	30	30
Future Vol, veh/h	30	1421	1496	30	30	30
Conflicting Peds, #/hr	5	0	0	5	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	175	-	-	-	0	76
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	32	1496	1575	32	32	32

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1612	0	-	0	2408	809
Stage 1	-	-	-	-	1596	-
Stage 2	-	-	-	-	812	-
Critical Hdwy	4.16	-	-	-	6.86	6.96
Critical Hdwy Stg 1	-	-	-	-	5.86	-
Critical Hdwy Stg 2	-	-	-	-	5.86	-
Follow-up Hdwy	2.23	-	-	-	3.53	3.33
Pot Cap-1 Maneuver	396	-	-	-	~ 27	321
Stage 1	-	-	-	-	150	-
Stage 2	-	-	-	-	394	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	394	-	-	-	~ 25	319
Mov Cap-2 Maneuver	-	-	-	-	~ 25	-
Stage 1	-	-	-	-	137	-
Stage 2	-	-	-	-	392	-

Approach	EB	WB	SB
HCM Control Delay, s	0.3	0	259
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	394	-	-	-	25	319
HCM Lane V/C Ratio	0.08	-	-	-	1.263	0.099
HCM Control Delay (s)	14.9	-	-	-	$ 500.4	17.5
HCM Lane LOS	B	-	-	-	F	C
HCM 95th %tile Q(veh)	0.3	-	-	-	3.9	0.3

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	4.9

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1061	80	90	840	40	40
Future Vol, veh/h	1061	80	90	840	40	40
Conflicting Peds, #/hr	0	5	5	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	100	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	1117	84	95	884	42	42

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1206	0	1796	606
Stage 1	-	-	-	-	1164	-
Stage 2	-	-	-	-	632	-
Critical Hdwy	-	-	4.16	-	6.86	6.96
Critical Hdwy Stg 1	-	-	-	-	5.86	-
Critical Hdwy Stg 2	-	-	-	-	5.86	-
Follow-up Hdwy	-	-	2.23	-	3.53	3.33
Pot Cap-1 Maneuver	-	-	569	-	71	438
Stage 1	-	-	-	-	257	-
Stage 2	-	-	-	-	489	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	566	-	59	436
Mov Cap-2 Maneuver	-	-	-	-	59	-
Stage 1	-	-	-	-	256	-
Stage 2	-	-	-	-	407	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.2	117
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	104	-	-	566	-
HCM Lane V/C Ratio	0.81	-	-	0.167	-
HCM Control Delay (s)	117	-	-	12.6	-
HCM Lane LOS	F	-	-	B	-
HCM 95th %tile Q(veh)	4.5	-	-	0.6	-

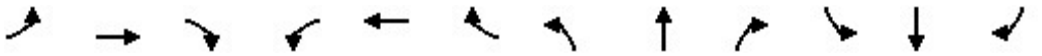
Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	150	150	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	0	0	0	0	0	0

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	0	0	0	0	0	0
Stage 1	0	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Critical Hdwy	5.76	7.16	-	-	5.36	-
Critical Hdwy Stg 1	6.66	-	-	-	-	-
Critical Hdwy Stg 2	6.06	-	-	-	-	-
Follow-up Hdwy	3.83	3.93	-	-	3.13	-
Pot Cap-1 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	-	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-	-
HCM Control Delay (s)	-	-	0	0	0	-
HCM Lane LOS	-	-	A	A	A	-
HCM 95th %tile Q(veh)	-	-	-	-	-	-



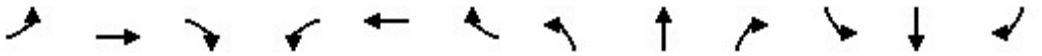
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	260	620	100	30	710	910	190	1130	50	950	970	180
Future Volume (veh/h)	260	620	100	30	710	910	190	1130	50	950	970	180
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	274	653	36	32	747	778	200	1189	51	1000	1021	61
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	218	1579	488	155	1487	459	212	1470	63	237	1568	478
Arrive On Green	0.06	0.31	0.31	0.05	0.30	0.30	0.12	0.30	0.30	0.14	0.31	0.31
Sat Flow, veh/h	3401	5025	1552	3401	5025	1552	1753	4936	212	1753	5025	1532
Grp Volume(v), veh/h	274	653	36	32	747	778	200	807	433	1000	1021	61
Grp Sat Flow(s),veh/h/ln	1700	1675	1552	1700	1675	1552	1753	1675	1798	1753	1675	1532
Q Serve(g_s), s	9.0	14.4	2.3	1.3	17.2	41.5	15.9	31.2	31.3	19.0	24.6	4.0
Cycle Q Clear(g_c), s	9.0	14.4	2.3	1.3	17.2	41.5	15.9	31.2	31.3	19.0	24.6	4.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.12	1.00		1.00
Lane Grp Cap(c), veh/h	218	1579	488	155	1487	459	212	998	536	237	1568	478
V/C Ratio(X)	1.26	0.41	0.07	0.21	0.50	1.69	0.94	0.81	0.81	4.21	0.65	0.13
Avail Cap(c_a), veh/h	218	1579	488	218	1487	459	212	1110	596	237	1737	530
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	65.6	37.9	33.8	64.5	40.9	49.4	61.1	45.6	45.6	60.6	41.7	34.6
Incr Delay (d2), s/veh	146.8	0.2	0.1	0.5	0.3	321.8	45.2	4.5	8.1	1455.1	0.9	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.3	5.8	0.8	0.5	6.9	56.3	9.5	13.1	14.7	104.2	10.1	1.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	212.5	38.1	33.8	65.0	41.2	371.2	106.4	50.1	53.7	1515.7	42.6	34.7
LnGrp LOS	F	D	C	E	D	F	F	D	D	F	D	C
Approach Vol, veh/h		963			1557			1440			2082	
Approach Delay, s/veh		87.6			206.6			59.0			749.9	
Approach LOS		F			F			E			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	26.0	48.8	13.9	51.6	24.0	50.8	16.5	49.0
Change Period (Y+Rc), s	7.0	7.0	7.5	7.5	7.0	7.0	7.5	7.5
Max Green Setting (Gmax), s	19.0	46.5	9.0	41.5	17.0	48.5	9.0	41.5
Max Q Clear Time (g_c+I1), s	21.0	33.3	3.3	16.4	17.9	26.6	11.0	43.5
Green Ext Time (p_c), s	0.0	7.8	0.0	5.3	0.0	9.6	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	339.7
HCM 6th LOS	F

Notes

User approved pedestrian interval to be less than phase max green.



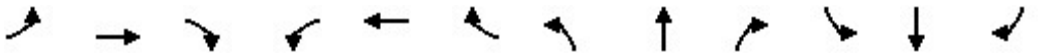
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	50	1310	320	270	1350	40	300	40	130	70	50	50
Future Volume (veh/h)	50	1310	320	270	1350	40	300	40	130	70	50	50
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	53	1379	142	284	1421	40	316	42	37	74	53	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	101	1569	480	318	2188	62	423	936	412	418	936	
Arrive On Green	0.06	0.31	0.31	0.18	0.44	0.44	0.27	0.27	0.27	0.27	0.27	0.00
Sat Flow, veh/h	1753	5025	1539	1753	5022	141	1330	3497	1539	1299	3589	0
Grp Volume(v), veh/h	53	1379	142	284	948	513	316	42	37	74	53	0
Grp Sat Flow(s),veh/h/ln	1753	1675	1539	1753	1675	1813	1330	1749	1539	1299	1749	0
Q Serve(g_s), s	2.6	22.9	6.1	13.9	19.6	19.6	20.4	0.8	1.6	3.9	1.0	0.0
Cycle Q Clear(g_c), s	2.6	22.9	6.1	13.9	19.6	19.6	21.4	0.8	1.6	4.7	1.0	0.0
Prop In Lane	1.00		1.00	1.00		0.08	1.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	101	1569	480	318	1460	790	423	936	412	418	936	
V/C Ratio(X)	0.52	0.88	0.30	0.89	0.65	0.65	0.75	0.04	0.09	0.18	0.06	
Avail Cap(c_a), veh/h	140	1600	490	339	1460	790	430	954	420	425	954	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	40.3	28.7	22.9	35.2	19.5	19.5	31.9	23.9	24.2	25.6	23.9	0.0
Incr Delay (d2), s/veh	1.6	6.1	0.5	22.6	1.2	2.1	7.9	0.0	0.2	0.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	9.0	2.1	7.4	6.7	7.5	6.9	0.3	0.6	1.2	0.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	41.8	34.7	23.4	57.7	20.7	21.7	39.7	23.9	24.3	26.0	24.0	0.0
LnGrp LOS	D	C	C	E	C	C	D	C	C	C	C	
Approach Vol, veh/h		1574			1745			395			127	A
Approach Delay, s/veh		34.0			27.0			36.6			25.1	
Approach LOS		C			C			D			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	23.0	34.5		30.5	12.1	45.3		30.5				
Change Period (Y+Rc), s	7.0	7.0		7.0	7.0	7.0		7.0				
Max Green Setting (Gmax), s	17.0	28.0		24.0	7.0	38.0		24.0				
Max Q Clear Time (g_c+I1), s	15.9	24.9		23.4	4.6	21.6		6.7				
Green Ext Time (p_c), s	0.1	2.6		0.2	0.0	10.3		0.7				

Intersection Summary			
HCM 6th Ctrl Delay		30.8	
HCM 6th LOS		C	

Notes

Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.

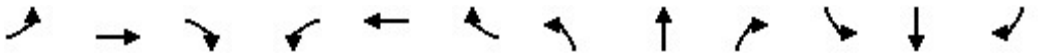


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	320	140	170	470	60	120	320	40	50	610	180
Future Volume (veh/h)	30	320	140	170	470	60	120	320	40	50	610	180
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	32	337	92	179	495	52	126	337	34	53	642	162
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	245	531	143	314	768	80	278	1025	103	423	828	209
Arrive On Green	0.04	0.20	0.20	0.08	0.24	0.24	0.07	0.32	0.32	0.05	0.30	0.30
Sat Flow, veh/h	1753	2711	728	1753	3188	334	1753	3204	321	1753	2755	694
Grp Volume(v), veh/h	32	215	214	179	271	276	126	183	188	53	407	397
Grp Sat Flow(s),veh/h/ln	1753	1749	1691	1753	1749	1773	1753	1749	1776	1753	1749	1700
Q Serve(g_s), s	1.1	8.8	9.0	6.4	10.8	10.9	3.8	6.2	6.3	1.6	16.5	16.5
Cycle Q Clear(g_c), s	1.1	8.8	9.0	6.4	10.8	10.9	3.8	6.2	6.3	1.6	16.5	16.5
Prop In Lane	1.00		0.43	1.00		0.19	1.00		0.18	1.00		0.41
Lane Grp Cap(c), veh/h	245	342	331	314	421	427	278	560	568	423	525	511
V/C Ratio(X)	0.13	0.63	0.65	0.57	0.64	0.65	0.45	0.33	0.33	0.13	0.77	0.78
Avail Cap(c_a), veh/h	313	608	588	314	619	628	287	642	652	466	642	624
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.5	28.6	28.7	23.1	26.5	26.5	18.6	20.0	20.1	16.9	24.8	24.8
Incr Delay (d2), s/veh	0.3	2.7	3.0	2.4	2.3	2.3	1.4	0.5	0.5	0.2	5.5	5.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	3.6	3.6	2.6	4.3	4.4	1.5	2.3	2.4	0.6	6.9	6.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.8	31.3	31.7	25.5	28.8	28.8	20.0	20.5	20.6	17.1	30.3	30.5
LnGrp LOS	C	C	C	C	C	C	C	C	C	B	C	C
Approach Vol, veh/h		461			726			497			857	
Approach Delay, s/veh		31.0			28.0			20.4			29.6	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.1	31.8	13.0	21.7	12.6	30.3	9.5	25.2
Change Period (Y+Rc), s	7.0	7.0	6.5	6.5	7.0	7.0	6.5	6.5
Max Green Setting (Gmax), s	6.0	28.5	6.5	27.0	6.0	28.5	6.0	27.5
Max Q Clear Time (g_c+I1), s	3.6	8.3	8.4	11.0	5.8	18.5	3.1	12.9
Green Ext Time (p_c), s	0.0	2.6	0.0	2.8	0.0	4.4	0.0	3.5

Intersection Summary	
HCM 6th Ctrl Delay	27.6
HCM 6th LOS	C

Min green cannot be greater than Max Green.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	410	20	440	230	1490	0	0	2100	860
Future Volume (veh/h)	0	0	0	410	20	440	230	1490	0	0	2100	860
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1841	1841	1841	1841	1841	0	0	1841	1841
Adj Flow Rate, veh/h				550	0	243	242	1568	0	0	2211	565
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				4	4	4	4	4	0	0	4	4
Cap, veh/h				673	0	299	387	3315	0	0	2445	757
Arrive On Green				0.19	0.00	0.19	0.11	0.66	0.00	0.00	0.49	0.49
Sat Flow, veh/h				3506	0	1560	3401	5191	0	0	5191	1555
Grp Volume(v), veh/h				550	0	243	242	1568	0	0	2211	565
Grp Sat Flow(s),veh/h/ln				1753	0	1560	1700	1675	0	0	1675	1555
Q Serve(g_s), s				13.2	0.0	13.1	5.9	13.5	0.0	0.0	35.4	25.7
Cycle Q Clear(g_c), s				13.2	0.0	13.1	5.9	13.5	0.0	0.0	35.4	25.7
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				673	0	299	387	3315	0	0	2445	757
V/C Ratio(X)				0.82	0.00	0.81	0.63	0.47	0.00	0.00	0.90	0.75
Avail Cap(c_a), veh/h				760	0	338	388	3326	0	0	2454	759
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				33.9	0.0	33.9	37.1	7.4	0.0	0.0	20.6	18.1
Incr Delay (d2), s/veh				6.8	0.0	13.6	3.1	0.1	0.0	0.0	5.3	4.4
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				6.1	0.0	6.0	2.5	3.8	0.0	0.0	13.2	9.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				40.8	0.0	47.5	40.2	7.5	0.0	0.0	26.0	22.5
LnGrp LOS				D	A	D	D	A	A	A	C	C
Approach Vol, veh/h					793			1810			2776	
Approach Delay, s/veh					42.8			11.9			25.3	
Approach LOS					D			B			C	

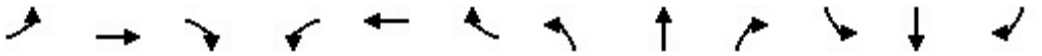
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		63.8			15.2	48.6		23.8				
Change Period (Y+Rc), s		6.0			* 5.2	6.0		7.0				
Max Green Setting (Gmax), s		58.0			* 10	42.8		19.0				
Max Q Clear Time (g_c+I1), s		15.5			7.9	37.4		15.2				
Green Ext Time (p_c), s		22.2			0.2	5.3		1.6				

Intersection Summary		
HCM 6th Ctrl Delay	23.3	
HCM 6th LOS	C	

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	240	10	270	0	0	0	0	1480	290	370	2130	0
Future Volume (veh/h)	240	10	270	0	0	0	0	1480	290	370	2130	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841				0	1841	1841	1841	1841	0
Adj Flow Rate, veh/h	253	11	281				0	1558	109	389	2242	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4				0	4	4	4	4	0
Cap, veh/h	721	13	320				0	1795	555	529	2944	0
Arrive On Green	0.21	0.21	0.21				0.00	0.36	0.36	0.16	0.59	0.00
Sat Flow, veh/h	3401	59	1510				0	5191	1553	3401	5191	0
Grp Volume(v), veh/h	253	0	292				0	1558	109	389	2242	0
Grp Sat Flow(s),veh/h/ln	1700	0	1569				0	1675	1553	1700	1675	0
Q Serve(g_s), s	4.1	0.0	11.6				0.0	18.6	3.1	7.0	21.4	0.0
Cycle Q Clear(g_c), s	4.1	0.0	11.6				0.0	18.6	3.1	7.0	21.4	0.0
Prop In Lane	1.00		0.96				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	721	0	333				0	1795	555	529	2944	0
V/C Ratio(X)	0.35	0.00	0.88				0.00	0.87	0.20	0.74	0.76	0.00
Avail Cap(c_a), veh/h	741	0	342				0	1814	561	534	2971	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	21.6	0.0	24.5				0.0	19.2	14.3	25.9	10.0	0.0
Incr Delay (d2), s/veh	0.4	0.0	22.2				0.0	5.0	0.3	5.2	1.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	0.0	6.1				0.0	7.0	1.0	3.0	5.8	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	22.0	0.0	46.7				0.0	24.2	14.6	31.1	11.2	0.0
LnGrp LOS	C	A	D				A	C	B	C	B	A
Approach Vol, veh/h		545						1667			2631	
Approach Delay, s/veh		35.2						23.6			14.2	
Approach LOS		D						C			B	

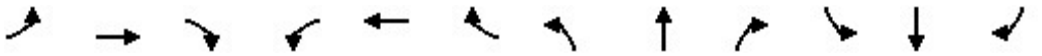
Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	14.7	29.0		20.6		43.7
Change Period (Y+Rc), s	* 4.7	6.0		7.0		6.0
Max Green Setting (Gmax), s	* 10	23.2		14.0		38.0
Max Q Clear Time (g_c+I1), s	9.0	20.6		13.6		23.4
Green Ext Time (p_c), s	0.2	2.4		0.0		13.2

Intersection Summary	
HCM 6th Ctrl Delay	19.8
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



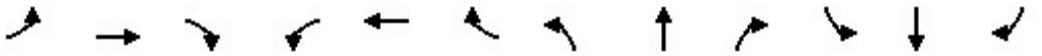
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	480	10	130	170	480	0	0	1310	460
Future Volume (veh/h)	0	0	0	480	10	130	170	480	0	0	1310	460
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		0.97
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1841	1841	1841	1841	1841	0	0	1841	1841
Adj Flow Rate, veh/h				513	0	26	179	505	0	0	1379	327
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				4	4	4	4	4	0	0	4	4
Cap, veh/h				610	0	543	215	2382	0	0	1735	753
Arrive On Green				0.17	0.00	0.17	0.16	0.91	0.00	0.00	0.50	0.50
Sat Flow, veh/h				3506	0	3120	1753	3589	0	0	3589	1519
Grp Volume(v), veh/h				513	0	26	179	505	0	0	1379	327
Grp Sat Flow(s),veh/h/ln				1753	0	1560	1753	1749	0	0	1749	1519
Q Serve(g_s), s				11.3	0.0	0.6	7.9	1.3	0.0	0.0	26.3	11.1
Cycle Q Clear(g_c), s				11.3	0.0	0.6	7.9	1.3	0.0	0.0	26.3	11.1
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				610	0	543	215	2382	0	0	1735	753
V/C Ratio(X)				0.84	0.00	0.05	0.83	0.21	0.00	0.00	0.80	0.43
Avail Cap(c_a), veh/h				728	0	647	219	2382	0	0	1735	753
HCM Platoon Ratio				1.00	1.00	1.00	1.33	1.33	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.82	0.82	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				32.0	0.0	27.5	32.7	1.3	0.0	0.0	16.8	13.0
Incr Delay (d2), s/veh				7.2	0.0	0.0	18.9	0.2	0.0	0.0	3.9	1.8
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				5.3	0.0	0.2	4.1	0.3	0.0	0.0	9.6	3.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				39.2	0.0	27.6	51.6	1.4	0.0	0.0	20.6	14.8
LnGrp LOS				D	A	C	D	A	A	A	C	B
Approach Vol, veh/h					539			684			1706	
Approach Delay, s/veh					38.6			14.5			19.5	
Approach LOS					D			B			B	

Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		60.3			14.8	45.5		19.7				
Change Period (Y+Rc), s		5.8			5.0	5.8		5.8				
Max Green Setting (Gmax), s		51.8			10.0	36.8		16.6				
Max Q Clear Time (g_c+I1), s		3.3			9.9	28.3		13.3				
Green Ext Time (p_c), s		2.7			0.0	4.4		0.6				

Intersection Summary												
HCM 6th Ctrl Delay			21.9									
HCM 6th LOS			C									

Notes

User approved volume balancing among the lanes for turning movement.



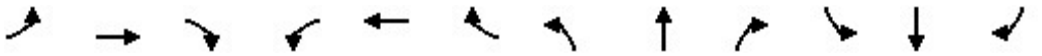
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	140	10	230	0	0	0	0	510	280	350	1430	0
Future Volume (veh/h)	140	10	230	0	0	0	0	510	280	350	1430	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		0.97	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841				0	1841	1841	1841	1841	0
Adj Flow Rate, veh/h	147	0	97				0	537	212	368	1505	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4				0	4	4	4	4	0
Cap, veh/h	436	0	388				0	1058	416	408	2555	0
Arrive On Green	0.12	0.00	0.12				0.00	0.44	0.44	0.23	0.73	0.00
Sat Flow, veh/h	3506	0	3120				0	2522	955	1753	3589	0
Grp Volume(v), veh/h	147	0	97				0	386	363	368	1505	0
Grp Sat Flow(s),veh/h/ln	1753	0	1560				0	1749	1637	1753	1749	0
Q Serve(g_s), s	3.1	0.0	2.2				0.0	12.8	12.9	16.3	16.3	0.0
Cycle Q Clear(g_c), s	3.1	0.0	2.2				0.0	12.8	12.9	16.3	16.3	0.0
Prop In Lane	1.00		1.00				0.00		0.58	1.00		0.00
Lane Grp Cap(c), veh/h	436	0	388				0	761	712	408	2555	0
V/C Ratio(X)	0.34	0.00	0.25				0.00	0.51	0.51	0.90	0.59	0.00
Avail Cap(c_a), veh/h	447	0	398				0	761	712	548	2555	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.45	0.45	0.00
Uniform Delay (d), s/veh	32.0	0.0	31.6				0.0	16.4	16.4	29.8	5.1	0.0
Incr Delay (d2), s/veh	0.3	0.0	0.2				0.0	2.4	2.6	6.3	0.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	0.0	0.8				0.0	4.9	4.7	7.0	3.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	32.3	0.0	31.9				0.0	18.8	19.0	36.1	5.6	0.0
LnGrp LOS	C	A	C				A	B	B	D	A	A
Approach Vol, veh/h		244						749			1873	
Approach Delay, s/veh		32.2						18.9			11.5	
Approach LOS		C						B			B	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	23.6	40.6		15.8		64.2
Change Period (Y+Rc), s	5.0	5.8		5.8		5.8
Max Green Setting (Gmax), s	25.0	28.2		10.2		58.2
Max Q Clear Time (g_c+I1), s	18.3	14.9		5.1		18.3
Green Ext Time (p_c), s	0.3	3.0		0.3		11.6

Intersection Summary	
HCM 6th Ctrl Delay	15.2
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	440	10	310	410	680	0	0	1790	230
Future Volume (veh/h)	0	0	0	440	10	310	410	680	0	0	1790	230
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		0.97
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1841	1841	1841	1841	1841	0	0	1841	1841
Adj Flow Rate, veh/h				507	0	88	432	716	0	0	1884	136
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				4	4	4	4	4	0	0	4	4
Cap, veh/h				865	0	385	605	3138	0	0	2477	593
Arrive On Green				0.25	0.00	0.25	0.36	1.00	0.00	0.00	0.39	0.39
Sat Flow, veh/h				3506	0	1560	3401	5191	0	0	6590	1516
Grp Volume(v), veh/h				507	0	88	432	716	0	0	1884	136
Grp Sat Flow(s),veh/h/ln				1753	0	1560	1700	1675	0	0	1583	1516
Q Serve(g_s), s				11.5	0.0	4.1	9.9	0.0	0.0	0.0	23.2	5.4
Cycle Q Clear(g_c), s				11.5	0.0	4.1	9.9	0.0	0.0	0.0	23.2	5.4
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				865	0	385	605	3138	0	0	2477	593
V/C Ratio(X)				0.59	0.00	0.23	0.71	0.23	0.00	0.00	0.76	0.23
Avail Cap(c_a), veh/h				865	0	385	605	3138	0	0	2477	593
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.90	0.90	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				29.9	0.0	27.1	27.0	0.0	0.0	0.0	23.7	18.3
Incr Delay (d2), s/veh				2.9	0.0	1.4	6.4	0.2	0.0	0.0	2.3	0.9
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				5.1	0.0	4.0	3.7	0.0	0.0	0.0	8.2	1.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				32.8	0.0	28.4	33.4	0.2	0.0	0.0	26.0	19.2
LnGrp LOS				C	A	C	C	A	A	A	C	B
Approach Vol, veh/h					595			1148			2020	
Approach Delay, s/veh					32.1			12.7			25.6	
Approach LOS					C			B			C	

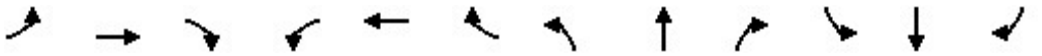
Timer - Assigned Phs	2	4	5	6
Phs Duration (G+Y+Rc), s	62.0	28.0	21.0	41.0
Change Period (Y+Rc), s	5.8	5.8	5.0	5.8
Max Green Setting (Gmax), s	56.2	22.2	16.0	35.2
Max Q Clear Time (g_c+I1), s	2.0	13.5	11.9	25.2
Green Ext Time (p_c), s	5.2	1.6	0.4	7.8

Intersection Summary	
HCM 6th Ctrl Delay	22.7
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

User approved volume balancing among the lanes for turning movement.



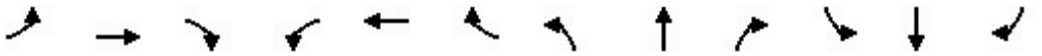
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	160	10	390	0	0	0	0	930	440	450	1780	0
Future Volume (veh/h)	160	10	390	0	0	0	0	930	440	450	1780	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		0.97	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841				0	1841	1841	1841	1841	0
Adj Flow Rate, veh/h	116	0	391				0	979	162	474	1874	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4				0	4	4	4	4	0
Cap, veh/h	452	0	804				0	2195	525	718	3082	0
Arrive On Green	0.26	0.00	0.26				0.00	0.35	0.35	0.07	0.20	0.00
Sat Flow, veh/h	1753	0	3120				0	6590	1514	3401	5191	0
Grp Volume(v), veh/h	116	0	391				0	979	162	474	1874	0
Grp Sat Flow(s),veh/h/ln	1753	0	1560				0	1583	1514	1700	1675	0
Q Serve(g_s), s	4.7	0.0	9.6				0.0	10.8	7.0	12.2	30.5	0.0
Cycle Q Clear(g_c), s	4.7	0.0	9.6				0.0	10.8	7.0	12.2	30.5	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	452	0	804				0	2195	525	718	3082	0
V/C Ratio(X)	0.26	0.00	0.49				0.00	0.45	0.31	0.66	0.61	0.00
Avail Cap(c_a), veh/h	452	0	804				0	2195	525	718	3082	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	0.33	0.33	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.57	0.57	0.00
Uniform Delay (d), s/veh	26.5	0.0	28.3				0.0	22.7	21.5	38.7	26.1	0.0
Incr Delay (d2), s/veh	1.4	0.0	2.1				0.0	0.7	1.5	2.7	0.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	0.0	3.7				0.0	3.8	2.5	5.7	13.5	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	27.9	0.0	30.4				0.0	23.4	23.0	41.4	26.6	0.0
LnGrp LOS	C	A	C				A	C	C	D	C	A
Approach Vol, veh/h		507						1141			2348	
Approach Delay, s/veh		29.9						23.3			29.6	
Approach LOS		C						C			C	

Timer - Assigned Phs	1	2				6		8				
Phs Duration (G+Y+Rc), s	24.0	37.0				61.0		29.0				
Change Period (Y+Rc), s	5.0	5.8				5.8		5.8				
Max Green Setting (Gmax), s	19.0	31.2				55.2		23.2				
Max Q Clear Time (g_c+I1), s	14.2	12.8				32.5		11.6				
Green Ext Time (p_c), s	0.5	6.7				14.1		1.6				

Intersection Summary			
HCM 6th Ctrl Delay			27.8
HCM 6th LOS			C

Notes

User approved volume balancing among the lanes for turning movement.



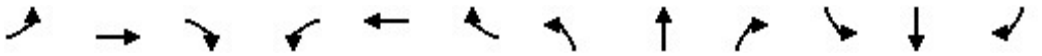
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	70	10	50	30	30	60	140	1230	40	110	1830	60
Future Volume (veh/h)	70	10	50	30	30	60	140	1230	40	110	1830	60
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.98		0.96	0.98		0.96	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	74	11	8	32	32	9	147	1295	41	116	1926	62
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	284	164	119	302	231	65	180	2499	79	146	2400	77
Arrive On Green	0.17	0.17	0.17	0.17	0.17	0.17	0.10	0.50	0.50	0.08	0.48	0.48
Sat Flow, veh/h	1323	974	708	1348	1369	385	1753	4998	158	1753	4995	161
Grp Volume(v), veh/h	74	0	19	32	0	41	147	868	468	116	1291	697
Grp Sat Flow(s),veh/h/ln	1323	0	1682	1348	0	1755	1753	1675	1806	1753	1675	1805
Q Serve(g_s), s	4.2	0.0	0.8	1.7	0.0	1.6	6.8	14.5	14.5	5.4	26.9	27.0
Cycle Q Clear(g_c), s	5.8	0.0	0.8	2.5	0.0	1.6	6.8	14.5	14.5	5.4	26.9	27.0
Prop In Lane	1.00		0.42	1.00		0.22	1.00		0.09	1.00		0.09
Lane Grp Cap(c), veh/h	284	0	284	302	0	296	180	1675	903	146	1610	867
V/C Ratio(X)	0.26	0.00	0.07	0.11	0.00	0.14	0.81	0.52	0.52	0.79	0.80	0.80
Avail Cap(c_a), veh/h	654	0	755	679	0	787	210	1675	903	235	1721	928
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.7	0.0	28.9	29.9	0.0	29.3	36.3	14.0	14.0	37.2	18.2	18.2
Incr Delay (d2), s/veh	0.4	0.0	0.1	0.1	0.0	0.2	16.5	0.3	0.6	3.7	2.8	5.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	0.0	0.3	0.6	0.0	0.7	3.5	4.6	5.0	2.3	9.4	10.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	32.1	0.0	29.0	30.1	0.0	29.4	52.8	14.3	14.6	40.9	20.9	23.3
LnGrp LOS	C	A	C	C	A	C	D	B	B	D	C	C
Approach Vol, veh/h		93			73			1483			2104	
Approach Delay, s/veh		31.5			29.7			18.2			22.8	
Approach LOS		C			C			B			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	13.4	47.9		21.5	15.0	46.2		21.5				
Change Period (Y+Rc), s	6.5	6.5		7.5	6.5	6.5		7.5				
Max Green Setting (Gmax), s	11.1	41.3		37.1	9.9	42.5		37.1				
Max Q Clear Time (g_c+I1), s	7.4	16.5		7.8	8.8	29.0		4.5				
Green Ext Time (p_c), s	0.0	10.8		0.2	0.0	10.7		0.2				

Intersection Summary			
HCM 6th Ctrl Delay		21.3	
HCM 6th LOS		C	

Notes

User approved pedestrian interval to be less than phase max green.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	120	1090	720	130	970	190	470	1340	570	200	1870	300
Future Volume (veh/h)	120	1090	720	130	970	190	470	1340	570	200	1870	300
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.97	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	126	1147	0	137	1021	163	495	1411	564	211	1968	278
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	146	965		145	962	537	417	2045	750	260	1813	680
Arrive On Green	0.08	0.28	0.00	0.08	0.28	0.28	0.12	0.41	0.41	0.08	0.36	0.36
Sat Flow, veh/h	1753	3497	1560	1753	3497	1518	3401	5025	1526	3401	5025	1524
Grp Volume(v), veh/h	126	1147	0	137	1021	163	495	1411	564	211	1968	278
Grp Sat Flow(s),veh/h/ln	1753	1749	1560	1753	1749	1518	1700	1675	1526	1700	1675	1524
Q Serve(g_s), s	10.3	40.0	0.0	11.3	39.9	11.3	17.8	33.6	43.4	8.9	52.3	18.0
Cycle Q Clear(g_c), s	10.3	40.0	0.0	11.3	39.9	11.3	17.8	33.6	43.4	8.9	52.3	18.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	146	965		145	962	537	417	2045	750	260	1813	680
V/C Ratio(X)	0.86	1.19		0.94	1.06	0.30	1.19	0.69	0.75	0.81	1.09	0.41
Avail Cap(c_a), veh/h	146	965		145	962	537	417	2045	750	342	1813	680
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	65.6	52.5	0.0	66.2	52.5	34.1	63.6	35.4	29.9	65.9	46.3	27.4
Incr Delay (d2), s/veh	36.1	95.4	0.0	57.4	46.6	0.4	105.4	1.0	4.3	10.6	48.6	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.0	29.8	0.0	7.2	23.1	4.1	13.7	13.6	15.9	4.2	29.3	6.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	101.7	147.9	0.0	123.6	99.1	34.6	169.0	36.4	34.2	76.5	94.9	27.8
LnGrp LOS	F	F		F	F	C	F	D	C	E	F	C
Approach Vol, veh/h		1273	A		1321			2470			2457	
Approach Delay, s/veh		143.4			93.7			62.5			85.8	
Approach LOS		F			F			E			F	

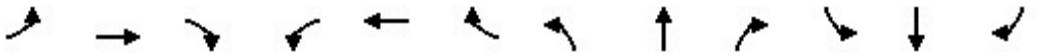
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.3	65.0	16.7	47.0	23.0	58.3	16.8	46.9
Change Period (Y+Rc), s	* 5.2	6.0	* 4.7	7.0	* 5.2	6.0	* 4.7	7.0
Max Green Setting (Gmax), s	* 15	55.5	* 12	40.0	* 18	52.3	* 12	39.9
Max Q Clear Time (g_c+I1), s	10.9	45.4	13.3	42.0	19.8	54.3	12.3	41.9
Green Ext Time (p_c), s	0.2	7.4	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	89.3
HCM 6th LOS	F

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



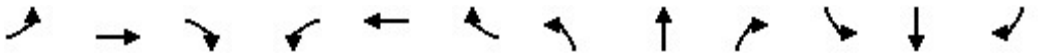
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	180	1380	120	220	920	100	20	520	100	160	570	260
Future Volume (veh/h)	180	1380	120	220	920	100	20	520	100	160	570	260
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	189	1453	48	232	968	41	21	547	24	168	600	238
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	212	1367	599	220	1383	606	42	704	307	157	649	257
Arrive On Green	0.12	0.39	0.39	0.12	0.39	0.39	0.02	0.20	0.20	0.09	0.26	0.26
Sat Flow, veh/h	1767	3526	1546	1767	3526	1546	1767	3526	1539	1767	2451	971
Grp Volume(v), veh/h	189	1453	48	232	968	41	21	547	24	168	431	407
Grp Sat Flow(s),veh/h/ln	1767	1763	1546	1767	1763	1546	1767	1763	1539	1767	1763	1658
Q Serve(g_s), s	14.8	54.5	2.8	17.5	32.3	2.3	1.7	20.7	1.8	12.5	33.5	33.6
Cycle Q Clear(g_c), s	14.8	54.5	2.8	17.5	32.3	2.3	1.7	20.7	1.8	12.5	33.5	33.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.59
Lane Grp Cap(c), veh/h	212	1367	599	220	1383	606	42	704	307	157	467	439
V/C Ratio(X)	0.89	1.06	0.08	1.05	0.70	0.07	0.50	0.78	0.08	1.07	0.92	0.93
Avail Cap(c_a), veh/h	253	1367	599	220	1383	606	75	815	356	157	489	460
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	60.9	43.0	27.2	61.5	35.8	26.7	67.8	53.3	45.7	64.0	50.3	50.3
Incr Delay (d2), s/veh	24.7	43.0	0.1	75.8	1.7	0.1	3.3	4.4	0.1	91.4	23.0	24.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.9	30.6	1.0	12.3	13.6	0.8	0.8	9.5	0.7	9.5	17.5	16.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	85.6	86.0	27.2	137.3	37.5	26.7	71.1	57.7	45.9	155.4	73.3	74.7
LnGrp LOS	F	F	C	F	D	C	E	E	D	F	E	E
Approach Vol, veh/h		1690			1241			592			1006	
Approach Delay, s/veh		84.3			55.8			57.7			87.6	
Approach LOS		F			E			E			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	19.0	34.6	25.0	62.0	9.9	43.7	24.4	62.6
Change Period (Y+Rc), s	6.5	6.5	7.5	7.5	6.5	6.5	7.5	7.5
Max Green Setting (Gmax), s	12.5	32.5	17.5	54.5	6.0	39.0	20.1	51.9
Max Q Clear Time (g_c+I1), s	14.5	22.7	19.5	56.5	3.7	35.6	16.8	34.3
Green Ext Time (p_c), s	0.0	2.7	0.0	0.0	0.0	1.6	0.1	6.6

Intersection Summary	
HCM 6th Ctrl Delay	73.7
HCM 6th LOS	E

Notes

User approved pedestrian interval to be less than phase max green.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	1410	100	190	1030	30	70	30	190	50	60	50
Future Volume (veh/h)	40	1410	100	190	1030	30	70	30	190	50	60	50
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	0.99		0.98	0.99		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	42	1484	102	200	1084	32	74	32	88	53	63	25
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	72	1713	117	230	2104	62	215	67	186	182	197	78
Arrive On Green	0.04	0.51	0.51	0.13	0.60	0.60	0.16	0.16	0.16	0.16	0.16	0.16
Sat Flow, veh/h	1767	3342	228	1767	3493	103	1289	429	1180	1254	1254	498
Grp Volume(v), veh/h	42	779	807	200	547	569	74	0	120	53	0	88
Grp Sat Flow(s),veh/h/ln	1767	1763	1807	1767	1763	1834	1289	0	1609	1254	0	1751
Q Serve(g_s), s	2.4	39.6	40.4	11.4	18.4	18.4	5.5	0.0	7.0	4.1	0.0	4.6
Cycle Q Clear(g_c), s	2.4	39.6	40.4	11.4	18.4	18.4	10.1	0.0	7.0	11.1	0.0	4.6
Prop In Lane	1.00		0.13	1.00		0.06	1.00		0.73	1.00		0.28
Lane Grp Cap(c), veh/h	72	904	927	230	1062	1104	215	0	253	182	0	276
V/C Ratio(X)	0.58	0.86	0.87	0.87	0.52	0.52	0.34	0.00	0.47	0.29	0.00	0.32
Avail Cap(c_a), veh/h	120	1004	1029	241	1124	1170	414	0	501	376	0	546
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	48.4	21.8	22.0	43.8	11.8	11.8	42.9	0.0	39.4	44.5	0.0	38.4
Incr Delay (d2), s/veh	7.2	7.4	7.9	26.2	0.5	0.5	0.9	0.0	1.4	0.9	0.0	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	15.7	16.5	6.4	6.0	6.2	1.8	0.0	2.9	1.3	0.0	2.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	55.6	29.3	29.9	70.0	12.2	12.2	43.8	0.0	40.8	45.3	0.0	39.1
LnGrp LOS	E	C	C	E	B	B	D	A	D	D	A	D
Approach Vol, veh/h		1628			1316			194			141	
Approach Delay, s/veh		30.3			21.0			41.9			41.4	
Approach LOS		C			C			D			D	

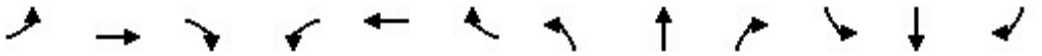
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.2	69.3		22.2	20.4	60.2		22.2				
Change Period (Y+Rc), s	7.0	7.5		6.0	7.0	7.5		6.0				
Max Green Setting (Gmax), s	7.0	65.5		32.0	14.0	58.5		32.0				
Max Q Clear Time (g_c+I1), s	4.4	20.4		13.1	13.4	42.4		12.1				
Green Ext Time (p_c), s	0.0	9.7		0.6	0.0	10.3		0.9				

Intersection Summary			
HCM 6th Ctrl Delay		27.7	
HCM 6th LOS		C	

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	190	1310	50	30	980	340	50	270	30	410	730	180
Future Volume (veh/h)	190	1310	50	30	980	340	50	270	30	410	730	180
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.98	1.00		0.97	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	200	1379	52	32	1032	232	53	284	27	432	768	175
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	246	1423	54	44	1284	563	68	355	33	436	902	206
Arrive On Green	0.07	0.41	0.41	0.03	0.36	0.36	0.04	0.11	0.11	0.25	0.32	0.32
Sat Flow, veh/h	3428	3462	130	1767	3526	1545	1767	3246	306	1767	2843	648
Grp Volume(v), veh/h	200	701	730	32	1032	232	53	153	158	432	476	467
Grp Sat Flow(s),veh/h/ln	1714	1763	1830	1767	1763	1545	1767	1763	1790	1767	1763	1729
Q Serve(g_s), s	8.3	56.0	56.3	2.6	37.9	16.2	4.3	12.2	12.4	35.1	36.4	36.4
Cycle Q Clear(g_c), s	8.3	56.0	56.3	2.6	37.9	16.2	4.3	12.2	12.4	35.1	36.4	36.4
Prop In Lane	1.00		0.07	1.00		1.00	1.00		0.17	1.00		0.37
Lane Grp Cap(c), veh/h	246	724	752	44	1284	563	68	193	196	436	559	548
V/C Ratio(X)	0.81	0.97	0.97	0.72	0.80	0.41	0.78	0.79	0.81	0.99	0.85	0.85
Avail Cap(c_a), veh/h	274	727	755	63	1297	569	92	245	248	436	587	576
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	65.9	41.5	41.6	69.7	41.2	34.3	68.7	62.6	62.7	54.1	46.0	46.0
Incr Delay (d2), s/veh	14.8	25.6	25.6	16.7	3.8	0.6	22.2	14.0	15.2	40.9	11.3	11.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.0	28.2	29.4	1.4	16.5	6.1	2.3	6.1	6.4	20.1	17.2	16.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	80.7	67.1	67.2	86.5	45.0	34.8	90.8	76.6	77.9	95.0	57.3	57.5
LnGrp LOS	F	E	E	F	D	C	F	E	E	F	E	E
Approach Vol, veh/h		1631			1296			364			1375	
Approach Delay, s/veh		68.8			44.2			79.2			69.2	
Approach LOS		E			D			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.8	60.0	13.0	53.2	11.1	66.7	43.0	23.2
Change Period (Y+Rc), s	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5
Max Green Setting (Gmax), s	11.5	53.0	7.5	48.0	5.1	59.4	35.5	20.0
Max Q Clear Time (g_c+I1), s	10.3	39.9	6.3	38.4	4.6	58.3	37.1	14.4
Green Ext Time (p_c), s	0.1	5.4	0.0	4.4	0.0	0.9	0.0	0.9

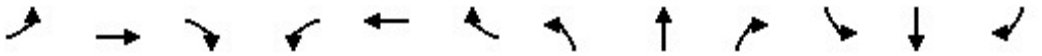
Intersection Summary	
HCM 6th Ctrl Delay	62.9
HCM 6th LOS	E



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	1440	150	110	1090	20	220	20	60	10	10	50
Future Volume (veh/h)	30	1440	150	110	1090	20	220	20	60	10	10	50
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.97	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	32	1516	153	116	1147	21	232	21	14	11	11	12
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	63	1665	166	143	1985	36	336	346	289	122	120	106
Arrive On Green	0.04	0.52	0.52	0.08	0.56	0.56	0.19	0.19	0.19	0.19	0.19	0.19
Sat Flow, veh/h	1767	3231	323	1767	3540	65	1377	1856	1550	396	644	567
Grp Volume(v), veh/h	32	820	849	116	571	597	232	21	14	34	0	0
Grp Sat Flow(s),veh/h/ln	1767	1763	1791	1767	1763	1842	1377	1856	1550	1607	0	0
Q Serve(g_s), s	1.8	41.8	43.2	6.4	20.8	20.9	14.2	0.9	0.7	0.0	0.0	0.0
Cycle Q Clear(g_c), s	1.8	41.8	43.2	6.4	20.8	20.9	15.8	0.9	0.7	1.6	0.0	0.0
Prop In Lane	1.00		0.18	1.00		0.04	1.00		1.00	0.32		0.35
Lane Grp Cap(c), veh/h	63	908	923	143	988	1033	336	346	289	348	0	0
V/C Ratio(X)	0.51	0.90	0.92	0.81	0.58	0.58	0.69	0.06	0.05	0.10	0.00	0.00
Avail Cap(c_a), veh/h	107	953	968	143	988	1033	524	600	501	563	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	46.9	21.7	22.1	44.8	14.1	14.1	39.0	33.1	33.0	33.4	0.0	0.0
Incr Delay (d2), s/veh	6.3	11.4	13.2	28.7	0.8	0.8	2.5	0.1	0.1	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	17.2	18.4	3.8	7.1	7.4	5.7	0.4	0.3	0.7	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	53.2	33.2	35.2	73.5	15.0	14.9	41.5	33.2	33.1	33.5	0.0	0.0
LnGrp LOS	D	C	D	E	B	B	D	C	C	C	A	A
Approach Vol, veh/h		1701			1284			267			34	
Approach Delay, s/veh		34.6			20.2			40.4			33.5	
Approach LOS		C			C			D			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.5	63.0		25.5	15.0	58.5		25.5				
Change Period (Y+Rc), s	7.0	7.5		7.0	7.0	7.5		7.0				
Max Green Setting (Gmax), s	6.0	55.5		32.0	8.0	53.5		32.0				
Max Q Clear Time (g_c+I1), s	3.8	22.9		17.8	8.4	45.2		3.6				
Green Ext Time (p_c), s	0.0	7.7		0.7	0.0	5.8		0.1				

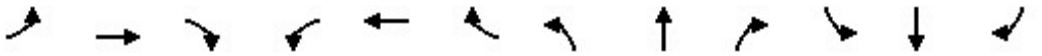
Intersection Summary			
HCM 6th Ctrl Delay		29.4	
HCM 6th LOS		C	



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	1170	320	290	1010	10	180	30	160	40	40	30
Future Volume (veh/h)	30	1170	320	290	1010	10	180	30	160	40	40	30
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	1.00		0.97	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	32	1232	323	305	1063	11	189	32	25	42	42	12
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	57	1286	331	282	2122	22	183	120	94	65	81	23
Arrive On Green	0.03	0.47	0.47	0.16	0.59	0.59	0.10	0.13	0.13	0.04	0.06	0.06
Sat Flow, veh/h	1767	2758	710	1767	3574	37	1767	953	744	1767	1372	392
Grp Volume(v), veh/h	32	779	776	305	524	550	189	0	57	42	0	54
Grp Sat Flow(s),veh/h/ln	1767	1763	1705	1767	1763	1848	1767	0	1697	1767	0	1764
Q Serve(g_s), s	2.2	53.0	55.9	20.0	21.6	21.6	13.0	0.0	3.8	2.9	0.0	3.7
Cycle Q Clear(g_c), s	2.2	53.0	55.9	20.0	21.6	21.6	13.0	0.0	3.8	2.9	0.0	3.7
Prop In Lane	1.00		0.42	1.00		0.02	1.00		0.44	1.00		0.22
Lane Grp Cap(c), veh/h	57	822	795	282	1047	1097	183	0	213	65	0	104
V/C Ratio(X)	0.56	0.95	0.98	1.08	0.50	0.50	1.03	0.00	0.27	0.65	0.00	0.52
Avail Cap(c_a), veh/h	99	823	796	282	1047	1097	183	0	488	127	0	450
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	59.8	32.0	32.8	52.6	14.7	14.7	56.1	0.0	49.5	59.5	0.0	57.2
Incr Delay (d2), s/veh	8.4	19.9	26.1	76.9	0.5	0.4	74.7	0.0	0.7	10.3	0.0	4.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	24.9	26.5	14.5	7.7	8.0	9.6	0.0	1.7	1.5	0.0	1.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	68.2	51.8	58.8	129.5	15.2	15.1	130.9	0.0	50.2	69.8	0.0	61.2
LnGrp LOS	E	D	E	F	B	B	F	A	D	E	A	E
Approach Vol, veh/h		1587			1379			246			96	
Approach Delay, s/veh		55.6			40.5			112.2			65.0	
Approach LOS		E			D			F			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.0	81.9	19.0	13.4	27.0	65.9	10.6	21.8
Change Period (Y+Rc), s	7.0	7.5	6.0	6.0	7.0	7.5	6.0	6.0
Max Green Setting (Gmax), s	7.0	71.5	13.0	32.0	20.0	58.5	9.0	36.0
Max Q Clear Time (g_c+I1), s	4.2	23.6	15.0	5.7	22.0	57.9	4.9	5.8
Green Ext Time (p_c), s	0.0	9.1	0.0	0.2	0.0	0.5	0.0	0.3

Intersection Summary	
HCM 6th Ctrl Delay	53.8
HCM 6th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	320	950	100	170	990	230	60	390	10	330	810	260
Future Volume (veh/h)	320	950	100	170	990	230	60	390	10	330	810	260
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	337	1000	36	179	1042	203	63	411	3	347	853	256
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	171	1159	517	157	1145	893	260	519	231	439	681	204
Arrive On Green	0.05	0.33	0.33	0.05	0.32	0.32	0.15	0.15	0.15	0.25	0.25	0.25
Sat Flow, veh/h	3428	3526	1572	3428	3526	1544	1767	3526	1572	1767	2737	821
Grp Volume(v), veh/h	337	1000	36	179	1042	203	63	411	3	347	578	531
Grp Sat Flow(s),veh/h/ln	1714	1763	1572	1714	1763	1544	1767	1763	1572	1767	1856	1702
Q Serve(g_s), s	6.5	34.7	2.1	6.0	37.0	8.4	4.1	14.7	0.2	24.0	32.5	32.5
Cycle Q Clear(g_c), s	6.5	34.7	2.1	6.0	37.0	8.4	4.1	14.7	0.2	24.0	32.5	32.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.48
Lane Grp Cap(c), veh/h	171	1159	517	157	1145	893	260	519	231	439	461	423
V/C Ratio(X)	1.98	0.86	0.07	1.14	0.91	0.23	0.24	0.79	0.01	0.79	1.25	1.25
Avail Cap(c_a), veh/h	171	1241	554	157	1228	929	412	823	367	439	461	423
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	62.1	41.1	30.1	62.3	42.3	13.7	49.3	53.8	47.6	45.9	49.1	49.1
Incr Delay (d2), s/veh	459.7	6.3	0.1	113.4	9.9	0.2	0.6	3.3	0.0	9.6	130.5	132.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	13.6	15.2	0.8	5.0	16.7	4.8	1.8	6.6	0.1	11.4	31.3	28.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	521.8	47.4	30.2	175.7	52.2	13.8	49.9	57.1	47.6	55.5	179.6	181.7
LnGrp LOS	F	D	C	F	D	B	D	E	D	E	F	F
Approach Vol, veh/h		1373			1424			477			1456	
Approach Delay, s/veh		163.4			62.2			56.1			150.8	
Approach LOS		F			E			E			F	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		26.7	13.5	50.5		40.0	14.0	50.0				
Change Period (Y+Rc), s		7.5	7.5	7.5		7.5	7.5	7.5				
Max Green Setting (Gmax), s		30.5	6.0	46.0		32.5	6.5	45.5				
Max Q Clear Time (g_c+I1), s		16.7	8.0	36.7		34.5	8.5	39.0				
Green Ext Time (p_c), s		2.5	0.0	4.7		0.0	0.0	3.4				

Intersection Summary		
HCM 6th Ctrl Delay	118.2	
HCM 6th LOS	F	

Notes
User approved pedestrian interval to be less than phase max green.
User approved volume balancing among the lanes for turning movement.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1180	130	190	1330	50	50
Future Volume (veh/h)	1180	130	190	1330	50	50
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		0.97	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	1242	80	200	1400	53	8
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	1615	701	247	2524	113	101
Arrive On Green	0.46	0.46	0.14	0.72	0.06	0.06
Sat Flow, veh/h	3618	1530	1767	3618	1767	1572
Grp Volume(v), veh/h	1242	80	200	1400	53	8
Grp Sat Flow(s),veh/h/ln	1763	1530	1767	1763	1767	1572
Q Serve(g_s), s	17.4	1.8	6.5	11.1	1.7	0.3
Cycle Q Clear(g_c), s	17.4	1.8	6.5	11.1	1.7	0.3
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1615	701	247	2524	113	101
V/C Ratio(X)	0.77	0.11	0.81	0.55	0.47	0.08
Avail Cap(c_a), veh/h	1967	854	299	2980	956	851
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	13.4	9.2	24.7	4.0	26.7	26.0
Incr Delay (d2), s/veh	1.7	0.1	13.1	0.2	3.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.1	0.4	3.2	0.8	0.8	0.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	15.1	9.2	37.8	4.2	29.7	26.4
LnGrp LOS	B	A	D	A	C	C
Approach Vol, veh/h	1322			1600	61	
Approach Delay, s/veh	14.7			8.4	29.2	
Approach LOS	B			A	C	

Timer - Assigned Phs	2			5	6	8
Phs Duration (G+Y+Rc), s	49.9			15.3	34.6	9.3
Change Period (Y+Rc), s	7.5			7.0	7.5	5.5
Max Green Setting (Gmax), s	50.0			10.0	33.0	32.0
Max Q Clear Time (g_c+I1), s	13.1			8.5	19.4	3.7
Green Ext Time (p_c), s	14.6			0.1	7.7	0.1

Intersection Summary	
HCM 6th Ctrl Delay	11.6
HCM 6th LOS	B

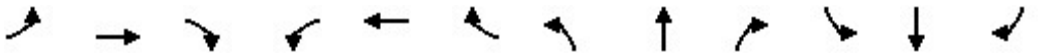
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	80	1120	40	90	1410	20	20	10	90	30	10	90
Future Volume (veh/h)	80	1120	40	90	1410	20	20	10	90	30	10	90
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	0.99		0.97	0.99		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	84	1179	41	95	1484	21	21	11	15	32	11	15
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	151	1734	60	159	1793	25	142	73	62	170	60	49
Arrive On Green	0.09	0.50	0.50	0.09	0.50	0.50	0.12	0.12	0.12	0.12	0.12	0.12
Sat Flow, veh/h	1767	3472	121	1767	3557	50	480	591	502	652	485	396
Grp Volume(v), veh/h	84	598	622	95	735	770	47	0	0	58	0	0
Grp Sat Flow(s),veh/h/ln	1767	1763	1830	1767	1763	1845	1573	0	0	1533	0	0
Q Serve(g_s), s	2.9	16.1	16.2	3.2	22.3	22.3	0.0	0.0	0.0	0.4	0.0	0.0
Cycle Q Clear(g_c), s	2.9	16.1	16.2	3.2	22.3	22.3	1.5	0.0	0.0	1.9	0.0	0.0
Prop In Lane	1.00		0.07	1.00		0.03	0.45		0.32	0.55		0.26
Lane Grp Cap(c), veh/h	151	880	914	159	888	930	277	0	0	278	0	0
V/C Ratio(X)	0.55	0.68	0.68	0.60	0.83	0.83	0.17	0.00	0.00	0.21	0.00	0.00
Avail Cap(c_a), veh/h	197	1039	1078	197	1039	1087	763	0	0	754	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	27.6	11.9	11.9	27.5	13.2	13.3	24.8	0.0	0.0	24.9	0.0	0.0
Incr Delay (d2), s/veh	3.1	1.4	1.4	3.5	4.9	4.8	0.2	0.0	0.0	0.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	4.6	4.8	1.4	7.4	7.7	0.6	0.0	0.0	0.8	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	30.7	13.3	13.3	31.0	18.2	18.0	25.0	0.0	0.0	25.2	0.0	0.0
LnGrp LOS	C	B	B	C	B	B	C	A	A	C	A	A
Approach Vol, veh/h		1304			1600			47			58	
Approach Delay, s/veh		14.4			18.9			25.0			25.2	
Approach LOS		B			B			C			C	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		13.8	10.7	38.4		13.8	10.4	38.6				
Change Period (Y+Rc), s		6.0	5.0	7.0		6.0	5.0	7.0				
Max Green Setting (Gmax), s		28.0	7.0	37.0		28.0	7.0	37.0				
Max Q Clear Time (g_c+I1), s		3.5	5.2	18.2		3.9	4.9	24.3				
Green Ext Time (p_c), s		0.2	0.0	6.9		0.2	0.0	7.3				

Intersection Summary		
HCM 6th Ctrl Delay		17.2
HCM 6th LOS		B

Notes

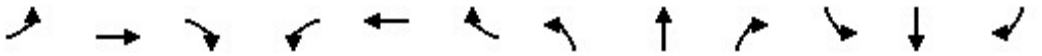
User approved pedestrian interval to be less than phase max green.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	270	810	330	210	990	170	260	970	40	190	1380	270
Future Volume (veh/h)	270	810	330	210	990	170	260	970	40	190	1380	270
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.97	1.00		0.97	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	284	853	344	221	1042	55	274	1021	17	200	1453	192
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	207	986	429	239	1012	53	207	1552	26	230	1424	188
Arrive On Green	0.12	0.28	0.28	0.14	0.30	0.30	0.12	0.30	0.30	0.13	0.32	0.32
Sat Flow, veh/h	1753	3497	1523	1753	3374	178	1753	5088	85	1753	4476	591
Grp Volume(v), veh/h	284	853	344	221	540	557	274	672	366	200	1087	558
Grp Sat Flow(s),veh/h/ln	1753	1749	1523	1753	1749	1803	1753	1675	1823	1753	1675	1717
Q Serve(g_s), s	13.0	25.5	23.1	13.7	33.0	33.0	13.0	19.2	19.2	12.3	35.0	35.0
Cycle Q Clear(g_c), s	13.0	25.5	23.1	13.7	33.0	33.0	13.0	19.2	19.2	12.3	35.0	35.0
Prop In Lane	1.00		1.00	1.00		0.10	1.00		0.05	1.00		0.34
Lane Grp Cap(c), veh/h	207	986	429	239	525	541	207	1022	556	230	1066	546
V/C Ratio(X)	1.37	0.87	0.80	0.92	1.03	1.03	1.32	0.66	0.66	0.87	1.02	1.02
Avail Cap(c_a), veh/h	207	986	429	239	525	541	207	1022	556	255	1066	546
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	48.5	37.5	36.6	46.9	38.5	38.5	48.5	33.2	33.2	46.8	37.5	37.5
Incr Delay (d2), s/veh	194.4	8.8	11.8	39.3	47.0	46.5	174.7	2.1	3.9	27.1	32.7	43.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	16.6	11.4	9.5	8.3	20.0	20.6	15.5	7.6	8.6	6.9	18.2	20.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	242.9	46.3	48.4	86.2	85.5	85.0	223.2	35.4	37.1	73.9	70.2	81.4
LnGrp LOS	F	D	D	F	F	F	F	D	D	E	F	F
Approach Vol, veh/h		1481			1318			1312			1845	
Approach Delay, s/veh		84.5			85.4			75.1			74.0	
Approach LOS		F			F			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.5	37.5	19.0	35.0	17.0	39.0	17.0	37.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	16.0	32.0	15.0	31.0	13.0	35.0	13.0	33.0
Max Q Clear Time (g_c+I1), s	14.3	21.2	15.7	27.5	15.0	37.0	15.0	35.0
Green Ext Time (p_c), s	0.2	6.9	0.0	2.2	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	79.4
HCM 6th LOS	E



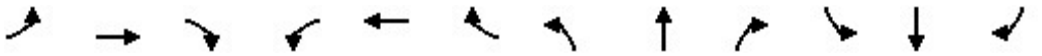
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	380	660	50	230	720	150	30	630	230	300	810	620
Future Volume (veh/h)	380	660	50	230	720	150	30	630	230	300	810	620
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	400	695	44	242	758	144	32	663	143	316	853	569
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	408	825	52	287	740	323	62	823	177	334	895	581
Arrive On Green	0.12	0.25	0.25	0.08	0.21	0.21	0.04	0.29	0.29	0.19	0.44	0.44
Sat Flow, veh/h	3428	3362	213	3428	3526	1539	1767	2874	619	1767	2034	1321
Grp Volume(v), veh/h	400	364	375	242	758	144	32	406	400	316	736	686
Grp Sat Flow(s),veh/h/ln	1714	1763	1812	1714	1763	1539	1767	1763	1730	1767	1763	1592
Q Serve(g_s), s	16.6	28.1	28.1	9.9	30.0	11.7	2.5	30.6	30.6	25.2	57.4	60.6
Cycle Q Clear(g_c), s	16.6	28.1	28.1	9.9	30.0	11.7	2.5	30.6	30.6	25.2	57.4	60.6
Prop In Lane	1.00		0.12	1.00		1.00	1.00		0.36	1.00		0.83
Lane Grp Cap(c), veh/h	408	432	444	287	740	323	62	505	495	334	776	700
V/C Ratio(X)	0.98	0.84	0.84	0.84	1.02	0.45	0.51	0.81	0.81	0.95	0.95	0.98
Avail Cap(c_a), veh/h	408	432	444	288	740	323	87	530	521	334	777	702
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	62.8	51.3	51.3	64.6	56.5	49.2	67.7	47.3	47.3	57.2	38.5	39.4
Incr Delay (d2), s/veh	39.3	14.0	13.8	19.0	39.4	1.0	4.8	8.2	8.4	35.3	20.8	28.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.3	13.7	14.1	5.0	17.0	4.5	1.2	14.2	14.0	14.3	28.1	28.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	102.1	65.3	65.1	83.5	95.9	50.2	72.5	55.5	55.8	92.5	59.2	68.0
LnGrp LOS	F	E	E	F	F	D	E	E	E	F	E	E
Approach Vol, veh/h		1139			1144			838			1738	
Approach Delay, s/veh		78.2			87.5			56.3			68.7	
Approach LOS		E			F			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	34.0	47.9	18.9	42.1	12.0	69.9	24.0	37.0
Change Period (Y+Rc), s	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Max Green Setting (Gmax), s	27.0	43.0	12.0	35.0	7.0	63.0	17.0	30.0
Max Q Clear Time (g_c+I1), s	27.2	32.6	11.9	30.1	4.5	62.6	18.6	32.0
Green Ext Time (p_c), s	0.0	2.8	0.0	1.8	0.0	0.3	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	73.2
HCM 6th LOS	E

Notes

User approved pedestrian interval to be less than phase max green.



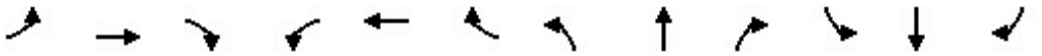
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	250	820	150	60	600	140	250	1850	290	160	2210	130
Future Volume (veh/h)	250	820	150	60	600	140	250	1850	290	160	2210	130
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	263	863	153	63	632	140	263	1947	224	168	2326	106
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	270	978	173	80	629	139	277	2244	543	181	2384	585
Arrive On Green	0.15	0.33	0.33	0.05	0.22	0.22	0.08	0.35	0.35	0.10	0.38	0.38
Sat Flow, veh/h	1753	2959	525	1753	2834	627	3401	6332	1533	1753	6332	1554
Grp Volume(v), veh/h	263	510	506	63	389	383	263	1947	224	168	2326	106
Grp Sat Flow(s),veh/h/ln	1753	1749	1735	1753	1749	1712	1700	1583	1533	1753	1583	1554
Q Serve(g_s), s	21.7	40.0	40.0	5.2	32.2	32.2	11.2	41.6	16.0	13.8	52.5	6.6
Cycle Q Clear(g_c), s	21.7	40.0	40.0	5.2	32.2	32.2	11.2	41.6	16.0	13.8	52.5	6.6
Prop In Lane	1.00		0.30	1.00		0.37	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	270	578	573	80	388	380	277	2244	543	181	2384	585
V/C Ratio(X)	0.98	0.88	0.88	0.79	1.00	1.01	0.95	0.87	0.41	0.93	0.98	0.18
Avail Cap(c_a), veh/h	270	578	573	81	388	380	277	2245	543	181	2384	585
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	61.1	45.9	45.9	68.5	56.4	56.4	66.3	43.6	35.4	64.4	44.5	30.2
Incr Delay (d2), s/veh	47.7	14.9	15.0	36.3	46.4	47.6	40.3	3.9	0.5	45.5	13.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	13.1	19.4	19.3	3.1	18.8	18.5	6.3	16.2	5.9	8.3	21.8	2.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	108.7	60.8	60.9	104.8	102.8	104.0	106.6	47.5	35.9	109.9	57.7	30.4
LnGrp LOS	F	E	E	F	F	F	F	D	D	F	E	C
Approach Vol, veh/h		1279			835			2434			2600	
Approach Delay, s/veh		70.7			103.5			52.8			60.0	
Approach LOS		E			F			D			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	19.7	57.9	12.3	55.1	16.5	61.1	28.0	39.4
Change Period (Y+Rc), s	* 4.7	6.5	* 5.7	7.2	* 4.7	6.5	* 5.7	7.2
Max Green Setting (Gmax), s	* 15	51.4	* 6.7	47.8	* 12	54.6	* 22	32.2
Max Q Clear Time (g_c+I1), s	15.8	43.6	7.2	42.0	13.2	54.5	23.7	34.2
Green Ext Time (p_c), s	0.0	6.5	0.0	3.0	0.0	0.1	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	64.6
HCM 6th LOS	E

Notes

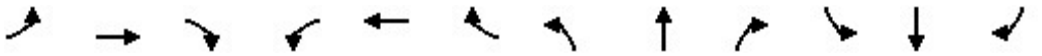
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	60	880	80	210	600	80	90	250	150	110	470	160
Future Volume (veh/h)	60	880	80	210	600	80	90	250	150	110	470	160
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	63	926	79	221	632	77	95	263	77	116	495	137
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	84	979	84	232	1206	147	116	602	172	133	633	174
Arrive On Green	0.05	0.30	0.30	0.13	0.38	0.38	0.07	0.22	0.22	0.08	0.23	0.23
Sat Flow, veh/h	1767	3282	280	1767	3157	384	1767	2691	769	1767	2718	747
Grp Volume(v), veh/h	63	497	508	221	352	357	95	170	170	116	320	312
Grp Sat Flow(s),veh/h/ln	1767	1763	1799	1767	1763	1779	1767	1763	1698	1767	1763	1703
Q Serve(g_s), s	3.8	29.4	29.4	13.2	16.5	16.5	5.7	8.8	9.2	6.9	18.1	18.4
Cycle Q Clear(g_c), s	3.8	29.4	29.4	13.2	16.5	16.5	5.7	8.8	9.2	6.9	18.1	18.4
Prop In Lane	1.00		0.16	1.00		0.22	1.00		0.45	1.00		0.44
Lane Grp Cap(c), veh/h	84	526	537	232	674	680	116	394	379	133	410	397
V/C Ratio(X)	0.75	0.95	0.95	0.95	0.52	0.52	0.82	0.43	0.45	0.88	0.78	0.79
Avail Cap(c_a), veh/h	149	529	540	232	674	680	116	529	509	133	545	527
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.2	36.6	36.6	46.0	25.5	25.5	49.2	35.6	35.7	48.8	38.3	38.4
Incr Delay (d2), s/veh	12.5	26.2	25.9	45.9	0.9	0.9	35.2	0.9	1.0	43.3	5.7	6.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	15.6	15.9	8.5	6.6	6.6	3.5	3.7	3.7	4.5	8.0	7.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	62.6	62.8	62.4	91.9	26.3	26.3	84.4	36.5	36.7	92.1	44.0	44.7
LnGrp LOS	E	E	E	F	C	C	F	D	D	F	D	D
Approach Vol, veh/h		1068			930			435			748	
Approach Delay, s/veh		62.6			41.9			47.0			51.8	
Approach LOS		E			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.1	48.3	14.0	32.3	21.0	39.3	15.0	31.3
Change Period (Y+Rc), s	7.0	7.5	7.0	7.5	7.0	7.5	7.0	7.5
Max Green Setting (Gmax), s	9.0	37.0	7.0	33.0	14.0	32.0	8.0	32.0
Max Q Clear Time (g_c+I1), s	5.8	18.5	7.7	20.4	15.2	31.4	8.9	11.2
Green Ext Time (p_c), s	0.0	4.4	0.0	3.3	0.0	0.4	0.0	2.0

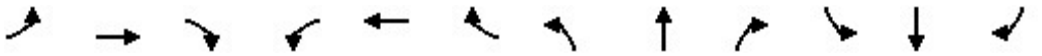
Intersection Summary	
HCM 6th Ctrl Delay	51.9
HCM 6th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	60	950	140	100	770	20	30	220	140	50	140	90
Future Volume (veh/h)	60	950	140	100	770	20	30	220	140	50	140	90
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.97	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	63	1000	138	105	811	21	32	232	33	53	147	18
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	99	1151	159	131	1364	35	67	448	63	91	500	60
Arrive On Green	0.06	0.37	0.37	0.07	0.39	0.39	0.04	0.14	0.14	0.05	0.16	0.16
Sat Flow, veh/h	1767	3104	428	1767	3509	91	1767	3094	434	1767	3158	380
Grp Volume(v), veh/h	63	568	570	105	407	425	32	131	134	53	81	84
Grp Sat Flow(s),veh/h/ln	1767	1763	1770	1767	1763	1837	1767	1763	1764	1767	1763	1776
Q Serve(g_s), s	2.8	24.2	24.2	4.7	14.9	14.9	1.4	5.5	5.7	2.4	3.3	3.4
Cycle Q Clear(g_c), s	2.8	24.2	24.2	4.7	14.9	14.9	1.4	5.5	5.7	2.4	3.3	3.4
Prop In Lane	1.00		0.24	1.00		0.05	1.00		0.25	1.00		0.21
Lane Grp Cap(c), veh/h	99	653	656	131	685	714	67	255	256	91	279	281
V/C Ratio(X)	0.63	0.87	0.87	0.80	0.59	0.59	0.48	0.51	0.53	0.58	0.29	0.30
Avail Cap(c_a), veh/h	131	698	700	131	698	727	131	698	698	131	698	703
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.3	23.6	23.6	36.8	19.6	19.6	38.1	31.9	32.0	37.5	30.0	30.1
Incr Delay (d2), s/veh	6.5	11.1	11.2	28.7	1.5	1.4	5.1	1.9	2.0	5.7	0.7	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	10.7	10.7	2.9	5.5	5.8	0.7	2.3	2.4	1.1	1.3	1.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	43.9	34.7	34.8	65.6	21.1	21.1	43.2	33.8	34.0	43.2	30.7	30.8
LnGrp LOS	D	C	C	E	C	C	D	C	C	D	C	C
Approach Vol, veh/h		1201			937			297			218	
Approach Delay, s/veh		35.2			26.1			34.9			33.8	
Approach LOS		D			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.5	38.9	10.1	20.3	13.0	37.5	11.2	19.2
Change Period (Y+Rc), s	7.0	7.5	7.0	7.5	7.0	7.5	7.0	7.5
Max Green Setting (Gmax), s	6.0	32.0	6.0	32.0	6.0	32.0	6.0	32.0
Max Q Clear Time (g_c+I1), s	4.8	16.9	3.4	5.4	6.7	26.2	4.4	7.7
Green Ext Time (p_c), s	0.0	4.8	0.0	0.9	0.0	3.5	0.0	1.6

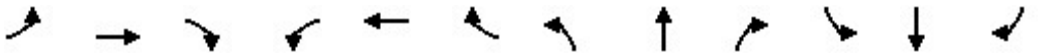
Intersection Summary	
HCM 6th Ctrl Delay	31.8
HCM 6th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	140	860	70	70	610	110	30	210	30	140	700	250
Future Volume (veh/h)	140	860	70	70	610	110	30	210	30	140	700	250
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	147	905	70	74	642	103	32	221	15	147	737	206
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	131	1121	87	96	970	155	64	1093	73	131	1040	287
Arrive On Green	0.07	0.34	0.34	0.05	0.32	0.32	0.04	0.23	0.23	0.07	0.26	0.26
Sat Flow, veh/h	1767	3311	256	1767	3041	487	1767	4846	323	1767	3946	1090
Grp Volume(v), veh/h	147	482	493	74	372	373	32	153	83	147	630	313
Grp Sat Flow(s),veh/h/ln	1767	1763	1804	1767	1763	1765	1767	1689	1792	1767	1689	1659
Q Serve(g_s), s	7.0	23.5	23.5	3.9	17.2	17.2	1.7	3.5	3.6	7.0	15.9	16.2
Cycle Q Clear(g_c), s	7.0	23.5	23.5	3.9	17.2	17.2	1.7	3.5	3.6	7.0	15.9	16.2
Prop In Lane	1.00		0.14	1.00		0.28	1.00		0.18	1.00		0.66
Lane Grp Cap(c), veh/h	131	597	611	96	562	563	64	761	404	131	890	437
V/C Ratio(X)	1.12	0.81	0.81	0.77	0.66	0.66	0.50	0.20	0.21	1.12	0.71	0.72
Avail Cap(c_a), veh/h	131	728	745	131	728	729	112	1181	626	131	1216	598
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.7	28.4	28.4	44.0	27.7	27.8	44.7	29.7	29.7	43.7	31.5	31.6
Incr Delay (d2), s/veh	115.0	5.9	5.8	17.0	1.7	1.7	6.0	0.2	0.3	115.0	1.4	3.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.1	10.0	10.2	2.1	6.9	6.9	0.8	1.3	1.5	7.2	6.5	6.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	158.7	34.3	34.2	61.1	29.4	29.5	50.6	29.8	30.0	158.7	32.9	34.6
LnGrp LOS	F	C	C	E	C	C	D	C	C	F	C	C
Approach Vol, veh/h		1122			819			268			1090	
Approach Delay, s/veh		50.5			32.3			32.4			50.3	
Approach LOS		D			C			C			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.0	28.8	12.1	39.5	10.4	32.4	14.0	37.6
Change Period (Y+Rc), s	7.0	7.5	7.0	7.5	7.0	7.5	7.0	7.5
Max Green Setting (Gmax), s	7.0	33.0	7.0	39.0	6.0	34.0	7.0	39.0
Max Q Clear Time (g_c+I1), s	9.0	5.6	5.9	25.5	3.7	18.2	9.0	19.2
Green Ext Time (p_c), s	0.0	1.5	0.0	5.5	0.0	6.7	0.0	4.8

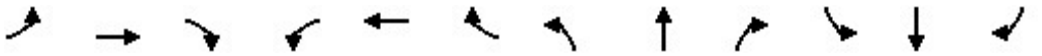
Intersection Summary	
HCM 6th Ctrl Delay	44.5
HCM 6th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	50	960	60	110	780	60	50	50	70	60	60	50
Future Volume (veh/h)	50	960	60	110	780	60	50	50	70	60	60	50
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	53	1011	36	116	821	54	53	53	60	63	63	49
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	96	1293	46	147	1347	89	96	208	180	105	242	167
Arrive On Green	0.05	0.37	0.37	0.08	0.40	0.40	0.05	0.12	0.12	0.06	0.12	0.12
Sat Flow, veh/h	1767	3468	123	1767	3354	221	1767	1763	1528	1767	1966	1361
Grp Volume(v), veh/h	53	514	533	116	431	444	53	53	60	63	56	56
Grp Sat Flow(s),veh/h/ln	1767	1763	1829	1767	1763	1811	1767	1763	1528	1767	1763	1565
Q Serve(g_s), s	2.1	18.6	18.7	4.7	14.0	14.0	2.1	2.0	2.6	2.5	2.1	2.4
Cycle Q Clear(g_c), s	2.1	18.6	18.7	4.7	14.0	14.0	2.1	2.0	2.6	2.5	2.1	2.4
Prop In Lane	1.00		0.07	1.00		0.12	1.00		1.00	1.00		0.87
Lane Grp Cap(c), veh/h	96	657	682	147	708	727	96	208	180	105	217	192
V/C Ratio(X)	0.55	0.78	0.78	0.79	0.61	0.61	0.55	0.26	0.33	0.60	0.26	0.29
Avail Cap(c_a), veh/h	147	817	848	171	842	865	147	781	677	147	781	693
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.3	20.1	20.1	32.5	17.1	17.1	33.3	29.0	29.3	33.1	28.7	28.8
Incr Delay (d2), s/veh	4.9	4.3	4.1	18.9	1.1	1.1	4.9	0.6	1.1	5.3	0.6	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	7.2	7.4	2.6	4.9	5.0	1.0	0.8	0.9	1.2	0.9	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	38.2	24.3	24.2	51.4	18.2	18.2	38.2	29.6	30.3	38.5	29.3	29.7
LnGrp LOS	D	C	C	D	B	B	D	C	C	D	C	C
Approach Vol, veh/h		1100			991			166			175	
Approach Delay, s/veh		24.9			22.1			32.6			32.7	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.9	36.5	9.9	14.9	13.0	34.4	10.3	14.5
Change Period (Y+Rc), s	7.0	7.5	6.0	6.0	7.0	7.5	6.0	6.0
Max Green Setting (Gmax), s	6.0	34.5	6.0	32.0	7.0	33.5	6.0	32.0
Max Q Clear Time (g_c+I1), s	4.1	16.0	4.1	4.4	6.7	20.7	4.5	4.6
Green Ext Time (p_c), s	0.0	5.6	0.0	0.6	0.0	5.7	0.0	0.5

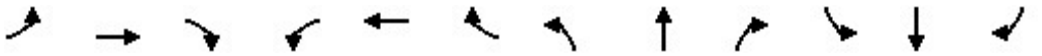
Intersection Summary	
HCM 6th Ctrl Delay	24.9
HCM 6th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	180	630	240	60	610	110	200	980	150	90	1720	110
Future Volume (veh/h)	180	630	240	60	610	110	200	980	150	90	1720	110
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.99	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	189	663	158	63	642	84	211	1032	54	95	1811	50
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	192	756	180	76	636	83	214	2082	109	116	1861	51
Arrive On Green	0.11	0.27	0.27	0.04	0.20	0.20	0.12	0.43	0.43	0.07	0.37	0.37
Sat Flow, veh/h	1753	2790	664	1753	3104	405	1753	4885	255	1753	5025	139
Grp Volume(v), veh/h	189	415	406	63	361	365	211	707	379	95	1207	654
Grp Sat Flow(s),veh/h/ln	1753	1749	1706	1753	1749	1761	1753	1675	1790	1753	1675	1814
Q Serve(g_s), s	15.6	32.9	33.0	5.2	29.7	29.7	17.4	22.3	22.3	7.8	51.4	51.5
Cycle Q Clear(g_c), s	15.6	32.9	33.0	5.2	29.7	29.7	17.4	22.3	22.3	7.8	51.4	51.5
Prop In Lane	1.00		0.39	1.00		0.23	1.00		0.14	1.00		0.08
Lane Grp Cap(c), veh/h	192	474	462	76	358	361	214	1428	763	116	1241	672
V/C Ratio(X)	0.98	0.88	0.88	0.83	1.01	1.01	0.99	0.50	0.50	0.82	0.97	0.97
Avail Cap(c_a), veh/h	192	474	462	76	358	361	214	1428	763	187	1241	672
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	64.4	50.5	50.5	68.8	57.6	57.6	63.5	30.3	30.3	66.8	44.9	45.0
Incr Delay (d2), s/veh	59.7	17.0	17.6	47.8	49.7	50.3	57.2	0.4	0.7	6.1	19.4	28.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.1	16.4	16.1	3.3	17.9	18.0	11.0	8.7	9.4	3.6	23.7	27.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	124.1	67.5	68.1	116.6	107.3	107.9	120.7	30.6	31.0	72.9	64.3	73.3
LnGrp LOS	F	E	E	F	F	F	F	C	C	E	E	E
Approach Vol, veh/h		1010			789			1297			1956	
Approach Delay, s/veh		78.3			108.3			45.4			67.7	
Approach LOS		E			F			D			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.1	69.3	12.8	45.8	25.2	61.2	22.4	36.2
Change Period (Y+Rc), s	7.5	7.5	6.5	6.5	7.5	7.5	6.5	6.5
Max Green Setting (Gmax), s	15.5	55.9	6.3	39.3	17.7	53.7	15.9	29.7
Max Q Clear Time (g_c+I1), s	9.8	24.3	7.2	35.0	19.4	53.5	17.6	31.7
Green Ext Time (p_c), s	0.0	10.8	0.0	2.4	0.0	0.2	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	70.5
HCM 6th LOS	E



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	150	1490	200	180	960	490	210	1540	190	620	1490	100
Future Volume (veh/h)	150	1490	200	180	960	490	210	1540	190	620	1490	100
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	158	1568	116	189	1011	484	221	1621	96	653	1568	39
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	242	1536	468	243	1537	773	270	1665	402	663	2397	580
Arrive On Green	0.07	0.31	0.31	0.07	0.31	0.31	0.08	0.26	0.26	0.20	0.38	0.38
Sat Flow, veh/h	3401	5025	1531	3401	5025	1531	3401	6332	1530	3401	6332	1533
Grp Volume(v), veh/h	158	1568	116	189	1011	484	221	1621	96	653	1568	39
Grp Sat Flow(s),veh/h/ln	1700	1675	1531	1700	1675	1531	1700	1583	1530	1700	1583	1533
Q Serve(g_s), s	6.3	42.8	8.0	7.6	24.5	32.3	9.0	35.5	6.9	26.8	28.6	2.3
Cycle Q Clear(g_c), s	6.3	42.8	8.0	7.6	24.5	32.3	9.0	35.5	6.9	26.8	28.6	2.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	242	1536	468	243	1537	773	270	1665	402	663	2397	580
V/C Ratio(X)	0.65	1.02	0.25	0.78	0.66	0.63	0.82	0.97	0.24	0.98	0.65	0.07
Avail Cap(c_a), veh/h	284	1536	468	243	1537	773	372	1665	402	663	2397	580
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	63.3	48.6	36.5	63.9	42.2	25.5	63.5	51.1	40.6	56.1	35.9	27.7
Incr Delay (d2), s/veh	2.5	28.3	0.3	13.6	1.0	1.6	7.1	16.2	0.3	30.9	0.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.8	21.3	3.0	3.7	10.0	11.6	4.0	15.3	2.6	13.9	10.6	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	65.8	76.9	36.8	77.5	43.3	27.1	70.5	67.4	40.9	87.0	36.6	27.8
LnGrp LOS	E	F	D	E	D	C	E	E	D	F	D	C
Approach Vol, veh/h		1842			1684			1938			2260	
Approach Delay, s/veh		73.4			42.5			66.4			51.0	
Approach LOS		E			D			E			D	

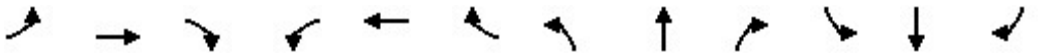
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	32.0	43.3	14.7	50.0	15.8	59.5	14.7	50.0
Change Period (Y+Rc), s	* 4.7	6.5	* 4.7	7.2	* 4.7	6.5	* 4.7	7.2
Max Green Setting (Gmax), s	* 27	36.8	* 10	42.8	* 15	48.8	* 12	41.1
Max Q Clear Time (g_c+I1), s	28.8	37.5	9.6	44.8	11.0	30.6	8.3	26.5
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.1	9.8	0.1	4.0

Intersection Summary	
HCM 6th Ctrl Delay	58.3
HCM 6th LOS	E

Notes

User approved pedestrian interval to be less than phase max green.

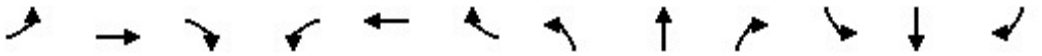
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	160	2050	60	110	1580	100	60	230	150	80	270	230
Future Volume (veh/h)	160	2050	60	110	1580	100	60	230	150	80	270	230
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	168	2158	27	116	1663	41	63	242	67	84	284	110
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	197	2682	650	142	2484	602	80	481	130	106	474	179
Arrive On Green	0.11	0.42	0.42	0.08	0.39	0.39	0.05	0.18	0.18	0.06	0.19	0.19
Sat Flow, veh/h	1753	6332	1534	1753	6332	1534	1753	2707	731	1753	2467	930
Grp Volume(v), veh/h	168	2158	27	116	1663	41	63	154	155	84	199	195
Grp Sat Flow(s),veh/h/ln	1753	1583	1534	1753	1583	1534	1753	1749	1689	1753	1749	1649
Q Serve(g_s), s	10.6	33.5	1.2	7.3	24.4	1.9	4.0	8.9	9.3	5.3	11.7	12.2
Cycle Q Clear(g_c), s	10.6	33.5	1.2	7.3	24.4	1.9	4.0	8.9	9.3	5.3	11.7	12.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.43	1.00		0.56
Lane Grp Cap(c), veh/h	197	2682	650	142	2484	602	80	310	300	106	336	317
V/C Ratio(X)	0.85	0.80	0.04	0.82	0.67	0.07	0.78	0.50	0.52	0.79	0.59	0.62
Avail Cap(c_a), veh/h	234	2813	682	156	2532	613	93	761	735	109	777	732
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	49.1	28.4	19.0	50.9	28.2	21.4	53.1	41.7	41.9	52.2	41.5	41.7
Incr Delay (d2), s/veh	22.5	1.8	0.0	26.1	0.7	0.1	30.2	1.5	1.7	31.4	2.0	2.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.7	12.0	0.4	4.1	8.7	0.6	2.4	3.8	3.9	3.2	5.0	4.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	71.5	30.1	19.1	77.0	28.9	21.4	83.3	43.2	43.6	83.5	43.5	44.0
LnGrp LOS	E	C	B	E	C	C	F	D	D	F	D	D
Approach Vol, veh/h		2353			1820			372			478	
Approach Delay, s/veh		33.0			31.8			50.2			50.7	
Approach LOS		C			C			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	19.6	51.7	12.2	29.1	16.1	55.2	13.8	27.5
Change Period (Y+Rc), s	7.0	7.5	7.0	7.5	7.0	7.5	7.0	7.5
Max Green Setting (Gmax), s	15.0	45.0	6.0	50.0	10.0	50.0	7.0	49.0
Max Q Clear Time (g_c+I1), s	12.6	26.4	6.0	14.2	9.3	35.5	7.3	11.3
Green Ext Time (p_c), s	0.1	12.2	0.0	2.7	0.0	12.1	0.0	2.0

Intersection Summary	
HCM 6th Ctrl Delay	35.5
HCM 6th LOS	D



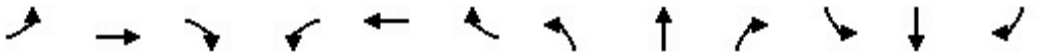
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	500	1550	350	350	1440	150	210	810	430	210	1040	430
Future Volume (veh/h)	500	1550	350	350	1440	150	210	810	430	210	1040	430
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	526	1632	0	368	1516	139	221	853	0	221	1095	299
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	467	1941		428	1752	160	295	1356		201	1496	456
Arrive On Green	0.14	0.31	0.00	0.13	0.30	0.30	0.09	0.27	0.00	0.11	0.30	0.30
Sat Flow, veh/h	3401	6332	1560	3401	5936	544	3401	5025	1560	1753	5025	1531
Grp Volume(v), veh/h	526	1632	0	368	1213	442	221	853	0	221	1095	299
Grp Sat Flow(s),veh/h/ln	1700	1583	1560	1700	1583	1731	1700	1675	1560	1753	1675	1531
Q Serve(g_s), s	12.0	21.0	0.0	9.3	21.1	21.1	5.5	13.0	0.0	10.0	17.1	14.9
Cycle Q Clear(g_c), s	12.0	21.0	0.0	9.3	21.1	21.1	5.5	13.0	0.0	10.0	17.1	14.9
Prop In Lane	1.00		1.00	1.00		0.31	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	467	1941		428	1401	511	295	1356		201	1496	456
V/C Ratio(X)	1.13	0.84		0.86	0.87	0.87	0.75	0.63		1.10	0.73	0.66
Avail Cap(c_a), veh/h	467	1957		428	1414	515	311	1496		201	1611	491
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.7	28.3	0.0	37.4	29.1	29.2	39.0	28.0	0.0	38.7	27.5	26.8
Incr Delay (d2), s/veh	80.8	3.8	0.0	17.1	6.3	15.4	11.4	1.2	0.0	93.2	2.1	4.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.9	7.7	0.0	4.6	8.0	10.1	2.6	4.8	0.0	9.2	6.4	5.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	118.4	32.1	0.0	54.5	35.5	44.6	50.4	29.2	0.0	131.9	29.7	31.0
LnGrp LOS	F	C		D	D	D	D	C		F	C	C
Approach Vol, veh/h		2158	A		2023			1074	A		1615	
Approach Delay, s/veh		53.2			40.9			33.6			43.9	
Approach LOS		D			D			C			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.0	27.6	15.0	30.8	11.6	30.0	16.0	29.8
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	10.0	26.0	11.0	27.0	8.0	28.0	12.0	26.0
Max Q Clear Time (g_c+I1), s	12.0	15.0	11.3	23.0	7.5	19.1	14.0	23.1
Green Ext Time (p_c), s	0.0	6.0	0.0	3.6	0.1	6.9	0.0	2.6

Intersection Summary	
HCM 6th Ctrl Delay	44.3
HCM 6th LOS	D

Notes

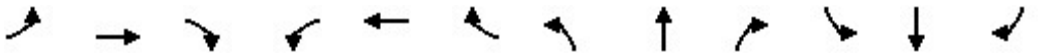
Unsignalized Delay for [NBR, EBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	410	1720	50	210	1670	340	50	230	70	320	320	270
Future Volume (veh/h)	410	1720	50	210	1670	340	50	230	70	320	320	270
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	432	1811	51	221	1758	143	53	242	51	337	337	164
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	443	2255	63	275	1928	466	85	430	89	346	681	325
Arrive On Green	0.13	0.35	0.35	0.08	0.30	0.30	0.05	0.15	0.15	0.20	0.30	0.30
Sat Flow, veh/h	3401	6374	180	3401	6332	1531	1753	2872	593	1753	2283	1087
Grp Volume(v), veh/h	432	1349	513	221	1758	143	53	145	148	337	256	245
Grp Sat Flow(s),veh/h/ln	1700	1583	1805	1700	1583	1531	1753	1749	1716	1753	1749	1621
Q Serve(g_s), s	15.1	30.5	30.5	7.6	31.8	8.5	3.5	9.2	9.5	22.8	14.4	14.8
Cycle Q Clear(g_c), s	15.1	30.5	30.5	7.6	31.8	8.5	3.5	9.2	9.5	22.8	14.4	14.8
Prop In Lane	1.00		0.10	1.00		1.00	1.00		0.35	1.00		0.67
Lane Grp Cap(c), veh/h	443	1680	638	275	1928	466	85	262	257	346	522	484
V/C Ratio(X)	0.98	0.80	0.80	0.80	0.91	0.31	0.62	0.56	0.57	0.97	0.49	0.51
Avail Cap(c_a), veh/h	443	1680	638	294	1941	469	150	712	699	346	907	841
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	51.6	34.7	34.7	53.8	39.9	31.8	55.6	46.9	47.1	47.5	34.3	34.5
Incr Delay (d2), s/veh	36.3	3.1	7.7	12.7	7.1	0.5	2.7	0.7	0.8	41.2	0.3	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.4	11.5	14.0	3.6	12.5	3.1	1.6	3.9	4.0	13.6	5.9	5.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	87.9	37.8	42.5	66.5	47.0	32.3	58.3	47.6	47.8	88.7	34.6	34.8
LnGrp LOS	F	D	D	E	D	C	E	D	D	F	C	C
Approach Vol, veh/h		2294			2122			346			838	
Approach Delay, s/veh		48.3			48.1			49.4			56.4	
Approach LOS		D			D			D			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	30.0	24.3	16.1	48.6	12.3	42.1	22.0	42.8
Change Period (Y+Rc), s	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
Max Green Setting (Gmax), s	23.5	48.5	10.3	41.7	10.2	61.8	15.5	36.5
Max Q Clear Time (g_c+I1), s	24.8	11.5	9.6	32.5	5.5	16.8	17.1	33.8
Green Ext Time (p_c), s	0.0	1.0	0.0	7.6	0.0	1.8	0.0	2.4

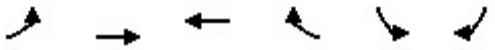
Intersection Summary	
HCM 6th Ctrl Delay	49.5
HCM 6th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	350	1530	240	640	1680	270	290	590	430	450	1050	260
Future Volume (veh/h)	350	1530	240	640	1680	270	290	590	430	450	1050	260
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	368	1611	234	674	1768	147	305	621	213	474	1105	122
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	376	1646	239	646	1873	571	306	851	258	501	1139	346
Arrive On Green	0.11	0.29	0.29	0.19	0.37	0.37	0.09	0.17	0.17	0.15	0.23	0.23
Sat Flow, veh/h	3401	5610	815	3401	5025	1533	3401	5025	1524	3401	5025	1528
Grp Volume(v), veh/h	368	1364	481	674	1768	147	305	621	213	474	1105	122
Grp Sat Flow(s),veh/h/ln	1700	1583	1676	1700	1675	1533	1700	1675	1524	1700	1675	1528
Q Serve(g_s), s	16.2	42.7	42.7	28.5	51.1	10.0	13.4	17.6	20.2	20.7	32.7	10.1
Cycle Q Clear(g_c), s	16.2	42.7	42.7	28.5	51.1	10.0	13.4	17.6	20.2	20.7	32.7	10.1
Prop In Lane	1.00		0.49	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	376	1393	492	646	1873	571	306	851	258	501	1139	346
V/C Ratio(X)	0.98	0.98	0.98	1.04	0.94	0.26	1.00	0.73	0.83	0.95	0.97	0.35
Avail Cap(c_a), veh/h	376	1393	492	646	1873	571	306	851	258	501	1139	346
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	66.5	52.5	52.5	60.8	45.5	32.6	68.2	59.0	60.2	63.4	57.5	48.7
Incr Delay (d2), s/veh	40.3	19.2	35.1	47.1	10.5	0.3	50.4	3.3	19.4	27.1	19.8	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.9	18.7	22.0	16.1	21.9	3.7	7.9	7.5	9.0	10.6	15.5	3.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	106.8	71.7	87.7	107.9	56.0	32.9	118.6	62.3	79.6	90.4	77.3	49.5
LnGrp LOS	F	E	F	F	E	C	F	E	E	F	E	D
Approach Vol, veh/h		2213			2589			1139			1701	
Approach Delay, s/veh		81.0			68.2			80.6			79.0	
Approach LOS		F			E			F			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	36.0	51.5	21.0	41.5	24.1	63.4	29.6	32.9
Change Period (Y+Rc), s	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5
Max Green Setting (Gmax), s	28.5	44.0	13.5	34.0	16.6	55.9	22.1	25.4
Max Q Clear Time (g_c+I1), s	30.5	44.7	15.4	34.7	18.2	53.1	22.7	22.2
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	2.5	0.0	1.5

Intersection Summary	
HCM 6th Ctrl Delay	76.2
HCM 6th LOS	E



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑	↑↑	↱	↰↰↑	↱
Traffic Volume (veh/h)	0	1780	1350	410	290	1340
Future Volume (veh/h)	0	1780	1350	410	290	1340
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	0	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	0	1874	1421	0	305	1400
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	4	4	4	4	4
Cap, veh/h	0	2077	1446		789	1404
Arrive On Green	0.00	0.41	0.41	0.00	0.45	0.45
Sat Flow, veh/h	0	5356	3589	1560	1753	3120
Grp Volume(v), veh/h	0	1874	1421	0	305	1400
Grp Sat Flow(s),veh/h/ln	0	1675	1749	1560	1753	1560
Q Serve(g_s), s	0.0	31.4	36.1	0.0	10.4	40.3
Cycle Q Clear(g_c), s	0.0	31.4	36.1	0.0	10.4	40.3
Prop In Lane	0.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	0	2077	1446		789	1404
V/C Ratio(X)	0.00	0.90	0.98		0.39	1.00
Avail Cap(c_a), veh/h	0	2077	1446		789	1404
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	24.7	26.1	0.0	16.5	24.7
Incr Delay (d2), s/veh	0.0	6.0	19.6	0.0	0.3	23.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	11.8	16.7	0.0	3.8	17.5
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.0	30.7	45.7	0.0	16.8	48.0
LnGrp LOS	A	C	D		B	D
Approach Vol, veh/h		1874	1421	A	1705	
Approach Delay, s/veh		30.7	45.7		42.4	
Approach LOS		C	D		D	

Timer - Assigned Phs	2	4	6
Phs Duration (G+Y+Rc), s	44.0	46.0	44.0
Change Period (Y+Rc), s	6.8	5.5	6.8
Max Green Setting (Gmax), s	37.2	40.5	37.2
Max Q Clear Time (g_c+I1), s	33.4	42.3	38.1
Green Ext Time (p_c), s	3.2	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	39.0
HCM 6th LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	630	1440	230	680	1080	140
Future Volume (veh/h)	630	1440	230	680	1080	140
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		0.97	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	663	1511	242	716	1137	72
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	4	4	4
Cap, veh/h	1470	2058	258	2749	1195	532
Arrive On Green	0.42	0.42	0.08	0.55	0.34	0.34
Sat Flow, veh/h	3589	2670	3401	5191	3506	1560
Grp Volume(v), veh/h	663	1511	242	716	1137	72
Grp Sat Flow(s),veh/h/ln	1749	1335	1700	1675	1753	1560
Q Serve(g_s), s	16.1	36.9	8.4	8.9	37.5	3.8
Cycle Q Clear(g_c), s	16.1	36.9	8.4	8.9	37.5	3.8
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1470	2058	258	2749	1195	532
V/C Ratio(X)	0.45	0.73	0.94	0.26	0.95	0.14
Avail Cap(c_a), veh/h	1645	2191	258	3000	1214	540
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.6	7.8	54.4	14.2	38.1	27.0
Incr Delay (d2), s/veh	0.2	1.2	39.0	0.0	15.6	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.2	22.1	4.8	3.0	18.6	1.5
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	24.8	9.0	93.5	14.2	53.7	27.1
LnGrp LOS	C	A	F	B	D	C
Approach Vol, veh/h	2174			958	1209	
Approach Delay, s/veh	13.8			34.2	52.1	
Approach LOS	B			C	D	

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	15.0	57.1				72.1	46.4
Change Period (Y+Rc), s	6.0	7.3				7.3	6.0
Max Green Setting (Gmax), s	9.0	55.7				70.7	41.0
Max Q Clear Time (g_c+I1), s	10.4	38.9				10.9	39.5
Green Ext Time (p_c), s	0.0	10.5				4.8	0.9

Intersection Summary	
HCM 6th Ctrl Delay	29.0
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.
User approved volume balancing among the lanes for turning movement.

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	1290	1350	30	0	20
Future Vol, veh/h	0	1290	1350	30	0	20
Conflicting Peds, #/hr	5	0	0	5	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	0	1358	1421	32	0	21

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	732
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.96
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.33
Pot Cap-1 Maneuver	0	-	-	-	0	361
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	359
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	15.7
HCM LOS			C

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	359
HCM Lane V/C Ratio	-	-	-	0.059
HCM Control Delay (s)	-	-	-	15.7
HCM Lane LOS	-	-	-	C
HCM 95th %tile Q(veh)	-	-	-	0.2

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	1290	1360	20	0	20
Future Vol, veh/h	0	1290	1360	20	0	20
Conflicting Peds, #/hr	5	0	0	5	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	0	1358	1432	21	0	21

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	732
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.96
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.33
Pot Cap-1 Maneuver	0	-	-	-	0	361
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	359
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	15.7
HCM LOS			C

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	359
HCM Lane V/C Ratio	-	-	-	0.059
HCM Control Delay (s)	-	-	-	15.7
HCM Lane LOS	-	-	-	C
HCM 95th %tile Q(veh)	-	-	-	0.2

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	20	1270	1370	20	30	10
Future Vol, veh/h	20	1270	1370	20	30	10
Conflicting Peds, #/hr	5	0	0	5	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	21	1337	1442	21	32	11

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1468	0	-	0	2169	737
Stage 1	-	-	-	-	1458	-
Stage 2	-	-	-	-	711	-
Critical Hdwy	4.16	-	-	-	6.86	6.96
Critical Hdwy Stg 1	-	-	-	-	5.86	-
Critical Hdwy Stg 2	-	-	-	-	5.86	-
Follow-up Hdwy	2.23	-	-	-	3.53	3.33
Pot Cap-1 Maneuver	451	-	-	-	39	359
Stage 1	-	-	-	-	179	-
Stage 2	-	-	-	-	445	-
Platoon blocked, %			-	-	-	
Mov Cap-1 Maneuver	449	-	-	-	37	357
Mov Cap-2 Maneuver	-	-	-	-	125	-
Stage 1	-	-	-	-	170	-
Stage 2	-	-	-	-	443	-

Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	38.4
HCM LOS			E

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	449	-	-	-	149
HCM Lane V/C Ratio	0.047	-	-	-	0.283
HCM Control Delay (s)	13.4	-	-	-	38.4
HCM Lane LOS	B	-	-	-	E
HCM 95th %tile Q(veh)	0.1	-	-	-	1.1

Intersection	
Int Delay, s/veh	1.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	30	1260	1350	30	50	40
Future Vol, veh/h	30	1260	1350	30	50	40
Conflicting Peds, #/hr	5	0	0	5	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	350	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	32	1326	1421	32	53	42

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1458	0	-	0	2169	732
Stage 1	-	-	-	-	1442	-
Stage 2	-	-	-	-	727	-
Critical Hdwy	4.16	-	-	-	6.86	6.96
Critical Hdwy Stg 1	-	-	-	-	5.86	-
Critical Hdwy Stg 2	-	-	-	-	5.86	-
Follow-up Hdwy	2.23	-	-	-	3.53	3.33
Pot Cap-1 Maneuver	455	-	-	-	~ 39	361
Stage 1	-	-	-	-	182	-
Stage 2	-	-	-	-	437	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	453	-	-	-	~ 36	359
Mov Cap-2 Maneuver	-	-	-	-	123	-
Stage 1	-	-	-	-	168	-
Stage 2	-	-	-	-	435	-

Approach	EB	WB	SB
HCM Control Delay, s	0.3	0	48
HCM LOS			E

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	453	-	-	-	174
HCM Lane V/C Ratio	0.07	-	-	-	0.544
HCM Control Delay (s)	13.5	-	-	-	48
HCM Lane LOS	B	-	-	-	E
HCM 95th %tile Q(veh)	0.2	-	-	-	2.8

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	3.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	30	1280	1350	30	30	30
Future Vol, veh/h	30	1280	1350	30	30	30
Conflicting Peds, #/hr	5	0	0	5	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	175	-	-	-	0	76
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	32	1347	1421	32	32	32

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1458	0	-	0	2180	732
Stage 1	-	-	-	-	1442	-
Stage 2	-	-	-	-	738	-
Critical Hdwy	4.16	-	-	-	6.86	6.96
Critical Hdwy Stg 1	-	-	-	-	5.86	-
Critical Hdwy Stg 2	-	-	-	-	5.86	-
Follow-up Hdwy	2.23	-	-	-	3.53	3.33
Pot Cap-1 Maneuver	455	-	-	-	39	361
Stage 1	-	-	-	-	182	-
Stage 2	-	-	-	-	431	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	453	-	-	-	36	359
Mov Cap-2 Maneuver	-	-	-	-	36	-
Stage 1	-	-	-	-	168	-
Stage 2	-	-	-	-	429	-

Approach	EB	WB	SB
HCM Control Delay, s	0.3	0	147
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	453	-	-	-	36	359
HCM Lane V/C Ratio	0.07	-	-	-	0.877	0.088
HCM Control Delay (s)	13.5	-	-	-	278	16
HCM Lane LOS	B	-	-	-	F	C
HCM 95th %tile Q(veh)	0.2	-	-	-	3.2	0.3

Intersection	
Int Delay, s/veh	3.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	950	70	80	760	40	40
Future Vol, veh/h	950	70	80	760	40	40
Conflicting Peds, #/hr	0	5	5	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	100	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	1000	74	84	800	42	42

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1079	0	1610	542
Stage 1	-	-	-	-	1042	-
Stage 2	-	-	-	-	568	-
Critical Hdwy	-	-	4.16	-	6.86	6.96
Critical Hdwy Stg 1	-	-	-	-	5.86	-
Critical Hdwy Stg 2	-	-	-	-	5.86	-
Follow-up Hdwy	-	-	2.23	-	3.53	3.33
Pot Cap-1 Maneuver	-	-	636	-	94	482
Stage 1	-	-	-	-	299	-
Stage 2	-	-	-	-	528	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	633	-	81	480
Mov Cap-2 Maneuver	-	-	-	-	81	-
Stage 1	-	-	-	-	298	-
Stage 2	-	-	-	-	458	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.1	64.4
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	139	-	-	633	-
HCM Lane V/C Ratio	0.606	-	-	0.133	-
HCM Control Delay (s)	64.4	-	-	11.6	-
HCM Lane LOS	F	-	-	B	-
HCM 95th %tile Q(veh)	3.2	-	-	0.5	-

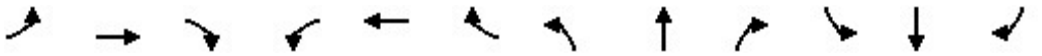
Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	150	150	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	0	0	0	0	0	0

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	0	0	0	0	0	0
Stage 1	0	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Critical Hdwy	5.76	7.16	-	-	5.36	-
Critical Hdwy Stg 1	6.66	-	-	-	-	-
Critical Hdwy Stg 2	6.06	-	-	-	-	-
Follow-up Hdwy	3.83	3.93	-	-	3.13	-
Pot Cap-1 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	-	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-	-
HCM Control Delay (s)	-	-	0	0	0	-
HCM Lane LOS	-	-	A	A	A	-
HCM 95th %tile Q(veh)	-	-	-	-	-	-



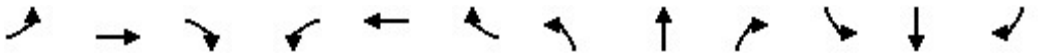
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	230	550	90	20	630	810	170	1000	50	840	860	160
Future Volume (veh/h)	230	550	90	20	630	810	170	1000	50	840	860	160
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	242	579	33	21	663	657	179	1053	50	884	905	50
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	223	1669	516	123	1520	470	203	1384	66	243	1531	467
Arrive On Green	0.07	0.33	0.33	0.04	0.30	0.30	0.12	0.28	0.28	0.14	0.30	0.30
Sat Flow, veh/h	3401	5025	1553	3401	5025	1552	1753	4911	233	1753	5025	1531
Grp Volume(v), veh/h	242	579	33	21	663	657	179	718	385	884	905	50
Grp Sat Flow(s),veh/h/ln	1700	1675	1553	1700	1675	1552	1753	1675	1794	1753	1675	1531
Q Serve(g_s), s	9.0	11.9	2.0	0.8	14.5	41.5	13.8	26.9	26.9	19.0	20.9	3.2
Cycle Q Clear(g_c), s	9.0	11.9	2.0	0.8	14.5	41.5	13.8	26.9	26.9	19.0	20.9	3.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.13	1.00		1.00
Lane Grp Cap(c), veh/h	223	1669	516	123	1520	470	203	944	506	243	1531	467
V/C Ratio(X)	1.08	0.35	0.06	0.17	0.44	1.40	0.88	0.76	0.76	3.64	0.59	0.11
Avail Cap(c_a), veh/h	223	1669	516	223	1520	470	243	1136	608	243	1704	519
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	64.1	34.6	31.3	64.1	38.4	47.8	59.7	45.0	45.0	59.1	40.4	34.3
Incr Delay (d2), s/veh	84.5	0.1	0.1	0.5	0.2	192.1	25.2	2.9	5.3	1198.2	0.6	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.4	4.8	0.7	0.4	5.8	40.3	7.4	11.1	12.3	89.1	8.5	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	148.6	34.7	31.3	64.6	38.7	239.9	84.9	47.9	50.4	1257.3	41.0	34.4
LnGrp LOS	F	C	C	E	D	F	F	D	D	F	D	C
Approach Vol, veh/h		854			1341			1282			1839	
Approach Delay, s/veh		66.9			137.7			53.8			625.5	
Approach LOS		E			F			D			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	26.0	45.7	12.5	53.0	22.9	48.8	16.5	49.0
Change Period (Y+Rc), s	7.0	7.0	7.5	7.5	7.0	7.0	7.5	7.5
Max Green Setting (Gmax), s	19.0	46.5	9.0	41.5	19.0	46.5	9.0	41.5
Max Q Clear Time (g_c+I1), s	21.0	28.9	2.8	13.9	15.8	22.9	11.0	43.5
Green Ext Time (p_c), s	0.0	8.4	0.0	4.7	0.1	8.7	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	274.8
HCM 6th LOS	F

Notes

User approved pedestrian interval to be less than phase max green.



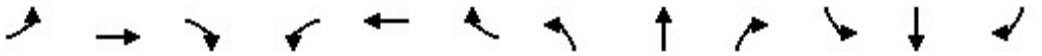
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	1170	280	240	1200	30	260	30	110	60	40	40
Future Volume (veh/h)	40	1170	280	240	1200	30	260	30	110	60	40	40
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	42	1232	97	253	1263	30	274	32	27	63	42	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	98	1479	453	295	2051	49	404	813	358	403	813	
Arrive On Green	0.06	0.29	0.29	0.17	0.41	0.41	0.23	0.23	0.23	0.23	0.23	0.00
Sat Flow, veh/h	1753	5025	1539	1753	5047	120	1343	3497	1538	1323	3589	0
Grp Volume(v), veh/h	42	1232	97	253	838	455	274	32	27	63	42	0
Grp Sat Flow(s),veh/h/ln	1753	1675	1539	1753	1675	1817	1343	1749	1538	1323	1749	0
Q Serve(g_s), s	1.6	15.8	3.3	9.7	13.6	13.6	13.7	0.5	0.9	2.7	0.6	0.0
Cycle Q Clear(g_c), s	1.6	15.8	3.3	9.7	13.6	13.6	14.3	0.5	0.9	3.2	0.6	0.0
Prop In Lane	1.00		1.00	1.00		0.07	1.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	98	1479	453	295	1361	738	404	813	358	403	813	
V/C Ratio(X)	0.43	0.83	0.21	0.86	0.62	0.62	0.68	0.04	0.08	0.16	0.05	
Avail Cap(c_a), veh/h	178	1533	469	306	1361	738	404	813	358	403	813	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	31.4	22.7	18.3	27.8	16.2	16.2	26.1	20.5	20.6	21.7	20.5	0.0
Incr Delay (d2), s/veh	1.1	4.2	0.3	19.3	1.0	1.8	5.4	0.0	0.2	0.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	5.7	1.0	5.1	4.3	4.8	4.4	0.2	0.3	0.8	0.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	32.5	26.9	18.6	47.2	17.2	18.0	31.5	20.5	20.8	22.0	20.6	0.0
LnGrp LOS	C	C	B	D	B	B	C	C	C	C	C	
Approach Vol, veh/h		1371			1546			333			105	A
Approach Delay, s/veh		26.5			22.3			29.5			21.4	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	18.6	27.3		23.0	10.9	35.0		23.0				
Change Period (Y+Rc), s	7.0	7.0		7.0	7.0	7.0		7.0				
Max Green Setting (Gmax), s	12.0	21.0		16.0	7.0	26.0		16.0				
Max Q Clear Time (g_c+I1), s	11.7	17.8		16.3	3.6	15.6		5.2				
Green Ext Time (p_c), s	0.0	2.5		0.0	0.0	6.6		0.4				

Intersection Summary	
HCM 6th Ctrl Delay	24.7
HCM 6th LOS	C

Notes

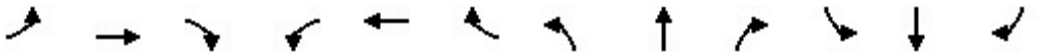
Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	290	130	150	420	60	100	280	30	40	540	160
Future Volume (veh/h)	20	290	130	150	420	60	100	280	30	40	540	160
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	21	305	80	158	442	51	105	295	25	42	568	139
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	258	510	131	335	778	89	297	1006	85	430	787	192
Arrive On Green	0.03	0.19	0.19	0.09	0.25	0.25	0.07	0.31	0.31	0.05	0.28	0.28
Sat Flow, veh/h	1753	2739	705	1753	3154	362	1753	3260	274	1753	2775	677
Grp Volume(v), veh/h	21	193	192	158	244	249	105	157	163	42	357	350
Grp Sat Flow(s),veh/h/ln	1753	1749	1695	1753	1749	1767	1753	1749	1785	1753	1749	1704
Q Serve(g_s), s	0.7	7.4	7.6	5.3	8.9	9.0	3.0	5.0	5.1	1.2	13.5	13.5
Cycle Q Clear(g_c), s	0.7	7.4	7.6	5.3	8.9	9.0	3.0	5.0	5.1	1.2	13.5	13.5
Prop In Lane	1.00		0.42	1.00		0.20	1.00		0.15	1.00		0.40
Lane Grp Cap(c), veh/h	258	326	316	335	431	436	297	540	551	430	496	483
V/C Ratio(X)	0.08	0.59	0.61	0.47	0.57	0.57	0.35	0.29	0.30	0.10	0.72	0.72
Avail Cap(c_a), veh/h	351	645	625	335	657	664	314	681	695	491	681	664
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.0	27.2	27.3	21.6	24.1	24.2	17.6	19.2	19.2	16.9	23.6	23.6
Incr Delay (d2), s/veh	0.2	2.4	2.7	1.0	1.7	1.7	0.9	0.4	0.4	0.1	3.1	3.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	3.0	3.0	2.0	3.5	3.5	1.1	1.9	1.9	0.4	5.4	5.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.1	29.6	30.0	22.6	25.8	25.8	18.5	19.6	19.7	17.0	26.7	26.9
LnGrp LOS	C	C	C	C	C	C	B	B	B	B	C	C
Approach Vol, veh/h		406			651			425			749	
Approach Delay, s/veh		29.5			25.0			19.4			26.3	
Approach LOS		C			C			B			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.4	29.6	13.0	20.1	12.3	27.7	8.6	24.6
Change Period (Y+Rc), s	7.0	7.0	6.5	6.5	7.0	7.0	6.5	6.5
Max Green Setting (Gmax), s	6.0	28.5	6.5	27.0	6.0	28.5	6.0	27.5
Max Q Clear Time (g_c+I1), s	3.2	7.1	7.3	9.6	5.0	15.5	2.7	11.0
Green Ext Time (p_c), s	0.0	2.3	0.0	2.6	0.0	4.5	0.0	3.3

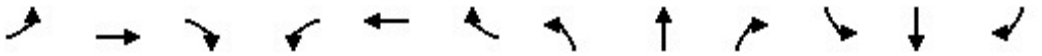
Intersection Summary	
HCM 6th Ctrl Delay	25.2
HCM 6th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	450	340	190	610	100	80	260	100	50	840	100
Future Volume (veh/h)	20	450	340	190	610	100	80	260	100	50	840	100
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.99	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	21	474	234	200	642	94	84	274	31	53	884	97
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	201	529	260	248	886	129	100	1259	554	68	1083	119
Arrive On Green	0.03	0.23	0.23	0.09	0.29	0.29	0.06	0.36	0.36	0.04	0.34	0.34
Sat Flow, veh/h	1753	2257	1106	1753	3053	446	1753	3497	1539	1753	3171	348
Grp Volume(v), veh/h	21	366	342	200	367	369	84	274	31	53	487	494
Grp Sat Flow(s),veh/h/ln	1753	1749	1615	1753	1749	1750	1753	1749	1539	1753	1749	1771
Q Serve(g_s), s	0.9	21.3	21.6	9.1	19.8	19.9	5.0	5.7	1.4	3.1	26.7	26.7
Cycle Q Clear(g_c), s	0.9	21.3	21.6	9.1	19.8	19.9	5.0	5.7	1.4	3.1	26.7	26.7
Prop In Lane	1.00		0.69	1.00		0.25	1.00		1.00	1.00		0.20
Lane Grp Cap(c), veh/h	201	410	379	248	507	508	100	1259	554	68	597	605
V/C Ratio(X)	0.10	0.89	0.90	0.80	0.72	0.73	0.84	0.22	0.06	0.78	0.82	0.82
Avail Cap(c_a), veh/h	274	433	400	248	507	508	100	1259	554	134	597	605
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.3	38.9	39.0	29.5	33.5	33.5	49.0	23.3	21.9	50.0	31.6	31.6
Incr Delay (d2), s/veh	0.1	19.4	22.0	16.2	4.8	4.9	41.7	0.4	0.2	7.1	11.7	11.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	10.8	10.3	4.7	8.6	8.6	3.3	2.3	0.5	1.5	12.5	12.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	29.4	58.3	61.0	45.7	38.3	38.4	90.7	23.7	22.1	57.2	43.3	43.1
LnGrp LOS	C	E	E	D	D	D	F	C	C	E	D	D
Approach Vol, veh/h		729			936			389			1034	
Approach Delay, s/veh		58.7			39.9			38.1			43.9	
Approach LOS		E			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.1	44.8	17.0	32.1	13.0	42.9	11.2	38.0
Change Period (Y+Rc), s	7.0	7.0	7.5	7.5	7.0	7.0	7.5	7.5
Max Green Setting (Gmax), s	8.0	32.5	9.5	26.0	6.0	34.5	8.0	27.5
Max Q Clear Time (g_c+I1), s	5.1	7.7	11.1	23.6	7.0	28.7	2.9	21.9
Green Ext Time (p_c), s	0.0	1.3	0.0	0.9	0.0	2.4	0.0	1.7

Intersection Summary	
HCM 6th Ctrl Delay	45.5
HCM 6th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	360	20	390	200	1330	0	0	1860	760
Future Volume (veh/h)	0	0	0	360	20	390	200	1330	0	0	1860	760
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1841	1841	1841	1841	1841	0	0	1841	1841
Adj Flow Rate, veh/h				471	0	186	211	1400	0	0	1958	459
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				4	4	4	4	4	0	0	4	4
Cap, veh/h				595	0	265	459	3278	0	0	2241	693
Arrive On Green				0.17	0.00	0.17	0.14	0.65	0.00	0.00	0.45	0.45
Sat Flow, veh/h				3506	0	1560	3401	5191	0	0	5191	1555
Grp Volume(v), veh/h				471	0	186	211	1400	0	0	1958	459
Grp Sat Flow(s),veh/h/ln				1753	0	1560	1700	1675	0	0	1675	1555
Q Serve(g_s), s				9.4	0.0	8.2	4.2	9.8	0.0	0.0	25.8	16.9
Cycle Q Clear(g_c), s				9.4	0.0	8.2	4.2	9.8	0.0	0.0	25.8	16.9
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				595	0	265	459	3278	0	0	2241	693
V/C Ratio(X)				0.79	0.00	0.70	0.46	0.43	0.00	0.00	0.87	0.66
Avail Cap(c_a), veh/h				672	0	299	466	3304	0	0	2258	699
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				29.1	0.0	28.6	29.1	6.1	0.0	0.0	18.4	15.9
Incr Delay (d2), s/veh				6.3	0.0	7.3	0.7	0.1	0.0	0.0	4.2	2.6
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				4.3	0.0	3.5	1.6	2.4	0.0	0.0	9.3	5.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				35.4	0.0	35.8	29.8	6.2	0.0	0.0	22.6	18.5
LnGrp LOS				D	A	D	C	A	A	A	C	B
Approach Vol, veh/h					657			1611			2417	
Approach Delay, s/veh					35.5			9.3			21.8	
Approach LOS					D			A			C	

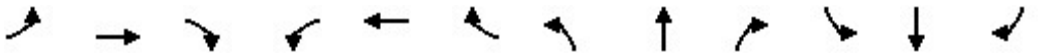
Timer - Assigned Phs	2		5	6		8						
Phs Duration (G+Y+Rc), s	53.6		15.1	38.6		19.4						
Change Period (Y+Rc), s	6.0		* 5.2	6.0		7.0						
Max Green Setting (Gmax), s	48.0		* 10	32.8		14.0						
Max Q Clear Time (g_c+I1), s	11.8		6.2	27.8		11.4						
Green Ext Time (p_c), s	17.7		0.2	4.7		1.0						

Intersection Summary		
HCM 6th Ctrl Delay	19.4	
HCM 6th LOS	B	

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	220	10	240	0	0	0	0	1310	260	330	1900	0
Future Volume (veh/h)	220	10	240	0	0	0	0	1310	260	330	1900	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841				0	1841	1841	1841	1841	0
Adj Flow Rate, veh/h	232	11	245				0	1379	102	347	2000	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4				0	4	4	4	4	0
Cap, veh/h	650	13	287				0	1834	567	544	3017	0
Arrive On Green	0.19	0.19	0.19				0.00	0.37	0.37	0.16	0.60	0.00
Sat Flow, veh/h	3401	67	1503				0	5191	1554	3401	5191	0
Grp Volume(v), veh/h	232	0	256				0	1379	102	347	2000	0
Grp Sat Flow(s),veh/h/ln	1700	0	1570				0	1675	1554	1700	1675	0
Q Serve(g_s), s	3.7	0.0	9.8				0.0	15.0	2.8	6.0	16.5	0.0
Cycle Q Clear(g_c), s	3.7	0.0	9.8				0.0	15.0	2.8	6.0	16.5	0.0
Prop In Lane	1.00		0.96				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	650	0	300				0	1834	567	544	3017	0
V/C Ratio(X)	0.36	0.00	0.85				0.00	0.75	0.18	0.64	0.66	0.00
Avail Cap(c_a), veh/h	709	0	327				0	1934	598	562	3143	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	21.9	0.0	24.4				0.0	17.3	13.5	24.5	8.3	0.0
Incr Delay (d2), s/veh	0.5	0.0	18.9				0.0	1.9	0.3	2.3	0.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	0.0	5.0				0.0	5.2	0.9	2.3	4.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	22.4	0.0	43.2				0.0	19.2	13.7	26.8	8.9	0.0
LnGrp LOS	C	A	D				A	B	B	C	A	A
Approach Vol, veh/h		488						1481			2347	
Approach Delay, s/veh		33.3						18.8			11.5	
Approach LOS		C						B			B	

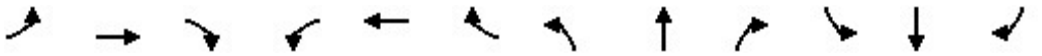
Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	14.7	28.8		18.9		43.4
Change Period (Y+Rc), s	* 4.7	6.0		7.0		6.0
Max Green Setting (Gmax), s	* 10	24.0		13.0		39.0
Max Q Clear Time (g_c+I1), s	8.0	17.0		11.8		18.5
Green Ext Time (p_c), s	0.3	5.8		0.1		16.9

Intersection Summary	
HCM 6th Ctrl Delay	16.5
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



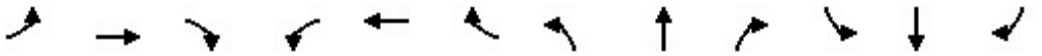
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	420	10	110	150	420	0	0	1160	410
Future Volume (veh/h)	0	0	0	420	10	110	150	420	0	0	1160	410
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		0.97
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1841	1841	1841	1841	1841	0	0	1841	1841
Adj Flow Rate, veh/h				450	0	22	158	442	0	0	1221	231
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				4	4	4	4	4	0	0	4	4
Cap, veh/h				582	0	518	270	2243	0	0	1413	613
Arrive On Green				0.17	0.00	0.17	0.15	0.64	0.00	0.00	0.40	0.40
Sat Flow, veh/h				3506	0	3120	1753	3589	0	0	3589	1516
Grp Volume(v), veh/h				450	0	22	158	442	0	0	1221	231
Grp Sat Flow(s),veh/h/ln				1753	0	1560	1753	1749	0	0	1749	1516
Q Serve(g_s), s				7.4	0.0	0.4	5.0	3.1	0.0	0.0	19.2	6.4
Cycle Q Clear(g_c), s				7.4	0.0	0.4	5.0	3.1	0.0	0.0	19.2	6.4
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				582	0	518	270	2243	0	0	1413	613
V/C Ratio(X)				0.77	0.00	0.04	0.58	0.20	0.00	0.00	0.86	0.38
Avail Cap(c_a), veh/h				652	0	580	291	2452	0	0	1580	685
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				24.0	0.0	21.1	23.7	4.4	0.0	0.0	16.4	12.6
Incr Delay (d2), s/veh				4.8	0.0	0.0	2.1	0.0	0.0	0.0	4.7	0.3
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				3.2	0.0	0.1	2.0	0.6	0.0	0.0	6.9	1.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				28.8	0.0	21.1	25.8	4.5	0.0	0.0	21.1	12.9
LnGrp LOS				C	A	C	C	A	A	A	C	B
Approach Vol, veh/h					472			600			1452	
Approach Delay, s/veh					28.5			10.1			19.8	
Approach LOS					C			B			B	

Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		44.4			14.3	30.1		15.8				
Change Period (Y+Rc), s		5.8			5.0	5.8		5.8				
Max Green Setting (Gmax), s		42.2			10.0	27.2		11.2				
Max Q Clear Time (g_c+I1), s		5.1			7.0	21.2		9.4				
Green Ext Time (p_c), s		2.3			0.1	3.1		0.3				

Intersection Summary		
HCM 6th Ctrl Delay	19.1	
HCM 6th LOS	B	

Notes

User approved volume balancing among the lanes for turning movement.



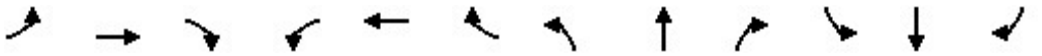
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	120	10	210	0	0	0	0	460	250	310	1270	0
Future Volume (veh/h)	120	10	210	0	0	0	0	460	250	310	1270	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		0.97	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841				0	1841	1841	1841	1841	0
Adj Flow Rate, veh/h	126	0	63				0	484	140	326	1337	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4				0	4	4	4	4	0
Cap, veh/h	651	0	579				0	698	200	384	2036	0
Arrive On Green	0.19	0.00	0.19				0.00	0.26	0.26	0.22	0.58	0.00
Sat Flow, veh/h	3506	0	3120				0	2751	763	1753	3589	0
Grp Volume(v), veh/h	126	0	63				0	317	307	326	1337	0
Grp Sat Flow(s),veh/h/ln	1753	0	1560				0	1749	1673	1753	1749	0
Q Serve(g_s), s	1.5	0.0	0.8				0.0	8.2	8.3	8.9	12.9	0.0
Cycle Q Clear(g_c), s	1.5	0.0	0.8				0.0	8.2	8.3	8.9	12.9	0.0
Prop In Lane	1.00		1.00				0.00		0.46	1.00		0.00
Lane Grp Cap(c), veh/h	651	0	579				0	459	439	384	2036	0
V/C Ratio(X)	0.19	0.00	0.11				0.00	0.69	0.70	0.85	0.66	0.00
Avail Cap(c_a), veh/h	702	0	625				0	854	818	491	3039	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	17.2	0.0	16.9				0.0	16.6	16.6	18.7	7.1	0.0
Incr Delay (d2), s/veh	0.1	0.0	0.1				0.0	1.4	1.5	8.8	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.0	0.3				0.0	2.8	2.7	3.8	2.5	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	17.3	0.0	17.0				0.0	18.0	18.1	27.5	7.3	0.0
LnGrp LOS	B	A	B				A	B	B	C	A	A
Approach Vol, veh/h		189						624			1663	
Approach Delay, s/veh		17.2						18.1			11.3	
Approach LOS		B						B			B	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	16.0	18.9		15.1		34.9
Change Period (Y+Rc), s	5.0	5.8		5.8		5.8
Max Green Setting (Gmax), s	14.0	24.4		10.0		43.4
Max Q Clear Time (g_c+I1), s	10.9	10.3		3.5		14.9
Green Ext Time (p_c), s	0.2	2.4		0.2		8.9

Intersection Summary	
HCM 6th Ctrl Delay	13.4
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	390	10	270	370	600	0	0	1590	200
Future Volume (veh/h)	0	0	0	390	10	270	370	600	0	0	1590	200
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		0.97
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1841	1841	1841	1841	1841	0	0	1841	1841
Adj Flow Rate, veh/h				449	0	75	389	632	0	0	1674	107
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				4	4	4	4	4	0	0	4	4
Cap, veh/h				912	0	406	605	3071	0	0	2392	573
Arrive On Green				0.26	0.00	0.26	0.36	1.00	0.00	0.00	0.38	0.38
Sat Flow, veh/h				3506	0	1560	3401	5191	0	0	6590	1516
Grp Volume(v), veh/h				449	0	75	389	632	0	0	1674	107
Grp Sat Flow(s),veh/h/ln				1753	0	1560	1700	1675	0	0	1583	1516
Q Serve(g_s), s				9.8	0.0	3.4	8.6	0.0	0.0	0.0	20.1	4.3
Cycle Q Clear(g_c), s				9.8	0.0	3.4	8.6	0.0	0.0	0.0	20.1	4.3
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				912	0	406	605	3071	0	0	2392	573
V/C Ratio(X)				0.49	0.00	0.18	0.64	0.21	0.00	0.00	0.70	0.19
Avail Cap(c_a), veh/h				912	0	406	605	3071	0	0	2392	573
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.93	0.93	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				28.3	0.0	25.9	26.6	0.0	0.0	0.0	23.7	18.7
Incr Delay (d2), s/veh				1.9	0.0	1.0	4.8	0.1	0.0	0.0	1.7	0.7
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				4.3	0.0	3.4	3.2	0.0	0.0	0.0	7.1	1.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				30.2	0.0	26.9	31.5	0.1	0.0	0.0	25.4	19.5
LnGrp LOS				C	A	C	C	A	A	A	C	B
Approach Vol, veh/h					524			1021			1781	
Approach Delay, s/veh					29.7			12.1			25.1	
Approach LOS					C			B			C	

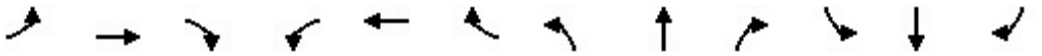
Timer - Assigned Phs	2	4	5	6
Phs Duration (G+Y+Rc), s	60.8	29.2	21.0	39.8
Change Period (Y+Rc), s	5.8	5.8	5.0	5.8
Max Green Setting (Gmax), s	55.0	23.4	16.0	34.0
Max Q Clear Time (g_c+I1), s	2.0	11.8	10.6	22.1
Green Ext Time (p_c), s	4.5	1.5	0.4	8.2

Intersection Summary	
HCM 6th Ctrl Delay	21.8
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

User approved volume balancing among the lanes for turning movement.



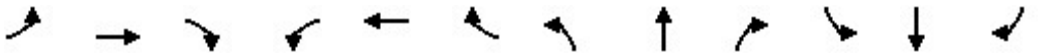
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	140	10	340	0	0	0	0	820	390	400	1580	0
Future Volume (veh/h)	140	10	340	0	0	0	0	820	390	400	1580	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		0.97	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841				0	1841	1841	1841	1841	0
Adj Flow Rate, veh/h	102	0	320				0	863	148	421	1663	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4				0	4	4	4	4	0
Cap, veh/h	432	0	770				0	2265	542	718	3138	0
Arrive On Green	0.25	0.00	0.25				0.00	0.36	0.36	0.07	0.21	0.00
Sat Flow, veh/h	1753	0	3120				0	6590	1515	3401	5191	0
Grp Volume(v), veh/h	102	0	320				0	863	148	421	1663	0
Grp Sat Flow(s),veh/h/ln	1753	0	1560				0	1583	1515	1700	1675	0
Q Serve(g_s), s	4.2	0.0	7.7				0.0	9.1	6.3	10.8	26.5	0.0
Cycle Q Clear(g_c), s	4.2	0.0	7.7				0.0	9.1	6.3	10.8	26.5	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	432	0	770				0	2265	542	718	3138	0
V/C Ratio(X)	0.24	0.00	0.42				0.00	0.38	0.27	0.59	0.53	0.00
Avail Cap(c_a), veh/h	432	0	770				0	2265	542	718	3138	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	0.33	0.33	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.67	0.67	0.00
Uniform Delay (d), s/veh	27.1	0.0	28.5				0.0	21.5	20.6	38.1	24.0	0.0
Incr Delay (d2), s/veh	1.3	0.0	1.7				0.0	0.5	1.2	2.4	0.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	0.0	3.0				0.0	3.2	2.2	4.9	11.7	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	28.4	0.0	30.1				0.0	22.0	21.8	40.4	24.4	0.0
LnGrp LOS	C	A	C				A	C	C	D	C	A
Approach Vol, veh/h		422						1011			2084	
Approach Delay, s/veh		29.7						22.0			27.6	
Approach LOS		C						C			C	

Timer - Assigned Phs	1	2				6		8				
Phs Duration (G+Y+Rc), s	24.0	38.0				62.0		28.0				
Change Period (Y+Rc), s	5.0	5.8				5.8		5.8				
Max Green Setting (Gmax), s	19.0	32.2				56.2		22.2				
Max Q Clear Time (g_c+I1), s	12.8	11.1				28.5		9.7				
Green Ext Time (p_c), s	0.5	6.1				13.7		1.3				

Intersection Summary	
HCM 6th Ctrl Delay	26.2
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.



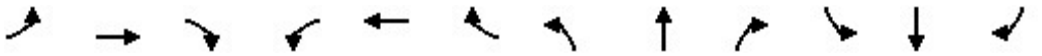
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	60	10	40	20	20	60	130	1100	30	100	1620	60
Future Volume (veh/h)	60	10	40	20	20	60	130	1100	30	100	1620	60
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.98		0.97	0.98		0.97	1.00		0.97	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	63	11	6	21	21	9	137	1158	31	105	1705	61
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	320	198	108	331	216	93	171	2306	62	134	2175	78
Arrive On Green	0.18	0.18	0.18	0.18	0.18	0.18	0.10	0.46	0.46	0.08	0.44	0.44
Sat Flow, veh/h	1337	1104	602	1352	1208	518	1753	5026	135	1753	4973	178
Grp Volume(v), veh/h	63	0	17	21	0	30	137	772	417	105	1148	618
Grp Sat Flow(s),veh/h/ln	1337	0	1707	1352	0	1726	1753	1675	1811	1753	1675	1801
Q Serve(g_s), s	3.0	0.0	0.6	0.9	0.0	1.0	5.5	11.6	11.6	4.2	21.0	21.1
Cycle Q Clear(g_c), s	4.0	0.0	0.6	1.5	0.0	1.0	5.5	11.6	11.6	4.2	21.0	21.1
Prop In Lane	1.00		0.35	1.00		0.30	1.00		0.07	1.00		0.10
Lane Grp Cap(c), veh/h	320	0	306	331	0	309	171	1537	831	134	1465	788
V/C Ratio(X)	0.20	0.00	0.06	0.06	0.00	0.10	0.80	0.50	0.50	0.78	0.78	0.78
Avail Cap(c_a), veh/h	770	0	880	786	0	890	208	1541	833	232	1588	853
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.3	0.0	24.4	25.0	0.0	24.6	31.7	13.7	13.7	32.6	17.3	17.3
Incr Delay (d2), s/veh	0.2	0.0	0.1	0.1	0.0	0.1	13.6	0.3	0.6	3.8	2.6	4.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	0.0	0.2	0.3	0.0	0.4	2.8	3.6	3.9	1.8	7.2	8.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.5	0.0	24.5	25.1	0.0	24.7	45.3	14.0	14.2	36.3	19.8	22.0
LnGrp LOS	C	A	C	C	A	C	D	B	B	D	B	C
Approach Vol, veh/h		80			51			1326			1871	
Approach Delay, s/veh		26.1			24.9			17.3			21.5	
Approach LOS		C			C			B			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	12.0	39.4		20.4	13.5	37.9		20.4				
Change Period (Y+Rc), s	6.5	6.5		7.5	6.5	6.5		7.5				
Max Green Setting (Gmax), s	9.5	33.0		37.0	8.5	34.0		37.0				
Max Q Clear Time (g_c+I1), s	6.2	13.6		6.0	7.5	23.1		3.5				
Green Ext Time (p_c), s	0.0	8.3		0.2	0.0	8.3		0.2				

Intersection Summary			
HCM 6th Ctrl Delay		20.0	
HCM 6th LOS		B	

Notes

User approved pedestrian interval to be less than phase max green.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	100	970	640	110	860	170	420	1190	500	180	1660	260
Future Volume (veh/h)	100	970	640	110	860	170	420	1190	500	180	1660	260
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.97	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	105	1021	0	116	905	142	442	1253	490	189	1747	235
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	144	970		145	972	531	448	2067	756	238	1757	660
Arrive On Green	0.08	0.28	0.00	0.08	0.28	0.28	0.13	0.41	0.41	0.07	0.35	0.35
Sat Flow, veh/h	1753	3497	1560	1753	3497	1519	3401	5025	1526	3401	5025	1523
Grp Volume(v), veh/h	105	1021	0	116	905	142	442	1253	490	189	1747	235
Grp Sat Flow(s),veh/h/ln	1753	1749	1560	1753	1749	1519	1700	1675	1526	1700	1675	1523
Q Serve(g_s), s	8.4	40.0	0.0	9.4	36.3	9.7	18.7	28.2	34.5	7.9	50.0	15.0
Cycle Q Clear(g_c), s	8.4	40.0	0.0	9.4	36.3	9.7	18.7	28.2	34.5	7.9	50.0	15.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	144	970		145	972	531	448	2067	756	238	1757	660
V/C Ratio(X)	0.73	1.05		0.80	0.93	0.27	0.99	0.61	0.65	0.79	0.99	0.36
Avail Cap(c_a), veh/h	147	970		154	985	537	448	2067	756	326	1757	660
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	64.6	52.1	0.0	65.0	50.7	33.8	62.5	33.3	27.2	66.0	46.8	27.5
Incr Delay (d2), s/veh	14.4	43.7	0.0	22.0	15.0	0.4	38.8	0.5	1.9	9.1	20.1	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.3	22.9	0.0	5.0	17.4	3.6	10.4	11.4	12.3	3.7	23.5	5.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	79.0	95.8	0.0	87.0	65.7	34.2	101.2	33.8	29.1	75.1	66.9	27.9
LnGrp LOS	E	F		F	E	C	F	C	C	E	E	C
Approach Vol, veh/h		1126	A		1163			2185			2171	
Approach Delay, s/veh		94.2			64.0			46.4			63.4	
Approach LOS		F			E			D			E	

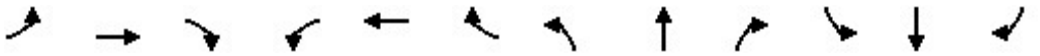
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.3	65.3	16.6	47.0	24.2	56.4	16.5	47.1
Change Period (Y+Rc), s	* 5.2	6.0	* 4.7	7.0	* 5.2	6.0	* 4.7	7.0
Max Green Setting (Gmax), s	* 14	55.6	* 13	40.0	* 19	50.4	* 12	40.6
Max Q Clear Time (g_c+I1), s	9.9	36.5	11.4	42.0	20.7	52.0	10.4	38.3
Green Ext Time (p_c), s	0.2	10.4	0.0	0.0	0.0	0.0	0.0	1.5

Intersection Summary	
HCM 6th Ctrl Delay	63.1
HCM 6th LOS	E

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



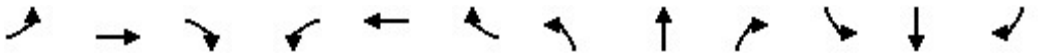
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	160	1220	100	190	820	90	20	460	90	140	500	230
Future Volume (veh/h)	160	1220	100	190	820	90	20	460	90	140	500	230
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	168	1284	39	200	863	35	21	484	21	147	526	202
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	194	1336	586	219	1386	608	44	638	278	166	620	237
Arrive On Green	0.11	0.38	0.38	0.12	0.39	0.39	0.02	0.18	0.18	0.09	0.25	0.25
Sat Flow, veh/h	1767	3526	1546	1767	3526	1546	1767	3526	1537	1767	2478	947
Grp Volume(v), veh/h	168	1284	39	200	863	35	21	484	21	147	373	355
Grp Sat Flow(s),veh/h/ln	1767	1763	1546	1767	1763	1546	1767	1763	1537	1767	1763	1663
Q Serve(g_s), s	11.8	44.8	2.0	14.1	24.8	1.8	1.5	16.4	1.4	10.4	25.4	25.6
Cycle Q Clear(g_c), s	11.8	44.8	2.0	14.1	24.8	1.8	1.5	16.4	1.4	10.4	25.4	25.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.57
Lane Grp Cap(c), veh/h	194	1336	586	219	1386	608	44	638	278	166	441	416
V/C Ratio(X)	0.87	0.96	0.07	0.91	0.62	0.06	0.48	0.76	0.08	0.89	0.85	0.85
Avail Cap(c_a), veh/h	237	1344	589	219	1386	608	84	885	386	166	524	494
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	55.1	38.2	24.9	54.5	30.7	23.7	60.6	48.9	42.8	56.4	44.9	45.0
Incr Delay (d2), s/veh	20.9	16.2	0.0	37.2	0.9	0.0	3.0	2.8	0.1	38.5	10.8	11.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.2	21.1	0.7	8.3	10.1	0.6	0.7	7.3	0.5	6.3	12.2	11.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	76.0	54.4	25.0	91.7	31.6	23.8	63.6	51.8	42.9	94.9	55.7	56.9
LnGrp LOS	E	D	C	F	C	C	E	D	D	F	E	E
Approach Vol, veh/h		1491			1098			526			875	
Approach Delay, s/veh		56.0			42.3			51.9			62.8	
Approach LOS		E			D			D			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.3	29.3	23.1	55.2	9.6	38.0	21.3	57.0
Change Period (Y+Rc), s	6.5	6.5	7.5	7.5	6.5	6.5	7.5	7.5
Max Green Setting (Gmax), s	11.8	31.6	15.6	48.0	6.0	37.4	16.9	46.7
Max Q Clear Time (g_c+I1), s	12.4	18.4	16.1	46.8	3.5	27.6	13.8	26.8
Green Ext Time (p_c), s	0.0	2.8	0.0	0.9	0.0	3.1	0.1	6.1

Intersection Summary	
HCM 6th Ctrl Delay	53.2
HCM 6th LOS	D

Notes

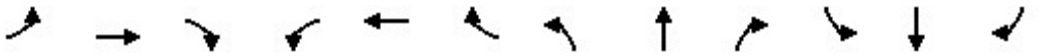
User approved pedestrian interval to be less than phase max green.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	1260	90	170	910	20	60	20	170	40	60	40
Future Volume (veh/h)	30	1260	90	170	910	20	60	20	170	40	60	40
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	0.99		0.98	0.99		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	32	1326	92	179	958	21	63	21	55	42	63	15
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	68	1577	109	215	1960	43	232	66	172	228	212	51
Arrive On Green	0.04	0.47	0.47	0.12	0.56	0.56	0.15	0.15	0.15	0.15	0.15	0.15
Sat Flow, veh/h	1767	3338	231	1767	3525	77	1300	445	1166	1303	1440	343
Grp Volume(v), veh/h	32	698	720	179	479	500	63	0	76	42	0	78
Grp Sat Flow(s),veh/h/ln	1767	1763	1806	1767	1763	1839	1300	0	1611	1303	0	1783
Q Serve(g_s), s	1.4	27.5	27.7	7.8	13.1	13.1	3.6	0.0	3.3	2.4	0.0	3.1
Cycle Q Clear(g_c), s	1.4	27.5	27.7	7.8	13.1	13.1	6.7	0.0	3.3	5.7	0.0	3.1
Prop In Lane	1.00		0.13	1.00		0.04	1.00		0.72	1.00		0.19
Lane Grp Cap(c), veh/h	68	833	853	215	980	1023	232	0	237	228	0	263
V/C Ratio(X)	0.47	0.84	0.84	0.83	0.49	0.49	0.27	0.00	0.32	0.18	0.00	0.30
Avail Cap(c_a), veh/h	134	945	968	223	1034	1078	565	0	650	561	0	720
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	37.4	18.3	18.3	34.0	10.7	10.7	33.1	0.0	30.3	32.8	0.0	30.2
Incr Delay (d2), s/veh	5.1	6.4	6.5	22.1	0.5	0.4	0.6	0.0	0.8	0.4	0.0	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	10.3	10.6	4.4	3.9	4.1	1.2	0.0	1.3	0.8	0.0	1.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	42.4	24.6	24.8	56.1	11.2	11.2	33.8	0.0	31.0	33.2	0.0	30.8
LnGrp LOS	D	C	C	E	B	B	C	A	C	C	A	C
Approach Vol, veh/h		1450			1158			139			120	
Approach Delay, s/veh		25.1			18.1			32.3			31.6	
Approach LOS		C			B			C			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.0	51.6		17.7	16.7	45.0		17.7				
Change Period (Y+Rc), s	7.0	7.5		6.0	7.0	7.5		6.0				
Max Green Setting (Gmax), s	6.0	46.5		32.0	10.0	42.5		32.0				
Max Q Clear Time (g_c+I1), s	3.4	15.1		7.7	9.8	29.7		8.7				
Green Ext Time (p_c), s	0.0	7.4		0.5	0.0	7.8		0.6				

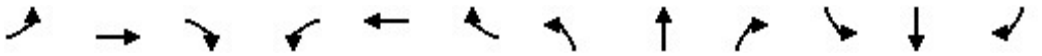
Intersection Summary			
HCM 6th Ctrl Delay		22.9	
HCM 6th LOS		C	



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	170	1170	50	20	870	300	40	240	20	370	650	160
Future Volume (veh/h)	170	1170	50	20	870	300	40	240	20	370	650	160
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.98	1.00		0.97	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	179	1232	52	21	916	164	42	253	17	389	684	151
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	235	1324	56	37	1188	520	67	352	23	414	863	190
Arrive On Green	0.07	0.38	0.38	0.02	0.34	0.34	0.04	0.11	0.11	0.23	0.30	0.30
Sat Flow, veh/h	3428	3445	145	1767	3526	1545	1767	3347	223	1767	2863	632
Grp Volume(v), veh/h	179	630	654	21	916	164	42	132	138	389	421	414
Grp Sat Flow(s),veh/h/ln	1714	1763	1827	1767	1763	1545	1767	1763	1807	1767	1763	1732
Q Serve(g_s), s	6.0	40.3	40.4	1.4	27.4	9.3	2.8	8.5	8.7	25.4	25.8	25.8
Cycle Q Clear(g_c), s	6.0	40.3	40.4	1.4	27.4	9.3	2.8	8.5	8.7	25.4	25.8	25.8
Prop In Lane	1.00		0.08	1.00		1.00	1.00		0.12	1.00		0.36
Lane Grp Cap(c), veh/h	235	678	702	37	1188	520	67	185	190	414	531	522
V/C Ratio(X)	0.76	0.93	0.93	0.56	0.77	0.32	0.62	0.71	0.72	0.94	0.79	0.79
Avail Cap(c_a), veh/h	271	696	721	77	1265	554	92	300	307	428	636	624
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.8	34.7	34.7	57.0	34.9	28.9	55.7	50.9	51.0	44.2	37.7	37.7
Incr Delay (d2), s/veh	9.6	18.9	18.7	9.5	2.9	0.4	6.8	6.0	6.2	28.2	6.1	6.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.8	19.6	20.2	0.7	11.5	3.4	1.3	4.0	4.2	13.9	11.5	11.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	63.4	53.6	53.4	66.5	37.9	29.3	62.6	56.9	57.1	72.4	43.8	44.0
LnGrp LOS	E	D	D	E	D	C	E	E	E	E	D	D
Approach Vol, veh/h		1463			1101			312			1224	
Approach Delay, s/veh		54.7			37.1			57.8			52.9	
Approach LOS		D			D			E			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.6	47.1	12.0	42.9	10.0	52.7	35.0	19.9
Change Period (Y+Rc), s	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5
Max Green Setting (Gmax), s	9.3	42.2	6.1	42.4	5.1	46.4	28.5	20.0
Max Q Clear Time (g_c+I1), s	8.0	29.4	4.8	27.8	3.4	42.4	27.4	10.7
Green Ext Time (p_c), s	0.1	4.8	0.0	5.0	0.0	2.8	0.1	1.0

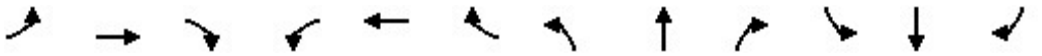
Intersection Summary	
HCM 6th Ctrl Delay	49.7
HCM 6th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	1280	140	100	970	20	190	20	60	10	10	40
Future Volume (veh/h)	20	1280	140	100	970	20	190	20	60	10	10	40
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.97	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	21	1347	141	105	1021	21	200	21	14	11	11	8
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	49	1566	163	133	1886	39	329	314	262	135	127	73
Arrive On Green	0.03	0.49	0.49	0.08	0.53	0.53	0.17	0.17	0.17	0.17	0.17	0.17
Sat Flow, veh/h	1767	3217	335	1767	3530	73	1382	1856	1549	436	751	432
Grp Volume(v), veh/h	21	735	753	105	510	532	200	21	14	30	0	0
Grp Sat Flow(s),veh/h/ln	1767	1763	1789	1767	1763	1840	1382	1856	1549	1620	0	0
Q Serve(g_s), s	0.9	29.3	29.9	4.7	15.2	15.2	9.7	0.8	0.6	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.9	29.3	29.9	4.7	15.2	15.2	10.9	0.8	0.6	1.2	0.0	0.0
Prop In Lane	1.00		0.19	1.00		0.04	1.00		1.00	0.37		0.27
Lane Grp Cap(c), veh/h	49	858	871	133	942	983	329	314	262	335	0	0
V/C Ratio(X)	0.42	0.86	0.86	0.79	0.54	0.54	0.61	0.07	0.05	0.09	0.00	0.00
Avail Cap(c_a), veh/h	132	980	995	155	1002	1046	648	742	620	699	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	38.3	18.1	18.2	36.4	12.2	12.2	32.0	27.9	27.9	28.1	0.0	0.0
Incr Delay (d2), s/veh	5.7	6.9	7.3	20.6	0.5	0.5	1.8	0.1	0.1	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	10.9	11.4	2.6	4.7	4.9	3.8	0.3	0.2	0.5	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	43.9	24.9	25.5	56.9	12.7	12.7	33.8	28.0	28.0	28.2	0.0	0.0
LnGrp LOS	D	C	C	E	B	B	C	C	C	C	A	A
Approach Vol, veh/h		1509			1147			235			30	
Approach Delay, s/veh		25.5			16.8			33.0			28.2	
Approach LOS		C			B			C			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.2	50.3		20.5	13.0	46.5		20.5				
Change Period (Y+Rc), s	7.0	7.5		7.0	7.0	7.5		7.0				
Max Green Setting (Gmax), s	6.0	45.5		32.0	7.0	44.5		32.0				
Max Q Clear Time (g_c+I1), s	2.9	17.2		12.9	6.7	31.9		3.2				
Green Ext Time (p_c), s	0.0	6.3		0.7	0.0	7.1		0.1				

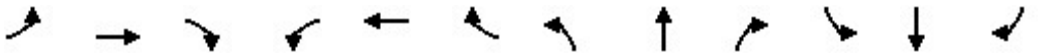
Intersection Summary			
HCM 6th Ctrl Delay		22.7	
HCM 6th LOS		C	



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	1040	280	260	900	10	160	20	140	30	30	20
Future Volume (veh/h)	20	1040	280	260	900	10	160	20	140	30	30	20
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	1.00		0.97	1.00		0.95
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	21	1095	281	274	947	11	168	21	25	32	32	3
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	45	1220	310	301	2092	24	195	99	118	58	89	8
Arrive On Green	0.03	0.44	0.44	0.17	0.59	0.59	0.11	0.13	0.13	0.03	0.05	0.05
Sat Flow, veh/h	1767	2765	703	1767	3568	41	1767	760	904	1767	1662	156
Grp Volume(v), veh/h	21	695	681	274	468	490	168	0	46	32	0	35
Grp Sat Flow(s),veh/h/ln	1767	1763	1706	1767	1763	1847	1767	0	1664	1767	0	1818
Q Serve(g_s), s	1.4	42.9	43.9	18.0	17.6	17.6	11.0	0.0	2.9	2.1	0.0	2.2
Cycle Q Clear(g_c), s	1.4	42.9	43.9	18.0	17.6	17.6	11.0	0.0	2.9	2.1	0.0	2.2
Prop In Lane	1.00		0.41	1.00		0.02	1.00		0.54	1.00		0.09
Lane Grp Cap(c), veh/h	45	777	752	301	1033	1083	195	0	218	58	0	98
V/C Ratio(X)	0.47	0.89	0.91	0.91	0.45	0.45	0.86	0.00	0.21	0.55	0.00	0.36
Avail Cap(c_a), veh/h	90	829	802	329	1068	1118	210	0	550	105	0	493
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	56.8	30.4	30.7	48.1	13.8	13.8	51.6	0.0	45.8	56.2	0.0	53.9
Incr Delay (d2), s/veh	7.5	11.8	13.6	26.7	0.4	0.4	27.5	0.0	0.5	7.8	0.0	2.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	19.0	19.1	9.8	6.2	6.5	6.4	0.0	1.3	1.1	0.0	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	64.2	42.3	44.3	74.8	14.1	14.1	79.1	0.0	46.3	64.0	0.0	56.1
LnGrp LOS	E	D	D	E	B	B	E	A	D	E	A	E
Approach Vol, veh/h		1397			1232			214			67	
Approach Delay, s/veh		43.6			27.6			72.1			59.9	
Approach LOS		D			C			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.0	76.7	19.0	12.3	27.1	59.6	9.9	21.5
Change Period (Y+Rc), s	7.0	7.5	6.0	6.0	7.0	7.5	6.0	6.0
Max Green Setting (Gmax), s	6.0	71.5	14.0	32.0	22.0	55.5	7.0	39.0
Max Q Clear Time (g_c+I1), s	3.4	19.6	13.0	4.2	20.0	45.9	4.1	4.9
Green Ext Time (p_c), s	0.0	7.7	0.0	0.1	0.2	6.2	0.0	0.2

Intersection Summary	
HCM 6th Ctrl Delay	39.3
HCM 6th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	280	850	90	150	880	200	60	350	10	290	720	230
Future Volume (veh/h)	280	850	90	150	880	200	60	350	10	290	720	230
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	295	895	33	158	926	169	63	368	3	305	758	224
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	343	1197	534	158	1006	833	237	474	211	441	686	203
Arrive On Green	0.10	0.34	0.34	0.05	0.29	0.29	0.13	0.13	0.13	0.25	0.25	0.25
Sat Flow, veh/h	3428	3526	1572	3428	3526	1543	1767	3526	1572	1767	2747	812
Grp Volume(v), veh/h	295	895	33	158	926	169	63	368	3	305	512	470
Grp Sat Flow(s),veh/h/ln	1714	1763	1572	1714	1763	1543	1767	1763	1572	1767	1856	1704
Q Serve(g_s), s	11.0	29.3	1.8	6.0	33.1	7.4	4.2	13.1	0.2	20.4	32.5	32.5
Cycle Q Clear(g_c), s	11.0	29.3	1.8	6.0	33.1	7.4	4.2	13.1	0.2	20.4	32.5	32.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.48
Lane Grp Cap(c), veh/h	343	1197	534	158	1006	833	237	474	211	441	463	425
V/C Ratio(X)	0.86	0.75	0.06	1.00	0.92	0.20	0.27	0.78	0.01	0.69	1.11	1.11
Avail Cap(c_a), veh/h	345	1246	556	158	1054	854	414	826	368	441	463	425
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	57.7	38.1	29.0	62.1	45.1	15.8	50.6	54.5	48.9	44.3	48.8	48.8
Incr Delay (d2), s/veh	18.7	2.5	0.1	71.6	12.6	0.1	0.7	3.3	0.0	4.8	73.6	75.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.5	12.3	0.7	4.1	15.5	4.2	1.8	5.9	0.1	9.3	24.0	22.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	76.4	40.6	29.1	133.6	57.6	15.9	51.3	57.8	48.9	49.1	122.4	124.1
LnGrp LOS	E	D	C	F	E	B	D	E	D	D	F	F
Approach Vol, veh/h		1223			1253			434			1287	
Approach Delay, s/veh		48.9			61.6			56.8			105.6	
Approach LOS		D			E			E			F	

Timer - Assigned Phs	2	3	4	6	7	8
Phs Duration (G+Y+Rc), s	25.0	13.5	51.7	40.0	20.5	44.7
Change Period (Y+Rc), s	7.5	7.5	7.5	7.5	7.5	7.5
Max Green Setting (Gmax), s	30.5	6.0	46.0	32.5	13.1	38.9
Max Q Clear Time (g_c+I1), s	15.1	8.0	31.3	34.5	13.0	35.1
Green Ext Time (p_c), s	2.4	0.0	5.6	0.0	0.0	2.0

Intersection Summary	
HCM 6th Ctrl Delay	70.9
HCM 6th LOS	E

Notes

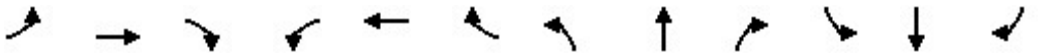
User approved pedestrian interval to be less than phase max green.

User approved volume balancing among the lanes for turning movement.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1050	110	170	1180	40	50
Future Volume (veh/h)	1050	110	170	1180	40	50
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		0.97	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	1105	56	179	1242	42	9
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	1483	643	224	2414	107	95
Arrive On Green	0.42	0.42	0.13	0.68	0.06	0.06
Sat Flow, veh/h	3618	1529	1767	3618	1767	1572
Grp Volume(v), veh/h	1105	56	179	1242	42	9
Grp Sat Flow(s),veh/h/ln	1763	1529	1767	1763	1767	1572
Q Serve(g_s), s	13.5	1.1	5.0	8.8	1.2	0.3
Cycle Q Clear(g_c), s	13.5	1.1	5.0	8.8	1.2	0.3
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1483	643	224	2414	107	95
V/C Ratio(X)	0.74	0.09	0.80	0.51	0.39	0.09
Avail Cap(c_a), veh/h	1796	779	242	2764	1108	986
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	12.5	8.9	21.6	3.9	23.1	22.6
Incr Delay (d2), s/veh	1.5	0.1	16.0	0.2	2.3	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.7	0.3	2.7	0.5	0.5	0.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	14.0	9.0	37.7	4.1	25.4	23.1
LnGrp LOS	B	A	D	A	C	C
Approach Vol, veh/h	1161			1421	51	
Approach Delay, s/veh	13.7			8.3	25.0	
Approach LOS	B			A	C	

Timer - Assigned Phs	2			5	6	8
Phs Duration (G+Y+Rc), s	42.4			13.5	29.0	8.6
Change Period (Y+Rc), s	7.5			7.0	7.5	5.5
Max Green Setting (Gmax), s	40.0			7.0	26.0	32.0
Max Q Clear Time (g_c+I1), s	10.8			7.0	15.5	3.2
Green Ext Time (p_c), s	11.2			0.0	5.7	0.1

Intersection Summary	
HCM 6th Ctrl Delay	11.0
HCM 6th LOS	B



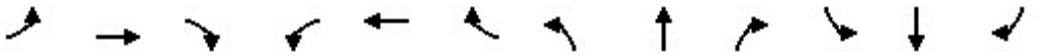
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	70	990	30	80	1250	20	20	10	80	20	10	80
Future Volume (veh/h)	70	990	30	80	1250	20	20	10	80	20	10	80
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	0.99		0.97	0.99		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	74	1042	31	84	1316	21	21	11	10	21	11	10
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	150	1650	49	160	1697	27	162	78	46	162	78	46
Arrive On Green	0.08	0.47	0.47	0.09	0.48	0.48	0.12	0.12	0.12	0.12	0.12	0.12
Sat Flow, veh/h	1767	3492	104	1767	3550	57	556	645	375	556	645	375
Grp Volume(v), veh/h	74	526	547	84	653	684	42	0	0	42	0	0
Grp Sat Flow(s),veh/h/ln	1767	1763	1833	1767	1763	1844	1576	0	0	1576	0	0
Q Serve(g_s), s	2.3	12.8	12.8	2.6	17.5	17.5	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	2.3	12.8	12.8	2.6	17.5	17.5	1.2	0.0	0.0	1.2	0.0	0.0
Prop In Lane	1.00		0.06	1.00		0.03	0.50		0.24	0.50		0.24
Lane Grp Cap(c), veh/h	150	833	866	160	843	881	286	0	0	286	0	0
V/C Ratio(X)	0.49	0.63	0.63	0.53	0.78	0.78	0.15	0.00	0.00	0.15	0.00	0.00
Avail Cap(c_a), veh/h	217	1144	1190	217	1144	1197	844	0	0	844	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	24.9	11.3	11.3	24.8	12.3	12.3	22.5	0.0	0.0	22.5	0.0	0.0
Incr Delay (d2), s/veh	2.5	0.8	0.8	2.7	2.4	2.3	0.2	0.0	0.0	0.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	3.4	3.6	1.1	5.2	5.4	0.5	0.0	0.0	0.5	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	27.4	12.1	12.1	27.4	14.7	14.6	22.7	0.0	0.0	22.7	0.0	0.0
LnGrp LOS	C	B	B	C	B	B	C	A	A	C	A	A
Approach Vol, veh/h		1147			1421			42			42	
Approach Delay, s/veh		13.1			15.4			22.7			22.7	
Approach LOS		B			B			C			C	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		12.9	10.1	33.9		12.9	9.8	34.3				
Change Period (Y+Rc), s		6.0	5.0	7.0		6.0	5.0	7.0				
Max Green Setting (Gmax), s		28.0	7.0	37.0		28.0	7.0	37.0				
Max Q Clear Time (g_c+I1), s		3.2	4.6	14.8		3.2	4.3	19.5				
Green Ext Time (p_c), s		0.1	0.0	6.2		0.1	0.0	7.7				

Intersection Summary		
HCM 6th Ctrl Delay		14.6
HCM 6th LOS		B

Notes

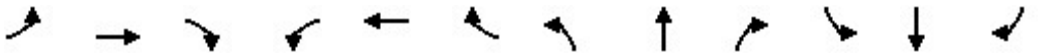
User approved pedestrian interval to be less than phase max green.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	240	720	300	180	880	150	230	860	30	170	1220	240
Future Volume (veh/h)	240	720	300	180	880	150	230	860	30	170	1220	240
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.97	1.00		1.00	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	253	758	312	189	926	42	242	905	0	179	1284	142
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	240	1052	459	220	986	45	224	1541	0	212	1373	152
Arrive On Green	0.14	0.30	0.30	0.13	0.29	0.29	0.13	0.31	0.00	0.12	0.30	0.30
Sat Flow, veh/h	1753	3497	1524	1753	3402	154	1753	5191	0	1753	4578	506
Grp Volume(v), veh/h	253	758	312	189	476	492	242	905	0	179	940	486
Grp Sat Flow(s),veh/h/ln	1753	1749	1524	1753	1749	1808	1753	1675	0	1753	1675	1734
Q Serve(g_s), s	15.0	21.2	19.7	11.6	29.1	29.1	14.0	16.7	0.0	11.0	29.9	29.9
Cycle Q Clear(g_c), s	15.0	21.2	19.7	11.6	29.1	29.1	14.0	16.7	0.0	11.0	29.9	29.9
Prop In Lane	1.00		1.00	1.00		0.09	1.00		0.00	1.00		0.29
Lane Grp Cap(c), veh/h	240	1052	459	220	507	524	224	1541	0	212	1005	520
V/C Ratio(X)	1.06	0.72	0.68	0.86	0.94	0.94	1.08	0.59	0.00	0.84	0.94	0.94
Avail Cap(c_a), veh/h	240	1052	459	256	510	528	224	1541	0	272	1008	522
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.3	34.2	33.7	47.0	38.0	38.0	47.8	32.2	0.0	47.2	37.4	37.4
Incr Delay (d2), s/veh	73.4	3.0	5.3	25.4	26.0	25.5	83.5	0.9	0.0	22.2	15.6	25.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.1	8.9	7.5	6.4	15.3	15.8	11.0	6.5	0.0	5.9	13.6	15.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	120.7	37.2	39.0	72.4	64.0	63.5	131.3	33.1	0.0	69.4	53.0	62.3
LnGrp LOS	F	D	D	E	E	E	F	C	A	E	D	E
Approach Vol, veh/h		1323			1157			1147			1605	
Approach Delay, s/veh		53.6			65.2			53.8			57.6	
Approach LOS		D			E			D			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.3	37.6	17.8	37.0	18.0	36.9	19.0	35.8
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	17.0	30.0	16.0	31.0	14.0	33.0	15.0	32.0
Max Q Clear Time (g_c+I1), s	13.0	18.7	13.6	23.2	16.0	31.9	17.0	31.1
Green Ext Time (p_c), s	0.3	6.5	0.2	3.7	0.0	1.0	0.0	0.7

Intersection Summary	
HCM 6th Ctrl Delay	57.4
HCM 6th LOS	E



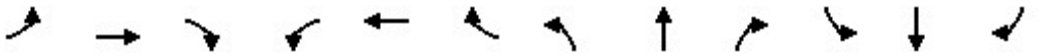
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	340	580	40	200	640	140	20	560	210	260	720	550
Future Volume (veh/h)	340	580	40	200	640	140	20	560	210	260	720	550
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	358	611	28	211	674	128	21	589	88	274	758	500
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	347	827	38	270	772	337	53	818	122	276	796	520
Arrive On Green	0.10	0.24	0.24	0.08	0.22	0.22	0.03	0.27	0.27	0.16	0.39	0.39
Sat Flow, veh/h	3428	3429	157	3428	3526	1540	1767	3068	457	1767	2029	1324
Grp Volume(v), veh/h	358	314	325	211	674	128	21	338	339	274	657	601
Grp Sat Flow(s),veh/h/ln	1714	1763	1824	1714	1763	1540	1767	1763	1763	1767	1763	1590
Q Serve(g_s), s	11.0	17.9	17.9	6.6	20.1	7.7	1.3	18.9	19.0	16.8	39.3	40.1
Cycle Q Clear(g_c), s	11.0	17.9	17.9	6.6	20.1	7.7	1.3	18.9	19.0	16.8	39.3	40.1
Prop In Lane	1.00		0.09	1.00		1.00	1.00		0.26	1.00		0.83
Lane Grp Cap(c), veh/h	347	425	440	270	772	337	53	470	470	276	692	624
V/C Ratio(X)	1.03	0.74	0.74	0.78	0.87	0.38	0.39	0.72	0.72	0.99	0.95	0.96
Avail Cap(c_a), veh/h	347	454	469	284	842	368	114	535	535	276	697	628
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	48.9	38.1	38.1	49.2	41.0	36.2	51.8	36.2	36.3	45.8	32.0	32.3
Incr Delay (d2), s/veh	57.1	5.9	5.7	11.3	9.5	0.7	3.5	3.6	3.7	52.0	22.5	26.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.3	8.0	8.3	3.1	9.3	2.8	0.6	8.3	8.3	11.1	19.8	18.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	106.1	44.0	43.9	60.5	50.5	36.9	55.2	39.9	40.0	97.8	54.5	58.8
LnGrp LOS	F	D	D	E	D	D	E	D	D	F	D	E
Approach Vol, veh/h		997			1013			698			1532	
Approach Delay, s/veh		66.2			50.9			40.4			63.9	
Approach LOS		E			D			D			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	24.0	36.0	15.6	33.2	10.3	49.7	18.0	30.8
Change Period (Y+Rc), s	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Max Green Setting (Gmax), s	17.0	33.0	9.0	28.0	7.0	43.0	11.0	26.0
Max Q Clear Time (g_c+I1), s	18.8	21.0	8.6	19.9	3.3	42.1	13.0	22.1
Green Ext Time (p_c), s	0.0	2.5	0.0	2.1	0.0	0.6	0.0	1.4

Intersection Summary	
HCM 6th Ctrl Delay	57.5
HCM 6th LOS	E

Notes

User approved pedestrian interval to be less than phase max green.



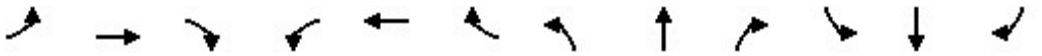
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	220	730	140	60	540	130	220	1650	260	140	1970	110
Future Volume (veh/h)	220	730	140	60	540	130	220	1650	260	140	1970	110
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	232	768	142	63	568	129	232	1737	169	147	2074	82
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	227	948	175	81	674	153	308	2001	484	170	2042	501
Arrive On Green	0.13	0.32	0.32	0.05	0.24	0.24	0.09	0.32	0.32	0.10	0.32	0.32
Sat Flow, veh/h	1753	2937	543	1753	2821	638	3401	6332	1532	1753	6332	1553
Grp Volume(v), veh/h	232	457	453	63	351	346	232	1737	169	147	2074	82
Grp Sat Flow(s),veh/h/ln	1753	1749	1731	1753	1749	1710	1700	1583	1532	1753	1583	1553
Q Serve(g_s), s	14.3	26.5	26.5	3.9	21.1	21.3	7.3	28.5	9.4	9.1	35.6	4.2
Cycle Q Clear(g_c), s	14.3	26.5	26.5	3.9	21.1	21.3	7.3	28.5	9.4	9.1	35.6	4.2
Prop In Lane	1.00		0.31	1.00		0.37	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	227	564	559	81	418	409	308	2001	484	170	2042	501
V/C Ratio(X)	1.02	0.81	0.81	0.78	0.84	0.85	0.75	0.87	0.35	0.87	1.02	0.16
Avail Cap(c_a), veh/h	227	605	599	113	491	480	308	2002	484	170	2042	501
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	48.0	34.3	34.3	52.1	40.0	40.0	49.0	35.6	29.0	49.1	37.4	26.7
Incr Delay (d2), s/veh	65.4	7.7	7.8	13.3	10.9	11.5	9.0	4.4	0.4	33.1	23.9	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.2	12.0	11.9	2.0	9.9	9.8	3.4	10.9	3.3	5.4	16.2	1.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	113.5	42.0	42.1	65.4	50.9	51.6	58.0	39.9	29.4	82.2	61.3	26.9
LnGrp LOS	F	D	D	E	D	D	E	D	C	F	F	C
Approach Vol, veh/h		1142			760			2138			2303	
Approach Delay, s/veh		56.5			52.4			41.1			61.4	
Approach LOS		E			D			D			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.4	41.4	10.8	42.8	14.7	42.1	20.0	33.6
Change Period (Y+Rc), s	* 4.7	6.5	* 5.7	7.2	* 4.7	6.5	* 5.7	7.2
Max Green Setting (Gmax), s	* 11	34.9	* 7.1	38.2	* 10	35.6	* 14	31.0
Max Q Clear Time (g_c+I1), s	11.1	30.5	5.9	28.5	9.3	37.6	16.3	23.3
Green Ext Time (p_c), s	0.0	3.6	0.0	3.8	0.0	0.0	0.0	2.3

Intersection Summary	
HCM 6th Ctrl Delay	52.6
HCM 6th LOS	D

Notes

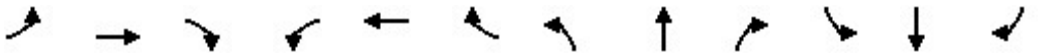
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	60	780	70	180	540	70	80	220	140	100	420	140
Future Volume (veh/h)	60	780	70	180	540	70	80	220	140	100	420	140
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	63	821	69	189	568	66	84	232	42	105	442	113
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	95	1015	85	122	1029	119	107	652	116	122	630	160
Arrive On Green	0.05	0.31	0.31	0.07	0.32	0.32	0.06	0.22	0.22	0.07	0.23	0.23
Sat Flow, veh/h	1767	3286	276	1767	3176	368	1767	2980	530	1767	2772	702
Grp Volume(v), veh/h	63	440	450	189	315	319	84	136	138	105	280	275
Grp Sat Flow(s),veh/h/ln	1767	1763	1800	1767	1763	1781	1767	1763	1747	1767	1763	1712
Q Serve(g_s), s	3.0	20.0	20.0	6.0	12.7	12.8	4.1	5.6	5.8	5.1	12.6	12.9
Cycle Q Clear(g_c), s	3.0	20.0	20.0	6.0	12.7	12.8	4.1	5.6	5.8	5.1	12.6	12.9
Prop In Lane	1.00		0.15	1.00		0.21	1.00		0.30	1.00		0.41
Lane Grp Cap(c), veh/h	95	544	556	122	571	577	107	386	382	122	401	389
V/C Ratio(X)	0.66	0.81	0.81	1.55	0.55	0.55	0.78	0.35	0.36	0.86	0.70	0.71
Avail Cap(c_a), veh/h	122	650	663	122	650	657	122	650	644	122	650	631
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.3	27.6	27.6	40.4	24.2	24.2	40.2	28.7	28.8	40.0	30.8	30.9
Incr Delay (d2), s/veh	8.4	6.8	6.7	282.7	1.0	1.0	24.7	0.7	0.7	42.2	2.6	2.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	8.6	8.7	12.0	4.9	5.0	2.4	2.3	2.3	3.5	5.2	5.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	48.7	34.4	34.3	323.1	25.2	25.2	64.9	29.3	29.5	82.2	33.4	33.7
LnGrp LOS	D	C	C	F	C	C	E	C	C	F	C	C
Approach Vol, veh/h		953			823			358			660	
Approach Delay, s/veh		35.3			93.6			37.7			41.3	
Approach LOS		D			F			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.7	35.6	12.3	27.2	13.0	34.3	13.0	26.5
Change Period (Y+Rc), s	7.0	7.5	7.0	7.5	7.0	7.5	7.0	7.5
Max Green Setting (Gmax), s	6.0	32.0	6.0	32.0	6.0	32.0	6.0	32.0
Max Q Clear Time (g_c+I1), s	5.0	14.8	6.1	14.9	8.0	22.0	7.1	7.8
Green Ext Time (p_c), s	0.0	3.8	0.0	3.3	0.0	4.1	0.0	1.6

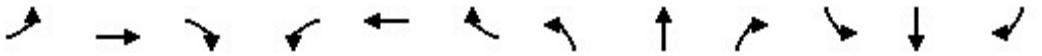
Intersection Summary	
HCM 6th Ctrl Delay	54.2
HCM 6th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	60	840	120	90	690	20	20	190	120	40	120	80
Future Volume (veh/h)	60	840	120	90	690	20	20	190	120	40	120	80
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.97	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	63	884	118	95	726	20	21	200	23	42	126	17
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	104	1114	149	123	1289	35	50	432	49	83	481	64
Arrive On Green	0.06	0.36	0.36	0.07	0.37	0.37	0.03	0.14	0.14	0.05	0.15	0.15
Sat Flow, veh/h	1767	3118	416	1767	3502	96	1767	3181	361	1767	3119	413
Grp Volume(v), veh/h	63	500	502	95	365	381	21	110	113	42	70	73
Grp Sat Flow(s),veh/h/ln	1767	1763	1772	1767	1763	1836	1767	1763	1779	1767	1763	1769
Q Serve(g_s), s	2.6	18.9	18.9	3.9	12.3	12.3	0.9	4.3	4.4	1.7	2.6	2.7
Cycle Q Clear(g_c), s	2.6	18.9	18.9	3.9	12.3	12.3	0.9	4.3	4.4	1.7	2.6	2.7
Prop In Lane	1.00		0.23	1.00		0.05	1.00		0.20	1.00		0.23
Lane Grp Cap(c), veh/h	104	630	633	123	649	676	50	239	242	83	272	273
V/C Ratio(X)	0.61	0.79	0.79	0.77	0.56	0.56	0.42	0.46	0.47	0.51	0.26	0.27
Avail Cap(c_a), veh/h	143	760	764	143	760	791	143	760	767	143	760	763
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.1	21.4	21.4	34.0	18.7	18.7	35.5	29.6	29.6	34.5	27.7	27.7
Incr Delay (d2), s/veh	5.6	5.1	5.1	20.0	0.9	0.9	5.5	1.6	1.7	4.7	0.6	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	7.5	7.5	2.2	4.4	4.6	0.4	1.7	1.8	0.8	1.0	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	39.7	26.5	26.5	54.0	19.6	19.6	40.9	31.2	31.3	39.3	28.3	28.3
LnGrp LOS	D	C	C	D	B	B	D	C	C	D	C	C
Approach Vol, veh/h		1065			841			244			185	
Approach Delay, s/veh		27.3			23.5			32.1			30.8	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.4	34.8	9.1	19.0	12.2	34.0	10.5	17.6
Change Period (Y+Rc), s	7.0	7.5	7.0	7.5	7.0	7.5	7.0	7.5
Max Green Setting (Gmax), s	6.0	32.0	6.0	32.0	6.0	32.0	6.0	32.0
Max Q Clear Time (g_c+I1), s	4.6	14.3	2.9	4.7	5.9	20.9	3.7	6.4
Green Ext Time (p_c), s	0.0	4.6	0.0	0.8	0.0	5.0	0.0	1.3

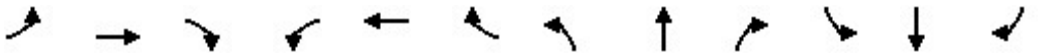
Intersection Summary	
HCM 6th Ctrl Delay	26.7
HCM 6th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	130	770	60	60	540	100	20	190	20	120	620	220
Future Volume (veh/h)	130	770	60	60	540	100	20	190	20	120	620	220
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.99	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	137	811	59	63	568	91	21	200	9	126	653	175
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	148	1089	79	98	909	145	49	986	44	127	968	255
Arrive On Green	0.08	0.33	0.33	0.06	0.30	0.30	0.03	0.20	0.20	0.07	0.24	0.24
Sat Flow, veh/h	1767	3328	242	1767	3042	486	1767	4968	221	1767	3991	1052
Grp Volume(v), veh/h	137	430	440	63	328	331	21	135	74	126	551	277
Grp Sat Flow(s),veh/h/ln	1767	1763	1807	1767	1763	1765	1767	1689	1812	1767	1689	1666
Q Serve(g_s), s	6.4	18.1	18.1	2.9	13.4	13.5	1.0	2.8	2.8	6.0	12.3	12.6
Cycle Q Clear(g_c), s	6.4	18.1	18.1	2.9	13.4	13.5	1.0	2.8	2.8	6.0	12.3	12.6
Prop In Lane	1.00		0.13	1.00		0.28	1.00		0.12	1.00		0.63
Lane Grp Cap(c), veh/h	148	577	592	98	527	527	49	670	360	127	819	404
V/C Ratio(X)	0.93	0.74	0.74	0.65	0.62	0.63	0.43	0.20	0.21	0.99	0.67	0.69
Avail Cap(c_a), veh/h	148	844	865	127	823	824	127	1374	737	127	1374	678
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.0	25.0	25.0	38.7	25.2	25.3	40.0	28.0	28.0	38.7	28.6	28.7
Incr Delay (d2), s/veh	52.1	2.4	2.4	7.0	1.5	1.5	5.8	0.2	0.3	77.5	1.2	2.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.7	7.1	7.3	1.4	5.3	5.3	0.5	1.1	1.2	5.1	4.7	4.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	90.1	27.4	27.4	45.6	26.7	26.8	45.8	28.1	28.3	116.3	29.8	31.2
LnGrp LOS	F	C	C	D	C	C	D	C	C	F	C	C
Approach Vol, veh/h		1007			722			230			954	
Approach Delay, s/veh		35.9			28.4			29.8			41.6	
Approach LOS		D			C			C			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.0	24.1	11.6	34.9	9.3	27.8	14.0	32.5
Change Period (Y+Rc), s	7.0	7.5	7.0	7.5	7.0	7.5	7.0	7.5
Max Green Setting (Gmax), s	6.0	34.0	6.0	40.0	6.0	34.0	7.0	39.0
Max Q Clear Time (g_c+I1), s	8.0	4.8	4.9	20.1	3.0	14.6	8.4	15.5
Green Ext Time (p_c), s	0.0	1.3	0.0	5.8	0.0	5.6	0.0	4.4

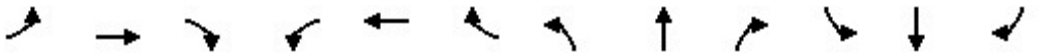
Intersection Summary	
HCM 6th Ctrl Delay	35.4
HCM 6th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	850	60	100	700	60	40	50	60	60	60	40
Future Volume (veh/h)	40	850	60	100	700	60	40	50	60	60	60	40
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	42	895	30	105	737	51	42	53	47	63	63	37
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	85	1217	41	135	1262	87	85	229	177	109	297	160
Arrive On Green	0.05	0.35	0.35	0.08	0.38	0.38	0.05	0.12	0.12	0.06	0.14	0.14
Sat Flow, veh/h	1767	3477	117	1767	3341	231	1767	1865	1445	1767	2193	1176
Grp Volume(v), veh/h	42	454	471	105	389	399	42	50	50	63	49	51
Grp Sat Flow(s),veh/h/ln	1767	1763	1830	1767	1763	1809	1767	1763	1547	1767	1763	1607
Q Serve(g_s), s	1.6	15.3	15.3	4.0	12.0	12.0	1.6	1.7	2.0	2.4	1.7	1.9
Cycle Q Clear(g_c), s	1.6	15.3	15.3	4.0	12.0	12.0	1.6	1.7	2.0	2.4	1.7	1.9
Prop In Lane	1.00		0.06	1.00		0.13	1.00		0.93	1.00		0.73
Lane Grp Cap(c), veh/h	85	617	641	135	666	684	85	216	190	109	239	218
V/C Ratio(X)	0.49	0.74	0.74	0.78	0.58	0.58	0.49	0.23	0.27	0.58	0.21	0.23
Avail Cap(c_a), veh/h	156	869	902	182	895	918	156	830	728	156	830	756
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.5	19.3	19.3	30.8	16.9	16.9	31.5	26.9	27.0	31.0	26.1	26.2
Incr Delay (d2), s/veh	4.3	2.3	2.3	14.0	1.0	1.0	4.3	0.5	0.7	4.8	0.4	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	5.6	5.8	2.1	4.1	4.3	0.7	0.7	0.7	1.1	0.7	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	35.9	21.7	21.6	44.9	17.9	17.8	35.9	27.5	27.8	35.9	26.6	26.8
LnGrp LOS	D	C	C	D	B	B	D	C	C	D	C	C
Approach Vol, veh/h		967			893			142			163	
Approach Delay, s/veh		22.2			21.0			30.1			30.2	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.3	33.2	9.3	15.2	12.2	31.3	10.2	14.3
Change Period (Y+Rc), s	7.0	7.5	6.0	6.0	7.0	7.5	6.0	6.0
Max Green Setting (Gmax), s	6.0	34.5	6.0	32.0	7.0	33.5	6.0	32.0
Max Q Clear Time (g_c+I1), s	3.6	14.0	3.6	3.9	6.0	17.3	4.4	4.0
Green Ext Time (p_c), s	0.0	5.2	0.0	0.5	0.0	5.7	0.0	0.5

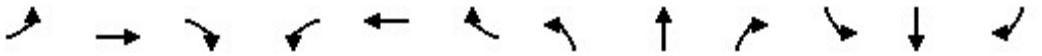
Intersection Summary	
HCM 6th Ctrl Delay	22.9
HCM 6th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	160	560	220	60	540	100	180	870	140	80	1530	100
Future Volume (veh/h)	160	560	220	60	540	100	180	870	140	80	1530	100
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.99	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	168	589	126	63	568	67	189	916	19	84	1611	40
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	193	755	161	80	629	74	206	2042	42	105	1744	43
Arrive On Green	0.11	0.26	0.26	0.05	0.20	0.20	0.12	0.40	0.40	0.06	0.35	0.35
Sat Flow, veh/h	1753	2856	609	1753	3146	370	1753	5065	105	1753	5041	125
Grp Volume(v), veh/h	168	360	355	63	315	320	189	606	329	84	1071	580
Grp Sat Flow(s),veh/h/ln	1753	1749	1717	1753	1749	1768	1753	1675	1820	1753	1675	1816
Q Serve(g_s), s	11.7	23.6	23.7	4.4	21.7	21.8	13.2	16.3	16.3	5.8	38.0	38.0
Cycle Q Clear(g_c), s	11.7	23.6	23.7	4.4	21.7	21.8	13.2	16.3	16.3	5.8	38.0	38.0
Prop In Lane	1.00		0.35	1.00		0.21	1.00		0.06	1.00		0.07
Lane Grp Cap(c), veh/h	193	462	454	80	350	354	206	1351	734	105	1159	628
V/C Ratio(X)	0.87	0.78	0.78	0.78	0.90	0.90	0.92	0.45	0.45	0.80	0.92	0.92
Avail Cap(c_a), veh/h	193	467	459	89	364	368	206	1351	734	180	1171	635
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	54.1	42.1	42.2	58.4	48.2	48.3	54.0	26.9	26.9	57.3	38.8	38.8
Incr Delay (d2), s/veh	31.2	8.6	9.0	28.8	24.5	25.1	40.1	0.3	0.6	5.1	12.2	19.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.7	11.0	10.9	2.6	11.6	11.9	7.9	6.2	6.8	2.7	16.7	19.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	85.3	50.7	51.2	87.1	72.8	73.4	94.1	27.2	27.5	62.4	51.0	58.3
LnGrp LOS	F	D	D	F	E	E	F	C	C	E	D	E
Approach Vol, veh/h		883			698			1124			1735	
Approach Delay, s/veh		57.5			74.3			38.5			54.0	
Approach LOS		E			E			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.9	57.3	12.2	39.2	22.0	50.3	20.1	31.2
Change Period (Y+Rc), s	7.5	7.5	6.5	6.5	7.5	7.5	6.5	6.5
Max Green Setting (Gmax), s	12.7	45.0	6.3	33.0	14.5	43.2	13.6	25.7
Max Q Clear Time (g_c+I1), s	7.8	18.3	6.4	25.7	15.2	40.0	13.7	23.8
Green Ext Time (p_c), s	0.0	8.5	0.0	3.2	0.0	2.8	0.0	0.9

Intersection Summary	
HCM 6th Ctrl Delay	54.0
HCM 6th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	140	1320	180	160	860	430	180	1370	170	550	1320	90
Future Volume (veh/h)	140	1320	180	160	860	430	180	1370	170	550	1320	90
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	147	1389	83	168	905	415	189	1442	51	579	1389	30
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	288	1636	499	289	1638	761	290	1422	343	569	1943	470
Arrive On Green	0.08	0.33	0.33	0.09	0.33	0.33	0.09	0.22	0.22	0.17	0.31	0.31
Sat Flow, veh/h	3401	5025	1532	3401	5025	1532	3401	6332	1528	3401	6332	1531
Grp Volume(v), veh/h	147	1389	83	168	905	415	189	1442	51	579	1389	30
Grp Sat Flow(s),veh/h/ln	1700	1675	1532	1700	1675	1532	1700	1583	1528	1700	1583	1531
Q Serve(g_s), s	4.8	30.2	4.5	5.6	17.3	22.0	6.3	26.3	3.1	19.6	22.8	1.6
Cycle Q Clear(g_c), s	4.8	30.2	4.5	5.6	17.3	22.0	6.3	26.3	3.1	19.6	22.8	1.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	288	1636	499	289	1638	761	290	1422	343	569	1943	470
V/C Ratio(X)	0.51	0.85	0.17	0.58	0.55	0.55	0.65	1.01	0.15	1.02	0.72	0.06
Avail Cap(c_a), veh/h	290	1760	536	290	1760	798	290	1422	343	569	1943	470
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	51.3	36.8	28.1	51.6	32.4	20.6	51.9	45.4	36.4	48.7	36.0	28.7
Incr Delay (d2), s/veh	0.6	3.9	0.2	1.9	0.3	0.7	4.1	27.3	0.2	42.1	1.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	12.3	1.6	2.4	6.8	7.5	2.7	12.4	1.2	11.2	8.4	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	51.9	40.7	28.3	53.5	32.8	21.3	55.9	72.7	36.6	90.8	37.3	28.8
LnGrp LOS	D	D	C	D	C	C	E	F	D	F	D	C
Approach Vol, veh/h		1619			1488			1682			1998	
Approach Delay, s/veh		41.1			31.9			69.8			52.7	
Approach LOS		D			C			E			D	

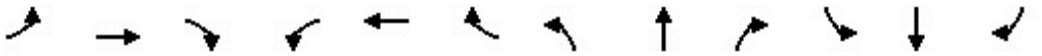
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	24.3	32.8	14.7	45.3	14.7	42.4	14.6	45.4
Change Period (Y+Rc), s	* 4.7	6.5	* 4.7	7.2	* 4.7	6.5	* 4.7	7.2
Max Green Setting (Gmax), s	* 20	26.3	* 10	41.0	* 10	35.9	* 10	41.0
Max Q Clear Time (g_c+I1), s	21.6	28.3	7.6	32.2	8.3	24.8	6.8	19.3
Green Ext Time (p_c), s	0.0	0.0	0.1	5.6	0.1	6.3	0.1	3.9

Intersection Summary	
HCM 6th Ctrl Delay	49.6
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

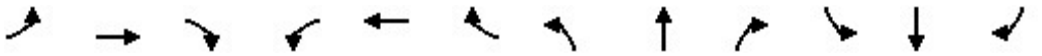
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	140	1820	60	100	1400	90	60	200	140	70	240	200
Future Volume (veh/h)	140	1820	60	100	1400	90	60	200	140	70	240	200
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	147	1916	23	105	1474	34	63	211	31	74	253	77
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	156	2365	573	117	2224	538	93	554	80	99	488	145
Arrive On Green	0.09	0.37	0.37	0.07	0.35	0.35	0.05	0.18	0.18	0.06	0.18	0.18
Sat Flow, veh/h	1753	6332	1533	1753	6332	1533	1753	3056	442	1753	2643	784
Grp Volume(v), veh/h	147	1916	23	105	1474	34	63	119	123	74	165	165
Grp Sat Flow(s),veh/h/ln	1753	1583	1533	1753	1583	1533	1753	1749	1749	1753	1749	1678
Q Serve(g_s), s	7.5	24.4	0.9	5.3	17.7	1.3	3.2	5.4	5.6	3.7	7.6	8.0
Cycle Q Clear(g_c), s	7.5	24.4	0.9	5.3	17.7	1.3	3.2	5.4	5.6	3.7	7.6	8.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.25	1.00		0.47
Lane Grp Cap(c), veh/h	156	2365	573	117	2224	538	93	317	317	99	323	310
V/C Ratio(X)	0.94	0.81	0.04	0.90	0.66	0.06	0.68	0.38	0.39	0.75	0.51	0.53
Avail Cap(c_a), veh/h	156	2464	597	117	2323	562	117	953	953	117	953	914
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.7	25.3	17.9	41.7	24.7	19.4	41.8	32.4	32.4	41.8	33.0	33.2
Incr Delay (d2), s/veh	55.1	2.1	0.0	52.8	0.7	0.1	10.6	0.9	0.9	19.9	1.5	1.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.4	8.5	0.3	3.9	6.1	0.4	1.6	2.2	2.3	2.1	3.2	3.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	95.9	27.4	18.0	94.5	25.4	19.4	52.5	33.2	33.4	61.7	34.5	34.9
LnGrp LOS	F	C	B	F	C	B	D	C	C	E	C	C
Approach Vol, veh/h		2086			1613			305			404	
Approach Delay, s/veh		32.2			29.8			37.3			39.6	
Approach LOS		C			C			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.0	39.1	11.8	24.1	13.0	41.1	12.1	23.8
Change Period (Y+Rc), s	7.0	7.5	7.0	7.5	7.0	7.5	7.0	7.5
Max Green Setting (Gmax), s	8.0	33.0	6.0	49.0	6.0	35.0	6.0	49.0
Max Q Clear Time (g_c+I1), s	9.5	19.7	5.2	10.0	7.3	26.4	5.7	7.6
Green Ext Time (p_c), s	0.0	8.6	0.0	2.2	0.0	7.1	0.0	1.6

Intersection Summary	
HCM 6th Ctrl Delay	32.3
HCM 6th LOS	C



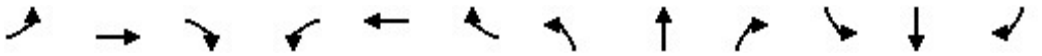
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	450	1380	310	310	1280	140	180	720	380	180	930	380
Future Volume (veh/h)	450	1380	310	310	1280	140	180	720	380	180	930	380
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	474	1453	0	326	1347	127	189	758	0	189	979	246
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	483	2016		408	1755	165	264	1337		187	1482	452
Arrive On Green	0.14	0.32	0.00	0.12	0.30	0.30	0.08	0.27	0.00	0.11	0.29	0.29
Sat Flow, veh/h	3401	6332	1560	3401	5921	557	3401	5025	1560	1753	5025	1531
Grp Volume(v), veh/h	474	1453	0	326	1080	394	189	758	0	189	979	246
Grp Sat Flow(s),veh/h/ln	1700	1583	1560	1700	1583	1728	1700	1675	1560	1753	1675	1531
Q Serve(g_s), s	11.8	17.2	0.0	7.9	17.5	17.6	4.6	11.0	0.0	9.0	14.4	11.4
Cycle Q Clear(g_c), s	11.8	17.2	0.0	7.9	17.5	17.6	4.6	11.0	0.0	9.0	14.4	11.4
Prop In Lane	1.00		1.00	1.00		0.32	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	483	2016		408	1408	512	264	1337		187	1482	452
V/C Ratio(X)	0.98	0.72		0.80	0.77	0.77	0.72	0.57		1.01	0.66	0.54
Avail Cap(c_a), veh/h	483	2022		442	1460	531	282	1604		187	1723	525
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.2	25.5	0.0	36.2	27.1	27.1	38.1	26.8	0.0	37.8	26.1	25.0
Incr Delay (d2), s/veh	36.4	1.6	0.0	11.2	2.9	7.9	10.3	0.8	0.0	69.3	1.3	2.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.9	6.0	0.0	3.7	6.3	7.6	2.1	4.0	0.0	7.1	5.3	4.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	72.6	27.1	0.0	47.4	30.0	35.0	48.4	27.6	0.0	107.1	27.4	27.2
LnGrp LOS	E	C		D	C	D	D	C		F	C	C
Approach Vol, veh/h		1927	A		1800			947	A		1414	
Approach Delay, s/veh		38.3			34.3			31.8			38.0	
Approach LOS		D			C			C			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.0	26.5	14.1	30.9	10.6	28.9	16.0	29.1
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	9.0	27.0	11.0	27.0	7.0	29.0	12.0	26.0
Max Q Clear Time (g_c+I1), s	11.0	13.0	9.9	19.2	6.6	16.4	13.8	19.6
Green Ext Time (p_c), s	0.0	6.4	0.3	6.6	0.0	8.5	0.0	5.4

Intersection Summary	
HCM 6th Ctrl Delay	36.0
HCM 6th LOS	D

Notes

Unsignalized Delay for [NBR, EBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	370	1530	50	180	1490	300	50	200	60	290	290	240
Future Volume (veh/h)	370	1530	50	180	1490	300	50	200	60	290	290	240
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.97	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	389	1611	51	189	1568	103	53	211	41	305	305	135
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	449	2287	72	248	1907	461	89	414	79	333	665	287
Arrive On Green	0.13	0.36	0.36	0.07	0.30	0.30	0.05	0.14	0.14	0.19	0.28	0.28
Sat Flow, veh/h	3401	6349	201	3401	6332	1531	1753	2917	555	1753	2363	1020
Grp Volume(v), veh/h	389	1205	457	189	1568	103	53	125	127	305	224	216
Grp Sat Flow(s),veh/h/ln	1700	1583	1800	1700	1583	1531	1753	1749	1724	1753	1749	1634
Q Serve(g_s), s	12.4	24.1	24.1	6.0	25.5	5.6	3.3	7.3	7.6	18.9	11.7	12.1
Cycle Q Clear(g_c), s	12.4	24.1	24.1	6.0	25.5	5.6	3.3	7.3	7.6	18.9	11.7	12.1
Prop In Lane	1.00		0.11	1.00		1.00	1.00		0.32	1.00		0.62
Lane Grp Cap(c), veh/h	449	1711	648	248	1907	461	89	248	245	333	492	460
V/C Ratio(X)	0.87	0.70	0.70	0.76	0.82	0.22	0.59	0.50	0.52	0.91	0.45	0.47
Avail Cap(c_a), veh/h	510	1784	677	298	1985	480	162	758	747	391	987	923
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.1	30.4	30.4	50.4	35.9	29.0	51.4	43.9	44.0	43.9	32.8	33.0
Incr Delay (d2), s/veh	12.2	1.4	3.6	7.2	3.0	0.3	2.3	0.6	0.6	21.9	0.2	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.8	8.8	10.4	2.7	9.5	2.0	1.5	3.1	3.2	9.9	4.8	4.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	59.3	31.7	33.9	57.5	38.9	29.3	53.8	44.5	44.7	65.9	33.0	33.2
LnGrp LOS	E	C	C	E	D	C	D	D	D	E	C	C
Approach Vol, veh/h		2051			1860			305			745	
Approach Delay, s/veh		37.5			40.3			46.2			46.5	
Approach LOS		D			D			D			D	

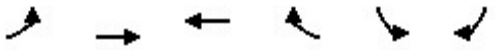
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	27.6	22.2	14.6	46.4	12.1	37.6	21.1	39.8
Change Period (Y+Rc), s	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
Max Green Setting (Gmax), s	24.7	48.0	9.7	41.6	10.2	62.5	16.6	34.7
Max Q Clear Time (g_c+I1), s	20.9	9.6	8.0	26.1	5.3	14.1	14.4	27.5
Green Ext Time (p_c), s	0.2	0.8	0.1	11.1	0.0	1.5	0.2	5.9

Intersection Summary	
HCM 6th Ctrl Delay	40.4
HCM 6th LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	310	1360	220	570	1490	240	260	530	380	400	940	230
Future Volume (veh/h)	310	1360	220	570	1490	240	260	530	380	400	940	230
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	326	1432	212	600	1568	107	274	558	165	421	989	82
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	364	1555	230	631	1791	546	294	916	278	463	1165	354
Arrive On Green	0.11	0.28	0.28	0.19	0.36	0.36	0.09	0.18	0.18	0.14	0.23	0.23
Sat Flow, veh/h	3401	5595	827	3401	5025	1533	3401	5025	1525	3401	5025	1528
Grp Volume(v), veh/h	326	1215	429	600	1568	107	274	558	165	421	989	82
Grp Sat Flow(s),veh/h/ln	1700	1583	1673	1700	1675	1533	1700	1675	1525	1700	1675	1528
Q Serve(g_s), s	13.0	34.1	34.2	24.0	40.1	6.6	11.0	14.0	13.6	16.8	25.9	6.0
Cycle Q Clear(g_c), s	13.0	34.1	34.2	24.0	40.1	6.6	11.0	14.0	13.6	16.8	25.9	6.0
Prop In Lane	1.00		0.49	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	364	1320	465	631	1791	546	294	916	278	463	1165	354
V/C Ratio(X)	0.90	0.92	0.92	0.95	0.88	0.20	0.93	0.61	0.59	0.91	0.85	0.23
Avail Cap(c_a), veh/h	364	1334	470	631	1806	551	294	994	302	463	1243	378
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	60.6	48.2	48.2	55.4	41.4	30.6	62.4	51.7	51.5	58.5	50.5	42.9
Incr Delay (d2), s/veh	23.5	10.6	23.9	24.2	5.2	0.2	34.4	1.0	2.9	21.7	5.6	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.6	14.1	16.7	12.0	16.5	2.4	6.0	5.8	5.3	8.4	11.1	2.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	84.1	58.8	72.1	79.6	46.6	30.8	96.8	52.7	54.4	80.2	56.1	43.3
LnGrp LOS	F	E	E	E	D	C	F	D	D	F	E	D
Approach Vol, veh/h		1970			2275			997			1492	
Approach Delay, s/veh		65.9			54.5			65.1			62.2	
Approach LOS		E			D			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	33.0	45.7	19.4	39.4	22.2	56.5	26.2	32.6
Change Period (Y+Rc), s	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5
Max Green Setting (Gmax), s	25.5	38.6	11.9	34.0	14.7	49.4	18.7	27.2
Max Q Clear Time (g_c+I1), s	26.0	36.2	13.0	27.9	15.0	42.1	18.8	16.0
Green Ext Time (p_c), s	0.0	2.0	0.0	3.5	0.0	5.6	0.0	3.2

Intersection Summary	
HCM 6th Ctrl Delay	61.1
HCM 6th LOS	E



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	1580	1200	370	260	1190
Future Volume (veh/h)	0	1580	1200	370	260	1190
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	0	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	0	1663	1263	0	274	1236
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	4	4	4	4	4
Cap, veh/h	0	1992	1386		744	1324
Arrive On Green	0.00	0.40	0.40	0.00	0.42	0.42
Sat Flow, veh/h	0	5356	3589	1560	1753	3120
Grp Volume(v), veh/h	0	1663	1263	0	274	1236
Grp Sat Flow(s),veh/h/ln	0	1675	1749	1560	1753	1560
Q Serve(g_s), s	0.0	20.5	23.4	0.0	7.3	25.9
Cycle Q Clear(g_c), s	0.0	20.5	23.4	0.0	7.3	25.9
Prop In Lane	0.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	0	1992	1386		744	1324
V/C Ratio(X)	0.00	0.84	0.91		0.37	0.93
Avail Cap(c_a), veh/h	0	2052	1428		759	1351
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	18.7	19.6	0.0	13.5	18.8
Incr Delay (d2), s/veh	0.0	3.1	8.9	0.0	0.3	11.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	6.8	9.1	0.0	2.5	9.8
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.0	21.8	28.5	0.0	13.8	30.7
LnGrp LOS	A	C	C		B	C
Approach Vol, veh/h		1663	1263	A	1510	
Approach Delay, s/veh		21.8	28.5		27.6	
Approach LOS		C	C		C	

Timer - Assigned Phs	2	4	6
Phs Duration (G+Y+Rc), s	34.0	34.6	34.0
Change Period (Y+Rc), s	6.8	5.5	6.8
Max Green Setting (Gmax), s	28.0	29.7	28.0
Max Q Clear Time (g_c+I1), s	22.5	27.9	25.4
Green Ext Time (p_c), s	4.1	1.2	1.8

Intersection Summary	
HCM 6th Ctrl Delay	25.7
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	560	1280	210	610	960	120
Future Volume (veh/h)	560	1280	210	610	960	120
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		0.97	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	589	1344	221	642	1011	60
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	4	4	4
Cap, veh/h	1466	1983	241	2768	1103	491
Arrive On Green	0.42	0.42	0.07	0.55	0.31	0.31
Sat Flow, veh/h	3589	2670	3401	5191	3506	1560
Grp Volume(v), veh/h	589	1344	221	642	1011	60
Grp Sat Flow(s),veh/h/ln	1749	1335	1700	1675	1753	1560
Q Serve(g_s), s	11.6	26.7	6.4	6.5	27.4	2.7
Cycle Q Clear(g_c), s	11.6	26.7	6.4	6.5	27.4	2.7
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1466	1983	241	2768	1103	491
V/C Ratio(X)	0.40	0.68	0.92	0.23	0.92	0.12
Avail Cap(c_a), veh/h	1971	2369	241	3494	1171	521
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.0	7.0	45.6	11.4	32.6	24.1
Incr Delay (d2), s/veh	0.2	0.6	36.4	0.0	10.9	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.3	15.9	3.8	2.0	13.1	1.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	20.2	7.7	82.0	11.5	43.5	24.2
LnGrp LOS	C	A	F	B	D	C
Approach Vol, veh/h	1933			863	1071	
Approach Delay, s/veh	11.5			29.5	42.4	
Approach LOS	B			C	D	

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	13.0	48.7				61.7	37.1
Change Period (Y+Rc), s	6.0	7.3				7.3	6.0
Max Green Setting (Gmax), s	7.0	55.7				68.7	33.0
Max Q Clear Time (g_c+I1), s	8.4	28.7				8.5	29.4
Green Ext Time (p_c), s	0.0	11.8				4.2	1.6

Intersection Summary	
HCM 6th Ctrl Delay	24.1
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.
User approved volume balancing among the lanes for turning movement.

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↱			↱
Traffic Vol, veh/h	0	1150	1200	20	0	20
Future Vol, veh/h	0	1150	1200	20	0	20
Conflicting Peds, #/hr	5	0	0	5	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	0	1211	1263	21	0	21

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	647
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.96
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.33
Pot Cap-1 Maneuver	0	-	-	-	0	411
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	409
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	14.3
HCM LOS			B

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	409
HCM Lane V/C Ratio	-	-	-	0.051
HCM Control Delay (s)	-	-	-	14.3
HCM Lane LOS	-	-	-	B
HCM 95th %tile Q(veh)	-	-	-	0.2

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	1150	1200	20	0	20
Future Vol, veh/h	0	1150	1200	20	0	20
Conflicting Peds, #/hr	5	0	0	5	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	0	1211	1263	21	0	21

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	647
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.96
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.33
Pot Cap-1 Maneuver	0	-	-	-	0	411
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	409
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	14.3
HCM LOS			B

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	409
HCM Lane V/C Ratio	-	-	-	0.051
HCM Control Delay (s)	-	-	-	14.3
HCM Lane LOS	-	-	-	B
HCM 95th %tile Q(veh)	-	-	-	0.2

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	20	1130	1210	20	20	10
Future Vol, veh/h	20	1130	1210	20	20	10
Conflicting Peds, #/hr	5	0	0	5	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	21	1189	1274	21	21	11

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1300	0	-	0	1927	653
Stage 1	-	-	-	-	1290	-
Stage 2	-	-	-	-	637	-
Critical Hdwy	4.16	-	-	-	6.86	6.96
Critical Hdwy Stg 1	-	-	-	-	5.86	-
Critical Hdwy Stg 2	-	-	-	-	5.86	-
Follow-up Hdwy	2.23	-	-	-	3.53	3.33
Pot Cap-1 Maneuver	523	-	-	-	58	408
Stage 1	-	-	-	-	220	-
Stage 2	-	-	-	-	486	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	521	-	-	-	55	406
Mov Cap-2 Maneuver	-	-	-	-	154	-
Stage 1	-	-	-	-	210	-
Stage 2	-	-	-	-	484	-

Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	27.1
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	521	-	-	-	194
HCM Lane V/C Ratio	0.04	-	-	-	0.163
HCM Control Delay (s)	12.2	-	-	-	27.1
HCM Lane LOS	B	-	-	-	D
HCM 95th %tile Q(veh)	0.1	-	-	-	0.6

Intersection	
Int Delay, s/veh	1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	20	1120	1200	20	40	30
Future Vol, veh/h	20	1120	1200	20	40	30
Conflicting Peds, #/hr	5	0	0	5	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	350	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	21	1179	1263	21	42	32

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1289	0	-	0	1911	647
Stage 1	-	-	-	-	1279	-
Stage 2	-	-	-	-	632	-
Critical Hdwy	4.16	-	-	-	6.86	6.96
Critical Hdwy Stg 1	-	-	-	-	5.86	-
Critical Hdwy Stg 2	-	-	-	-	5.86	-
Follow-up Hdwy	2.23	-	-	-	3.53	3.33
Pot Cap-1 Maneuver	528	-	-	-	59	411
Stage 1	-	-	-	-	223	-
Stage 2	-	-	-	-	489	-
Platoon blocked, %			-	-	-	
Mov Cap-1 Maneuver	525	-	-	-	56	409
Mov Cap-2 Maneuver	-	-	-	-	156	-
Stage 1	-	-	-	-	213	-
Stage 2	-	-	-	-	487	-

Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	30.8
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	525	-	-	-	212
HCM Lane V/C Ratio	0.04	-	-	-	0.348
HCM Control Delay (s)	12.1	-	-	-	30.8
HCM Lane LOS	B	-	-	-	D
HCM 95th %tile Q(veh)	0.1	-	-	-	1.5

Intersection	
Int Delay, s/veh	1.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	20	1140	1200	20	20	20
Future Vol, veh/h	20	1140	1200	20	20	20
Conflicting Peds, #/hr	5	0	0	5	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	175	-	-	-	0	76
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	21	1200	1263	21	21	21

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1289	0	-	0	1921	647
Stage 1	-	-	-	-	1279	-
Stage 2	-	-	-	-	642	-
Critical Hdwy	4.16	-	-	-	6.86	6.96
Critical Hdwy Stg 1	-	-	-	-	5.86	-
Critical Hdwy Stg 2	-	-	-	-	5.86	-
Follow-up Hdwy	2.23	-	-	-	3.53	3.33
Pot Cap-1 Maneuver	528	-	-	-	58	411
Stage 1	-	-	-	-	223	-
Stage 2	-	-	-	-	483	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	525	-	-	-	55	409
Mov Cap-2 Maneuver	-	-	-	-	55	-
Stage 1	-	-	-	-	213	-
Stage 2	-	-	-	-	481	-

Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	60.4
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	525	-	-	-	55	409
HCM Lane V/C Ratio	0.04	-	-	-	0.383	0.051
HCM Control Delay (s)	12.1	-	-	-	106.4	14.3
HCM Lane LOS	B	-	-	-	F	B
HCM 95th %tile Q(veh)	0.1	-	-	-	1.4	0.2

Intersection	
Int Delay, s/veh	1.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	850	60	70	670	30	30
Future Vol, veh/h	850	60	70	670	30	30
Conflicting Peds, #/hr	0	5	5	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	100	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	895	63	74	705	32	32

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	963	0	1433	484
Stage 1	-	-	-	-	932	-
Stage 2	-	-	-	-	501	-
Critical Hdwy	-	-	4.16	-	6.86	6.96
Critical Hdwy Stg 1	-	-	-	-	5.86	-
Critical Hdwy Stg 2	-	-	-	-	5.86	-
Follow-up Hdwy	-	-	2.23	-	3.53	3.33
Pot Cap-1 Maneuver	-	-	704	-	124	526
Stage 1	-	-	-	-	341	-
Stage 2	-	-	-	-	571	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	701	-	110	523
Mov Cap-2 Maneuver	-	-	-	-	110	-
Stage 1	-	-	-	-	339	-
Stage 2	-	-	-	-	510	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1	34.9
HCM LOS			D

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	182	-	-	701	-
HCM Lane V/C Ratio	0.347	-	-	0.105	-
HCM Control Delay (s)	34.9	-	-	10.7	-
HCM Lane LOS	D	-	-	B	-
HCM 95th %tile Q(veh)	1.5	-	-	0.4	-

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	150	150	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	0	0	0	0	0	0

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	0	0	0	0	0	0
Stage 1	0	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Critical Hdwy	5.76	7.16	-	-	5.36	-
Critical Hdwy Stg 1	6.66	-	-	-	-	-
Critical Hdwy Stg 2	6.06	-	-	-	-	-
Follow-up Hdwy	3.83	3.93	-	-	3.13	-
Pot Cap-1 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	-	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-	-
HCM Control Delay (s)	-	-	0	0	0	-
HCM Lane LOS	-	-	A	A	A	-
HCM 95th %tile Q(veh)	-	-	-	-	-	-

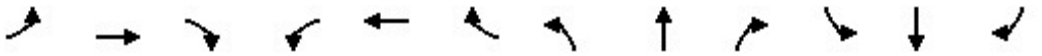
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	270	855	184	50	645	953	143	1022	40	1007	1284	270
Future Volume (veh/h)	270	855	184	50	645	953	143	1022	40	1007	1284	270
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	284	900	62	53	679	829	151	1076	40	1060	1352	139
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	219	1573	486	191	1531	473	174	1460	54	226	1626	496
Arrive On Green	0.06	0.31	0.31	0.06	0.30	0.30	0.10	0.29	0.29	0.13	0.32	0.32
Sat Flow, veh/h	3401	5025	1552	3401	5025	1552	1753	4969	185	1753	5025	1532
Grp Volume(v), veh/h	284	900	62	53	679	829	151	725	391	1060	1352	139
Grp Sat Flow(s),veh/h/ln	1700	1675	1552	1700	1675	1552	1753	1675	1803	1753	1675	1532
Q Serve(g_s), s	9.0	20.9	4.0	2.1	15.1	42.5	11.8	27.2	27.3	18.0	34.7	9.4
Cycle Q Clear(g_c), s	9.0	20.9	4.0	2.1	15.1	42.5	11.8	27.2	27.3	18.0	34.7	9.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.10	1.00		1.00
Lane Grp Cap(c), veh/h	219	1573	486	191	1531	473	174	984	530	226	1626	496
V/C Ratio(X)	1.29	0.57	0.13	0.28	0.44	1.75	0.87	0.74	0.74	4.69	0.83	0.28
Avail Cap(c_a), veh/h	219	1573	486	219	1531	473	201	1117	601	226	1747	533
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	65.2	40.1	34.3	63.1	39.0	48.5	61.9	44.4	44.4	60.7	43.7	35.1
Incr Delay (d2), s/veh	161.8	0.6	0.1	0.6	0.2	347.3	27.0	2.6	4.7	1668.4	3.6	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.8	8.5	1.5	0.9	6.0	61.2	6.4	11.3	12.5	112.7	14.5	3.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	227.1	40.7	34.4	63.7	39.2	395.8	88.9	47.0	49.1	1729.1	47.3	35.5
LnGrp LOS	F	D	C	E	D	F	F	D	D	F	D	D
Approach Vol, veh/h		1246			1561			1267			2551	
Approach Delay, s/veh		82.8			229.4			52.6			745.5	
Approach LOS		F			F			D			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	25.0	48.0	15.3	51.2	20.9	52.1	16.5	50.0
Change Period (Y+Rc), s	7.0	7.0	7.5	7.5	7.0	7.0	7.5	7.5
Max Green Setting (Gmax), s	18.0	46.5	9.0	42.5	16.0	48.5	9.0	42.5
Max Q Clear Time (g_c+I1), s	20.0	29.3	4.1	22.9	13.8	36.7	11.0	44.5
Green Ext Time (p_c), s	0.0	8.4	0.0	6.9	0.1	8.4	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	366.7
HCM 6th LOS	F

Notes

User approved pedestrian interval to be less than phase max green.



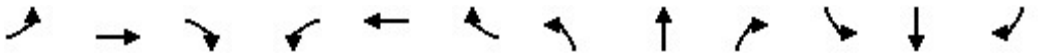
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	50	1410	242	130	1290	120	298	70	160	30	30	50
Future Volume (veh/h)	50	1410	242	130	1290	120	298	70	160	30	30	50
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	0.99		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	53	1484	98	137	1358	113	314	74	44	32	32	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	110	1784	544	167	1828	152	444	921	403	407	921	
Arrive On Green	0.06	0.35	0.35	0.10	0.39	0.39	0.26	0.26	0.26	0.26	0.26	0.00
Sat Flow, veh/h	1753	5025	1533	1753	4719	393	1348	3497	1530	1248	3589	0
Grp Volume(v), veh/h	53	1484	98	137	964	507	314	74	44	32	32	0
Grp Sat Flow(s),veh/h/ln	1753	1675	1533	1753	1675	1762	1348	1749	1530	1248	1749	0
Q Serve(g_s), s	2.1	19.8	3.2	5.6	18.2	18.2	16.6	1.2	1.6	1.5	0.5	0.0
Cycle Q Clear(g_c), s	2.1	19.8	3.2	5.6	18.2	18.2	17.1	1.2	1.6	2.6	0.5	0.0
Prop In Lane	1.00		1.00	1.00		0.22	1.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	110	1784	544	167	1298	682	444	921	403	407	921	
V/C Ratio(X)	0.48	0.83	0.18	0.82	0.74	0.74	0.71	0.08	0.11	0.08	0.03	
Avail Cap(c_a), veh/h	167	1849	564	167	1298	682	456	953	417	418	953	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	33.2	21.7	16.3	32.6	19.3	19.3	26.4	20.3	20.5	21.3	20.1	0.0
Incr Delay (d2), s/veh	1.2	3.5	0.2	24.9	2.5	4.7	5.7	0.1	0.2	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	7.0	1.0	3.3	6.2	6.9	5.4	0.4	0.5	0.4	0.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	34.4	25.1	16.5	57.5	21.9	24.1	32.1	20.4	20.7	21.5	20.1	0.0
LnGrp LOS	C	C	B	E	C	C	C	C	C	C	C	
Approach Vol, veh/h		1635			1608			432			64	A
Approach Delay, s/veh		24.9			25.6			28.9			20.8	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	14.0	33.0		26.3	11.6	35.4		26.3				
Change Period (Y+Rc), s	7.0	7.0		7.0	7.0	7.0		7.0				
Max Green Setting (Gmax), s	7.0	27.0		20.0	7.0	27.0		20.0				
Max Q Clear Time (g_c+I1), s	7.6	21.8		19.1	4.1	20.2		4.6				
Green Ext Time (p_c), s	0.0	4.2		0.3	0.0	5.2		0.3				

Intersection Summary			
HCM 6th Ctrl Delay		25.6	
HCM 6th LOS		C	

Notes

Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.

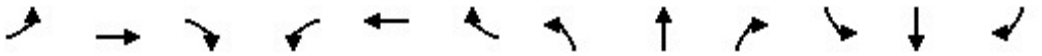


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	120	300	151	70	210	30	121	703	200	50	252	20
Future Volume (veh/h)	120	300	151	70	210	30	121	703	200	50	252	20
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	126	316	86	74	221	19	127	740	186	53	265	16
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	360	516	138	284	568	48	499	920	231	243	1047	63
Arrive On Green	0.08	0.19	0.19	0.06	0.17	0.17	0.07	0.33	0.33	0.05	0.31	0.31
Sat Flow, veh/h	1753	2714	725	1753	3255	277	1753	2757	693	1753	3348	201
Grp Volume(v), veh/h	126	202	200	74	118	122	127	469	457	53	138	143
Grp Sat Flow(s),veh/h/ln	1753	1749	1691	1753	1749	1783	1753	1749	1701	1753	1749	1800
Q Serve(g_s), s	4.3	7.9	8.2	2.5	4.5	4.6	3.6	18.3	18.3	1.5	4.4	4.5
Cycle Q Clear(g_c), s	4.3	7.9	8.2	2.5	4.5	4.6	3.6	18.3	18.3	1.5	4.4	4.5
Prop In Lane	1.00		0.43	1.00		0.16	1.00		0.41	1.00		0.11
Lane Grp Cap(c), veh/h	360	332	321	284	305	311	499	583	568	243	547	563
V/C Ratio(X)	0.35	0.61	0.62	0.26	0.39	0.39	0.25	0.80	0.80	0.22	0.25	0.25
Avail Cap(c_a), veh/h	366	632	611	317	632	644	509	671	653	289	671	691
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.7	27.8	27.9	23.1	27.4	27.4	15.3	22.8	22.8	17.6	19.2	19.2
Incr Delay (d2), s/veh	0.7	2.5	2.8	0.5	1.1	1.1	0.3	6.9	7.1	0.5	0.3	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	3.2	3.2	1.0	1.8	1.9	1.3	7.7	7.5	0.6	1.7	1.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.4	30.3	30.7	23.6	28.5	28.6	15.7	29.6	29.8	18.1	19.6	19.6
LnGrp LOS	C	C	C	C	C	C	B	C	C	B	B	B
Approach Vol, veh/h		528			314			1053			334	
Approach Delay, s/veh		28.8			27.4			28.0			19.3	
Approach LOS		C			C			C			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.0	32.0	11.2	20.8	12.6	30.5	12.4	19.6
Change Period (Y+Rc), s	7.0	7.0	6.5	6.5	7.0	7.0	6.5	6.5
Max Green Setting (Gmax), s	6.0	28.8	6.1	27.1	6.0	28.8	6.1	27.1
Max Q Clear Time (g_c+I1), s	3.5	20.3	4.5	10.2	5.6	6.5	6.3	6.6
Green Ext Time (p_c), s	0.0	4.5	0.0	2.7	0.0	2.0	0.0	1.6

Intersection Summary	
HCM 6th Ctrl Delay	26.8
HCM 6th LOS	C

Min green cannot be greater than Max Green.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	250	10	380	347	2366	0	0	1579	570
Future Volume (veh/h)	0	0	0	250	10	380	347	2366	0	0	1579	570
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1841	1841	1841	1841	1841	0	0	1841	1841
Adj Flow Rate, veh/h				375	0	206	365	2491	0	0	1662	272
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				4	4	4	4	4	0	0	4	4
Cap, veh/h				592	0	263	446	3451	0	0	2501	774
Arrive On Green				0.17	0.00	0.17	0.09	0.46	0.00	0.00	0.50	0.50
Sat Flow, veh/h				3506	0	1560	3401	5191	0	0	5191	1555
Grp Volume(v), veh/h				375	0	206	365	2491	0	0	1662	272
Grp Sat Flow(s),veh/h/ln				1753	0	1560	1700	1675	0	0	1675	1555
Q Serve(g_s), s				9.0	0.0	11.4	9.5	36.1	0.0	0.0	22.3	9.6
Cycle Q Clear(g_c), s				9.0	0.0	11.4	9.5	36.1	0.0	0.0	22.3	9.6
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				592	0	263	446	3451	0	0	2501	774
V/C Ratio(X)				0.63	0.00	0.78	0.82	0.72	0.00	0.00	0.66	0.35
Avail Cap(c_a), veh/h				779	0	347	521	3451	0	0	2501	774
HCM Platoon Ratio				1.00	1.00	1.00	0.67	0.67	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.23	0.23	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				34.8	0.0	35.8	40.0	17.3	0.0	0.0	17.0	13.8
Incr Delay (d2), s/veh				1.6	0.0	9.8	2.1	0.3	0.0	0.0	1.4	1.3
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				3.9	0.0	5.0	4.1	14.1	0.0	0.0	8.0	3.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				36.4	0.0	45.6	42.1	17.7	0.0	0.0	18.4	15.0
LnGrp LOS				D	A	D	D	B	A	A	B	B
Approach Vol, veh/h					581			2856			1934	
Approach Delay, s/veh					39.7			20.8			17.9	
Approach LOS					D			C			B	

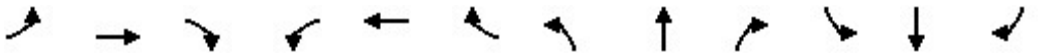
Timer - Assigned Phs	2		5	6		8						
Phs Duration (G+Y+Rc), s	67.8		17.0	50.8		22.2						
Change Period (Y+Rc), s	6.0		* 5.2	6.0		7.0						
Max Green Setting (Gmax), s	57.0		* 14	38.0		20.0						
Max Q Clear Time (g_c+I1), s	38.1		11.5	24.3		13.4						
Green Ext Time (p_c), s	17.6		0.3	11.2		1.8						

Intersection Summary		
HCM 6th Ctrl Delay	21.8	
HCM 6th LOS	C	

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



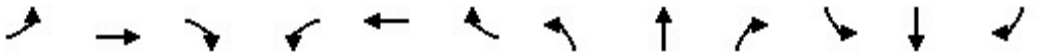
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	430	10	309	0	0	0	0	2283	350	380	1449	0
Future Volume (veh/h)	430	10	309	0	0	0	0	2283	350	380	1449	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841				0	1841	1841	1841	1841	0
Adj Flow Rate, veh/h	453	11	282				0	2403	183	400	1525	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4				0	4	4	4	4	0
Cap, veh/h	605	10	268				0	2490	771	442	3406	0
Arrive On Green	0.18	0.18	0.18				0.00	0.50	0.50	0.17	0.90	0.00
Sat Flow, veh/h	3401	59	1510				0	5191	1555	3401	5191	0
Grp Volume(v), veh/h	453	0	293				0	2403	183	400	1525	0
Grp Sat Flow(s),veh/h/ln	1700	0	1569				0	1675	1555	1700	1675	0
Q Serve(g_s), s	11.4	0.0	16.0				0.0	41.6	6.1	10.4	4.5	0.0
Cycle Q Clear(g_c), s	11.4	0.0	16.0				0.0	41.6	6.1	10.4	4.5	0.0
Prop In Lane	1.00		0.96				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	605	0	279				0	2490	771	442	3406	0
V/C Ratio(X)	0.75	0.00	1.05				0.00	0.96	0.24	0.90	0.45	0.00
Avail Cap(c_a), veh/h	605	0	279				0	2490	771	442	3406	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.33	1.33	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.60	0.60	0.00
Uniform Delay (d), s/veh	35.1	0.0	37.0				0.0	21.9	13.0	36.7	1.7	0.0
Incr Delay (d2), s/veh	5.5	0.0	67.7				0.0	11.5	0.7	14.7	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.1	0.0	11.2				0.0	16.9	2.1	4.8	0.9	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	40.6	0.0	104.7				0.0	33.5	13.7	51.4	1.9	0.0
LnGrp LOS	D	A	F				A	C	B	D	A	A
Approach Vol, veh/h		746						2586			1925	
Approach Delay, s/veh		65.8						32.1			12.2	
Approach LOS		E						C			B	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	16.4	50.6		23.0		67.0
Change Period (Y+Rc), s	* 4.7	6.0		7.0		6.0
Max Green Setting (Gmax), s	* 12	44.6		16.0		61.0
Max Q Clear Time (g_c+I1), s	12.4	43.6		18.0		6.5
Green Ext Time (p_c), s	0.0	1.0		0.0		23.9

Intersection Summary	
HCM 6th Ctrl Delay	29.6
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	163	10	300	308	1580	0	0	485	150
Future Volume (veh/h)	0	0	0	163	10	300	308	1580	0	0	485	150
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		0.97
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1841	1841	1841	1841	1841	0	0	1841	1841
Adj Flow Rate, veh/h				180	0	227	324	1663	0	0	511	64
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				4	4	4	4	4	0	0	4	4
Cap, veh/h				438	0	390	358	2553	0	0	1621	704
Arrive On Green				0.12	0.00	0.12	0.41	1.00	0.00	0.00	0.46	0.46
Sat Flow, veh/h				3506	0	3120	1753	3589	0	0	3589	1518
Grp Volume(v), veh/h				180	0	227	324	1663	0	0	511	64
Grp Sat Flow(s),veh/h/ln				1753	0	1560	1753	1749	0	0	1749	1518
Q Serve(g_s), s				3.8	0.0	5.5	13.9	0.0	0.0	0.0	7.3	1.9
Cycle Q Clear(g_c), s				3.8	0.0	5.5	13.9	0.0	0.0	0.0	7.3	1.9
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				438	0	390	358	2553	0	0	1621	704
V/C Ratio(X)				0.41	0.00	0.58	0.91	0.65	0.00	0.00	0.32	0.09
Avail Cap(c_a), veh/h				596	0	530	526	2553	0	0	1621	704
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.09	0.09	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				32.3	0.0	33.0	23.0	0.0	0.0	0.0	13.5	12.0
Incr Delay (d2), s/veh				0.5	0.0	1.0	1.5	0.1	0.0	0.0	0.5	0.3
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				1.6	0.0	2.1	4.1	0.0	0.0	0.0	2.6	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				32.7	0.0	34.1	24.5	0.1	0.0	0.0	14.0	12.3
LnGrp LOS				C	A	C	C	A	A	A	B	B
Approach Vol, veh/h					407			1987			575	
Approach Delay, s/veh					33.5			4.1			13.8	
Approach LOS					C			A			B	

Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		64.2			21.3	42.9		15.8				
Change Period (Y+Rc), s		5.8			5.0	5.8		5.8				
Max Green Setting (Gmax), s		54.8			24.0	25.8		13.6				
Max Q Clear Time (g_c+I1), s		2.0			15.9	9.3		7.5				
Green Ext Time (p_c), s		14.7			0.4	2.0		0.7				

Intersection Summary		
HCM 6th Ctrl Delay	10.0	
HCM 6th LOS	A	

Notes

User approved volume balancing among the lanes for turning movement.

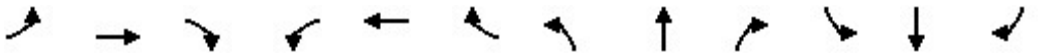
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	520	10	287	0	0	0	0	1368	406	160	488	0
Future Volume (veh/h)	520	10	287	0	0	0	0	1368	406	160	488	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		0.97	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841				0	1841	1841	1841	1841	0
Adj Flow Rate, veh/h	547	0	59				0	1440	392	168	514	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4				0	4	4	4	4	0
Cap, veh/h	570	0	507				0	1385	362	214	2422	0
Arrive On Green	0.16	0.00	0.16				0.00	0.51	0.51	0.04	0.23	0.00
Sat Flow, veh/h	3506	0	3120				0	2819	712	1753	3589	0
Grp Volume(v), veh/h	547	0	59				0	901	931	168	514	0
Grp Sat Flow(s),veh/h/ln	1753	0	1560				0	1749	1690	1753	1749	0
Q Serve(g_s), s	12.4	0.0	1.3				0.0	40.6	40.6	7.6	9.5	0.0
Cycle Q Clear(g_c), s	12.4	0.0	1.3				0.0	40.6	40.6	7.6	9.5	0.0
Prop In Lane	1.00		1.00				0.00		0.42	1.00		0.00
Lane Grp Cap(c), veh/h	570	0	507				0	888	858	214	2422	0
V/C Ratio(X)	0.96	0.00	0.12				0.00	1.01	1.08	0.79	0.21	0.00
Avail Cap(c_a), veh/h	570	0	507				0	888	858	219	2422	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	0.33	0.33	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.94	0.94	0.00
Uniform Delay (d), s/veh	33.2	0.0	28.6				0.0	19.7	19.7	37.4	13.2	0.0
Incr Delay (d2), s/veh	27.8	0.0	0.1				0.0	33.9	56.0	14.4	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.3	0.0	0.5				0.0	21.7	26.2	4.1	3.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	61.1	0.0	28.7				0.0	53.6	75.7	51.7	13.4	0.0
LnGrp LOS	E	A	C				A	F	F	D	B	A
Approach Vol, veh/h		606						1832			682	
Approach Delay, s/veh		57.9						64.8			22.8	
Approach LOS		E						E			C	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	14.8	46.4		18.8		61.2
Change Period (Y+Rc), s	5.0	5.8		5.8		5.8
Max Green Setting (Gmax), s	10.0	40.4		13.0		55.4
Max Q Clear Time (g_c+I1), s	9.6	42.6		14.4		11.5
Green Ext Time (p_c), s	0.0	0.0		0.0		2.7

Intersection Summary	
HCM 6th Ctrl Delay	54.3
HCM 6th LOS	D

Notes

User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	383	10	540	700	1848	0	0	898	200
Future Volume (veh/h)	0	0	0	383	10	540	700	1848	0	0	898	200
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		0.97
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1841	1841	1841	1841	1841	0	0	1841	1841
Adj Flow Rate, veh/h				569	0	311	737	1945	0	0	945	79
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				4	4	4	4	4	0	0	4	4
Cap, veh/h				771	0	343	756	3272	0	0	2364	566
Arrive On Green				0.22	0.00	0.22	0.22	0.65	0.00	0.00	0.37	0.37
Sat Flow, veh/h				3506	0	1560	3401	5191	0	0	6590	1515
Grp Volume(v), veh/h				569	0	311	737	1945	0	0	945	79
Grp Sat Flow(s),veh/h/ln				1753	0	1560	1700	1675	0	0	1583	1515
Q Serve(g_s), s				13.6	0.0	17.5	19.4	19.8	0.0	0.0	9.9	3.1
Cycle Q Clear(g_c), s				13.6	0.0	17.5	19.4	19.8	0.0	0.0	9.9	3.1
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				771	0	343	756	3272	0	0	2364	566
V/C Ratio(X)				0.74	0.00	0.91	0.98	0.59	0.00	0.00	0.40	0.14
Avail Cap(c_a), veh/h				771	0	343	756	3272	0	0	2364	566
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.48	0.48	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				32.7	0.0	34.2	34.8	8.9	0.0	0.0	20.8	18.6
Incr Delay (d2), s/veh				6.2	0.0	29.7	17.5	0.4	0.0	0.0	0.5	0.5
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				6.3	0.0	16.7	9.3	5.6	0.0	0.0	3.4	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				38.9	0.0	63.9	52.3	9.3	0.0	0.0	21.3	19.2
LnGrp LOS				D	A	E	D	A	A	A	C	B
Approach Vol, veh/h					880			2682			1024	
Approach Delay, s/veh					47.8			21.1			21.1	
Approach LOS					D			C			C	

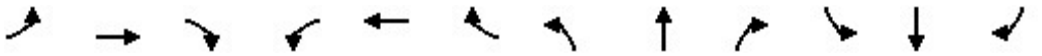
Timer - Assigned Phs	2	4	5	6
Phs Duration (G+Y+Rc), s	64.4	25.6	25.0	39.4
Change Period (Y+Rc), s	5.8	5.8	5.0	5.8
Max Green Setting (Gmax), s	58.6	19.8	20.0	33.6
Max Q Clear Time (g_c+I1), s	21.8	19.5	21.4	11.9
Green Ext Time (p_c), s	19.7	0.1	0.0	6.5

Intersection Summary	
HCM 6th Ctrl Delay	26.2
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

User approved volume balancing among the lanes for turning movement.



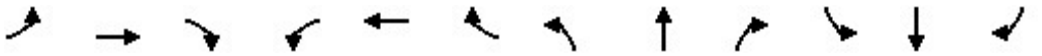
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	410	10	430	0	0	0	0	2138	478	320	961	0
Future Volume (veh/h)	410	10	430	0	0	0	0	2138	478	320	961	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		0.97	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841				0	1841	1841	1841	1841	0
Adj Flow Rate, veh/h	533	0	212				0	2251	220	337	1012	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4				0	4	4	4	4	0
Cap, veh/h	904	0	402				0	2758	661	416	3082	0
Arrive On Green	0.26	0.00	0.26				0.00	0.44	0.44	0.04	0.20	0.00
Sat Flow, veh/h	3506	0	1560				0	6590	1517	3401	5191	0
Grp Volume(v), veh/h	533	0	212				0	2251	220	337	1012	0
Grp Sat Flow(s),veh/h/ln	1753	0	1560				0	1583	1517	1700	1675	0
Q Serve(g_s), s	12.0	0.0	10.5				0.0	28.0	8.6	8.8	15.5	0.0
Cycle Q Clear(g_c), s	12.0	0.0	10.5				0.0	28.0	8.6	8.8	15.5	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	904	0	402				0	2758	661	416	3082	0
V/C Ratio(X)	0.59	0.00	0.53				0.00	0.82	0.33	0.81	0.33	0.00
Avail Cap(c_a), veh/h	904	0	402				0	2758	661	416	3082	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	0.33	0.33	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.82	0.82	0.00
Uniform Delay (d), s/veh	29.2	0.0	28.7				0.0	22.2	16.8	42.2	20.1	0.0
Incr Delay (d2), s/veh	2.8	0.0	4.9				0.0	2.8	1.4	13.2	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.3	0.0	4.4				0.0	9.7	3.0	4.6	6.8	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	32.1	0.0	33.6				0.0	25.0	18.1	55.3	20.3	0.0
LnGrp LOS	C	A	C				A	C	B	E	C	A
Approach Vol, veh/h		745						2471			1349	
Approach Delay, s/veh		32.5						24.4			29.0	
Approach LOS		C						C			C	

Timer - Assigned Phs	1	2				6		8				
Phs Duration (G+Y+Rc), s	16.0	45.0				61.0		29.0				
Change Period (Y+Rc), s	5.0	5.8				5.8		5.8				
Max Green Setting (Gmax), s	11.0	39.2				55.2		23.2				
Max Q Clear Time (g_c+I1), s	10.8	30.0				17.5		14.0				
Green Ext Time (p_c), s	0.0	8.1				7.8		2.0				

Intersection Summary			
HCM 6th Ctrl Delay			27.1
HCM 6th LOS			C

Notes

User approved volume balancing among the lanes for turning movement.



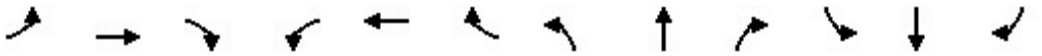
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	20	44	124	40	200	143	2256	62	70	991	60
Future Volume (veh/h)	40	20	44	124	40	200	143	2256	62	70	991	60
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.97	0.99		0.97	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	42	21	9	131	42	102	151	2375	64	74	1043	59
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	224	240	103	327	92	224	88	2661	71	78	2544	144
Arrive On Green	0.20	0.20	0.20	0.20	0.20	0.20	0.05	0.53	0.53	0.04	0.52	0.52
Sat Flow, veh/h	1212	1209	518	1339	465	1128	1753	5026	135	1753	4856	274
Grp Volume(v), veh/h	42	0	30	131	0	144	151	1579	860	74	719	383
Grp Sat Flow(s),veh/h/ln	1212	0	1727	1339	0	1593	1753	1675	1811	1753	1675	1780
Q Serve(g_s), s	2.8	0.0	1.3	8.0	0.0	7.2	4.5	37.8	38.3	3.8	11.7	11.7
Cycle Q Clear(g_c), s	10.0	0.0	1.3	9.2	0.0	7.2	4.5	37.8	38.3	3.8	11.7	11.7
Prop In Lane	1.00		0.30	1.00		0.71	1.00		0.07	1.00		0.15
Lane Grp Cap(c), veh/h	224	0	343	327	0	316	88	1774	959	78	1755	933
V/C Ratio(X)	0.19	0.00	0.09	0.40	0.00	0.46	1.72	0.89	0.90	0.95	0.41	0.41
Avail Cap(c_a), veh/h	482	0	710	611	0	655	88	1774	959	78	1755	933
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.2	0.0	29.4	33.2	0.0	31.8	42.8	18.9	19.0	42.9	13.0	13.0
Incr Delay (d2), s/veh	0.3	0.0	0.1	0.6	0.0	0.8	368.4	7.2	12.8	84.0	0.7	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	0.0	0.5	2.6	0.0	2.8	10.8	13.7	16.5	3.4	4.0	4.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	36.5	0.0	29.5	33.8	0.0	32.6	411.2	26.0	31.8	126.9	13.7	14.3
LnGrp LOS	D	A	C	C	A	C	F	C	C	F	B	B
Approach Vol, veh/h		72			275			2590			1176	
Approach Delay, s/veh		33.6			33.1			50.4			21.0	
Approach LOS		C			C			D			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.5	54.1		25.4	11.0	53.6		25.4				
Change Period (Y+Rc), s	6.5	6.5		7.5	6.5	6.5		7.5				
Max Green Setting (Gmax), s	4.0	28.5		37.0	4.5	28.0		37.0				
Max Q Clear Time (g_c+I1), s	5.8	40.3		12.0	6.5	13.7		11.2				
Green Ext Time (p_c), s	0.0	0.0		0.2	0.0	6.7		1.1				

Intersection Summary			
HCM 6th Ctrl Delay		40.6	
HCM 6th LOS		D	

Notes

User approved pedestrian interval to be less than phase max green.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	260	519	500	262	1280	337	530	1766	154	199	1279	130
Future Volume (veh/h)	260	519	500	262	1280	337	530	1766	154	199	1279	130
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		0.98	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	274	546	0	276	1347	295	558	1859	128	209	1346	55
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	221	957		298	1110	590	441	1657	767	235	1352	605
Arrive On Green	0.13	0.27	0.00	0.17	0.32	0.32	0.13	0.33	0.33	0.07	0.27	0.27
Sat Flow, veh/h	1753	3497	1560	1753	3497	1521	3401	5025	1522	3401	5025	1518
Grp Volume(v), veh/h	274	546	0	276	1347	295	558	1859	128	209	1346	55
Grp Sat Flow(s),veh/h/ln	1753	1749	1560	1753	1749	1521	1700	1675	1522	1700	1675	1518
Q Serve(g_s), s	18.3	19.5	0.0	22.5	46.0	21.4	18.8	47.8	6.7	8.8	38.8	3.3
Cycle Q Clear(g_c), s	18.3	19.5	0.0	22.5	46.0	21.4	18.8	47.8	6.7	8.8	38.8	3.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	221	957		298	1110	590	441	1657	767	235	1352	605
V/C Ratio(X)	1.24	0.57		0.93	1.21	0.50	1.27	1.12	0.17	0.89	1.00	0.09
Avail Cap(c_a), veh/h	221	957		340	1110	590	441	1657	767	235	1352	605
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	63.4	45.3	0.0	59.3	49.5	33.9	63.1	48.6	19.8	67.0	52.9	27.5
Incr Delay (d2), s/veh	139.7	1.0	0.0	27.4	104.8	0.9	136.5	63.6	0.1	31.6	23.4	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	16.6	8.5	0.0	12.0	35.4	7.8	16.4	29.2	2.3	4.8	18.9	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	203.1	46.3	0.0	86.6	154.3	34.8	199.6	112.2	19.9	98.6	76.4	27.6
LnGrp LOS	F	D		F	F	C	F	F	B	F	E	C
Approach Vol, veh/h		820	A		1918			2545			1610	
Approach Delay, s/veh		98.7			126.2			126.7			77.6	
Approach LOS		F			F			F			E	

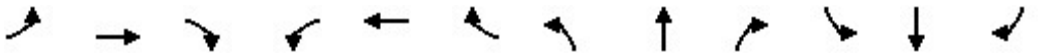
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.2	53.8	29.3	46.7	24.0	45.0	23.0	53.0
Change Period (Y+Rc), s	* 5.2	6.0	* 4.7	7.0	* 5.2	6.0	* 4.7	7.0
Max Green Setting (Gmax), s	* 10	47.8	* 28	36.2	* 19	39.0	* 18	46.0
Max Q Clear Time (g_c+I1), s	10.8	49.8	24.5	21.5	20.8	40.8	20.3	48.0
Green Ext Time (p_c), s	0.0	0.0	0.1	3.9	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	111.8
HCM 6th LOS	F

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



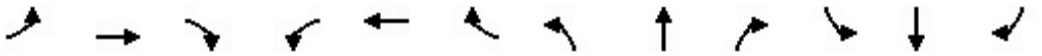
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	170	672	30	112	1400	362	130	810	253	163	350	150
Future Volume (veh/h)	170	672	30	112	1400	362	130	810	253	163	350	150
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	179	707	12	118	1474	247	137	853	134	172	368	126
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	174	1427	626	140	1359	596	159	802	351	168	599	202
Arrive On Green	0.10	0.40	0.40	0.08	0.39	0.39	0.09	0.23	0.23	0.10	0.23	0.23
Sat Flow, veh/h	1767	3526	1546	1767	3526	1546	1767	3526	1540	1767	2574	867
Grp Volume(v), veh/h	179	707	12	118	1474	247	137	853	134	172	250	244
Grp Sat Flow(s),veh/h/ln	1767	1763	1546	1767	1763	1546	1767	1763	1540	1767	1763	1678
Q Serve(g_s), s	14.3	21.7	0.7	9.6	55.9	16.9	11.1	33.0	10.7	13.8	18.4	18.9
Cycle Q Clear(g_c), s	14.3	21.7	0.7	9.6	55.9	16.9	11.1	33.0	10.7	13.8	18.4	18.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.52
Lane Grp Cap(c), veh/h	174	1427	626	140	1359	596	159	802	351	168	410	390
V/C Ratio(X)	1.03	0.50	0.02	0.84	1.08	0.41	0.86	1.06	0.38	1.02	0.61	0.62
Avail Cap(c_a), veh/h	174	1427	626	219	1359	596	186	802	351	168	410	390
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	65.3	32.1	25.9	65.8	44.6	32.6	65.1	56.0	47.4	65.6	49.8	49.9
Incr Delay (d2), s/veh	75.5	0.3	0.0	9.0	50.8	0.6	25.4	49.9	0.8	75.5	2.6	3.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.9	9.0	0.2	4.6	32.7	6.3	6.1	20.0	4.1	9.7	8.3	8.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	140.8	32.4	25.9	74.9	95.3	33.1	90.4	105.9	48.2	141.1	52.4	53.0
LnGrp LOS	F	C	C	E	F	C	F	F	D	F	D	D
Approach Vol, veh/h		898			1839			1124			666	
Approach Delay, s/veh		53.9			85.6			97.1			75.5	
Approach LOS		D			F			F			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	20.3	39.5	19.0	66.2	19.6	40.2	21.8	63.4
Change Period (Y+Rc), s	6.5	6.5	7.5	7.5	6.5	6.5	7.5	7.5
Max Green Setting (Gmax), s	13.8	33.0	18.0	52.2	15.3	31.5	14.3	55.9
Max Q Clear Time (g_c+I1), s	15.8	35.0	11.6	23.7	13.1	20.9	16.3	57.9
Green Ext Time (p_c), s	0.0	0.0	0.1	4.6	0.0	2.1	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	80.7
HCM 6th LOS	F

Notes

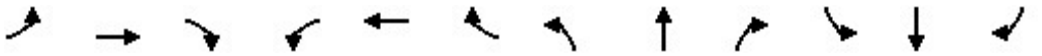
User approved pedestrian interval to be less than phase max green.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	110	997	30	192	1614	112	80	70	153	13	30	80
Future Volume (veh/h)	110	997	30	192	1614	112	80	70	153	13	30	80
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	116	1049	32	202	1699	116	84	74	90	14	32	13
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	144	1861	57	237	1960	132	213	96	117	111	158	64
Arrive On Green	0.08	0.53	0.53	0.13	0.59	0.59	0.13	0.13	0.13	0.13	0.13	0.13
Sat Flow, veh/h	1767	3489	106	1767	3345	226	1350	755	918	1212	1248	507
Grp Volume(v), veh/h	116	530	551	202	887	928	84	0	164	14	0	45
Grp Sat Flow(s),veh/h/ln	1767	1763	1833	1767	1763	1808	1350	0	1673	1212	0	1755
Q Serve(g_s), s	6.4	20.0	20.0	11.1	41.8	43.5	5.9	0.0	9.4	1.1	0.0	2.3
Cycle Q Clear(g_c), s	6.4	20.0	20.0	11.1	41.8	43.5	8.2	0.0	9.4	10.6	0.0	2.3
Prop In Lane	1.00		0.06	1.00		0.13	1.00		0.55	1.00		0.29
Lane Grp Cap(c), veh/h	144	940	978	237	1033	1059	213	0	212	111	0	223
V/C Ratio(X)	0.81	0.56	0.56	0.85	0.86	0.88	0.40	0.00	0.77	0.13	0.00	0.20
Avail Cap(c_a), veh/h	160	947	985	337	1124	1153	475	0	538	347	0	564
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	45.0	15.5	15.5	42.2	17.2	17.5	42.6	0.0	42.1	47.2	0.0	39.0
Incr Delay (d2), s/veh	23.5	0.9	0.8	13.7	6.6	7.5	1.2	0.0	5.9	0.5	0.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.6	7.0	7.2	5.4	15.2	16.4	2.1	0.0	4.3	0.4	0.0	1.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	68.5	16.4	16.3	55.8	23.8	25.1	43.8	0.0	48.0	47.7	0.0	39.4
LnGrp LOS	E	B	B	E	C	C	D	A	D	D	A	D
Approach Vol, veh/h		1197			2017			248			59	
Approach Delay, s/veh		21.4			27.6			46.6			41.4	
Approach LOS		C			C			D			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	15.1	65.8		18.6	20.3	60.6		18.6				
Change Period (Y+Rc), s	7.0	7.5		6.0	7.0	7.5		6.0				
Max Green Setting (Gmax), s	9.0	63.5		32.0	19.0	53.5		32.0				
Max Q Clear Time (g_c+I1), s	8.4	45.5		12.6	13.1	22.0		11.4				
Green Ext Time (p_c), s	0.0	12.9		0.2	0.2	8.6		1.2				

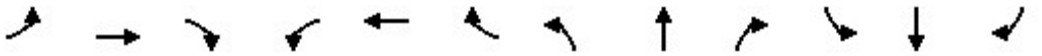
Intersection Summary			
HCM 6th Ctrl Delay		27.1	
HCM 6th LOS		C	



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	310	960	13	61	1225	444	22	732	51	316	302	170
Future Volume (veh/h)	310	960	13	61	1225	444	22	732	51	316	302	170
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	326	1011	14	64	1289	339	23	771	52	333	318	130
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	286	1379	19	81	1234	541	44	680	46	289	836	334
Arrive On Green	0.08	0.39	0.39	0.05	0.35	0.35	0.02	0.20	0.20	0.16	0.34	0.34
Sat Flow, veh/h	3428	3559	49	1767	3526	1545	1767	3346	226	1767	2445	977
Grp Volume(v), veh/h	326	501	524	64	1289	339	23	406	417	333	227	221
Grp Sat Flow(s),veh/h/ln	1714	1763	1846	1767	1763	1545	1767	1763	1809	1767	1763	1659
Q Serve(g_s), s	12.5	36.5	36.5	5.4	52.5	27.4	1.9	30.5	30.5	24.5	14.6	15.1
Cycle Q Clear(g_c), s	12.5	36.5	36.5	5.4	52.5	27.4	1.9	30.5	30.5	24.5	14.6	15.1
Prop In Lane	1.00		0.03	1.00		1.00	1.00		0.12	1.00		0.59
Lane Grp Cap(c), veh/h	286	683	715	81	1234	541	44	358	368	289	603	567
V/C Ratio(X)	1.14	0.73	0.73	0.79	1.04	0.63	0.53	1.13	1.13	1.15	0.38	0.39
Avail Cap(c_a), veh/h	286	683	715	102	1234	541	73	358	368	289	603	567
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	68.8	39.3	39.3	70.8	48.7	40.6	72.3	59.8	59.8	62.8	37.3	37.5
Incr Delay (d2), s/veh	96.9	4.2	4.0	24.6	38.1	2.5	7.2	88.7	88.3	101.2	0.5	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.2	16.0	16.7	2.9	28.6	10.6	1.0	22.2	22.7	18.9	6.3	6.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	165.6	43.5	43.3	95.4	86.8	43.1	79.4	148.4	148.1	163.9	37.7	38.0
LnGrp LOS	F	D	D	F	F	D	E	F	F	F	D	D
Approach Vol, veh/h		1351			1692			846			781	
Approach Delay, s/veh		72.9			78.4			146.4			91.6	
Approach LOS		E			E			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	20.0	60.0	11.2	58.8	14.4	65.6	32.0	38.0
Change Period (Y+Rc), s	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5
Max Green Setting (Gmax), s	12.5	52.5	6.2	48.8	8.7	56.3	24.5	30.5
Max Q Clear Time (g_c+I1), s	14.5	54.5	3.9	17.1	7.4	38.5	26.5	32.5
Green Ext Time (p_c), s	0.0	0.0	0.0	3.2	0.0	6.7	0.0	0.0

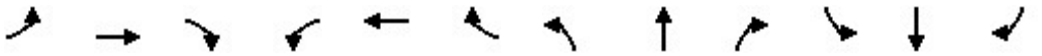
Intersection Summary	
HCM 6th Ctrl Delay	91.3
HCM 6th LOS	F



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	70	987	270	100	1448	82	300	20	170	23	10	100
Future Volume (veh/h)	70	987	270	100	1448	82	300	20	170	23	10	100
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	74	1039	262	105	1524	83	316	21	61	24	11	30
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	96	1258	315	130	1606	87	423	459	383	171	87	177
Arrive On Green	0.05	0.45	0.45	0.07	0.47	0.47	0.25	0.25	0.25	0.25	0.25	0.25
Sat Flow, veh/h	1767	2775	696	1767	3397	184	1355	1856	1551	481	353	715
Grp Volume(v), veh/h	74	658	643	105	788	819	316	21	61	65	0	0
Grp Sat Flow(s),veh/h/ln	1767	1763	1708	1767	1763	1819	1355	1856	1551	1549	0	0
Q Serve(g_s), s	3.9	31.0	31.4	5.6	40.5	41.2	17.8	0.8	2.9	0.0	0.0	0.0
Cycle Q Clear(g_c), s	3.9	31.0	31.4	5.6	40.5	41.2	20.7	0.8	2.9	2.8	0.0	0.0
Prop In Lane	1.00		0.41	1.00		0.10	1.00		1.00	0.37		0.46
Lane Grp Cap(c), veh/h	96	799	774	130	833	860	423	459	383	435	0	0
V/C Ratio(X)	0.77	0.82	0.83	0.81	0.95	0.95	0.75	0.05	0.16	0.15	0.00	0.00
Avail Cap(c_a), veh/h	111	824	798	130	843	869	544	624	521	570	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	44.4	22.7	22.8	43.4	23.9	24.1	34.4	27.3	28.1	28.0	0.0	0.0
Incr Delay (d2), s/veh	24.6	6.6	7.3	30.2	18.9	19.9	4.2	0.0	0.2	0.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.3	12.5	12.3	3.4	18.5	19.6	7.0	0.3	1.0	1.2	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	69.0	29.3	30.1	73.6	42.8	44.0	38.6	27.3	28.3	28.2	0.0	0.0
LnGrp LOS	E	C	C	E	D	D	D	C	C	C	A	A
Approach Vol, veh/h		1375			1712			398			65	
Approach Delay, s/veh		31.8			45.3			36.4			28.2	
Approach LOS		C			D			D			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	12.2	52.5		30.5	14.0	50.7		30.5				
Change Period (Y+Rc), s	7.0	7.5		7.0	7.0	7.5		7.0				
Max Green Setting (Gmax), s	6.0	45.5		32.0	7.0	44.5		32.0				
Max Q Clear Time (g_c+I1), s	5.9	43.2		4.8	7.6	33.4		22.7				
Green Ext Time (p_c), s	0.0	1.8		0.3	0.0	5.7		0.9				

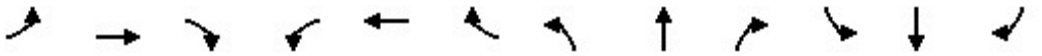
Intersection Summary												
HCM 6th Ctrl Delay			38.7									
HCM 6th LOS			D									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	1060	80	42	1480	32	100	30	33	33	30	50
Future Volume (veh/h)	40	1060	80	42	1480	32	100	30	33	33	30	50
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	1.00		0.97	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	42	1116	81	44	1558	34	105	32	4	35	32	6
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	76	1763	128	78	1873	41	132	155	19	68	91	17
Arrive On Green	0.04	0.53	0.53	0.04	0.53	0.53	0.07	0.10	0.10	0.04	0.06	0.06
Sat Flow, veh/h	1767	3326	241	1767	3525	77	1767	1610	201	1767	1508	283
Grp Volume(v), veh/h	42	591	606	44	778	814	105	0	36	35	0	38
Grp Sat Flow(s),veh/h/ln	1767	1763	1805	1767	1763	1839	1767	0	1812	1767	0	1790
Q Serve(g_s), s	2.1	21.6	21.7	2.2	33.7	33.9	5.3	0.0	1.7	1.8	0.0	1.9
Cycle Q Clear(g_c), s	2.1	21.6	21.7	2.2	33.7	33.9	5.3	0.0	1.7	1.8	0.0	1.9
Prop In Lane	1.00		0.13	1.00		0.04	1.00		0.11	1.00		0.16
Lane Grp Cap(c), veh/h	76	934	956	78	936	977	132	0	174	68	0	108
V/C Ratio(X)	0.55	0.63	0.63	0.56	0.83	0.83	0.79	0.00	0.21	0.51	0.00	0.35
Avail Cap(c_a), veh/h	116	1112	1138	116	1112	1160	155	0	656	136	0	629
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	42.7	15.1	15.2	42.7	17.9	18.0	41.5	0.0	38.0	43.0	0.0	41.1
Incr Delay (d2), s/veh	6.1	1.0	1.0	6.2	4.9	4.8	21.0	0.0	0.6	5.8	0.0	2.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	7.3	7.5	1.0	12.2	12.8	3.1	0.0	0.8	0.9	0.0	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	48.8	16.2	16.2	48.9	22.8	22.8	62.5	0.0	38.6	48.8	0.0	43.1
LnGrp LOS	D	B	B	D	C	C	E	A	D	D	A	D
Approach Vol, veh/h		1239			1636			141			73	
Approach Delay, s/veh		17.3			23.5			56.4			45.8	
Approach LOS		B			C			E			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.9	55.9	12.8	11.5	11.0	55.8	9.5	14.8
Change Period (Y+Rc), s	7.0	7.5	6.0	6.0	7.0	7.5	6.0	6.0
Max Green Setting (Gmax), s	6.0	57.5	8.0	32.0	6.0	57.5	7.0	33.0
Max Q Clear Time (g_c+I1), s	4.1	35.9	7.3	3.9	4.2	23.7	3.8	3.7
Green Ext Time (p_c), s	0.0	12.5	0.0	0.1	0.0	10.2	0.0	0.1

Intersection Summary	
HCM 6th Ctrl Delay	23.0
HCM 6th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	260	802	63	215	1393	321	34	718	293	102	367	126
Future Volume (veh/h)	260	802	63	215	1393	321	34	718	293	102	367	126
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	274	844	22	226	1466	293	36	756	99	107	386	113
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	248	1172	523	161	1083	747	407	813	362	306	478	138
Arrive On Green	0.07	0.33	0.33	0.05	0.31	0.31	0.23	0.23	0.23	0.17	0.17	0.17
Sat Flow, veh/h	3428	3526	1572	3428	3526	1544	1767	3526	1572	1767	2761	798
Grp Volume(v), veh/h	274	844	22	226	1466	293	36	756	99	107	258	241
Grp Sat Flow(s),veh/h/ln	1714	1763	1572	1714	1763	1544	1767	1763	1572	1767	1856	1704
Q Serve(g_s), s	10.0	29.1	1.3	6.5	42.5	16.8	2.2	29.1	7.2	7.4	18.4	18.9
Cycle Q Clear(g_c), s	10.0	29.1	1.3	6.5	42.5	16.8	2.2	29.1	7.2	7.4	18.4	18.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.47
Lane Grp Cap(c), veh/h	248	1172	523	161	1083	747	407	813	362	306	321	295
V/C Ratio(X)	1.11	0.72	0.04	1.40	1.35	0.39	0.09	0.93	0.27	0.35	0.80	0.82
Avail Cap(c_a), veh/h	248	1172	523	161	1083	747	415	828	369	383	402	369
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	64.2	40.5	31.3	65.9	47.9	23.1	41.8	52.1	43.7	50.3	54.9	55.1
Incr Delay (d2), s/veh	88.4	2.3	0.0	214.3	165.2	0.4	0.1	16.8	0.5	0.8	9.6	11.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.3	12.4	0.5	7.5	42.5	8.3	1.0	14.3	2.7	3.3	9.3	8.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	152.6	42.8	31.3	280.2	213.1	23.5	41.9	68.9	44.2	51.2	64.5	66.8
LnGrp LOS	F	D	C	F	F	C	D	E	D	D	E	E
Approach Vol, veh/h		1140			1985			891			606	
Approach Delay, s/veh		69.0			192.8			65.1			63.1	
Approach LOS		E			F			E			E	

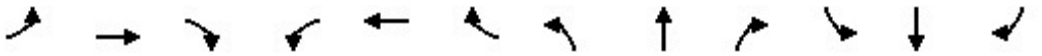
Timer - Assigned Phs	2	3	4	6	7	8
Phs Duration (G+Y+Rc), s	39.4	14.0	53.5	31.5	17.5	50.0
Change Period (Y+Rc), s	7.5	7.5	7.5	7.5	7.5	7.5
Max Green Setting (Gmax), s	32.5	6.5	46.0	30.0	10.0	42.5
Max Q Clear Time (g_c+I1), s	31.1	8.5	31.1	20.9	12.0	44.5
Green Ext Time (p_c), s	0.8	0.0	5.3	2.5	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	120.6
HCM 6th LOS	F

Notes

User approved pedestrian interval to be less than phase max green.

User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	1128	43	23	1874	30	27	0	18	30	0	30
Future Volume (veh/h)	30	1128	43	23	1874	30	27	0	18	30	0	30
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	32	1187	32	24	1973	32	28	0	2	32	0	4
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	64	2428	1079	52	2422	39	162	0	100	164	0	100
Arrive On Green	0.04	0.69	0.69	0.03	0.68	0.68	0.06	0.00	0.06	0.06	0.00	0.06
Sat Flow, veh/h	1767	3526	1567	1767	3549	57	1401	0	1572	1404	0	1572
Grp Volume(v), veh/h	32	1187	32	24	977	1028	28	0	2	32	0	4
Grp Sat Flow(s),veh/h/ln	1767	1763	1567	1767	1763	1844	1401	0	1572	1404	0	1572
Q Serve(g_s), s	1.7	14.9	0.6	1.3	37.2	37.7	1.8	0.0	0.1	2.1	0.0	0.2
Cycle Q Clear(g_c), s	1.7	14.9	0.6	1.3	37.2	37.7	2.0	0.0	0.1	2.2	0.0	0.2
Prop In Lane	1.00		1.00	1.00		0.03	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	64	2428	1079	52	1203	1258	162	0	100	164	0	100
V/C Ratio(X)	0.50	0.49	0.03	0.46	0.81	0.82	0.17	0.00	0.02	0.19	0.00	0.04
Avail Cap(c_a), veh/h	113	2902	1290	113	1451	1518	609	0	601	612	0	601
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	44.5	6.9	4.7	44.9	10.6	10.7	42.3	0.0	41.3	42.3	0.0	41.4
Incr Delay (d2), s/veh	6.0	0.2	0.0	6.1	3.2	3.2	0.5	0.0	0.1	0.6	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	3.7	0.1	0.6	10.5	11.2	0.6	0.0	0.0	0.7	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	50.5	7.1	4.7	51.0	13.9	14.0	42.8	0.0	41.4	42.9	0.0	41.5
LnGrp LOS	D	A	A	D	B	B	D	A	D	D	A	D
Approach Vol, veh/h		1251			2029			30			36	
Approach Delay, s/veh		8.1			14.4			42.7			42.8	
Approach LOS		A			B			D			D	

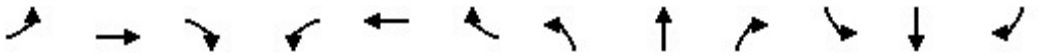
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.4	71.7		12.0	9.8	72.4		12.0				
Change Period (Y+Rc), s	7.0	7.5		6.0	7.0	7.5		6.0				
Max Green Setting (Gmax), s	6.0	77.5		36.0	6.0	77.5		36.0				
Max Q Clear Time (g_c+I1), s	3.7	39.7		4.2	3.3	16.9		4.0				
Green Ext Time (p_c), s	0.0	24.5		0.1	0.0	12.7		0.1				

Intersection Summary												
HCM 6th Ctrl Delay			12.6									
HCM 6th LOS			B									

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1102	74	121	1868	59	84
Future Volume (veh/h)	1102	74	121	1868	59	84
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		0.97	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	1160	44	127	1966	62	12
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	1773	770	162	2509	125	112
Arrive On Green	0.50	0.50	0.09	0.71	0.07	0.07
Sat Flow, veh/h	3618	1531	1767	3618	1767	1572
Grp Volume(v), veh/h	1160	44	127	1966	62	12
Grp Sat Flow(s),veh/h/ln	1763	1531	1767	1763	1767	1572
Q Serve(g_s), s	14.6	0.9	4.2	21.7	2.0	0.4
Cycle Q Clear(g_c), s	14.6	0.9	4.2	21.7	2.0	0.4
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1773	770	162	2509	125	112
V/C Ratio(X)	0.65	0.06	0.79	0.78	0.49	0.11
Avail Cap(c_a), veh/h	2123	922	207	2948	946	842
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	11.0	7.6	26.6	5.6	26.7	26.0
Incr Delay (d2), s/veh	0.6	0.0	14.0	1.3	3.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.8	0.2	2.1	2.2	0.9	0.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	11.6	7.6	40.6	6.9	29.7	26.4
LnGrp LOS	B	A	D	A	C	C
Approach Vol, veh/h	1204			2093	74	
Approach Delay, s/veh	11.5			9.0	29.2	
Approach LOS	B			A	C	

Timer - Assigned Phs	2			5	6	8
Phs Duration (G+Y+Rc), s	50.0			12.5	37.6	9.7
Change Period (Y+Rc), s	7.5			7.0	7.5	5.5
Max Green Setting (Gmax), s	50.0			7.0	36.0	32.0
Max Q Clear Time (g_c+I1), s	23.7			6.2	16.6	4.0
Green Ext Time (p_c), s	18.8			0.0	8.7	0.2

Intersection Summary	
HCM 6th Ctrl Delay	10.3
HCM 6th LOS	B



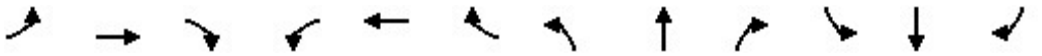
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	82	1092	12	80	1874	30	63	10	230	20	10	53
Future Volume (veh/h)	82	1092	12	80	1874	30	63	10	230	20	10	53
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	0.99		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	86	1149	13	84	1973	32	66	11	128	21	11	11
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	114	2065	23	113	2052	33	118	30	165	149	77	59
Arrive On Green	0.06	0.58	0.58	0.06	0.58	0.58	0.17	0.17	0.17	0.17	0.17	0.17
Sat Flow, veh/h	1767	3569	40	1767	3549	57	398	172	947	544	446	340
Grp Volume(v), veh/h	86	567	595	84	977	1028	205	0	0	43	0	0
Grp Sat Flow(s),veh/h/ln	1767	1763	1847	1767	1763	1843	1517	0	0	1330	0	0
Q Serve(g_s), s	4.7	19.6	19.6	4.6	51.4	52.2	9.7	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	4.7	19.6	19.6	4.6	51.4	52.2	12.6	0.0	0.0	2.0	0.0	0.0
Prop In Lane	1.00		0.02	1.00		0.03	0.32		0.62	0.49		0.26
Lane Grp Cap(c), veh/h	114	1020	1069	113	1019	1066	312	0	0	286	0	0
V/C Ratio(X)	0.75	0.56	0.56	0.74	0.96	0.96	0.66	0.00	0.00	0.15	0.00	0.00
Avail Cap(c_a), veh/h	126	1020	1069	216	1025	1072	479	0	0	446	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	45.1	12.8	12.8	45.1	19.6	19.7	38.6	0.0	0.0	34.3	0.0	0.0
Incr Delay (d2), s/veh	20.5	0.7	0.6	9.1	18.8	19.4	1.8	0.0	0.0	0.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	6.4	6.7	2.2	22.2	23.7	4.8	0.0	0.0	0.9	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	65.5	13.5	13.5	54.2	38.4	39.2	40.3	0.0	0.0	34.5	0.0	0.0
LnGrp LOS	E	B	B	D	D	D	D	A	A	C	A	A
Approach Vol, veh/h		1248			2089			205			43	
Approach Delay, s/veh		17.1			39.4			40.3			34.5	
Approach LOS		B			D			D			C	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		23.0	11.3	63.7		23.0	11.3	63.7				
Change Period (Y+Rc), s		6.0	5.0	7.0		6.0	5.0	7.0				
Max Green Setting (Gmax), s		28.0	12.0	52.0		28.0	7.0	57.0				
Max Q Clear Time (g_c+I1), s		14.6	6.6	21.6		4.0	6.7	54.2				
Green Ext Time (p_c), s		0.8	0.1	7.5		0.1	0.0	2.5				

Intersection Summary		
HCM 6th Ctrl Delay		31.6
HCM 6th LOS		C

Notes

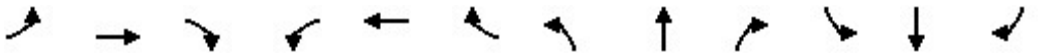
User approved pedestrian interval to be less than phase max green.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	382	789	171	400	1157	230	481	1839	121	110	653	346
Future Volume (veh/h)	382	789	171	400	1157	230	481	1839	121	110	653	346
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	1.00		0.98	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	402	831	87	421	1218	231	506	1936	123	116	687	301
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	280	863	375	421	955	180	362	1704	108	93	681	293
Arrive On Green	0.16	0.25	0.25	0.24	0.33	0.33	0.21	0.35	0.35	0.05	0.20	0.20
Sat Flow, veh/h	1753	3497	1520	1753	2925	550	1753	4822	305	1753	3405	1465
Grp Volume(v), veh/h	402	831	87	421	724	725	506	1343	716	116	676	312
Grp Sat Flow(s),veh/h/ln	1753	1749	1520	1753	1749	1726	1753	1675	1777	1753	1675	1520
Q Serve(g_s), s	24.0	35.2	6.9	36.0	49.0	49.0	31.0	53.0	53.0	8.0	30.0	30.0
Cycle Q Clear(g_c), s	24.0	35.2	6.9	36.0	49.0	49.0	31.0	53.0	53.0	8.0	30.0	30.0
Prop In Lane	1.00		1.00	1.00		0.32	1.00		0.17	1.00		0.96
Lane Grp Cap(c), veh/h	280	863	375	421	571	564	362	1184	628	93	670	304
V/C Ratio(X)	1.43	0.96	0.23	1.00	1.27	1.29	1.40	1.13	1.14	1.24	1.01	1.03
Avail Cap(c_a), veh/h	280	863	375	421	571	564	362	1184	628	93	670	304
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	63.0	55.8	45.1	57.0	50.5	50.5	59.5	48.5	48.5	71.0	60.0	60.0
Incr Delay (d2), s/veh	214.3	22.3	0.7	44.0	133.7	141.9	194.5	71.3	81.5	171.1	36.9	58.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	27.1	17.7	2.6	20.6	41.8	42.5	32.9	32.9	36.7	8.0	15.8	16.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	277.3	78.2	45.8	101.0	184.2	192.4	254.0	119.8	130.0	242.1	96.9	118.8
LnGrp LOS	F	E	D	F	F	F	F	F	F	F	F	F
Approach Vol, veh/h		1320			1870			2565			1104	
Approach Delay, s/veh		136.7			168.6			149.1			118.4	
Approach LOS		F			F			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.0	57.0	40.0	41.0	35.0	34.0	28.0	53.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	8.0	53.0	36.0	37.0	31.0	30.0	24.0	49.0
Max Q Clear Time (g_c+I1), s	10.0	55.0	38.0	37.2	33.0	32.0	26.0	51.0
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	147.1
HCM 6th LOS	F



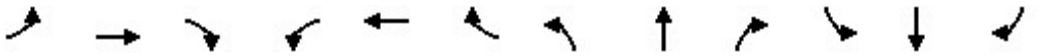
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	260	725	35	500	1030	380	173	730	210	310	540	384
Future Volume (veh/h)	260	725	35	500	1030	380	173	730	210	310	540	384
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	274	763	36	526	1084	307	182	768	204	326	568	323
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	262	785	37	498	1051	460	210	815	216	391	629	358
Arrive On Green	0.08	0.23	0.23	0.15	0.30	0.30	0.12	0.30	0.30	0.11	0.29	0.29
Sat Flow, veh/h	3428	3424	161	3428	3526	1544	1767	2743	728	3428	2150	1222
Grp Volume(v), veh/h	274	393	406	526	1084	307	182	494	478	326	466	425
Grp Sat Flow(s),veh/h/ln	1714	1763	1823	1714	1763	1544	1767	1763	1708	1714	1763	1608
Q Serve(g_s), s	10.0	28.9	28.9	19.0	39.0	22.8	13.2	35.8	35.8	12.2	33.2	33.3
Cycle Q Clear(g_c), s	10.0	28.9	28.9	19.0	39.0	22.8	13.2	35.8	35.8	12.2	33.2	33.3
Prop In Lane	1.00		0.09	1.00		1.00	1.00		0.43	1.00		0.76
Lane Grp Cap(c), veh/h	262	404	418	498	1051	460	210	524	508	391	516	471
V/C Ratio(X)	1.05	0.97	0.97	1.06	1.03	0.67	0.87	0.94	0.94	0.83	0.90	0.90
Avail Cap(c_a), veh/h	262	404	418	498	1051	460	446	539	522	865	539	492
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	60.4	50.0	50.0	55.9	45.9	40.2	56.6	44.9	44.9	56.7	44.5	44.5
Incr Delay (d2), s/veh	68.0	37.2	36.6	56.0	36.1	3.7	8.0	24.7	25.2	3.5	17.7	19.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.7	16.4	16.9	11.8	21.5	8.8	6.2	18.7	18.2	5.3	16.6	15.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	128.4	87.1	86.6	111.9	82.0	43.9	64.6	69.6	70.1	60.2	62.2	63.7
LnGrp LOS	F	F	F	F	F	D	E	E	E	E	E	E
Approach Vol, veh/h		1073			1917			1154			1217	
Approach Delay, s/veh		97.5			84.1			69.0			62.2	
Approach LOS		F			F			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	21.9	45.9	26.0	37.0	22.5	45.3	17.0	46.0
Change Period (Y+Rc), s	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Max Green Setting (Gmax), s	33.0	40.0	19.0	30.0	33.0	40.0	10.0	39.0
Max Q Clear Time (g_c+I1), s	14.2	37.8	21.0	30.9	15.2	35.3	12.0	41.0
Green Ext Time (p_c), s	0.8	1.1	0.0	0.0	0.3	1.9	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	78.5
HCM 6th LOS	E

Notes

User approved pedestrian interval to be less than phase max green.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	120	591	100	266	1169	196	390	2134	230	179	1742	120
Future Volume (veh/h)	120	591	100	266	1169	196	390	2134	230	179	1742	120
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	126	622	91	280	1231	192	411	2246	118	188	1834	39
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	88	947	138	88	938	145	340	1893	458	1198	5700	1402
Arrive On Green	0.05	0.31	0.31	0.05	0.31	0.31	0.10	0.30	0.30	0.68	0.90	0.90
Sat Flow, veh/h	1753	3054	446	1753	3026	469	3401	6332	1531	1753	6332	1557
Grp Volume(v), veh/h	126	356	357	280	708	715	411	2246	118	188	1834	39
Grp Sat Flow(s),veh/h/ln	1753	1749	1751	1753	1749	1746	1700	1583	1531	1753	1583	1557
Q Serve(g_s), s	5.0	17.6	17.7	5.0	31.0	31.0	10.0	29.9	9.4	3.8	4.1	0.3
Cycle Q Clear(g_c), s	5.0	17.6	17.7	5.0	31.0	31.0	10.0	29.9	9.4	3.8	4.1	0.3
Prop In Lane	1.00		0.25	1.00		0.27	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	88	542	543	88	542	541	340	1893	458	1198	5700	1402
V/C Ratio(X)	1.44	0.66	0.66	3.19	1.31	1.32	1.21	1.19	0.26	0.16	0.32	0.03
Avail Cap(c_a), veh/h	88	542	543	88	542	541	340	1893	458	1198	5700	1402
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.5	29.9	29.9	47.5	34.5	34.5	45.0	35.0	69.2	5.6	0.7	0.5
Incr Delay (d2), s/veh	250.0	2.9	2.9	1016.5	150.8	156.9	118.2	89.5	1.4	0.0	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.2	7.5	7.5	26.8	34.8	35.6	9.6	22.4	3.7	1.1	0.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	297.5	32.7	32.8	1064.0	185.3	191.4	163.2	124.6	70.6	5.6	0.9	0.5
LnGrp LOS	F	C	C	F	F	F	F	F	E	A	A	A
Approach Vol, veh/h		839			1703			2775			2061	
Approach Delay, s/veh		72.5			332.3			128.0			1.3	
Approach LOS		E			F			F			A	

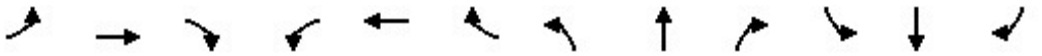
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	76.6	36.4	10.7	38.2	14.7	98.3	10.7	38.2
Change Period (Y+Rc), s	6.5	* 6.5	* 5.7	7.2	* 4.7	6.5	* 5.7	7.2
Max Green Setting (Gmax), s	10.0	* 30	* 5	31.0	* 10	29.9	* 5	31.0
Max Q Clear Time (g_c+I1), s	5.8	31.9	7.0	19.7	12.0	6.1	7.0	33.0
Green Ext Time (p_c), s	0.1	0.0	0.0	3.2	0.0	14.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	133.5
HCM 6th LOS	F

Notes

User approved pedestrian interval to be less than phase max green.

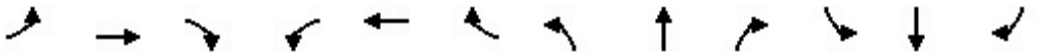
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	170	820	120	92	1201	34	70	601	74	75	241	60
Future Volume (veh/h)	170	820	120	92	1201	34	70	601	74	75	241	60
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	179	863	118	97	1264	35	74	633	71	79	254	46
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	175	1270	174	120	1322	37	88	745	83	88	696	124
Arrive On Green	0.10	0.41	0.41	0.07	0.38	0.38	0.05	0.23	0.23	0.05	0.23	0.23
Sat Flow, veh/h	1767	3108	425	1767	3502	97	1767	3188	357	1767	2979	531
Grp Volume(v), veh/h	179	489	492	97	636	663	74	350	354	79	149	151
Grp Sat Flow(s),veh/h/ln	1767	1763	1771	1767	1763	1836	1767	1763	1783	1767	1763	1747
Q Serve(g_s), s	12.0	27.5	27.5	6.5	42.5	42.5	5.0	22.9	23.0	5.4	8.5	8.8
Cycle Q Clear(g_c), s	12.0	27.5	27.5	6.5	42.5	42.5	5.0	22.9	23.0	5.4	8.5	8.8
Prop In Lane	1.00		0.24	1.00		0.05	1.00		0.20	1.00		0.30
Lane Grp Cap(c), veh/h	175	720	724	120	666	693	88	412	416	88	412	408
V/C Ratio(X)	1.02	0.68	0.68	0.81	0.96	0.96	0.84	0.85	0.85	0.90	0.36	0.37
Avail Cap(c_a), veh/h	175	720	724	146	671	699	88	467	472	88	467	462
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	54.4	29.3	29.3	55.5	36.6	36.7	57.0	44.3	44.3	57.1	38.8	38.9
Incr Delay (d2), s/veh	73.4	2.7	2.7	23.1	24.2	23.8	49.2	13.0	13.1	64.4	0.6	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.7	11.4	11.5	3.6	21.5	22.4	3.4	11.1	11.2	3.9	3.6	3.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	127.8	32.0	32.0	78.7	60.8	60.5	106.2	57.2	57.4	121.5	39.4	39.5
LnGrp LOS	F	C	C	E	E	E	F	E	E	F	D	D
Approach Vol, veh/h		1160			1396			778			379	
Approach Delay, s/veh		46.8			61.9			62.0			56.6	
Approach LOS		D			E			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	19.0	53.1	13.0	35.7	15.2	56.9	13.0	35.7
Change Period (Y+Rc), s	7.0	7.5	7.0	7.5	7.0	7.5	7.0	7.5
Max Green Setting (Gmax), s	12.0	46.0	6.0	32.0	10.0	48.0	6.0	32.0
Max Q Clear Time (g_c+I1), s	14.0	44.5	7.0	10.8	8.5	29.5	7.4	25.0
Green Ext Time (p_c), s	0.0	1.1	0.0	1.7	0.0	6.5	0.0	2.5

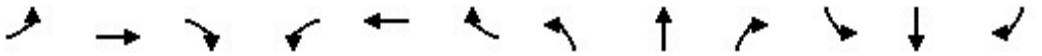
Intersection Summary	
HCM 6th Ctrl Delay	56.6
HCM 6th LOS	E



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	100	859	70	92	1167	50	30	340	84	50	300	30
Future Volume (veh/h)	100	859	70	92	1167	50	30	340	84	50	300	30
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	105	904	70	97	1228	52	32	358	68	53	316	26
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	128	1329	103	123	1373	58	63	538	101	83	638	52
Arrive On Green	0.07	0.40	0.40	0.07	0.40	0.40	0.04	0.18	0.18	0.05	0.19	0.19
Sat Flow, veh/h	1767	3311	256	1767	3443	146	1767	2950	554	1767	3294	269
Grp Volume(v), veh/h	105	481	493	97	628	652	32	212	214	53	168	174
Grp Sat Flow(s),veh/h/ln	1767	1763	1804	1767	1763	1826	1767	1763	1741	1767	1763	1800
Q Serve(g_s), s	5.7	21.8	21.8	5.2	32.2	32.3	1.7	10.8	11.1	2.9	8.2	8.3
Cycle Q Clear(g_c), s	5.7	21.8	21.8	5.2	32.2	32.3	1.7	10.8	11.1	2.9	8.2	8.3
Prop In Lane	1.00		0.14	1.00		0.08	1.00		0.32	1.00		0.15
Lane Grp Cap(c), veh/h	128	708	724	123	703	728	63	322	318	83	342	349
V/C Ratio(X)	0.82	0.68	0.68	0.79	0.89	0.90	0.51	0.66	0.67	0.64	0.49	0.50
Avail Cap(c_a), veh/h	128	708	725	164	744	771	109	584	577	109	584	597
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.3	23.9	23.9	44.4	27.2	27.2	45.9	36.8	36.9	45.3	34.8	34.8
Incr Delay (d2), s/veh	33.2	2.8	2.7	16.8	13.0	12.8	6.1	2.8	3.0	7.8	1.3	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.5	8.7	8.9	2.8	14.6	15.2	0.8	4.6	4.7	1.4	3.5	3.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	77.5	26.7	26.6	61.1	40.2	40.0	52.0	39.6	39.9	53.2	36.1	36.2
LnGrp LOS	E	C	C	E	D	D	D	D	D	D	D	D
Approach Vol, veh/h		1079			1377			458			395	
Approach Delay, s/veh		31.6			41.6			40.6			38.4	
Approach LOS		C			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.0	46.1	10.5	26.3	13.7	46.4	11.6	25.2
Change Period (Y+Rc), s	7.0	7.5	7.0	7.5	7.0	7.5	7.0	7.5
Max Green Setting (Gmax), s	7.0	40.9	6.0	32.1	9.0	38.9	6.0	32.1
Max Q Clear Time (g_c+I1), s	7.7	34.3	3.7	10.3	7.2	23.8	4.9	13.1
Green Ext Time (p_c), s	0.0	4.3	0.0	2.0	0.0	5.8	0.0	2.5

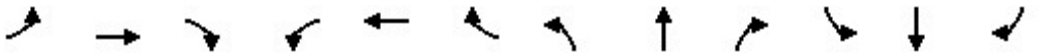
Intersection Summary	
HCM 6th Ctrl Delay	37.8
HCM 6th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	232	755	30	53	1106	18	30	783	6	112	472	60
Future Volume (veh/h)	232	755	30	53	1106	18	30	783	6	112	472	60
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	244	795	31	56	1164	19	32	824	6	118	497	51
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	262	1576	61	72	1236	20	56	1073	8	124	1144	116
Arrive On Green	0.15	0.46	0.46	0.04	0.35	0.35	0.03	0.21	0.21	0.07	0.25	0.25
Sat Flow, veh/h	1767	3457	135	1767	3549	58	1767	5187	38	1767	4665	472
Grp Volume(v), veh/h	244	405	421	56	578	605	32	536	294	118	358	190
Grp Sat Flow(s),veh/h/ln	1767	1763	1829	1767	1763	1844	1767	1689	1848	1767	1689	1759
Q Serve(g_s), s	17.5	20.8	20.8	4.0	40.8	40.8	2.3	19.2	19.2	8.5	11.5	11.7
Cycle Q Clear(g_c), s	17.5	20.8	20.8	4.0	40.8	40.8	2.3	19.2	19.2	8.5	11.5	11.7
Prop In Lane	1.00		0.07	1.00		0.03	1.00		0.02	1.00		0.27
Lane Grp Cap(c), veh/h	262	804	834	72	614	642	56	699	382	124	828	431
V/C Ratio(X)	0.93	0.50	0.50	0.78	0.94	0.94	0.57	0.77	0.77	0.95	0.43	0.44
Avail Cap(c_a), veh/h	262	804	834	124	626	655	83	857	469	124	936	487
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.9	24.6	24.6	60.9	40.5	40.5	61.2	47.9	47.9	59.4	40.8	40.9
Incr Delay (d2), s/veh	37.5	0.6	0.6	16.3	22.5	21.9	8.7	3.7	6.6	65.4	0.4	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.2	8.3	8.6	2.1	20.5	21.4	1.1	8.1	9.2	6.0	4.7	5.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	91.4	25.2	25.2	77.2	63.0	62.4	69.9	51.6	54.5	124.7	41.3	41.8
LnGrp LOS	F	C	C	E	E	E	E	D	D	F	D	D
Approach Vol, veh/h		1070			1239			862			666	
Approach Delay, s/veh		40.3			63.4			53.3			56.2	
Approach LOS		D			E			D			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.0	34.0	12.2	65.9	11.1	38.9	26.0	52.1
Change Period (Y+Rc), s	7.0	7.5	7.0	7.5	7.0	7.5	7.0	7.5
Max Green Setting (Gmax), s	9.0	32.5	9.0	55.5	6.0	35.5	19.0	45.5
Max Q Clear Time (g_c+I1), s	10.5	21.2	6.0	22.8	4.3	13.7	19.5	42.8
Green Ext Time (p_c), s	0.0	4.2	0.0	6.2	0.0	3.6	0.0	1.9

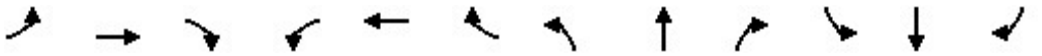
Intersection Summary	
HCM 6th Ctrl Delay	53.4
HCM 6th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	82	963	30	70	968	97	70	33	220	88	32	76
Future Volume (veh/h)	82	963	30	70	968	97	70	33	220	88	32	76
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	86	1014	31	74	1019	40	74	35	79	93	34	15
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	121	1317	40	114	1317	577	114	219	180	125	150	66
Arrive On Green	0.07	0.38	0.38	0.06	0.37	0.37	0.06	0.12	0.12	0.07	0.12	0.12
Sat Flow, veh/h	1767	3489	107	1767	3526	1546	1767	1856	1528	1767	1209	533
Grp Volume(v), veh/h	86	512	533	74	1019	40	74	35	79	93	0	49
Grp Sat Flow(s),veh/h/ln	1767	1763	1833	1767	1763	1546	1767	1856	1528	1767	0	1742
Q Serve(g_s), s	3.4	18.3	18.3	2.9	18.3	1.2	2.9	1.2	3.4	3.7	0.0	1.8
Cycle Q Clear(g_c), s	3.4	18.3	18.3	2.9	18.3	1.2	2.9	1.2	3.4	3.7	0.0	1.8
Prop In Lane	1.00		0.06	1.00		1.00	1.00		1.00	1.00		0.31
Lane Grp Cap(c), veh/h	121	665	692	114	1317	577	114	219	180	125	0	216
V/C Ratio(X)	0.71	0.77	0.77	0.65	0.77	0.07	0.65	0.16	0.44	0.75	0.00	0.23
Avail Cap(c_a), veh/h	148	848	882	148	1696	743	148	828	682	148	0	777
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	32.7	19.6	19.6	32.8	19.8	14.5	32.8	28.4	29.4	32.7	0.0	28.3
Incr Delay (d2), s/veh	11.5	3.6	3.5	6.1	1.9	0.1	6.1	0.3	1.7	15.6	0.0	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	6.9	7.1	1.3	6.6	0.4	1.4	0.5	1.2	2.1	0.0	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	44.2	23.2	23.1	38.9	21.7	14.5	38.9	28.8	31.1	48.3	0.0	28.8
LnGrp LOS	D	C	C	D	C	B	D	C	C	D	A	C
Approach Vol, veh/h		1131			1133			188			142	
Approach Delay, s/veh		24.8			22.6			33.7			41.6	
Approach LOS		C			C			C			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.9	34.3	10.6	14.9	11.6	34.6	11.1	14.5
Change Period (Y+Rc), s	7.0	7.5	6.0	6.0	7.0	7.5	6.0	6.0
Max Green Setting (Gmax), s	6.0	34.5	6.0	32.0	6.0	34.5	6.0	32.0
Max Q Clear Time (g_c+I1), s	5.4	20.3	4.9	3.8	4.9	20.3	5.7	5.4
Green Ext Time (p_c), s	0.0	6.5	0.0	0.2	0.0	6.1	0.0	0.4

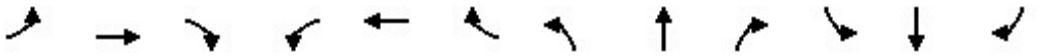
Intersection Summary	
HCM 6th Ctrl Delay	25.4
HCM 6th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	270	682	240	170	403	211	454	1960	100	120	970	233
Future Volume (veh/h)	270	682	240	170	403	211	454	1960	100	120	970	233
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.99	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	284	718	230	179	424	177	478	2063	102	126	1021	218
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	291	670	215	163	446	184	405	1876	92	127	927	198
Arrive On Green	0.17	0.26	0.26	0.09	0.19	0.19	0.23	0.38	0.38	0.07	0.22	0.22
Sat Flow, veh/h	1753	2591	830	1753	2402	992	1753	4901	241	1753	4136	882
Grp Volume(v), veh/h	284	485	463	179	307	294	478	1407	758	126	827	412
Grp Sat Flow(s),veh/h/ln	1753	1749	1672	1753	1749	1645	1753	1675	1792	1753	1675	1667
Q Serve(g_s), s	23.4	37.5	37.5	13.5	25.2	25.7	33.5	55.5	55.5	10.4	32.5	32.5
Cycle Q Clear(g_c), s	23.4	37.5	37.5	13.5	25.2	25.7	33.5	55.5	55.5	10.4	32.5	32.5
Prop In Lane	1.00		0.50	1.00		0.60	1.00		0.13	1.00		0.53
Lane Grp Cap(c), veh/h	291	452	432	163	324	305	405	1282	686	127	751	374
V/C Ratio(X)	0.97	1.07	1.07	1.10	0.95	0.96	1.18	1.10	1.10	0.99	1.10	1.10
Avail Cap(c_a), veh/h	291	452	432	163	324	305	405	1282	686	127	751	374
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	60.1	53.8	53.8	65.8	58.3	58.5	55.8	44.8	44.8	67.2	56.3	56.3
Incr Delay (d2), s/veh	45.5	62.8	63.7	98.7	36.4	41.4	103.8	56.2	66.5	77.4	64.0	77.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	13.9	24.1	23.1	10.4	14.3	14.0	26.0	31.9	36.1	7.3	20.0	21.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	105.6	116.5	117.5	164.4	94.8	100.0	159.6	101.0	111.3	144.6	120.2	133.6
LnGrp LOS	F	F	F	F	F	F	F	F	F	F	F	F
Approach Vol, veh/h		1232			780			2643			1365	
Approach Delay, s/veh		114.4			112.7			114.5			126.5	
Approach LOS		F			F			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.0	63.0	20.0	44.0	41.0	40.0	30.6	33.4
Change Period (Y+Rc), s	7.5	7.5	6.5	6.5	7.5	7.5	6.5	6.5
Max Green Setting (Gmax), s	10.5	55.5	13.5	37.5	33.5	32.5	24.1	26.9
Max Q Clear Time (g_c+I1), s	12.4	57.5	15.5	39.5	35.5	34.5	25.4	27.7
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	117.0
HCM 6th LOS	F



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	157	822	220	282	1662	670	170	1557	132	540	1514	124
Future Volume (veh/h)	157	822	220	282	1662	670	170	1557	132	540	1514	124
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	165	865	193	297	1749	670	179	1639	72	568	1594	50
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	244	1471	560	321	1583	677	244	2042	494	423	2375	575
Arrive On Green	0.07	0.29	0.29	0.09	0.32	0.32	0.07	0.32	0.32	0.12	0.38	0.38
Sat Flow, veh/h	3401	5025	1531	3401	5025	1532	3401	6332	1532	3401	6332	1533
Grp Volume(v), veh/h	165	865	193	297	1749	670	179	1639	72	568	1594	50
Grp Sat Flow(s),veh/h/ln	1700	1675	1531	1700	1675	1532	1700	1583	1532	1700	1583	1533
Q Serve(g_s), s	6.6	20.4	12.7	12.0	43.8	43.8	7.2	32.9	4.6	17.3	29.2	2.9
Cycle Q Clear(g_c), s	6.6	20.4	12.7	12.0	43.8	43.8	7.2	32.9	4.6	17.3	29.2	2.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	244	1471	560	321	1583	677	244	2042	494	423	2375	575
V/C Ratio(X)	0.68	0.59	0.34	0.93	1.10	0.99	0.73	0.80	0.15	1.34	0.67	0.09
Avail Cap(c_a), veh/h	245	1471	560	321	1583	677	323	2314	560	423	2501	606
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	62.9	42.0	32.1	62.5	47.6	38.8	63.2	43.1	33.5	60.9	36.3	28.1
Incr Delay (d2), s/veh	5.9	0.6	0.4	31.4	57.0	32.0	3.5	1.9	0.1	169.1	0.7	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.0	8.3	4.7	6.5	26.0	27.5	3.1	12.5	1.7	17.1	10.8	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	68.8	42.6	32.5	93.9	104.6	70.7	66.7	45.0	33.6	229.9	36.9	28.1
LnGrp LOS	E	D	C	F	F	E	E	D	C	F	D	C
Approach Vol, veh/h		1223			2716			1890			2212	
Approach Delay, s/veh		44.6			95.1			46.6			86.3	
Approach LOS		D			F			D			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	22.0	51.3	17.8	47.9	14.7	58.6	14.7	51.0
Change Period (Y+Rc), s	* 4.7	6.5	* 4.7	7.2	* 4.7	6.5	* 4.7	7.2
Max Green Setting (Gmax), s	* 17	50.8	* 13	40.7	* 13	54.9	* 10	43.8
Max Q Clear Time (g_c+I1), s	19.3	34.9	14.0	22.4	9.2	31.2	8.6	45.8
Green Ext Time (p_c), s	0.0	9.5	0.0	6.0	0.1	11.6	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	73.6
HCM 6th LOS	E

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	245	1460	150	190	2230	100	50	300	30	50	270	133
Future Volume (veh/h)	245	1460	150	190	2230	100	50	300	30	50	270	133
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	258	1537	153	200	2347	0	53	316	4	53	284	21
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	247	2571	623	229	2506	617	75	581	7	75	542	40
Arrive On Green	0.14	0.41	0.41	0.13	0.40	0.00	0.04	0.16	0.16	0.04	0.16	0.16
Sat Flow, veh/h	1753	6332	1534	1753	6332	1560	1753	3535	45	1753	3297	242
Grp Volume(v), veh/h	258	1537	153	200	2347	0	53	156	164	53	150	155
Grp Sat Flow(s),veh/h/ln	1753	1583	1534	1753	1583	1560	1753	1749	1831	1753	1749	1790
Q Serve(g_s), s	16.0	21.6	7.5	12.7	40.4	0.0	3.4	9.3	9.3	3.4	8.9	9.0
Cycle Q Clear(g_c), s	16.0	21.6	7.5	12.7	40.4	0.0	3.4	9.3	9.3	3.4	8.9	9.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.02	1.00		0.14
Lane Grp Cap(c), veh/h	247	2571	623	229	2506	617	75	288	301	75	288	294
V/C Ratio(X)	1.04	0.60	0.25	0.87	0.94	0.00	0.70	0.54	0.54	0.70	0.52	0.53
Avail Cap(c_a), veh/h	247	2571	623	278	2513	619	93	756	791	93	756	774
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	48.7	26.4	22.2	48.4	32.9	0.0	53.5	43.5	43.5	53.5	43.3	43.3
Incr Delay (d2), s/veh	68.9	0.4	0.2	21.8	7.6	0.0	16.6	1.9	1.8	16.6	1.8	1.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.4	7.7	2.6	6.7	15.5	0.0	1.8	4.0	4.2	1.8	3.8	4.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	117.6	26.8	22.5	70.1	40.5	0.0	70.1	45.4	45.3	70.1	45.0	45.1
LnGrp LOS	F	C	C	E	D	A	E	D	D	E	D	D
Approach Vol, veh/h		1948			2547			373			358	
Approach Delay, s/veh		38.5			42.8			48.9			48.8	
Approach LOS		D			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	23.0	52.4	11.9	26.1	21.8	53.5	11.9	26.1
Change Period (Y+Rc), s	7.0	7.5	7.0	7.5	7.0	7.5	7.0	7.5
Max Green Setting (Gmax), s	16.0	45.0	6.0	49.0	18.0	43.0	6.0	49.0
Max Q Clear Time (g_c+I1), s	18.0	42.4	5.4	11.0	14.7	23.6	5.4	11.3
Green Ext Time (p_c), s	0.0	2.5	0.0	2.0	0.2	12.1	0.0	2.0

Intersection Summary	
HCM 6th Ctrl Delay	42.0
HCM 6th LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	410	1571	290	400	1548	377	260	1487	360	240	680	460
Future Volume (veh/h)	410	1571	290	400	1548	377	260	1487	360	240	680	460
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	432	1654	0	421	1629	357	274	1565	0	253	716	309
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	402	1784		464	1565	343	332	1508		239	1702	519
Arrive On Green	0.12	0.28	0.00	0.14	0.30	0.30	0.10	0.30	0.00	0.14	0.34	0.34
Sat Flow, veh/h	3401	6332	1560	3401	5216	1143	3401	5025	1560	1753	5025	1532
Grp Volume(v), veh/h	432	1654	0	421	1483	503	274	1565	0	253	716	309
Grp Sat Flow(s),veh/h/ln	1700	1583	1560	1700	1583	1610	1700	1675	1560	1753	1675	1532
Q Serve(g_s), s	13.0	27.9	0.0	13.4	33.0	33.0	8.7	33.0	0.0	15.0	12.1	18.4
Cycle Q Clear(g_c), s	13.0	27.9	0.0	13.4	33.0	33.0	8.7	33.0	0.0	15.0	12.1	18.4
Prop In Lane	1.00		1.00	1.00		0.71	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	402	1784		464	1425	483	332	1508		239	1702	519
V/C Ratio(X)	1.07	0.93		0.91	1.04	1.04	0.82	1.04		1.06	0.42	0.60
Avail Cap(c_a), veh/h	402	1784		464	1425	483	340	1508		239	1702	519
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	48.5	38.4	0.0	46.8	38.5	38.5	48.7	38.5	0.0	47.5	28.1	30.1
Incr Delay (d2), s/veh	66.3	9.2	0.0	22.4	35.3	52.1	16.6	33.7	0.0	74.4	0.4	2.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.0	11.3	0.0	6.9	16.6	19.1	4.3	17.2	0.0	11.1	4.6	6.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	114.8	47.6	0.0	69.2	73.8	90.6	65.3	72.2	0.0	121.9	28.4	33.0
LnGrp LOS	F	D		E	F	F	E	F		F	C	C
Approach Vol, veh/h		2086	A		2407			1839	A		1278	
Approach Delay, s/veh		61.5			76.5			71.2			48.0	
Approach LOS		E			E			E			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	19.0	37.0	19.0	35.0	14.8	41.2	17.0	37.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	15.0	33.0	15.0	31.0	11.0	37.0	13.0	33.0
Max Q Clear Time (g_c+I1), s	17.0	35.0	15.4	29.9	10.7	20.4	15.0	35.0
Green Ext Time (p_c), s	0.0	0.0	0.0	1.0	0.1	8.7	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	66.3
HCM 6th LOS	E

Notes

Unsignalized Delay for [NBR, EBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	400	1665	106	170	1797	302	108	312	110	424	311	270
Future Volume (veh/h)	400	1665	106	170	1797	302	108	312	110	424	311	270
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	421	1753	107	179	1892	140	114	328	88	446	327	165
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	374	2085	127	231	1884	456	139	492	130	350	679	335
Arrive On Green	0.11	0.34	0.34	0.07	0.30	0.30	0.08	0.18	0.18	0.20	0.30	0.30
Sat Flow, veh/h	3401	6140	375	3401	6332	1531	1753	2723	718	1753	2254	1111
Grp Volume(v), veh/h	421	1356	504	179	1892	140	114	209	207	446	252	240
Grp Sat Flow(s),veh/h/ln	1700	1583	1765	1700	1583	1531	1753	1749	1692	1753	1749	1616
Q Serve(g_s), s	13.5	32.4	32.4	6.4	36.5	8.7	7.9	13.6	14.0	24.5	14.4	15.0
Cycle Q Clear(g_c), s	13.5	32.4	32.4	6.4	36.5	8.7	7.9	13.6	14.0	24.5	14.4	15.0
Prop In Lane	1.00		0.21	1.00		1.00	1.00		0.42	1.00		0.69
Lane Grp Cap(c), veh/h	374	1613	600	231	1884	456	139	316	306	350	527	487
V/C Ratio(X)	1.12	0.84	0.84	0.77	1.00	0.31	0.82	0.66	0.68	1.27	0.48	0.49
Avail Cap(c_a), veh/h	374	1613	600	236	1884	456	259	706	683	350	797	737
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	54.6	37.4	37.4	56.2	43.1	33.3	55.6	46.8	46.9	49.1	35.0	35.2
Incr Delay (d2), s/veh	84.8	4.3	10.7	13.2	21.7	0.5	4.5	0.9	1.0	143.7	0.3	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.0	12.5	15.0	3.0	16.2	3.1	3.6	5.8	5.8	24.3	6.0	5.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	139.4	41.8	48.2	69.4	64.8	33.8	60.1	47.6	47.9	192.8	35.2	35.5
LnGrp LOS	F	D	D	E	F	C	E	D	D	F	D	D
Approach Vol, veh/h		2281			2211			530			938	
Approach Delay, s/veh		61.2			63.2			50.4			110.2	
Approach LOS		E			E			D			F	

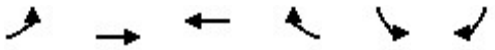
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	31.0	28.7	14.8	48.2	16.2	43.4	20.0	43.0
Change Period (Y+Rc), s	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
Max Green Setting (Gmax), s	24.5	49.5	8.5	41.5	18.1	55.9	13.5	36.5
Max Q Clear Time (g_c+I1), s	26.5	16.0	8.4	34.4	9.9	17.0	15.5	38.5
Green Ext Time (p_c), s	0.0	1.4	0.0	6.1	0.1	1.8	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	68.7
HCM 6th LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	316	1694	157	373	1889	270	179	1184	508	280	407	191
Future Volume (veh/h)	316	1694	157	373	1889	270	179	1184	508	280	407	191
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	333	1783	156	393	1988	163	188	1246	383	295	428	48
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	329	2099	184	429	1916	585	234	1189	362	290	1272	387
Arrive On Green	0.10	0.35	0.35	0.13	0.38	0.38	0.07	0.24	0.24	0.09	0.25	0.25
Sat Flow, veh/h	3401	5963	522	3401	5025	1533	3401	5025	1529	3401	5025	1529
Grp Volume(v), veh/h	333	1420	519	393	1988	163	188	1246	383	295	428	48
Grp Sat Flow(s),veh/h/ln	1700	1583	1736	1700	1675	1533	1700	1675	1529	1700	1675	1529
Q Serve(g_s), s	14.5	41.5	41.5	17.1	57.2	11.0	8.2	35.5	35.5	12.8	10.4	3.6
Cycle Q Clear(g_c), s	14.5	41.5	41.5	17.1	57.2	11.0	8.2	35.5	35.5	12.8	10.4	3.6
Prop In Lane	1.00		0.30	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	329	1672	611	429	1916	585	234	1189	362	290	1272	387
V/C Ratio(X)	1.01	0.85	0.85	0.92	1.04	0.28	0.80	1.05	1.06	1.02	0.34	0.12
Avail Cap(c_a), veh/h	329	1672	611	429	1916	585	322	1189	362	290	1272	387
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	67.8	44.9	44.9	64.8	46.4	32.1	68.8	57.3	57.3	68.6	45.7	43.2
Incr Delay (d2), s/veh	52.9	4.4	11.1	24.2	31.0	0.3	8.6	39.5	63.6	57.1	0.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.5	16.2	18.9	8.6	28.0	4.1	3.8	18.9	19.7	7.7	4.3	1.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	120.7	49.4	56.0	89.0	77.4	32.4	77.5	96.8	120.9	125.7	45.9	43.4
LnGrp LOS	F	D	E	F	F	C	E	F	F	F	D	D
Approach Vol, veh/h		2272			2544			1817			771	
Approach Delay, s/veh		61.3			76.3			99.9			76.3	
Approach LOS		E			E			F			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	26.4	60.3	17.8	45.5	22.0	64.7	20.3	43.0
Change Period (Y+Rc), s	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5
Max Green Setting (Gmax), s	18.9	52.8	14.2	34.1	14.5	57.2	12.8	35.5
Max Q Clear Time (g_c+I1), s	19.1	43.5	10.2	12.4	16.5	59.2	14.8	37.5
Green Ext Time (p_c), s	0.0	7.5	0.2	3.2	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	77.5
HCM 6th LOS	E



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑	↑↑	↱	↰↰	↱
Traffic Volume (veh/h)	0	1730	863	220	230	1769
Future Volume (veh/h)	0	1730	863	220	230	1769
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	0	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	0	1821	908	0	242	1835
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	4	4	4	4	4
Cap, veh/h	0	1766	1229		983	1749
Arrive On Green	0.00	0.35	0.35	0.00	0.56	0.56
Sat Flow, veh/h	0	5356	3589	1560	1753	3120
Grp Volume(v), veh/h	0	1821	908	0	242	1835
Grp Sat Flow(s),veh/h/ln	0	1675	1749	1560	1753	1560
Q Serve(g_s), s	0.0	49.2	31.8	0.0	9.8	78.5
Cycle Q Clear(g_c), s	0.0	49.2	31.8	0.0	9.8	78.5
Prop In Lane	0.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	0	1766	1229		983	1749
V/C Ratio(X)	0.00	1.03	0.74		0.25	1.05
Avail Cap(c_a), veh/h	0	1766	1229		983	1749
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	45.4	39.8	0.0	15.7	30.7
Incr Delay (d2), s/veh	0.0	29.9	2.4	0.0	0.1	35.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	24.1	13.4	0.0	3.8	35.6
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.0	75.3	42.2	0.0	15.8	66.4
LnGrp LOS	A	F	D		B	F
Approach Vol, veh/h		1821	908	A	2077	
Approach Delay, s/veh		75.3	42.2		60.5	
Approach LOS		E	D		E	

Timer - Assigned Phs	2	4	6
Phs Duration (G+Y+Rc), s	56.0	84.0	56.0
Change Period (Y+Rc), s	6.8	5.5	6.8
Max Green Setting (Gmax), s	49.2	78.5	49.2
Max Q Clear Time (g_c+I1), s	51.2	80.5	33.8
Green Ext Time (p_c), s	0.0	0.0	4.9

Intersection Summary	
HCM 6th Ctrl Delay	62.6
HCM 6th LOS	E

Notes

User approved volume balancing among the lanes for turning movement.

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	745	1215	180	452	631	560
Future Volume (veh/h)	745	1215	180	452	631	560
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		0.97	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	784	1273	189	476	711	357
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	4	4	4
Cap, veh/h	1576	1921	232	2952	915	407
Arrive On Green	0.45	0.45	0.07	0.59	0.26	0.26
Sat Flow, veh/h	3589	2671	3401	5191	3506	1560
Grp Volume(v), veh/h	784	1273	189	476	711	357
Grp Sat Flow(s),veh/h/ln	1749	1336	1700	1675	1753	1560
Q Serve(g_s), s	13.9	23.0	4.8	3.8	16.5	19.2
Cycle Q Clear(g_c), s	13.9	23.0	4.8	3.8	16.5	19.2
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1576	1921	232	2952	915	407
V/C Ratio(X)	0.50	0.66	0.81	0.16	0.78	0.88
Avail Cap(c_a), veh/h	2180	2381	232	3819	999	444
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.1	7.0	40.3	8.3	30.1	31.1
Incr Delay (d2), s/veh	0.2	0.5	19.3	0.0	3.6	16.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.8	11.6	2.5	1.1	7.3	9.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	17.3	7.5	59.7	8.3	33.7	47.8
LnGrp LOS	B	A	E	A	C	D
Approach Vol, veh/h	2057			665	1068	
Approach Delay, s/veh	11.2			22.9	38.4	
Approach LOS	B			C	D	

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	12.0	46.9				58.9	28.9
Change Period (Y+Rc), s	6.0	7.3				7.3	6.0
Max Green Setting (Gmax), s	6.0	54.7				66.7	25.0
Max Q Clear Time (g_c+I1), s	6.8	25.0				5.8	21.2
Green Ext Time (p_c), s	0.0	13.6				3.0	1.7

Intersection Summary	
HCM 6th Ctrl Delay	20.9
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.
User approved volume balancing among the lanes for turning movement.

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	9	16	1029	4	8	637
Future Volume (veh/h)	9	16	1029	4	8	637
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		0.99	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	9	17	1083	4	8	671
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	57	51	2123	655	19	3168
Arrive On Green	0.03	0.03	0.42	0.42	0.01	0.63
Sat Flow, veh/h	1767	1572	5233	1563	1767	5233
Grp Volume(v), veh/h	9	17	1083	4	8	671
Grp Sat Flow(s),veh/h/ln	1767	1572	1689	1563	1767	1689
Q Serve(g_s), s	0.2	0.3	4.8	0.0	0.1	1.8
Cycle Q Clear(g_c), s	0.2	0.3	4.8	0.0	0.1	1.8
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	57	51	2123	655	19	3168
V/C Ratio(X)	0.16	0.33	0.51	0.01	0.42	0.21
Avail Cap(c_a), veh/h	1843	1640	3549	1095	288	5365
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	14.4	14.5	6.6	5.2	15.1	2.5
Incr Delay (d2), s/veh	1.3	3.8	0.2	0.0	14.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.1	0.6	0.0	0.1	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	15.7	18.3	6.8	5.2	29.2	2.5
LnGrp LOS	B	B	A	A	C	A
Approach Vol, veh/h	26		1087			679
Approach Delay, s/veh	17.4		6.8			2.8
Approach LOS	B		A			A

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	6.3	18.9			25.2	5.5
Change Period (Y+Rc), s	6.0	6.0			6.0	4.5
Max Green Setting (Gmax), s	5.0	21.5			32.5	32.0
Max Q Clear Time (g_c+I1), s	2.1	6.8			3.8	2.3
Green Ext Time (p_c), s	0.0	5.9			4.3	0.0

Intersection Summary	
HCM 6th Ctrl Delay	5.4
HCM 6th LOS	A

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↱			↱
Traffic Vol, veh/h	0	1197	1890	30	0	20
Future Vol, veh/h	0	1197	1890	30	0	20
Conflicting Peds, #/hr	5	0	0	5	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	0	1260	1989	32	0	21

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	1016
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.96
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.33
Pot Cap-1 Maneuver	0	-	-	-	0	234
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	233
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	22
HCM LOS			C

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	233
HCM Lane V/C Ratio	-	-	-	0.09
HCM Control Delay (s)	-	-	-	22
HCM Lane LOS	-	-	-	C
HCM 95th %tile Q(veh)	-	-	-	0.3

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑			↱
Traffic Vol, veh/h	0	1197	1900	20	0	20
Future Vol, veh/h	0	1197	1900	20	0	20
Conflicting Peds, #/hr	0	0	0	5	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	0	1260	2000	21	0	21

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	1016
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.96
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.33
Pot Cap-1 Maneuver	0	-	-	-	0	234
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	233
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	22
HCM LOS			C

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	233
HCM Lane V/C Ratio	-	-	-	0.09
HCM Control Delay (s)	-	-	-	22
HCM Lane LOS	-	-	-	C
HCM 95th %tile Q(veh)	-	-	-	0.3

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	20	1177	1910	20	10	10
Future Vol, veh/h	20	1177	1910	20	10	10
Conflicting Peds, #/hr	5	0	0	5	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	21	1239	2011	21	11	11

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	2037	0	-	0	2689	1021
Stage 1	-	-	-	-	2027	-
Stage 2	-	-	-	-	662	-
Critical Hdwy	4.16	-	-	-	6.86	6.96
Critical Hdwy Stg 1	-	-	-	-	5.86	-
Critical Hdwy Stg 2	-	-	-	-	5.86	-
Follow-up Hdwy	2.23	-	-	-	3.53	3.33
Pot Cap-1 Maneuver	270	-	-	-	17	232
Stage 1	-	-	-	-	87	-
Stage 2	-	-	-	-	472	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	269	-	-	-	16	231
Mov Cap-2 Maneuver	-	-	-	-	66	-
Stage 1	-	-	-	-	80	-
Stage 2	-	-	-	-	470	-

Approach	EB	WB	SB
HCM Control Delay, s	0.3	0	48.7
HCM LOS			E

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	269	-	-	-	103
HCM Lane V/C Ratio	0.078	-	-	-	0.204
HCM Control Delay (s)	19.5	-	-	-	48.7
HCM Lane LOS	C	-	-	-	E
HCM 95th %tile Q(veh)	0.3	-	-	-	0.7

Intersection	
Int Delay, s/veh	2.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	30	1168	1900	32	33	30
Future Vol, veh/h	30	1168	1900	32	33	30
Conflicting Peds, #/hr	5	0	0	5	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	350	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	32	1229	2000	34	35	32

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	2039	0	-	0	2701	1022
Stage 1	-	-	-	-	2022	-
Stage 2	-	-	-	-	679	-
Critical Hdwy	4.16	-	-	-	6.86	6.96
Critical Hdwy Stg 1	-	-	-	-	5.86	-
Critical Hdwy Stg 2	-	-	-	-	5.86	-
Follow-up Hdwy	2.23	-	-	-	3.53	3.33
Pot Cap-1 Maneuver	269	-	-	-	~ 17	232
Stage 1	-	-	-	-	87	-
Stage 2	-	-	-	-	462	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	268	-	-	-	~ 15	231
Mov Cap-2 Maneuver	-	-	-	-	63	-
Stage 1	-	-	-	-	76	-
Stage 2	-	-	-	-	460	-

Approach	EB	WB	SB
HCM Control Delay, s	0.5	0	101.4
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	268	-	-	-	96
HCM Lane V/C Ratio	0.118	-	-	-	0.691
HCM Control Delay (s)	20.2	-	-	-	101.4
HCM Lane LOS	C	-	-	-	F
HCM 95th %tile Q(veh)	0.4	-	-	-	3.5

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	65.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	833	40	42	1026	150	163
Future Vol, veh/h	833	40	42	1026	150	163
Conflicting Peds, #/hr	0	5	5	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	100	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	877	42	44	1080	158	172

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	924	0	1531	465
Stage 1	-	-	-	-	903	-
Stage 2	-	-	-	-	628	-
Critical Hdwy	-	-	4.16	-	6.86	6.96
Critical Hdwy Stg 1	-	-	-	-	5.86	-
Critical Hdwy Stg 2	-	-	-	-	5.86	-
Follow-up Hdwy	-	-	2.23	-	3.53	3.33
Pot Cap-1 Maneuver	-	-	729	-	~ 107	541
Stage 1	-	-	-	-	353	-
Stage 2	-	-	-	-	491	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	726	-	~ 100	538
Mov Cap-2 Maneuver	-	-	-	-	~ 100	-
Stage 1	-	-	-	-	351	-
Stage 2	-	-	-	-	461	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.4	$ 467.7
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	174	-	-	726	-
HCM Lane V/C Ratio	1.894	-	-	0.061	-
HCM Control Delay (s)	$ 467.7	-	-	10.3	-
HCM Lane LOS	F	-	-	B	-
HCM 95th %tile Q(veh)	24.5	-	-	0.2	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	290	703	118	30	808	1031	216	1258	60	1064	1069	200
Future Volume (veh/h)	290	703	118	30	808	1031	216	1258	60	1064	1069	200
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	305	740	42	32	851	900	227	1324	61	1120	1125	90
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	214	1584	489	154	1495	462	221	1526	70	221	1559	475
Arrive On Green	0.06	0.32	0.32	0.05	0.30	0.30	0.13	0.31	0.31	0.13	0.31	0.31
Sat Flow, veh/h	3401	5025	1553	3401	5025	1552	1753	4919	227	1753	5025	1532
Grp Volume(v), veh/h	305	740	42	32	851	900	227	902	483	1120	1125	90
Grp Sat Flow(s),veh/h/ln	1700	1675	1553	1700	1675	1552	1753	1675	1795	1753	1675	1532
Q Serve(g_s), s	9.0	16.9	2.7	1.3	20.5	42.5	18.0	36.3	36.3	18.0	28.4	6.1
Cycle Q Clear(g_c), s	9.0	16.9	2.7	1.3	20.5	42.5	18.0	36.3	36.3	18.0	28.4	6.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.13	1.00		1.00
Lane Grp Cap(c), veh/h	214	1584	489	154	1495	462	221	1040	557	221	1559	475
V/C Ratio(X)	1.42	0.47	0.09	0.21	0.57	1.95	1.03	0.87	0.87	5.07	0.72	0.19
Avail Cap(c_a), veh/h	214	1584	489	214	1495	462	221	1091	584	221	1636	499
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	66.9	39.3	34.4	65.7	42.4	50.2	62.4	46.5	46.5	62.4	43.8	36.1
Incr Delay (d2), s/veh	215.4	0.3	0.1	0.5	0.6	434.8	67.9	7.6	13.2	1841.2	1.7	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.3	6.9	1.0	0.6	8.2	71.5	12.0	15.6	17.6	120.9	11.7	2.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	282.3	39.5	34.5	66.2	43.0	484.9	130.3	54.1	59.6	1903.7	45.4	36.4
LnGrp LOS	F	D	C	E	D	F	F	D	E	F	D	D
Approach Vol, veh/h		1087			1783			1612			2335	
Approach Delay, s/veh		107.4			266.5			66.5			936.4	
Approach LOS		F			F			E			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	25.0	51.3	14.0	52.5	25.0	51.3	16.5	50.0
Change Period (Y+Rc), s	7.0	7.0	7.5	7.5	7.0	7.0	7.5	7.5
Max Green Setting (Gmax), s	18.0	46.5	9.0	42.5	18.0	46.5	9.0	42.5
Max Q Clear Time (g_c+I1), s	20.0	38.3	3.3	18.9	20.0	30.4	11.0	44.5
Green Ext Time (p_c), s	0.0	5.9	0.0	5.9	0.0	9.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	423.3
HCM 6th LOS	F

Notes

User approved pedestrian interval to be less than phase max green.

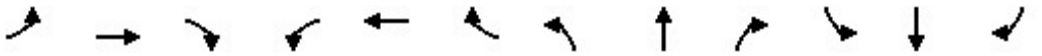
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	50	1460	386	300	1510	40	350	40	140	80	50	50
Future Volume (veh/h)	50	1460	386	300	1510	40	350	40	140	80	50	50
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	53	1537	194	316	1589	40	368	42	41	84	53	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	100	1563	479	312	2176	55	435	971	427	428	971	
Arrive On Green	0.06	0.31	0.31	0.18	0.43	0.43	0.28	0.28	0.28	0.28	0.28	0.00
Sat Flow, veh/h	1753	5025	1539	1753	5039	127	1330	3497	1539	1294	3589	0
Grp Volume(v), veh/h	53	1537	194	316	1056	573	368	42	41	84	53	0
Grp Sat Flow(s),veh/h/ln	1753	1675	1539	1753	1675	1816	1330	1749	1539	1294	1749	0
Q Serve(g_s), s	2.6	27.3	8.9	16.0	23.6	23.6	24.0	0.8	1.8	4.6	1.0	0.0
Cycle Q Clear(g_c), s	2.6	27.3	8.9	16.0	23.6	23.6	25.0	0.8	1.8	5.4	1.0	0.0
Prop In Lane	1.00		1.00	1.00		0.07	1.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	100	1563	479	312	1447	784	435	971	427	428	971	
V/C Ratio(X)	0.53	0.98	0.41	1.01	0.73	0.73	0.85	0.04	0.10	0.20	0.05	
Avail Cap(c_a), veh/h	136	1563	479	312	1447	784	435	971	427	428	971	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	41.3	30.8	24.4	37.0	21.2	21.2	33.4	23.8	24.1	25.7	23.8	0.0
Incr Delay (d2), s/veh	1.6	18.8	0.8	54.6	2.1	3.8	15.1	0.0	0.2	0.4	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	12.5	3.0	11.0	8.3	9.3	9.2	0.3	0.6	1.4	0.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	42.9	49.6	25.2	91.6	23.3	25.0	48.6	23.8	24.3	26.1	23.9	0.0
LnGrp LOS	D	D	C	F	C	C	D	C	C	C	C	
Approach Vol, veh/h		1784			1945			451			137	A
Approach Delay, s/veh		46.7			34.9			44.1			25.2	
Approach LOS		D			C			D			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	23.0	35.0		32.0	12.1	45.9		32.0				
Change Period (Y+Rc), s	7.0	7.0		7.0	7.0	7.0		7.0				
Max Green Setting (Gmax), s	16.0	28.0		25.0	7.0	37.0		25.0				
Max Q Clear Time (g_c+I1), s	18.0	29.3		27.0	4.6	25.6		7.4				
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	8.6		0.7				

Intersection Summary		
HCM 6th Ctrl Delay		40.4
HCM 6th LOS		D

Notes

Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.

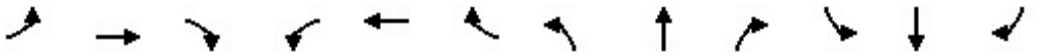


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	370	168	180	530	80	134	375	40	50	701	200
Future Volume (veh/h)	30	370	168	180	530	80	134	375	40	50	701	200
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	32	389	120	189	558	71	141	395	35	53	738	185
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	223	562	171	288	791	100	249	1086	96	403	866	217
Arrive On Green	0.04	0.21	0.21	0.08	0.25	0.25	0.07	0.33	0.33	0.05	0.31	0.31
Sat Flow, veh/h	1753	2626	799	1753	3114	395	1753	3246	286	1753	2759	691
Grp Volume(v), veh/h	32	257	252	189	313	316	141	212	218	53	468	455
Grp Sat Flow(s),veh/h/ln	1753	1749	1677	1753	1749	1760	1753	1749	1783	1753	1749	1701
Q Serve(g_s), s	1.2	11.3	11.6	6.5	13.6	13.7	4.5	7.7	7.8	1.7	21.0	21.0
Cycle Q Clear(g_c), s	1.2	11.3	11.6	6.5	13.6	13.7	4.5	7.7	7.8	1.7	21.0	21.0
Prop In Lane	1.00		0.48	1.00		0.22	1.00		0.16	1.00		0.41
Lane Grp Cap(c), veh/h	223	374	359	288	444	447	249	585	597	403	549	534
V/C Ratio(X)	0.14	0.69	0.70	0.66	0.70	0.71	0.57	0.36	0.37	0.13	0.85	0.85
Avail Cap(c_a), veh/h	283	565	541	288	575	579	249	596	608	440	596	580
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.5	30.3	30.4	25.5	28.3	28.4	20.6	21.1	21.1	17.6	26.9	26.9
Incr Delay (d2), s/veh	0.4	3.2	3.6	5.3	3.5	3.5	3.3	0.5	0.5	0.2	11.4	11.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	4.7	4.6	3.1	5.6	5.7	1.9	3.0	3.0	0.6	9.6	9.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	24.9	33.5	34.0	30.9	31.8	31.9	23.9	21.6	21.6	17.8	38.3	38.5
LnGrp LOS	C	C	C	C	C	C	C	C	C	B	D	D
Approach Vol, veh/h		541			818			571			976	
Approach Delay, s/veh		33.2			31.6			22.2			37.3	
Approach LOS		C			C			C			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.2	35.0	13.0	24.4	13.0	33.2	9.6	27.7
Change Period (Y+Rc), s	7.0	7.0	6.5	6.5	7.0	7.0	6.5	6.5
Max Green Setting (Gmax), s	6.0	28.5	6.5	27.0	6.0	28.5	6.0	27.5
Max Q Clear Time (g_c+I1), s	3.7	9.8	8.5	13.6	6.5	23.0	3.2	15.7
Green Ext Time (p_c), s	0.0	3.0	0.0	3.1	0.0	3.2	0.0	3.6

Intersection Summary	
HCM 6th Ctrl Delay	32.0
HCM 6th LOS	C

Min green cannot be greater than Max Green.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	450	20	490	265	1677	0	0	2334	940
Future Volume (veh/h)	0	0	0	450	20	490	265	1677	0	0	2334	940
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1841	1841	1841	1841	1841	0	0	1841	1841
Adj Flow Rate, veh/h				612	0	284	279	1765	0	0	2457	668
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				4	4	4	4	4	0	0	4	4
Cap, veh/h				701	0	312	378	3294	0	0	2446	757
Arrive On Green				0.20	0.00	0.20	0.11	0.66	0.00	0.00	0.49	0.49
Sat Flow, veh/h				3506	0	1560	3401	5191	0	0	5191	1555
Grp Volume(v), veh/h				612	0	284	279	1765	0	0	2457	668
Grp Sat Flow(s),veh/h/ln				1753	0	1560	1700	1675	0	0	1675	1555
Q Serve(g_s), s				15.2	0.0	16.0	7.2	16.8	0.0	0.0	43.8	34.8
Cycle Q Clear(g_c), s				15.2	0.0	16.0	7.2	16.8	0.0	0.0	43.8	34.8
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				701	0	312	378	3294	0	0	2446	757
V/C Ratio(X)				0.87	0.00	0.91	0.74	0.54	0.00	0.00	1.00	0.88
Avail Cap(c_a), veh/h				701	0	312	378	3294	0	0	2446	757
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.52	0.52	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				34.9	0.0	35.2	38.7	8.2	0.0	0.0	23.1	20.8
Incr Delay (d2), s/veh				12.0	0.0	29.6	4.0	0.3	0.0	0.0	19.3	14.1
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				7.5	0.0	8.5	3.1	4.9	0.0	0.0	19.4	14.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				46.9	0.0	64.8	42.7	8.6	0.0	0.0	42.4	34.9
LnGrp LOS				D	A	E	D	A	A	A	F	C
Approach Vol, veh/h					896			2044			3125	
Approach Delay, s/veh					52.6			13.2			40.8	
Approach LOS					D			B			D	

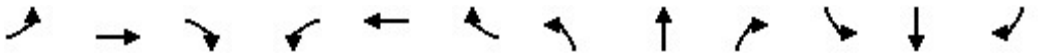
Timer - Assigned Phs	2		5	6		8						
Phs Duration (G+Y+Rc), s	65.0		15.2	49.8		25.0						
Change Period (Y+Rc), s	6.0		* 5.2	6.0		7.0						
Max Green Setting (Gmax), s	59.0		* 10	43.8		18.0						
Max Q Clear Time (g_c+I1), s	18.8		9.2	45.8		18.0						
Green Ext Time (p_c), s	25.1		0.1	0.0		0.0						

Intersection Summary		
HCM 6th Ctrl Delay	33.2	
HCM 6th LOS	C	

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	260	10	321	0	0	0	0	1682	320	410	2374	0
Future Volume (veh/h)	260	10	321	0	0	0	0	1682	320	410	2374	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841				0	1841	1841	1841	1841	0
Adj Flow Rate, veh/h	274	11	336				0	1771	140	432	2499	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4				0	4	4	4	4	0
Cap, veh/h	813	12	363				0	2094	648	501	3097	0
Arrive On Green	0.24	0.24	0.24				0.00	0.42	0.42	0.10	0.41	0.00
Sat Flow, veh/h	3401	50	1518				0	5191	1554	3401	5191	0
Grp Volume(v), veh/h	274	0	347				0	1771	140	432	2499	0
Grp Sat Flow(s),veh/h/ln	1700	0	1568				0	1675	1554	1700	1675	0
Q Serve(g_s), s	6.0	0.0	19.5				0.0	28.6	5.2	11.3	39.4	0.0
Cycle Q Clear(g_c), s	6.0	0.0	19.5				0.0	28.6	5.2	11.3	39.4	0.0
Prop In Lane	1.00		0.97				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	813	0	375				0	2094	648	501	3097	0
V/C Ratio(X)	0.34	0.00	0.93				0.00	0.85	0.22	0.86	0.81	0.00
Avail Cap(c_a), veh/h	831	0	383				0	2094	648	503	3097	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	0.67	0.67	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.09	0.09	0.00
Uniform Delay (d), s/veh	28.3	0.0	33.5				0.0	23.6	16.8	39.7	21.7	0.0
Incr Delay (d2), s/veh	0.3	0.0	28.2				0.0	4.4	0.8	1.5	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	0.0	10.1				0.0	11.1	1.9	4.8	15.6	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	28.7	0.0	61.6				0.0	28.1	17.6	41.2	21.9	0.0
LnGrp LOS	C	A	E				A	C	B	D	C	A
Approach Vol, veh/h		621						1911			2931	
Approach Delay, s/veh		47.1						27.3			24.8	
Approach LOS		D						C			C	

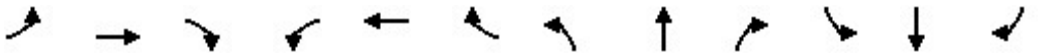
Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	18.0	43.5		28.5		61.5
Change Period (Y+Rc), s	* 4.7	6.0		7.0		6.0
Max Green Setting (Gmax), s	* 13	37.0		22.0		55.0
Max Q Clear Time (g_c+I1), s	13.3	30.6		21.5		41.4
Green Ext Time (p_c), s	0.0	5.9		0.1		12.9

Intersection Summary	
HCM 6th Ctrl Delay	28.2
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



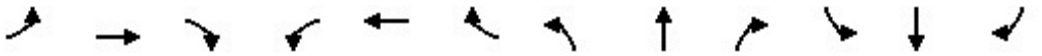
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	526	10	140	249	559	0	0	1492	510
Future Volume (veh/h)	0	0	0	526	10	140	249	559	0	0	1492	510
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		0.97
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1841	1841	1841	1841	1841	0	0	1841	1841
Adj Flow Rate, veh/h				562	0	27	262	588	0	0	1571	379
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				4	4	4	4	4	0	0	4	4
Cap, veh/h				622	0	554	263	2369	0	0	1626	706
Arrive On Green				0.18	0.00	0.18	0.30	1.00	0.00	0.00	0.47	0.47
Sat Flow, veh/h				3506	0	3120	1753	3589	0	0	3589	1518
Grp Volume(v), veh/h				562	0	27	262	588	0	0	1571	379
Grp Sat Flow(s),veh/h/ln				1753	0	1560	1753	1749	0	0	1749	1518
Q Serve(g_s), s				12.6	0.0	0.6	11.9	0.0	0.0	0.0	34.9	14.2
Cycle Q Clear(g_c), s				12.6	0.0	0.6	11.9	0.0	0.0	0.0	34.9	14.2
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				622	0	554	263	2369	0	0	1626	706
V/C Ratio(X)				0.90	0.00	0.05	1.00	0.25	0.00	0.00	0.97	0.54
Avail Cap(c_a), veh/h				622	0	554	263	2369	0	0	1626	706
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.62	0.62	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				32.2	0.0	27.3	28.0	0.0	0.0	0.0	20.8	15.3
Incr Delay (d2), s/veh				16.4	0.0	0.0	42.7	0.2	0.0	0.0	15.6	2.9
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				6.6	0.0	0.2	6.9	0.1	0.0	0.0	15.4	4.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				48.6	0.0	27.3	70.7	0.2	0.0	0.0	36.4	18.2
LnGrp LOS				D	A	C	E	A	A	A	D	B
Approach Vol, veh/h					589			850			1950	
Approach Delay, s/veh					47.6			21.9			32.8	
Approach LOS					D			C			C	

Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		60.0			17.0	43.0		20.0				
Change Period (Y+Rc), s		5.8			5.0	5.8		5.8				
Max Green Setting (Gmax), s		54.2			12.0	37.2		14.2				
Max Q Clear Time (g_c+I1), s		2.0			13.9	36.9		14.6				
Green Ext Time (p_c), s		3.2			0.0	0.2		0.0				

Intersection Summary		
HCM 6th Ctrl Delay	32.7	
HCM 6th LOS	C	

Notes

User approved volume balancing among the lanes for turning movement.



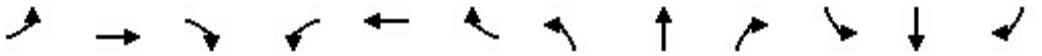
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	130	10	332	0	0	0	0	678	307	390	1628	0
Future Volume (veh/h)	130	10	332	0	0	0	0	678	307	390	1628	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		0.97	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841				0	1841	1841	1841	1841	0
Adj Flow Rate, veh/h	137	0	230				0	714	262	411	1714	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4				0	4	4	4	4	0
Cap, veh/h	438	0	390				0	1023	375	448	2553	0
Arrive On Green	0.12	0.00	0.12				0.00	0.41	0.41	0.26	0.73	0.00
Sat Flow, veh/h	3506	0	3120				0	2575	911	1753	3589	0
Grp Volume(v), veh/h	137	0	230				0	503	473	411	1714	0
Grp Sat Flow(s),veh/h/ln	1753	0	1560				0	1749	1646	1753	1749	0
Q Serve(g_s), s	2.8	0.0	5.6				0.0	19.0	19.0	18.2	20.8	0.0
Cycle Q Clear(g_c), s	2.8	0.0	5.6				0.0	19.0	19.0	18.2	20.8	0.0
Prop In Lane	1.00		1.00				0.00		0.55	1.00		0.00
Lane Grp Cap(c), veh/h	438	0	390				0	720	678	448	2553	0
V/C Ratio(X)	0.31	0.00	0.59				0.00	0.70	0.70	0.92	0.67	0.00
Avail Cap(c_a), veh/h	508	0	452				0	720	678	504	2553	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.16	0.16	0.00
Uniform Delay (d), s/veh	31.9	0.0	33.1				0.0	19.4	19.4	29.0	5.7	0.0
Incr Delay (d2), s/veh	0.3	0.0	1.2				0.0	5.5	5.9	4.2	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	0.0	2.1				0.0	7.8	7.4	7.5	4.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	32.2	0.0	34.2				0.0	25.0	25.3	33.2	5.9	0.0
LnGrp LOS	C	A	C				A	C	C	C	A	A
Approach Vol, veh/h		367						976			2125	
Approach Delay, s/veh		33.5						25.1			11.2	
Approach LOS		C						C			B	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	25.4	38.8		15.8		64.2
Change Period (Y+Rc), s	5.0	5.8		5.8		5.8
Max Green Setting (Gmax), s	23.0	28.8		11.6		56.8
Max Q Clear Time (g_c+I1), s	20.2	21.0		7.6		22.8
Green Ext Time (p_c), s	0.2	3.0		0.4		13.8

Intersection Summary	
HCM 6th Ctrl Delay	17.5
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.
User approved volume balancing among the lanes for turning movement.



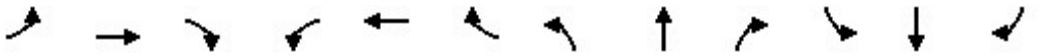
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	657	10	340	460	766	0	0	2004	250
Future Volume (veh/h)	0	0	0	657	10	340	460	766	0	0	2004	250
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		0.97
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1841	1841	1841	1841	1841	0	0	1841	1841
Adj Flow Rate, veh/h				764	0	148	484	806	0	0	2109	160
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				4	4	4	4	4	0	0	4	4
Cap, veh/h				943	0	419	529	3026	0	0	2477	593
Arrive On Green				0.27	0.00	0.27	0.31	1.00	0.00	0.00	0.39	0.39
Sat Flow, veh/h				3506	0	1560	3401	5191	0	0	6590	1516
Grp Volume(v), veh/h				764	0	148	484	806	0	0	2109	160
Grp Sat Flow(s),veh/h/ln				1753	0	1560	1700	1675	0	0	1583	1516
Q Serve(g_s), s				18.3	0.0	6.9	12.3	0.0	0.0	0.0	27.4	6.5
Cycle Q Clear(g_c), s				18.3	0.0	6.9	12.3	0.0	0.0	0.0	27.4	6.5
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				943	0	419	529	3026	0	0	2477	593
V/C Ratio(X)				0.81	0.00	0.35	0.91	0.27	0.00	0.00	0.85	0.27
Avail Cap(c_a), veh/h				943	0	419	529	3026	0	0	2477	593
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.90	0.90	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				30.8	0.0	26.6	30.4	0.0	0.0	0.0	25.0	18.7
Incr Delay (d2), s/veh				7.5	0.0	2.3	21.2	0.2	0.0	0.0	3.9	1.1
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				8.5	0.0	6.7	5.5	0.1	0.0	0.0	9.9	2.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				38.3	0.0	28.9	51.6	0.2	0.0	0.0	29.0	19.8
LnGrp LOS				D	A	C	D	A	A	A	C	B
Approach Vol, veh/h					912			1290			2269	
Approach Delay, s/veh					36.7			19.5			28.3	
Approach LOS					D			B			C	

Timer - Assigned Phs	2	4	5	6
Phs Duration (G+Y+Rc), s	60.0	30.0	19.0	41.0
Change Period (Y+Rc), s	5.8	5.8	5.0	5.8
Max Green Setting (Gmax), s	54.2	24.2	14.0	35.2
Max Q Clear Time (g_c+I1), s	2.0	20.3	14.3	29.4
Green Ext Time (p_c), s	6.0	1.5	0.0	5.1

Intersection Summary	
HCM 6th Ctrl Delay	27.5
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.
User approved volume balancing among the lanes for turning movement.

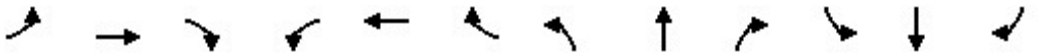


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	180	10	430	0	0	0	0	1046	624	500	2161	0
Future Volume (veh/h)	180	10	430	0	0	0	0	1046	624	500	2161	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		0.97	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841				0	1841	1841	1841	1841	0
Adj Flow Rate, veh/h	130	0	444				0	1101	317	526	2275	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4				0	4	4	4	4	0
Cap, veh/h	393	0	700				0	2547	610	642	3250	0
Arrive On Green	0.22	0.00	0.22				0.00	0.40	0.40	0.13	0.43	0.00
Sat Flow, veh/h	1753	0	3120				0	6590	1516	3401	5191	0
Grp Volume(v), veh/h	130	0	444				0	1101	317	526	2275	0
Grp Sat Flow(s),veh/h/ln	1753	0	1560				0	1583	1516	1700	1675	0
Q Serve(g_s), s	5.6	0.0	11.6				0.0	11.3	14.2	13.6	33.1	0.0
Cycle Q Clear(g_c), s	5.6	0.0	11.6				0.0	11.3	14.2	13.6	33.1	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	393	0	700				0	2547	610	642	3250	0
V/C Ratio(X)	0.33	0.00	0.63				0.00	0.43	0.52	0.82	0.70	0.00
Avail Cap(c_a), veh/h	393	0	700				0	2547	610	642	3250	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	0.67	0.67	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.40	0.40	0.00
Uniform Delay (d), s/veh	29.2	0.0	31.6				0.0	19.5	20.3	37.8	18.4	0.0
Incr Delay (d2), s/veh	2.2	0.0	4.3				0.0	0.5	3.1	4.8	0.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	0.0	4.7				0.0	3.9	5.1	6.1	13.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	31.5	0.0	35.9				0.0	20.0	23.5	42.6	18.9	0.0
LnGrp LOS	C	A	D				A	C	C	D	B	A
Approach Vol, veh/h		574						1418			2801	
Approach Delay, s/veh		34.9						20.8			23.4	
Approach LOS		C						C			C	

Timer - Assigned Phs	1	2				6		8				
Phs Duration (G+Y+Rc), s	22.0	42.0				64.0		26.0				
Change Period (Y+Rc), s	5.0	5.8				5.8		5.8				
Max Green Setting (Gmax), s	17.0	36.2				58.2		20.2				
Max Q Clear Time (g_c+I1), s	15.6	16.2				35.1		13.6				
Green Ext Time (p_c), s	0.2	8.5				17.4		1.3				

Intersection Summary			
HCM 6th Ctrl Delay			24.0
HCM 6th LOS			C

Notes
User approved pedestrian interval to be less than phase max green.
User approved volume balancing among the lanes for turning movement.



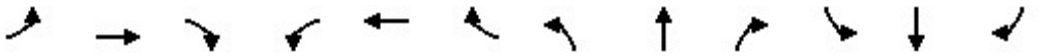
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	80	10	58	37	30	70	168	1520	47	120	2211	70
Future Volume (veh/h)	80	10	58	37	30	70	168	1520	47	120	2211	70
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.98		0.96	0.98		0.96	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	84	11	9	39	32	13	177	1600	48	126	2327	73
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	279	159	130	300	213	86	88	2778	83	78	2746	86
Arrive On Green	0.17	0.17	0.17	0.17	0.17	0.17	0.05	0.55	0.55	0.04	0.55	0.55
Sat Flow, veh/h	1319	920	753	1348	1230	500	1753	5008	150	1753	5001	156
Grp Volume(v), veh/h	84	0	20	39	0	45	177	1070	578	126	1555	845
Grp Sat Flow(s),veh/h/ln	1319	0	1673	1348	0	1729	1753	1675	1808	1753	1675	1806
Q Serve(g_s), s	5.2	0.0	0.9	2.2	0.0	2.0	4.5	18.8	18.8	4.0	35.2	35.7
Cycle Q Clear(g_c), s	7.2	0.0	0.9	3.1	0.0	2.0	4.5	18.8	18.8	4.0	35.2	35.7
Prop In Lane	1.00		0.45	1.00		0.29	1.00		0.08	1.00		0.09
Lane Grp Cap(c), veh/h	279	0	290	300	0	299	88	1858	1003	78	1840	992
V/C Ratio(X)	0.30	0.00	0.07	0.13	0.00	0.15	2.02	0.58	0.58	1.62	0.85	0.85
Avail Cap(c_a), veh/h	593	0	688	621	0	711	88	1858	1003	78	1840	992
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.6	0.0	31.1	32.5	0.0	31.6	42.8	13.1	13.1	43.0	17.1	17.2
Incr Delay (d2), s/veh	0.4	0.0	0.1	0.1	0.0	0.2	496.3	1.3	2.4	328.8	5.0	9.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	0.0	0.4	0.7	0.0	0.8	13.9	6.1	6.9	8.8	12.4	14.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	35.1	0.0	31.2	32.6	0.0	31.8	539.0	14.4	15.5	371.8	22.1	26.4
LnGrp LOS	D	A	C	C	A	C	F	B	B	F	C	C
Approach Vol, veh/h		104			84			1825			2526	
Approach Delay, s/veh		34.3			32.2			65.7			40.9	
Approach LOS		C			C			E			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.5	56.4		23.1	11.0	55.9		23.1				
Change Period (Y+Rc), s	6.5	6.5		7.5	6.5	6.5		7.5				
Max Green Setting (Gmax), s	4.0	28.5		37.0	4.5	28.0		37.0				
Max Q Clear Time (g_c+I1), s	6.0	20.8		9.2	6.5	37.7		5.1				
Green Ext Time (p_c), s	0.0	5.8		0.3	0.0	0.0		0.3				

Intersection Summary		
HCM 6th Ctrl Delay		50.6
HCM 6th LOS		D

Notes

User approved pedestrian interval to be less than phase max green.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	130	1227	810	152	1119	224	530	1498	652	244	2070	340
Future Volume (veh/h)	130	1227	810	152	1119	224	530	1498	652	244	2070	340
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.97	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	137	1292	0	160	1178	200	558	1577	650	257	2179	319
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	145	965		149	972	561	417	1972	731	303	1802	676
Arrive On Green	0.08	0.28	0.00	0.08	0.28	0.28	0.12	0.39	0.39	0.09	0.36	0.36
Sat Flow, veh/h	1753	3497	1560	1753	3497	1519	3401	5025	1525	3401	5025	1524
Grp Volume(v), veh/h	137	1292	0	160	1178	200	558	1577	650	257	2179	319
Grp Sat Flow(s),veh/h/ln	1753	1749	1560	1753	1749	1519	1700	1675	1525	1700	1675	1524
Q Serve(g_s), s	11.3	40.0	0.0	12.3	40.3	13.9	17.8	40.3	56.3	10.8	52.0	21.4
Cycle Q Clear(g_c), s	11.3	40.0	0.0	12.3	40.3	13.9	17.8	40.3	56.3	10.8	52.0	21.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	145	965		149	972	561	417	1972	731	303	1802	676
V/C Ratio(X)	0.94	1.34		1.08	1.21	0.36	1.34	0.80	0.89	0.85	1.21	0.47
Avail Cap(c_a), veh/h	145	965		149	972	561	417	1972	731	328	1802	676
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	66.2	52.5	0.0	66.4	52.3	33.5	63.6	39.0	34.5	65.1	46.5	28.6
Incr Delay (d2), s/veh	57.4	159.7	0.0	95.5	105.0	0.5	167.0	2.4	13.0	17.5	99.6	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.3	38.4	0.0	9.3	31.2	5.1	17.3	16.7	22.2	5.4	37.7	7.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	123.6	212.2	0.0	161.9	157.3	34.0	230.6	41.4	47.5	82.6	146.1	29.1
LnGrp LOS	F	F		F	F	C	F	D	D	F	F	C
Approach Vol, veh/h		1429	A		1538			2785			2755	
Approach Delay, s/veh		203.7			141.8			80.8			126.6	
Approach LOS		F			F			F			F	

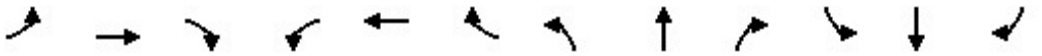
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.1	62.9	17.0	47.0	23.0	58.0	16.7	47.3
Change Period (Y+Rc), s	* 5.2	6.0	* 4.7	7.0	* 5.2	6.0	* 4.7	7.0
Max Green Setting (Gmax), s	* 14	55.8	* 12	40.0	* 18	52.0	* 12	40.3
Max Q Clear Time (g_c+I1), s	12.8	58.3	14.3	42.0	19.8	54.0	13.3	42.3
Green Ext Time (p_c), s	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	127.3
HCM 6th LOS	F

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



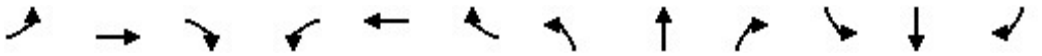
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	190	1603	130	276	1074	106	20	560	137	157	650	300
Future Volume (veh/h)	190	1603	130	276	1074	106	20	560	137	157	650	300
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	200	1687	57	291	1131	44	21	589	37	165	684	280
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	223	1374	603	230	1388	609	42	740	323	130	630	258
Arrive On Green	0.13	0.39	0.39	0.13	0.39	0.39	0.02	0.21	0.21	0.07	0.26	0.26
Sat Flow, veh/h	1767	3526	1546	1767	3526	1546	1767	3526	1539	1767	2424	992
Grp Volume(v), veh/h	200	1687	57	291	1131	44	21	589	37	165	497	467
Grp Sat Flow(s),veh/h/ln	1767	1763	1546	1767	1763	1546	1767	1763	1539	1767	1763	1654
Q Serve(g_s), s	15.9	55.5	3.3	18.5	40.8	2.5	1.7	22.6	2.8	10.5	37.0	37.0
Cycle Q Clear(g_c), s	15.9	55.5	3.3	18.5	40.8	2.5	1.7	22.6	2.8	10.5	37.0	37.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.60
Lane Grp Cap(c), veh/h	223	1374	603	230	1388	609	42	740	323	130	458	430
V/C Ratio(X)	0.90	1.23	0.09	1.27	0.81	0.07	0.50	0.80	0.11	1.27	1.09	1.09
Avail Cap(c_a), veh/h	261	1374	603	230	1388	609	74	805	351	130	458	430
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	61.3	43.4	27.5	61.9	38.5	26.9	68.7	53.4	45.5	65.9	52.7	52.7
Incr Delay (d2), s/veh	25.9	109.1	0.1	150.1	4.0	0.1	3.4	5.4	0.2	166.9	67.2	68.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.5	43.7	1.2	17.7	17.6	0.9	0.8	10.4	1.1	10.7	24.6	23.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	87.2	152.5	27.6	212.0	42.5	27.0	72.0	58.8	45.7	232.9	119.9	121.2
LnGrp LOS	F	F	C	F	D	C	E	E	D	F	F	F
Approach Vol, veh/h		1944			1466			647			1129	
Approach Delay, s/veh		142.1			75.7			58.5			136.9	
Approach LOS		F			E			E			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.0	36.4	26.0	63.0	9.9	43.5	25.5	63.5
Change Period (Y+Rc), s	6.5	6.5	7.5	7.5	6.5	6.5	7.5	7.5
Max Green Setting (Gmax), s	10.5	32.5	18.5	55.5	6.0	37.0	21.0	53.0
Max Q Clear Time (g_c+I1), s	12.5	24.6	20.5	57.5	3.7	39.0	17.9	42.8
Green Ext Time (p_c), s	0.0	2.5	0.0	0.0	0.0	0.0	0.1	5.6

Intersection Summary	
HCM 6th Ctrl Delay	111.8
HCM 6th LOS	F

Notes

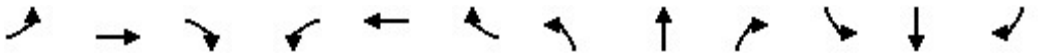
User approved pedestrian interval to be less than phase max green.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	1646	110	196	1225	36	80	30	217	67	80	50
Future Volume (veh/h)	40	1646	110	196	1225	36	80	30	217	67	80	50
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	0.99		0.98	0.99		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	42	1733	114	206	1289	38	84	32	111	71	84	36
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	63	1858	121	225	2256	66	184	59	205	156	202	87
Arrive On Green	0.04	0.55	0.55	0.13	0.65	0.65	0.17	0.17	0.17	0.17	0.17	0.17
Sat Flow, veh/h	1767	3354	218	1767	3494	103	1254	357	1240	1229	1222	524
Grp Volume(v), veh/h	42	902	945	206	650	677	84	0	143	71	0	120
Grp Sat Flow(s),veh/h/ln	1767	1763	1809	1767	1763	1834	1254	0	1597	1229	0	1746
Q Serve(g_s), s	3.1	62.5	65.1	15.4	27.6	27.7	8.6	0.0	11.0	7.5	0.0	8.2
Cycle Q Clear(g_c), s	3.1	62.5	65.1	15.4	27.6	27.7	16.8	0.0	11.0	18.5	0.0	8.2
Prop In Lane	1.00		0.12	1.00		0.06	1.00		0.78	1.00		0.30
Lane Grp Cap(c), veh/h	63	977	1002	225	1138	1184	184	0	264	156	0	289
V/C Ratio(X)	0.67	0.92	0.94	0.92	0.57	0.57	0.46	0.00	0.54	0.45	0.00	0.42
Avail Cap(c_a), veh/h	119	996	1022	225	1138	1184	277	0	382	247	0	418
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	63.7	27.2	27.8	57.6	13.3	13.3	57.5	0.0	51.1	59.6	0.0	50.0
Incr Delay (d2), s/veh	11.7	13.7	16.1	37.9	0.8	0.7	1.8	0.0	1.7	2.1	0.0	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	26.9	29.3	9.0	9.6	10.1	2.8	0.0	4.6	2.5	0.0	3.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	75.4	41.0	44.0	95.6	14.0	14.0	59.3	0.0	52.8	61.6	0.0	50.9
LnGrp LOS	E	D	D	F	B	B	E	A	D	E	A	D
Approach Vol, veh/h		1889			1533			227			191	
Approach Delay, s/veh		43.2			25.0			55.2			54.9	
Approach LOS		D			C			E			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.7	93.8		28.1	24.0	81.5		28.1				
Change Period (Y+Rc), s	7.0	7.5		6.0	7.0	7.5		6.0				
Max Green Setting (Gmax), s	9.0	83.5		32.0	17.0	75.5		32.0				
Max Q Clear Time (g_c+I1), s	5.1	29.7		20.5	17.4	67.1		18.8				
Green Ext Time (p_c), s	0.0	13.3		0.7	0.0	6.9		0.9				

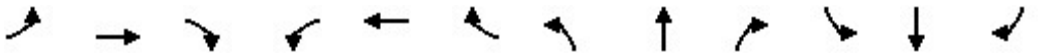
Intersection Summary			
HCM 6th Ctrl Delay		37.2	
HCM 6th LOS		D	



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	230	1536	64	34	1162	372	55	301	33	465	833	200
Future Volume (veh/h)	230	1536	64	34	1162	372	55	301	33	465	833	200
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.98	1.00		0.97	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	242	1617	66	36	1223	271	58	317	31	489	877	197
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	251	1426	58	46	1291	566	74	433	42	398	905	203
Arrive On Green	0.07	0.41	0.41	0.03	0.37	0.37	0.04	0.13	0.13	0.23	0.32	0.32
Sat Flow, veh/h	3428	3451	140	1767	3526	1545	1767	3238	314	1767	2852	640
Grp Volume(v), veh/h	242	823	860	36	1223	271	58	171	177	489	542	532
Grp Sat Flow(s),veh/h/ln	1714	1763	1828	1767	1763	1545	1767	1763	1789	1767	1763	1730
Q Serve(g_s), s	10.5	61.5	61.5	3.0	50.1	20.1	4.8	13.9	14.1	33.5	45.1	45.1
Cycle Q Clear(g_c), s	10.5	61.5	61.5	3.0	50.1	20.1	4.8	13.9	14.1	33.5	45.1	45.1
Prop In Lane	1.00		0.08	1.00		1.00	1.00		0.18	1.00		0.37
Lane Grp Cap(c), veh/h	251	729	756	46	1291	566	74	236	239	398	559	549
V/C Ratio(X)	0.96	1.13	1.14	0.78	0.95	0.48	0.79	0.73	0.74	1.23	0.97	0.97
Avail Cap(c_a), veh/h	251	729	756	59	1318	578	75	237	240	398	559	549
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	68.7	43.6	43.6	72.0	45.8	36.2	70.6	61.8	61.9	57.6	50.1	50.1
Incr Delay (d2), s/veh	46.4	74.9	77.9	34.8	14.1	0.8	39.5	11.0	11.7	123.3	30.3	30.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.1	40.6	42.7	1.8	23.5	7.6	3.0	6.8	7.1	28.2	24.0	23.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	115.2	118.6	121.5	106.9	59.8	37.0	110.1	72.9	73.6	180.9	80.4	80.9
LnGrp LOS	F	F	F	F	E	D	F	E	E	F	F	F
Approach Vol, veh/h		1925			1530			406			1563	
Approach Delay, s/veh		119.4			56.9			78.5			112.1	
Approach LOS		F			E			E			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.4	62.0	13.7	54.7	11.4	69.0	41.0	27.4
Change Period (Y+Rc), s	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5
Max Green Setting (Gmax), s	10.9	55.6	6.3	47.2	5.0	61.5	33.5	20.0
Max Q Clear Time (g_c+I1), s	12.5	52.1	6.8	47.1	5.0	63.5	35.5	16.1
Green Ext Time (p_c), s	0.0	2.4	0.0	0.0	0.0	0.0	0.0	0.7

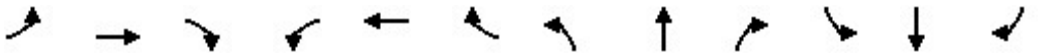
Intersection Summary	
HCM 6th Ctrl Delay	96.6
HCM 6th LOS	F



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	1673	180	140	1267	25	250	20	50	16	10	50
Future Volume (veh/h)	30	1673	180	140	1267	25	250	20	50	16	10	50
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.97	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	32	1761	185	147	1334	26	263	21	12	17	11	12
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	54	1814	187	150	2184	43	333	370	309	154	100	93
Arrive On Green	0.03	0.56	0.56	0.09	0.62	0.62	0.20	0.20	0.20	0.20	0.20	0.20
Sat Flow, veh/h	1767	3221	332	1767	3535	69	1377	1856	1550	591	500	468
Grp Volume(v), veh/h	32	948	998	147	665	695	263	21	12	40	0	0
Grp Sat Flow(s),veh/h/ln	1767	1763	1790	1767	1763	1841	1377	1856	1550	1560	0	0
Q Serve(g_s), s	2.5	71.7	77.7	11.7	32.7	32.7	23.1	1.3	0.9	0.0	0.0	0.0
Cycle Q Clear(g_c), s	2.5	71.7	77.7	11.7	32.7	32.7	25.7	1.3	0.9	2.6	0.0	0.0
Prop In Lane	1.00		0.19	1.00		0.04	1.00		1.00	0.42		0.30
Lane Grp Cap(c), veh/h	54	993	1008	150	1089	1138	333	370	309	347	0	0
V/C Ratio(X)	0.60	0.95	0.99	0.98	0.61	0.61	0.79	0.06	0.04	0.12	0.00	0.00
Avail Cap(c_a), veh/h	88	993	1008	150	1089	1138	371	421	351	389	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	67.6	29.1	30.4	64.4	16.5	16.6	55.2	45.8	45.6	46.3	0.0	0.0
Incr Delay (d2), s/veh	10.1	18.6	25.8	66.7	1.0	1.0	10.0	0.1	0.1	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	32.0	36.8	7.9	12.0	12.6	10.2	0.6	0.4	1.2	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	77.7	47.7	56.2	131.1	17.5	17.5	65.2	45.8	45.6	46.4	0.0	0.0
LnGrp LOS	E	D	E	F	B	B	E	D	D	D	A	A
Approach Vol, veh/h		1978			1507			296			40	
Approach Delay, s/veh		52.5			28.6			63.1			46.4	
Approach LOS		D			C			E			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.3	94.7		35.1	19.0	87.0		35.1				
Change Period (Y+Rc), s	7.0	7.5		7.0	7.0	7.5		7.0				
Max Green Setting (Gmax), s	7.0	84.5		32.0	12.0	79.5		32.0				
Max Q Clear Time (g_c+I1), s	4.5	34.7		27.7	13.7	79.7		4.6				
Green Ext Time (p_c), s	0.0	10.5		0.4	0.0	0.0		0.2				

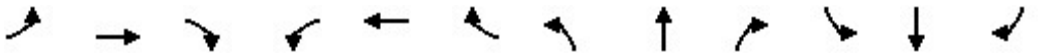
Intersection Summary			
HCM 6th Ctrl Delay		43.8	
HCM 6th LOS		D	



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	1659	50	36	1333	56	70	30	57	47	30	30
Future Volume (veh/h)	30	1659	50	36	1333	56	70	30	57	47	30	30
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	1.00		0.96	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	32	1746	53	38	1403	58	74	32	6	49	32	4
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	62	2064	62	69	2050	85	95	100	19	78	91	11
Arrive On Green	0.04	0.59	0.59	0.04	0.59	0.59	0.05	0.07	0.07	0.04	0.06	0.06
Sat Flow, veh/h	1767	3491	105	1767	3446	142	1767	1508	283	1767	1607	201
Grp Volume(v), veh/h	32	878	921	38	716	745	74	0	38	49	0	36
Grp Sat Flow(s),veh/h/ln	1767	1763	1833	1767	1763	1826	1767	0	1791	1767	0	1808
Q Serve(g_s), s	1.8	41.4	42.1	2.2	28.3	28.5	4.2	0.0	2.1	2.8	0.0	2.0
Cycle Q Clear(g_c), s	1.8	41.4	42.1	2.2	28.3	28.5	4.2	0.0	2.1	2.8	0.0	2.0
Prop In Lane	1.00		0.06	1.00		0.08	1.00		0.16	1.00		0.11
Lane Grp Cap(c), veh/h	62	1042	1084	69	1049	1086	95	0	119	78	0	103
V/C Ratio(X)	0.52	0.84	0.85	0.55	0.68	0.69	0.78	0.00	0.32	0.63	0.00	0.35
Avail Cap(c_a), veh/h	104	1201	1249	104	1201	1243	104	0	561	104	0	567
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	48.4	17.0	17.1	48.2	14.1	14.1	47.7	0.0	45.5	48.0	0.0	46.3
Incr Delay (d2), s/veh	6.5	5.2	5.3	6.8	1.5	1.5	29.1	0.0	1.5	8.0	0.0	2.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	14.8	15.7	1.0	9.4	9.9	2.6	0.0	1.0	1.4	0.0	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	54.9	22.2	22.5	55.0	15.6	15.6	76.8	0.0	47.0	56.0	0.0	48.3
LnGrp LOS	D	C	C	E	B	B	E	A	D	E	A	D
Approach Vol, veh/h		1831			1499			112			85	
Approach Delay, s/veh		22.9			16.6			66.7			52.7	
Approach LOS		C			B			E			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.6	68.2	11.5	11.8	11.0	67.8	10.5	12.8
Change Period (Y+Rc), s	7.0	7.5	6.0	6.0	7.0	7.5	6.0	6.0
Max Green Setting (Gmax), s	6.0	69.5	6.0	32.0	6.0	69.5	6.0	32.0
Max Q Clear Time (g_c+I1), s	3.8	30.5	6.2	4.0	4.2	44.1	4.8	4.1
Green Ext Time (p_c), s	0.0	14.7	0.0	0.1	0.0	16.2	0.0	0.1

Intersection Summary	
HCM 6th Ctrl Delay	22.3
HCM 6th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	330	1308	124	241	1116	315	85	472	47	406	1031	223
Future Volume (veh/h)	330	1308	124	241	1116	315	85	472	47	406	1031	223
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	347	1377	45	254	1175	291	89	497	9	427	1085	223
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	249	1193	532	150	1090	838	301	601	268	405	684	140
Arrive On Green	0.07	0.34	0.34	0.04	0.31	0.31	0.17	0.17	0.17	0.23	0.23	0.23
Sat Flow, veh/h	3428	3526	1572	3428	3526	1544	1767	3526	1572	1767	2986	611
Grp Volume(v), veh/h	347	1377	45	254	1175	291	89	497	9	427	672	636
Grp Sat Flow(s),veh/h/ln	1714	1763	1572	1714	1763	1544	1767	1763	1572	1767	1856	1741
Q Serve(g_s), s	10.0	46.5	2.7	6.0	42.5	14.7	6.0	18.7	0.7	31.5	31.5	31.5
Cycle Q Clear(g_c), s	10.0	46.5	2.7	6.0	42.5	14.7	6.0	18.7	0.7	31.5	31.5	31.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.35
Lane Grp Cap(c), veh/h	249	1193	532	150	1090	838	301	601	268	405	425	399
V/C Ratio(X)	1.39	1.15	0.08	1.70	1.08	0.35	0.30	0.83	0.03	1.05	1.58	1.59
Avail Cap(c_a), veh/h	249	1193	532	150	1090	838	399	795	355	405	425	399
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	63.7	45.5	31.0	65.7	47.5	18.0	49.8	55.0	47.6	53.0	53.0	53.0
Incr Delay (d2), s/veh	198.7	79.3	0.1	340.6	50.7	0.3	0.7	5.9	0.1	59.7	272.5	278.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.1	32.3	1.0	9.6	25.3	8.1	2.7	8.6	0.3	20.3	46.5	44.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	262.4	124.8	31.0	406.3	98.2	18.3	50.4	61.0	47.6	112.6	325.5	331.3
LnGrp LOS	F	F	C	F	F	B	D	E	D	F	F	F
Approach Vol, veh/h		1769			1720			595			1735	
Approach Delay, s/veh		149.4			130.2			59.2			275.2	
Approach LOS		F			F			E			F	

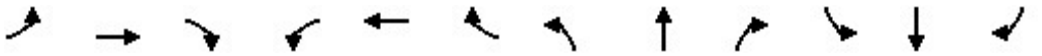
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		30.9	13.5	54.0		39.0	17.5	50.0				
Change Period (Y+Rc), s		7.5	7.5	7.5		7.5	7.5	7.5				
Max Green Setting (Gmax), s		31.0	6.0	46.5		31.5	10.0	42.5				
Max Q Clear Time (g_c+I1), s		20.7	8.0	48.5		33.5	12.0	44.5				
Green Ext Time (p_c), s		2.7	0.0	0.0		0.0	0.0	0.0				

Intersection Summary		
HCM 6th Ctrl Delay		172.0
HCM 6th LOS		F

Notes

User approved pedestrian interval to be less than phase max green.

User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	1612	146	87	1533	30	103	0	74	30	0	30
Future Volume (veh/h)	30	1612	146	87	1533	30	103	0	74	30	0	30
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.97	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	32	1697	116	92	1614	32	108	0	13	32	0	6
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	66	2062	916	117	2169	43	227	0	164	220	0	164
Arrive On Green	0.04	0.58	0.58	0.07	0.61	0.61	0.10	0.00	0.10	0.10	0.00	0.10
Sat Flow, veh/h	1767	3526	1566	1767	3534	70	1399	0	1572	1390	0	1572
Grp Volume(v), veh/h	32	1697	116	92	804	842	108	0	13	32	0	6
Grp Sat Flow(s),veh/h/ln	1767	1763	1566	1767	1763	1841	1399	0	1572	1390	0	1572
Q Serve(g_s), s	1.5	32.3	2.8	4.3	27.1	27.3	6.3	0.0	0.6	1.8	0.0	0.3
Cycle Q Clear(g_c), s	1.5	32.3	2.8	4.3	27.1	27.3	6.6	0.0	0.6	2.4	0.0	0.3
Prop In Lane	1.00		1.00	1.00		0.04	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	66	2062	916	117	1082	1130	227	0	164	220	0	164
V/C Ratio(X)	0.48	0.82	0.13	0.78	0.74	0.75	0.48	0.00	0.08	0.15	0.00	0.04
Avail Cap(c_a), veh/h	127	2377	1056	148	1209	1263	682	0	675	673	0	675
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	39.5	13.9	7.8	38.5	11.5	11.5	36.7	0.0	33.9	35.0	0.0	33.8
Incr Delay (d2), s/veh	5.3	2.3	0.1	19.0	2.4	2.3	1.6	0.0	0.2	0.3	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	9.9	0.7	2.3	8.1	8.5	2.2	0.0	0.2	0.6	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	44.8	16.2	7.9	57.6	13.9	13.8	38.3	0.0	34.1	35.3	0.0	33.9
LnGrp LOS	D	B	A	E	B	B	D	A	C	D	A	C
Approach Vol, veh/h		1845			1738			121			38	
Approach Delay, s/veh		16.2			16.2			37.8			35.1	
Approach LOS		B			B			D			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.2	58.9		14.7	12.6	56.5		14.7				
Change Period (Y+Rc), s	7.0	7.5		6.0	7.0	7.5		6.0				
Max Green Setting (Gmax), s	6.0	57.5		36.0	7.0	56.5		36.0				
Max Q Clear Time (g_c+I1), s	3.5	29.3		4.4	6.3	34.3		8.6				
Green Ext Time (p_c), s	0.0	15.3		0.1	0.0	14.7		0.3				

Intersection Summary			
HCM 6th Ctrl Delay		17.1	
HCM 6th LOS		B	

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1572	144	196	1532	118	166
Future Volume (veh/h)	1572	144	196	1532	118	166
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		0.97	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	1655	113	206	1613	124	24
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	1960	852	241	2707	163	145
Arrive On Green	0.56	0.56	0.14	0.77	0.09	0.09
Sat Flow, veh/h	3618	1532	1767	3618	1767	1572
Grp Volume(v), veh/h	1655	113	206	1613	124	24
Grp Sat Flow(s),veh/h/ln	1763	1532	1767	1763	1767	1572
Q Serve(g_s), s	36.4	3.3	10.6	18.2	6.4	1.3
Cycle Q Clear(g_c), s	36.4	3.3	10.6	18.2	6.4	1.3
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1960	852	241	2707	163	145
V/C Ratio(X)	0.84	0.13	0.86	0.60	0.76	0.17
Avail Cap(c_a), veh/h	2205	958	286	3041	610	543
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.2	9.9	39.2	4.6	41.1	38.8
Incr Delay (d2), s/veh	3.0	0.1	19.2	0.3	7.2	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.4	0.9	5.5	3.0	3.0	0.5
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	20.2	10.0	58.4	4.9	48.3	39.4
LnGrp LOS	C	A	E	A	D	D
Approach Vol, veh/h	1768			1819	148	
Approach Delay, s/veh	19.6			11.0	46.8	
Approach LOS	B			B	D	

Timer - Assigned Phs		2			5	6	8
Phs Duration (G+Y+Rc), s		78.7			19.6	59.1	14.0
Change Period (Y+Rc), s		7.5			7.0	7.5	5.5
Max Green Setting (Gmax), s		80.0			15.0	58.0	32.0
Max Q Clear Time (g_c+I1), s		20.2			12.6	38.4	8.4
Green Ext Time (p_c), s		21.6			0.1	13.1	0.4

Intersection Summary	
HCM 6th Ctrl Delay	16.5
HCM 6th LOS	B

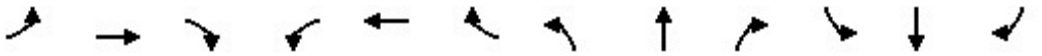
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	96	1596	46	100	1595	20	27	10	100	30	10	107
Future Volume (veh/h)	96	1596	46	100	1595	20	27	10	100	30	10	107
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	0.99		0.97	0.99		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	101	1680	47	105	1679	21	28	11	14	32	11	15
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	146	1960	55	148	1999	25	147	58	47	152	54	46
Arrive On Green	0.08	0.56	0.56	0.08	0.56	0.56	0.11	0.11	0.11	0.11	0.11	0.11
Sat Flow, veh/h	1767	3500	98	1767	3564	45	636	512	412	673	473	400
Grp Volume(v), veh/h	101	843	884	105	829	871	53	0	0	58	0	0
Grp Sat Flow(s),veh/h/ln	1767	1763	1835	1767	1763	1846	1560	0	0	1546	0	0
Q Serve(g_s), s	4.1	29.9	30.3	4.3	28.9	29.1	0.0	0.0	0.0	0.2	0.0	0.0
Cycle Q Clear(g_c), s	4.1	29.9	30.3	4.3	28.9	29.1	2.0	0.0	0.0	2.3	0.0	0.0
Prop In Lane	1.00		0.05	1.00		0.02	0.53		0.26	0.55		0.26
Lane Grp Cap(c), veh/h	146	987	1028	148	989	1036	252	0	0	251	0	0
V/C Ratio(X)	0.69	0.85	0.86	0.71	0.84	0.84	0.21	0.00	0.00	0.23	0.00	0.00
Avail Cap(c_a), veh/h	167	1116	1162	167	1116	1169	643	0	0	640	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	33.1	13.8	13.9	33.1	13.5	13.5	30.0	0.0	0.0	30.1	0.0	0.0
Incr Delay (d2), s/veh	9.9	6.0	6.1	11.6	5.3	5.1	0.3	0.0	0.0	0.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	9.8	10.4	2.2	9.7	10.1	0.9	0.0	0.0	1.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	43.0	19.8	20.0	44.7	18.8	18.7	30.3	0.0	0.0	30.5	0.0	0.0
LnGrp LOS	D	B	B	D	B	B	C	A	A	C	A	A
Approach Vol, veh/h		1828			1805			53			58	
Approach Delay, s/veh		21.2			20.2			30.3			30.5	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	2	3	4	6	7	8
Phs Duration (G+Y+Rc), s	14.5	11.2	48.6	14.5	11.1	48.6
Change Period (Y+Rc), s	6.0	5.0	7.0	6.0	5.0	7.0
Max Green Setting (Gmax), s	28.0	7.0	47.0	28.0	7.0	47.0
Max Q Clear Time (g_c+I1), s	4.0	6.3	32.3	4.3	6.1	31.1
Green Ext Time (p_c), s	0.2	0.0	9.2	0.2	0.0	9.8

Intersection Summary	
HCM 6th Ctrl Delay	21.0
HCM 6th LOS	C

Notes

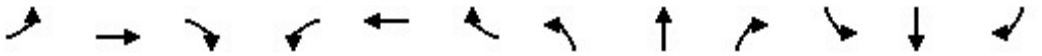
User approved pedestrian interval to be less than phase max green.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	437	1096	393	191	1055	190	273	1108	20	210	1559	466
Future Volume (veh/h)	437	1096	393	191	1055	190	273	1108	20	210	1559	466
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.97	1.00		0.97	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	460	1154	256	201	1111	189	287	1166	21	221	1641	452
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	288	1149	501	200	830	141	188	1536	28	246	1314	355
Arrive On Green	0.16	0.33	0.33	0.11	0.28	0.28	0.11	0.30	0.30	0.14	0.34	0.34
Sat Flow, veh/h	1753	3497	1525	1753	2978	505	1753	5080	91	1753	3913	1057
Grp Volume(v), veh/h	460	1154	256	201	651	649	287	769	418	221	1400	693
Grp Sat Flow(s),veh/h/ln	1753	1749	1525	1753	1749	1734	1753	1675	1821	1753	1675	1620
Q Serve(g_s), s	23.0	46.0	19.0	16.0	39.0	39.0	15.0	29.1	29.1	17.4	47.0	47.0
Cycle Q Clear(g_c), s	23.0	46.0	19.0	16.0	39.0	39.0	15.0	29.1	29.1	17.4	47.0	47.0
Prop In Lane	1.00		1.00	1.00		0.29	1.00		0.05	1.00		0.65
Lane Grp Cap(c), veh/h	288	1149	501	200	487	483	188	1013	551	246	1125	544
V/C Ratio(X)	1.60	1.00	0.51	1.00	1.34	1.34	1.53	0.76	0.76	0.90	1.25	1.27
Avail Cap(c_a), veh/h	288	1149	501	200	487	483	188	1013	551	275	1125	544
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	58.5	47.0	37.9	62.0	50.5	50.5	62.5	44.2	44.2	59.2	46.5	46.5
Incr Delay (d2), s/veh	284.5	27.6	1.8	64.4	164.6	168.4	262.7	4.0	7.2	30.3	117.9	137.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	32.7	23.5	7.1	10.5	38.7	38.8	20.2	12.2	13.8	9.6	37.1	38.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	343.0	74.6	39.7	126.4	215.1	218.9	325.2	48.2	51.4	89.5	164.4	183.6
LnGrp LOS	F	F	D	F	F	F	F	D	D	F	F	F
Approach Vol, veh/h		1870			1501			1474			2314	
Approach Delay, s/veh		135.8			204.9			103.1			163.0	
Approach LOS		F			F			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	23.7	46.3	20.0	50.0	19.0	51.0	27.0	43.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	22.0	40.0	16.0	46.0	15.0	47.0	23.0	39.0
Max Q Clear Time (g_c+I1), s	19.4	31.1	18.0	48.0	17.0	49.0	25.0	41.0
Green Ext Time (p_c), s	0.3	6.5	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	152.3
HCM 6th LOS	F



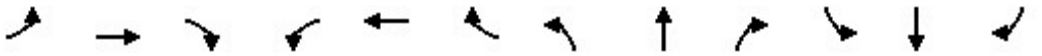
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	420	888	68	280	682	170	40	710	240	320	890	714
Future Volume (veh/h)	420	888	68	280	682	170	40	710	240	320	890	714
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	442	935	69	295	718	36	42	747	231	337	937	653
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	429	833	61	239	687	300	70	985	305	382	898	595
Arrive On Green	0.13	0.25	0.25	0.07	0.19	0.19	0.04	0.37	0.37	0.11	0.45	0.45
Sat Flow, veh/h	3428	3323	245	3428	3526	1538	1767	2639	816	3428	2017	1335
Grp Volume(v), veh/h	442	496	508	295	718	36	42	499	479	337	813	777
Grp Sat Flow(s),veh/h/ln	1714	1763	1806	1714	1763	1538	1767	1763	1692	1714	1763	1589
Q Serve(g_s), s	18.0	36.0	36.0	10.0	28.0	2.8	3.4	35.6	35.6	13.9	64.0	64.0
Cycle Q Clear(g_c), s	18.0	36.0	36.0	10.0	28.0	2.8	3.4	35.6	35.6	13.9	64.0	64.0
Prop In Lane	1.00		0.14	1.00		1.00	1.00		0.48	1.00		0.84
Lane Grp Cap(c), veh/h	429	442	452	239	687	300	70	658	632	382	785	708
V/C Ratio(X)	1.03	1.12	1.12	1.24	1.05	0.12	0.60	0.76	0.76	0.88	1.03	1.10
Avail Cap(c_a), veh/h	429	442	452	239	687	300	86	662	636	406	785	708
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	62.8	53.8	53.8	66.8	57.8	47.7	67.9	39.3	39.3	62.9	39.8	39.8
Incr Delay (d2), s/veh	51.1	80.8	80.4	137.0	46.7	0.2	6.0	4.8	5.0	18.5	41.5	63.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.7	25.3	25.9	8.8	16.6	1.1	1.6	15.8	15.2	6.9	35.3	36.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	114.0	134.7	134.2	203.9	104.5	47.9	73.9	44.1	44.3	81.4	81.3	103.8
LnGrp LOS	F	F	F	F	F	D	E	D	D	F	F	F
Approach Vol, veh/h		1446			1049			1020			1927	
Approach Delay, s/veh		128.2			130.5			45.5			90.4	
Approach LOS		F			F			D			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	23.0	60.7	17.0	43.0	12.7	71.0	25.0	35.0
Change Period (Y+Rc), s	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Max Green Setting (Gmax), s	17.0	54.0	10.0	36.0	7.0	64.0	18.0	28.0
Max Q Clear Time (g_c+I1), s	15.9	37.6	12.0	38.0	5.4	66.0	20.0	30.0
Green Ext Time (p_c), s	0.1	4.4	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	99.8
HCM 6th LOS	F

Notes

User approved pedestrian interval to be less than phase max green.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	290	945	190	86	697	168	280	2082	341	210	2452	170
Future Volume (veh/h)	290	945	190	86	697	168	280	2082	341	210	2452	170
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	305	995	183	91	734	157	295	2192	235	221	2581	68
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	88	912	167	88	885	189	340	1893	458	1212	5751	1414
Arrive On Green	0.05	0.31	0.31	0.05	0.31	0.31	0.10	0.30	0.30	0.69	0.91	0.91
Sat Flow, veh/h	1753	2940	540	1753	2856	611	3401	6332	1531	1753	6332	1557
Grp Volume(v), veh/h	305	591	587	91	449	442	295	2192	235	221	2581	68
Grp Sat Flow(s),veh/h/ln	1753	1749	1732	1753	1749	1717	1700	1583	1531	1753	1583	1557
Q Serve(g_s), s	5.0	31.0	31.0	5.0	23.9	23.9	8.5	29.9	20.6	4.5	6.3	0.4
Cycle Q Clear(g_c), s	5.0	31.0	31.0	5.0	23.9	23.9	8.5	29.9	20.6	4.5	6.3	0.4
Prop In Lane	1.00		0.31	1.00		0.36	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	88	542	537	88	542	532	340	1893	458	1212	5751	1414
V/C Ratio(X)	3.48	1.09	1.09	1.04	0.83	0.83	0.87	1.16	0.51	0.18	0.45	0.05
Avail Cap(c_a), veh/h	88	542	537	88	542	532	340	1893	458	1212	5751	1414
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.5	34.5	34.5	47.5	32.0	32.0	44.3	35.0	76.5	5.5	0.7	0.4
Incr Delay (d2), s/veh	1143.9	65.5	66.7	106.9	10.4	10.6	19.7	77.4	4.1	0.0	0.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	30.0	22.3	22.3	4.7	10.9	10.7	4.4	20.8	8.2	1.2	0.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	1191.4	100.0	101.2	154.4	42.4	42.6	64.0	112.4	80.6	5.5	1.0	0.5
LnGrp LOS	F	F	F	F	D	D	E	F	F	A	A	A
Approach Vol, veh/h		1483			982			2722			2870	
Approach Delay, s/veh		325.0			52.9			104.4			1.3	
Approach LOS		F			D			F			A	

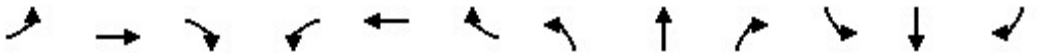
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	77.4	36.4	10.7	38.2	14.7	99.1	10.7	38.2
Change Period (Y+Rc), s	6.5	* 6.5	* 5.7	7.2	* 4.7	6.5	* 5.7	7.2
Max Green Setting (Gmax), s	10.0	* 30	* 5	31.0	* 10	29.9	* 5	31.0
Max Q Clear Time (g_c+I1), s	6.5	31.9	7.0	33.0	10.5	8.3	7.0	25.9
Green Ext Time (p_c), s	0.1	0.0	0.0	0.0	0.0	18.1	0.0	2.3

Intersection Summary	
HCM 6th Ctrl Delay	102.0
HCM 6th LOS	F

Notes

User approved pedestrian interval to be less than phase max green.

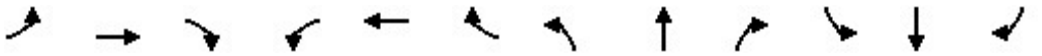
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	70	1037	90	247	711	96	100	293	160	137	534	180
Future Volume (veh/h)	70	1037	90	247	711	96	100	293	160	137	534	180
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	74	1092	91	260	748	95	105	308	119	144	562	167
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	93	1158	96	262	1405	178	112	524	198	150	618	183
Arrive On Green	0.05	0.35	0.35	0.15	0.45	0.45	0.06	0.21	0.21	0.08	0.23	0.23
Sat Flow, veh/h	1767	3289	274	1767	3140	399	1767	2487	939	1767	2667	790
Grp Volume(v), veh/h	74	585	598	260	420	423	105	216	211	144	371	358
Grp Sat Flow(s),veh/h/ln	1767	1763	1801	1767	1763	1776	1767	1763	1663	1767	1763	1694
Q Serve(g_s), s	5.9	45.6	45.7	20.8	24.5	24.5	8.4	15.6	16.3	11.5	29.0	29.2
Cycle Q Clear(g_c), s	5.9	45.6	45.7	20.8	24.5	24.5	8.4	15.6	16.3	11.5	29.0	29.2
Prop In Lane	1.00		0.15	1.00		0.22	1.00		0.56	1.00		0.47
Lane Grp Cap(c), veh/h	93	621	634	262	789	795	112	371	350	150	409	393
V/C Ratio(X)	0.79	0.94	0.94	0.99	0.53	0.53	0.94	0.58	0.60	0.96	0.91	0.91
Avail Cap(c_a), veh/h	150	634	648	262	789	795	112	398	375	150	435	418
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	66.4	44.5	44.6	60.3	28.4	28.4	66.1	50.4	50.6	64.7	53.0	53.1
Incr Delay (d2), s/veh	13.9	22.5	22.4	53.7	0.8	0.8	64.9	2.2	2.7	62.2	22.1	23.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.0	22.9	23.4	13.0	10.1	10.2	5.7	7.0	6.9	7.6	14.9	14.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	80.3	67.0	66.9	114.0	29.2	29.2	131.0	52.5	53.3	126.9	75.0	76.6
LnGrp LOS	F	E	E	F	C	C	F	D	D	F	E	E
Approach Vol, veh/h		1257			1103			532			873	
Approach Delay, s/veh		67.7			49.2			68.3			84.2	
Approach LOS		E			D			E			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.5	70.9	16.0	40.4	28.0	57.4	19.0	37.4
Change Period (Y+Rc), s	7.0	7.5	7.0	7.5	7.0	7.5	7.0	7.5
Max Green Setting (Gmax), s	12.0	60.0	9.0	35.0	21.0	51.0	12.0	32.0
Max Q Clear Time (g_c+I1), s	7.9	26.5	10.4	31.2	22.8	47.7	13.5	18.3
Green Ext Time (p_c), s	0.0	6.5	0.0	1.6	0.0	2.2	0.0	2.2

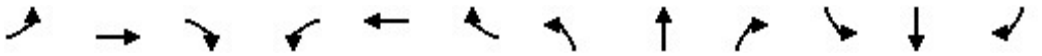
Intersection Summary	
HCM 6th Ctrl Delay	66.2
HCM 6th LOS	E



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	60	1103	170	108	904	30	30	230	160	50	160	120
Future Volume (veh/h)	60	1103	170	108	904	30	30	230	160	50	160	120
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.97	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	63	1161	171	114	952	31	32	242	55	53	168	23
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	88	1351	198	141	1635	53	62	414	92	82	485	65
Arrive On Green	0.05	0.44	0.44	0.08	0.47	0.47	0.04	0.15	0.15	0.05	0.16	0.16
Sat Flow, veh/h	1767	3077	451	1767	3482	113	1767	2851	634	1767	3112	419
Grp Volume(v), veh/h	63	663	669	114	482	501	32	148	149	53	94	97
Grp Sat Flow(s),veh/h/ln	1767	1763	1765	1767	1763	1833	1767	1763	1722	1767	1763	1768
Q Serve(g_s), s	3.5	33.9	34.2	6.4	20.0	20.0	1.8	7.8	8.1	3.0	4.8	4.9
Cycle Q Clear(g_c), s	3.5	33.9	34.2	6.4	20.0	20.0	1.8	7.8	8.1	3.0	4.8	4.9
Prop In Lane	1.00		0.26	1.00		0.06	1.00		0.37	1.00		0.24
Lane Grp Cap(c), veh/h	88	774	775	141	828	861	62	256	250	82	275	276
V/C Ratio(X)	0.72	0.86	0.86	0.81	0.58	0.58	0.51	0.58	0.60	0.65	0.34	0.35
Avail Cap(c_a), veh/h	141	875	876	141	875	910	106	569	556	106	569	570
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.9	25.2	25.3	45.3	19.4	19.4	47.4	39.9	40.1	47.0	37.7	37.7
Incr Delay (d2), s/veh	10.5	8.0	8.3	28.2	1.0	1.0	6.4	2.5	2.8	8.4	0.9	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	14.3	14.5	3.8	7.5	7.8	0.9	3.4	3.5	1.4	2.0	2.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	57.4	33.2	33.7	73.5	20.4	20.4	53.8	42.4	42.8	55.3	38.5	38.7
LnGrp LOS	E	C	C	E	C	C	D	D	D	E	D	D
Approach Vol, veh/h		1395			1097			329			244	
Approach Delay, s/veh		34.5			25.9			43.7			42.2	
Approach LOS		C			C			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.0	54.5	10.5	23.1	15.0	51.5	11.6	22.0
Change Period (Y+Rc), s	7.0	7.5	7.0	7.5	7.0	7.5	7.0	7.5
Max Green Setting (Gmax), s	8.0	49.7	6.0	32.3	8.0	49.7	6.0	32.3
Max Q Clear Time (g_c+I1), s	5.5	22.0	3.8	6.9	8.4	36.2	5.0	10.1
Green Ext Time (p_c), s	0.0	7.5	0.0	1.1	0.0	7.7	0.0	1.7

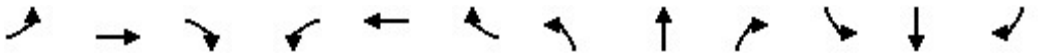
Intersection Summary	
HCM 6th Ctrl Delay	33.0
HCM 6th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	160	1033	80	98	695	157	30	297	39	215	885	257
Future Volume (veh/h)	160	1033	80	98	695	157	30	297	39	215	885	257
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	168	1087	80	103	732	150	32	313	27	226	932	229
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	153	1160	85	123	965	198	59	989	84	215	1203	295
Arrive On Green	0.09	0.35	0.35	0.07	0.33	0.33	0.03	0.21	0.21	0.12	0.30	0.30
Sat Flow, veh/h	1767	3325	245	1767	2911	596	1767	4751	402	1767	4060	994
Grp Volume(v), veh/h	168	576	591	103	443	439	32	221	119	226	775	386
Grp Sat Flow(s),veh/h/ln	1767	1763	1806	1767	1763	1745	1767	1689	1776	1767	1689	1677
Q Serve(g_s), s	10.0	36.4	36.5	6.6	25.8	25.9	2.1	6.4	6.6	14.0	24.1	24.3
Cycle Q Clear(g_c), s	10.0	36.4	36.5	6.6	25.8	25.9	2.1	6.4	6.6	14.0	24.1	24.3
Prop In Lane	1.00		0.14	1.00		0.34	1.00		0.23	1.00		0.59
Lane Grp Cap(c), veh/h	153	615	630	123	585	579	59	703	370	215	1001	497
V/C Ratio(X)	1.09	0.94	0.94	0.84	0.76	0.76	0.54	0.31	0.32	1.05	0.77	0.78
Avail Cap(c_a), veh/h	153	628	643	123	597	591	92	968	509	215	1202	597
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.6	36.3	36.3	52.9	34.4	34.4	54.8	38.6	38.7	50.6	37.0	37.0
Incr Delay (d2), s/veh	100.3	21.6	21.4	37.6	5.7	5.7	7.5	0.3	0.6	75.8	2.8	5.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.5	18.3	18.7	4.1	11.3	11.2	1.0	2.6	2.8	10.7	10.3	10.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	152.9	57.8	57.7	90.6	40.0	40.1	62.3	38.9	39.3	126.4	39.8	42.8
LnGrp LOS	F	E	E	F	D	D	E	D	D	F	D	D
Approach Vol, veh/h		1335			985			372			1387	
Approach Delay, s/veh		69.7			45.4			41.1			54.8	
Approach LOS		E			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	21.0	31.5	15.0	47.7	10.8	41.6	17.0	45.7
Change Period (Y+Rc), s	7.0	7.5	7.0	7.5	7.0	7.5	7.0	7.5
Max Green Setting (Gmax), s	14.0	33.0	8.0	41.0	6.0	41.0	10.0	39.0
Max Q Clear Time (g_c+I1), s	16.0	8.6	8.6	38.5	4.1	26.3	12.0	27.9
Green Ext Time (p_c), s	0.0	2.2	0.0	1.7	0.0	7.9	0.0	4.4

Intersection Summary	
HCM 6th Ctrl Delay	56.1
HCM 6th LOS	E



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	124	1181	30	140	984	191	51	36	120	171	35	120
Future Volume (veh/h)	124	1181	30	140	984	191	51	36	120	171	35	120
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	0.99		0.97	0.99		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	131	1243	32	147	1036	109	54	38	18	180	37	20
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	163	1473	38	180	1512	663	294	191	157	319	137	74
Arrive On Green	0.09	0.42	0.42	0.10	0.43	0.43	0.05	0.10	0.10	0.07	0.12	0.12
Sat Flow, veh/h	1767	3509	90	1767	3526	1547	1767	1856	1525	1767	1121	606
Grp Volume(v), veh/h	131	624	651	147	1036	109	54	38	18	180	0	57
Grp Sat Flow(s),veh/h/ln	1767	1763	1836	1767	1763	1547	1767	1856	1525	1767	0	1726
Q Serve(g_s), s	6.3	27.5	27.6	7.0	20.6	3.7	2.3	1.6	0.9	6.0	0.0	2.6
Cycle Q Clear(g_c), s	6.3	27.5	27.6	7.0	20.6	3.7	2.3	1.6	0.9	6.0	0.0	2.6
Prop In Lane	1.00		0.05	1.00		1.00	1.00		1.00	1.00		0.35
Lane Grp Cap(c), veh/h	163	740	771	180	1512	663	294	191	157	319	0	210
V/C Ratio(X)	0.80	0.84	0.84	0.82	0.69	0.16	0.18	0.20	0.11	0.56	0.00	0.27
Avail Cap(c_a), veh/h	225	846	881	184	1610	706	327	687	564	319	0	639
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	38.5	22.5	22.6	38.1	20.0	15.2	32.0	35.5	35.2	33.5	0.0	34.5
Incr Delay (d2), s/veh	13.4	7.3	7.1	24.0	1.2	0.1	0.3	0.5	0.3	2.3	0.0	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.2	11.3	11.7	4.1	7.5	1.2	1.0	0.7	0.3	3.7	0.0	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	51.9	29.8	29.6	62.1	21.2	15.3	32.3	36.0	35.5	35.8	0.0	35.2
LnGrp LOS	D	C	C	E	C	B	C	D	D	D	A	D
Approach Vol, veh/h		1406			1292			110			237	
Approach Delay, s/veh		31.8			25.3			34.1			35.6	
Approach LOS		C			C			C			D	

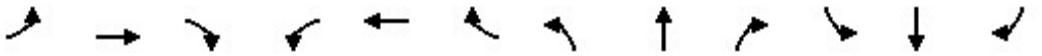
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.0	44.6	10.4	16.5	15.8	43.8	12.0	14.9
Change Period (Y+Rc), s	7.0	7.5	6.0	6.0	7.0	7.5	6.0	6.0
Max Green Setting (Gmax), s	11.0	39.5	6.0	32.0	9.0	41.5	6.0	32.0
Max Q Clear Time (g_c+I1), s	8.3	22.6	4.3	4.6	9.0	29.6	8.0	3.6
Green Ext Time (p_c), s	0.1	7.6	0.0	0.2	0.0	6.7	0.0	0.2

Intersection Summary	
HCM 6th Ctrl Delay	29.4
HCM 6th LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	208	716	400	130	597	123	385	1070	180	102	1850	190
Future Volume (veh/h)	208	716	400	130	597	123	385	1070	180	102	1850	190
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.99	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	219	754	368	137	628	117	405	1126	173	107	1947	192
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	187	664	323	139	780	145	284	1583	243	128	1266	124
Arrive On Green	0.11	0.29	0.29	0.08	0.27	0.27	0.16	0.36	0.36	0.07	0.27	0.27
Sat Flow, veh/h	1753	2264	1103	1753	2936	546	1753	4383	673	1753	4647	455
Grp Volume(v), veh/h	219	582	540	137	374	371	405	861	438	107	1400	739
Grp Sat Flow(s),veh/h/ln	1753	1749	1618	1753	1749	1734	1753	1675	1706	1753	1675	1751
Q Serve(g_s), s	15.5	42.5	42.5	11.3	28.9	29.0	23.5	32.0	32.1	8.7	39.5	39.5
Cycle Q Clear(g_c), s	15.5	42.5	42.5	11.3	28.9	29.0	23.5	32.0	32.1	8.7	39.5	39.5
Prop In Lane	1.00		0.68	1.00		0.31	1.00		0.39	1.00		0.26
Lane Grp Cap(c), veh/h	187	513	474	139	464	460	284	1210	616	128	913	477
V/C Ratio(X)	1.17	1.14	1.14	0.99	0.80	0.81	1.43	0.71	0.71	0.83	1.53	1.55
Avail Cap(c_a), veh/h	187	513	474	139	464	460	284	1210	616	170	913	477
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	64.8	51.3	51.3	66.7	49.7	49.8	60.8	39.8	39.8	66.3	52.8	52.8
Incr Delay (d2), s/veh	118.5	82.7	85.3	71.5	10.4	10.7	210.7	2.2	4.2	17.8	245.6	257.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	13.0	30.0	28.1	7.8	13.8	13.8	26.8	13.1	13.7	4.5	47.1	50.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	183.3	134.0	136.5	138.2	60.1	60.5	271.5	42.0	44.0	84.1	298.4	310.4
LnGrp LOS	F	F	F	F	E	E	F	D	D	F	F	F
Approach Vol, veh/h		1341			882			1704			2246	
Approach Delay, s/veh		143.0			72.4			97.0			292.1	
Approach LOS		F			E			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.1	59.9	18.0	49.0	31.0	47.0	22.0	45.0
Change Period (Y+Rc), s	7.5	7.5	6.5	6.5	7.5	7.5	6.5	6.5
Max Green Setting (Gmax), s	14.1	48.9	11.5	42.5	23.5	39.5	15.5	38.5
Max Q Clear Time (g_c+I1), s	10.7	34.1	13.3	44.5	25.5	41.5	17.5	31.0
Green Ext Time (p_c), s	0.0	8.9	0.0	0.0	0.0	0.0	0.0	3.3

Intersection Summary	
HCM 6th Ctrl Delay	174.5
HCM 6th LOS	F



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	177	1666	220	205	1086	550	230	1727	226	680	1673	124
Future Volume (veh/h)	177	1666	220	205	1086	550	230	1727	226	680	1673	124
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	186	1754	164	216	1143	543	242	1818	159	716	1761	54
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	239	1447	441	239	1448	663	291	2133	516	485	2495	604
Arrive On Green	0.07	0.29	0.29	0.07	0.29	0.29	0.09	0.34	0.34	0.14	0.39	0.39
Sat Flow, veh/h	3401	5025	1531	3401	5025	1531	3401	6332	1532	3401	6332	1534
Grp Volume(v), veh/h	186	1754	164	216	1143	543	242	1818	159	716	1761	54
Grp Sat Flow(s),veh/h/ln	1700	1675	1531	1700	1675	1531	1700	1583	1532	1700	1583	1534
Q Serve(g_s), s	7.7	41.0	12.2	9.0	29.8	41.0	10.0	38.0	10.9	20.3	33.2	3.1
Cycle Q Clear(g_c), s	7.7	41.0	12.2	9.0	29.8	41.0	10.0	38.0	10.9	20.3	33.2	3.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	239	1447	441	239	1448	663	291	2133	516	485	2495	604
V/C Ratio(X)	0.78	1.21	0.37	0.90	0.79	0.82	0.83	0.85	0.31	1.48	0.71	0.09
Avail Cap(c_a), veh/h	239	1447	441	239	1448	663	404	2251	545	485	2495	604
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	65.1	50.7	40.4	65.7	46.7	35.7	64.1	43.9	34.9	61.0	36.2	27.1
Incr Delay (d2), s/veh	13.8	102.0	0.5	33.1	3.0	8.0	7.4	3.2	0.3	225.3	0.9	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.7	30.3	4.6	4.9	12.5	17.4	4.5	14.6	4.1	23.6	12.3	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	78.9	152.6	40.9	98.8	49.7	43.7	71.5	47.2	35.3	286.3	37.1	27.2
LnGrp LOS	E	F	D	F	D	D	E	D	D	F	D	C
Approach Vol, veh/h		2104			1902			2219			2531	
Approach Delay, s/veh		137.4			53.6			49.0			107.4	
Approach LOS		F			D			D			F	

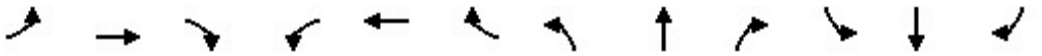
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	25.0	54.4	14.7	48.2	16.9	62.6	14.7	48.2
Change Period (Y+Rc), s	* 4.7	6.5	* 4.7	7.2	* 4.7	6.5	* 4.7	7.2
Max Green Setting (Gmax), s	* 20	50.6	* 10	41.0	* 17	54.0	* 10	41.0
Max Q Clear Time (g_c+I1), s	22.3	40.0	11.0	43.0	12.0	35.2	9.7	31.8
Green Ext Time (p_c), s	0.0	7.8	0.0	0.0	0.2	11.3	0.0	3.7

Intersection Summary	
HCM 6th Ctrl Delay	88.1
HCM 6th LOS	F

Notes

User approved pedestrian interval to be less than phase max green.

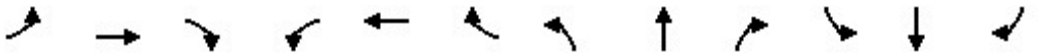
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	203	2300	70	120	1760	110	70	260	170	110	300	261
Future Volume (veh/h)	203	2300	70	120	1760	110	70	260	170	110	300	261
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	214	2421	33	126	1853	43	74	274	90	116	316	152
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	220	2723	660	117	2353	570	88	523	168	103	483	226
Arrive On Green	0.13	0.43	0.43	0.07	0.37	0.37	0.05	0.20	0.20	0.06	0.21	0.21
Sat Flow, veh/h	1753	6332	1534	1753	6332	1533	1753	2589	830	1753	2293	1076
Grp Volume(v), veh/h	214	2421	33	126	1853	43	74	183	181	116	239	229
Grp Sat Flow(s),veh/h/ln	1753	1583	1534	1753	1583	1533	1753	1749	1670	1753	1749	1620
Q Serve(g_s), s	14.5	42.2	1.5	8.0	31.1	2.2	5.0	11.1	11.6	7.0	15.0	15.5
Cycle Q Clear(g_c), s	14.5	42.2	1.5	8.0	31.1	2.2	5.0	11.1	11.6	7.0	15.0	15.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.50	1.00		0.66
Lane Grp Cap(c), veh/h	220	2723	660	117	2353	570	88	354	338	103	368	341
V/C Ratio(X)	0.97	0.89	0.05	1.07	0.79	0.08	0.84	0.52	0.54	1.13	0.65	0.67
Avail Cap(c_a), veh/h	220	2752	667	117	2382	577	88	716	684	103	731	677
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.1	31.5	19.9	55.8	33.4	24.3	56.3	42.5	42.7	56.3	43.2	43.4
Incr Delay (d2), s/veh	53.0	4.0	0.0	104.6	1.9	0.1	48.6	1.4	1.6	128.4	2.3	2.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.4	15.6	0.5	6.8	11.5	0.8	3.3	4.8	4.8	6.7	6.5	6.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	105.1	35.5	19.9	160.4	35.3	24.4	105.0	43.9	44.3	184.7	45.5	46.2
LnGrp LOS	F	D	B	F	D	C	F	D	D	F	D	D
Approach Vol, veh/h		2668			2022			438			584	
Approach Delay, s/veh		40.9			42.8			54.4			73.4	
Approach LOS		D			D			D			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	22.0	51.9	13.0	32.7	15.0	58.9	14.0	31.7
Change Period (Y+Rc), s	7.0	7.5	7.0	7.5	7.0	7.5	7.0	7.5
Max Green Setting (Gmax), s	15.0	45.0	6.0	50.0	8.0	52.0	7.0	49.0
Max Q Clear Time (g_c+I1), s	16.5	33.1	7.0	17.5	10.0	44.2	9.0	13.6
Green Ext Time (p_c), s	0.0	9.4	0.0	3.2	0.0	7.2	0.0	2.4

Intersection Summary	
HCM 6th Ctrl Delay	45.9
HCM 6th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	560	1702	400	390	1624	307	250	918	480	331	1200	470
Future Volume (veh/h)	560	1702	400	390	1624	307	250	918	480	331	1200	470
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	589	1792	0	411	1709	298	263	966	0	348	1263	395
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	576	2164		461	1678	293	288	1040		337	1582	482
Arrive On Green	0.17	0.34	0.00	0.14	0.31	0.31	0.08	0.21	0.00	0.19	0.31	0.31
Sat Flow, veh/h	3401	6332	1560	3401	5448	950	3401	5025	1560	1753	5025	1532
Grp Volume(v), veh/h	589	1792	0	411	1490	517	263	966	0	348	1263	395
Grp Sat Flow(s),veh/h/ln	1700	1583	1560	1700	1583	1649	1700	1675	1560	1753	1675	1532
Q Serve(g_s), s	22.0	33.7	0.0	15.4	40.0	40.0	10.0	24.5	0.0	25.0	29.9	30.9
Cycle Q Clear(g_c), s	22.0	33.7	0.0	15.4	40.0	40.0	10.0	24.5	0.0	25.0	29.9	30.9
Prop In Lane	1.00		1.00	1.00		0.58	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	576	2164		461	1463	508	288	1040		337	1582	482
V/C Ratio(X)	1.02	0.83		0.89	1.02	1.02	0.91	0.93		1.03	0.80	0.82
Avail Cap(c_a), veh/h	576	2164		471	1463	508	288	1045		337	1586	484
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.9	39.2	0.0	55.2	44.9	44.9	59.0	50.6	0.0	52.4	40.7	41.1
Incr Delay (d2), s/veh	43.3	3.1	0.0	19.7	28.3	44.7	32.5	14.3	0.0	57.3	3.4	11.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.5	12.9	0.0	7.7	18.8	21.9	5.4	11.2	0.0	15.9	12.1	12.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	97.2	42.4	0.0	74.9	73.2	89.7	91.5	64.9	0.0	109.7	44.1	52.9
LnGrp LOS	F	D		E	F	F	F	E		F	D	D
Approach Vol, veh/h		2381	A		2418			1229	A		2006	
Approach Delay, s/veh		56.0			77.0			70.6			57.2	
Approach LOS		E			E			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	29.0	30.9	21.6	48.4	15.0	44.9	26.0	44.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	25.0	27.0	18.0	44.0	11.0	41.0	22.0	40.0
Max Q Clear Time (g_c+I1), s	27.0	26.5	17.4	35.7	12.0	32.9	24.0	42.0
Green Ext Time (p_c), s	0.0	0.4	0.2	7.5	0.0	6.9	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	64.9
HCM 6th LOS	E

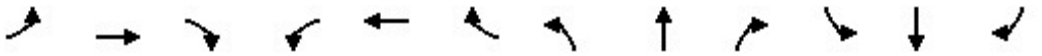
Notes

Unsignalized Delay for [NBR, EBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	450	1993	70	230	1986	385	85	255	80	373	365	300
Future Volume (veh/h)	450	1993	70	230	1986	385	85	255	80	373	365	300
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	474	2098	72	242	2091	204	89	268	61	393	384	200
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	409	2387	82	240	2073	502	112	449	100	312	607	311
Arrive On Green	0.12	0.38	0.38	0.07	0.33	0.33	0.06	0.16	0.16	0.18	0.27	0.27
Sat Flow, veh/h	3401	6329	217	3401	6332	1532	1753	2827	631	1753	2220	1138
Grp Volume(v), veh/h	474	1574	596	242	2091	204	89	164	165	393	301	283
Grp Sat Flow(s),veh/h/ln	1700	1583	1797	1700	1583	1532	1753	1749	1709	1753	1749	1610
Q Serve(g_s), s	14.5	37.3	37.3	8.5	39.5	12.5	6.0	10.5	10.9	21.5	18.2	18.7
Cycle Q Clear(g_c), s	14.5	37.3	37.3	8.5	39.5	12.5	6.0	10.5	10.9	21.5	18.2	18.7
Prop In Lane	1.00		0.12	1.00		1.00	1.00		0.37	1.00		0.71
Lane Grp Cap(c), veh/h	409	1791	678	240	2073	502	112	277	271	312	478	440
V/C Ratio(X)	1.16	0.88	0.88	1.01	1.01	0.41	0.80	0.59	0.61	1.26	0.63	0.64
Avail Cap(c_a), veh/h	409	1791	678	240	2073	502	222	703	687	312	793	730
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.1	35.0	35.0	56.1	40.6	31.5	55.7	47.1	47.3	49.6	38.5	38.7
Incr Delay (d2), s/veh	95.8	5.5	13.0	60.7	21.9	0.8	4.8	0.7	0.8	139.5	0.5	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.4	14.3	17.7	5.5	17.4	4.5	2.8	4.5	4.6	21.2	7.6	7.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	148.9	40.5	48.0	116.8	62.4	32.2	60.6	47.9	48.1	189.0	39.0	39.2
LnGrp LOS	F	D	D	F	F	C	E	D	D	F	D	D
Approach Vol, veh/h		2644			2537			418			977	
Approach Delay, s/veh		61.6			65.2			50.7			99.4	
Approach LOS		E			E			D			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	28.0	25.6	15.0	52.0	14.2	39.5	21.0	46.0
Change Period (Y+Rc), s	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
Max Green Setting (Gmax), s	21.5	48.5	8.5	45.5	15.3	54.7	14.5	39.5
Max Q Clear Time (g_c+I1), s	23.5	12.9	10.5	39.3	8.0	20.7	16.5	41.5
Green Ext Time (p_c), s	0.0	1.1	0.0	5.7	0.0	2.1	0.0	0.0

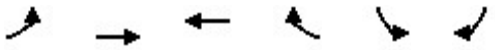
Intersection Summary	
HCM 6th Ctrl Delay	67.9
HCM 6th LOS	E



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	385	1774	287	713	1975	300	341	658	478	500	1170	285
Future Volume (veh/h)	385	1774	287	713	1975	300	341	658	478	500	1170	285
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	405	1867	283	751	2079	188	359	693	285	526	1232	148
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	329	1710	259	601	1943	593	306	851	258	501	1139	346
Arrive On Green	0.10	0.31	0.31	0.18	0.39	0.39	0.09	0.17	0.17	0.15	0.23	0.23
Sat Flow, veh/h	3401	5575	844	3401	5025	1534	3401	5025	1524	3401	5025	1528
Grp Volume(v), veh/h	405	1590	560	751	2079	188	359	693	285	526	1232	148
Grp Sat Flow(s),veh/h/ln	1700	1583	1670	1700	1675	1534	1700	1675	1524	1700	1675	1528
Q Serve(g_s), s	14.5	46.0	46.0	26.5	58.0	12.9	13.5	19.9	25.4	22.1	34.0	12.4
Cycle Q Clear(g_c), s	14.5	46.0	46.0	26.5	58.0	12.9	13.5	19.9	25.4	22.1	34.0	12.4
Prop In Lane	1.00		0.51	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	329	1456	512	601	1943	593	306	851	258	501	1139	346
V/C Ratio(X)	1.23	1.09	1.09	1.25	1.07	0.32	1.17	0.81	1.10	1.05	1.08	0.43
Avail Cap(c_a), veh/h	329	1456	512	601	1943	593	306	851	258	501	1139	346
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	67.8	52.0	52.0	61.8	46.0	32.2	68.3	60.0	62.3	64.0	58.0	49.7
Incr Delay (d2), s/veh	128.1	52.8	67.5	125.9	42.1	0.4	106.8	6.2	87.0	53.9	51.6	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.0	24.5	28.0	21.6	30.3	4.7	10.3	8.7	15.8	13.1	19.4	4.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	195.8	104.8	119.5	187.6	88.1	32.5	175.1	66.2	149.3	117.8	109.6	50.7
LnGrp LOS	F	F	F	F	F	C	F	E	F	F	F	D
Approach Vol, veh/h		2555			3018			1337			1906	
Approach Delay, s/veh		122.5			109.4			113.2			107.3	
Approach LOS		F			F			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	34.0	53.5	21.0	41.5	22.0	65.5	29.6	32.9
Change Period (Y+Rc), s	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5
Max Green Setting (Gmax), s	26.5	46.0	13.5	34.0	14.5	58.0	22.1	25.4
Max Q Clear Time (g_c+I1), s	28.5	48.0	15.5	36.0	16.5	60.0	24.1	27.4
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	113.3
HCM 6th LOS	F



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑	↑↑	↱	↰↰	↱
Traffic Volume (veh/h)	0	2007	1604	450	320	1506
Future Volume (veh/h)	0	2007	1604	450	320	1506
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	0	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	0	2113	1688	0	337	1581
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	4	4	4	4	4
Cap, veh/h	0	2233	1554		820	1460
Arrive On Green	0.00	0.44	0.44	0.00	0.47	0.47
Sat Flow, veh/h	0	5356	3589	1560	1753	3120
Grp Volume(v), veh/h	0	2113	1688	0	337	1581
Grp Sat Flow(s),veh/h/ln	0	1675	1749	1560	1753	1560
Q Serve(g_s), s	0.0	56.4	62.2	0.0	17.7	65.5
Cycle Q Clear(g_c), s	0.0	56.4	62.2	0.0	17.7	65.5
Prop In Lane	0.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	0	2233	1554		820	1460
V/C Ratio(X)	0.00	0.95	1.09		0.41	1.08
Avail Cap(c_a), veh/h	0	2233	1554		820	1460
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	37.3	38.9	0.0	24.5	37.2
Incr Delay (d2), s/veh	0.0	9.4	50.1	0.0	0.3	49.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	23.3	35.4	0.0	7.2	33.5
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.0	46.7	89.0	0.0	24.9	86.8
LnGrp LOS	A	D	F		C	F
Approach Vol, veh/h		2113	1688	A	1918	
Approach Delay, s/veh		46.7	89.0		75.9	
Approach LOS		D	F		E	

Timer - Assigned Phs	2	4	6
Phs Duration (G+Y+Rc), s	69.0	71.0	69.0
Change Period (Y+Rc), s	6.8	5.5	6.8
Max Green Setting (Gmax), s	62.2	65.5	62.2
Max Q Clear Time (g_c+I1), s	58.4	67.5	64.2
Green Ext Time (p_c), s	3.3	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	69.0
HCM 6th LOS	E

Notes

User approved volume balancing among the lanes for turning movement.

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	717	1610	260	780	1274	150
Future Volume (veh/h)	717	1610	260	780	1274	150
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		0.97	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	755	1691	274	821	1341	79
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	4	4	4
Cap, veh/h	1417	2098	277	2668	1299	578
Arrive On Green	0.41	0.41	0.08	0.53	0.37	0.37
Sat Flow, veh/h	3589	2669	3401	5191	3506	1560
Grp Volume(v), veh/h	755	1691	274	821	1341	79
Grp Sat Flow(s),veh/h/ln	1749	1334	1700	1675	1753	1560
Q Serve(g_s), s	22.1	52.4	10.9	12.4	50.0	4.5
Cycle Q Clear(g_c), s	22.1	52.4	10.9	12.4	50.0	4.5
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1417	2098	277	2668	1299	578
V/C Ratio(X)	0.53	0.81	0.99	0.31	1.03	0.14
Avail Cap(c_a), veh/h	1417	2099	277	2669	1299	578
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.5	9.3	61.9	17.7	42.5	28.2
Incr Delay (d2), s/veh	0.4	2.4	50.8	0.1	33.7	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.9	29.0	6.5	4.5	27.7	1.8
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	30.8	11.7	112.7	17.8	76.2	28.3
LnGrp LOS	C	B	F	B	F	C
Approach Vol, veh/h	2446			1095	1420	
Approach Delay, s/veh	17.6			41.5	73.5	
Approach LOS	B			D	E	

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	17.0	62.0			79.0	56.0
Change Period (Y+Rc), s	6.0	7.3			7.3	6.0
Max Green Setting (Gmax), s	11.0	54.7			71.7	50.0
Max Q Clear Time (g_c+I1), s	12.9	54.4			14.4	52.0
Green Ext Time (p_c), s	0.0	0.3			5.7	0.0

Intersection Summary		
HCM 6th Ctrl Delay		38.9
HCM 6th LOS		D

Notes

User approved pedestrian interval to be less than phase max green.
User approved volume balancing among the lanes for turning movement.

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	9	15	590	24	48	1348
Future Volume (veh/h)	9	15	590	24	48	1348
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	9	16	621	25	51	1419
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	56	50	1667	517	103	3033
Arrive On Green	0.03	0.03	0.33	0.33	0.06	0.60
Sat Flow, veh/h	1767	1572	5233	1572	1767	5233
Grp Volume(v), veh/h	9	16	621	25	51	1419
Grp Sat Flow(s),veh/h/ln	1767	1572	1689	1572	1767	1689
Q Serve(g_s), s	0.1	0.3	2.7	0.3	0.8	4.4
Cycle Q Clear(g_c), s	0.1	0.3	2.7	0.3	0.8	4.4
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	56	50	1667	517	103	3033
V/C Ratio(X)	0.16	0.32	0.37	0.05	0.49	0.47
Avail Cap(c_a), veh/h	1992	1772	3658	1135	373	5799
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	13.4	13.5	7.3	6.5	13.0	3.2
Incr Delay (d2), s/veh	1.3	3.7	0.1	0.0	3.6	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.1	0.4	0.0	0.3	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	14.7	17.1	7.4	6.5	16.6	3.3
LnGrp LOS	B	B	A	A	B	A
Approach Vol, veh/h	25		646			1470
Approach Delay, s/veh	16.3		7.4			3.8
Approach LOS	B		A			A

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	7.7	15.3			23.0	5.4
Change Period (Y+Rc), s	6.0	6.0			6.0	4.5
Max Green Setting (Gmax), s	6.0	20.5			32.5	32.0
Max Q Clear Time (g_c+I1), s	2.8	4.7			6.4	2.3
Green Ext Time (p_c), s	0.0	3.4			10.6	0.0

Intersection Summary	
HCM 6th Ctrl Delay	5.0
HCM 6th LOS	A

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑			↱
Traffic Vol, veh/h	0	1761	1632	30	0	20
Future Vol, veh/h	0	1761	1632	30	0	20
Conflicting Peds, #/hr	5	0	0	5	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	0	1854	1718	32	0	21

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	880
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.96
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.33
Pot Cap-1 Maneuver	0	-	-	-	0	288
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	287
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	18.5
HCM LOS			C

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	287
HCM Lane V/C Ratio	-	-	-	0.073
HCM Control Delay (s)	-	-	-	18.5
HCM Lane LOS	-	-	-	C
HCM 95th %tile Q(veh)	-	-	-	0.2

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	1761	1642	20	0	20
Future Vol, veh/h	0	1761	1642	20	0	20
Conflicting Peds, #/hr	5	0	0	5	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	0	1854	1728	21	0	21

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	880
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.96
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.33
Pot Cap-1 Maneuver	0	-	-	-	0	288
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	287
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	18.5
HCM LOS			C

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	287
HCM Lane V/C Ratio	-	-	-	0.073
HCM Control Delay (s)	-	-	-	18.5
HCM Lane LOS	-	-	-	C
HCM 95th %tile Q(veh)	-	-	-	0.2

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	20	1741	1652	20	30	10
Future Vol, veh/h	20	1741	1652	20	30	10
Conflicting Peds, #/hr	5	0	0	5	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	21	1833	1739	21	32	11

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1765	0	-	0	2714	885
Stage 1	-	-	-	-	1755	-
Stage 2	-	-	-	-	959	-
Critical Hdwy	4.16	-	-	-	6.86	6.96
Critical Hdwy Stg 1	-	-	-	-	5.86	-
Critical Hdwy Stg 2	-	-	-	-	5.86	-
Follow-up Hdwy	2.23	-	-	-	3.53	3.33
Pot Cap-1 Maneuver	345	-	-	-	~ 17	286
Stage 1	-	-	-	-	123	-
Stage 2	-	-	-	-	330	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	343	-	-	-	~ 16	285
Mov Cap-2 Maneuver	-	-	-	-	83	-
Stage 1	-	-	-	-	115	-
Stage 2	-	-	-	-	328	-

Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	64
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	343	-	-	-	101
HCM Lane V/C Ratio	0.061	-	-	-	0.417
HCM Control Delay (s)	16.2	-	-	-	64
HCM Lane LOS	C	-	-	-	F
HCM 95th %tile Q(veh)	0.2	-	-	-	1.7

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	3.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	30	1731	1631	35	56	41
Future Vol, veh/h	30	1731	1631	35	56	41
Conflicting Peds, #/hr	5	0	0	5	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	350	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	32	1822	1717	37	59	43

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1759	0	-	0	2716	882
Stage 1	-	-	-	-	1741	-
Stage 2	-	-	-	-	975	-
Critical Hdwy	4.16	-	-	-	6.86	6.96
Critical Hdwy Stg 1	-	-	-	-	5.86	-
Critical Hdwy Stg 2	-	-	-	-	5.86	-
Follow-up Hdwy	2.23	-	-	-	3.53	3.33
Pot Cap-1 Maneuver	347	-	-	-	~ 17	287
Stage 1	-	-	-	-	125	-
Stage 2	-	-	-	-	324	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	345	-	-	-	~ 15	286
Mov Cap-2 Maneuver	-	-	-	-	81	-
Stage 1	-	-	-	-	113	-
Stage 2	-	-	-	-	322	-

Approach	EB	WB	SB
HCM Control Delay, s	0.3	0	123.2
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	345	-	-	-	116
HCM Lane V/C Ratio	0.092	-	-	-	0.88
HCM Control Delay (s)	16.5	-	-	-	123.2
HCM Lane LOS	C	-	-	-	F
HCM 95th %tile Q(veh)	0.3	-	-	-	5.4

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	41.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1156	131	155	887	62	66
Future Vol, veh/h	1156	131	155	887	62	66
Conflicting Peds, #/hr	0	5	5	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	100	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	1217	138	163	934	65	69

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1360	0	2084	683
Stage 1	-	-	-	-	1291	-
Stage 2	-	-	-	-	793	-
Critical Hdwy	-	-	4.16	-	6.86	6.96
Critical Hdwy Stg 1	-	-	-	-	5.86	-
Critical Hdwy Stg 2	-	-	-	-	5.86	-
Follow-up Hdwy	-	-	2.23	-	3.53	3.33
Pot Cap-1 Maneuver	-	-	496	-	~ 45	389
Stage 1	-	-	-	-	220	-
Stage 2	-	-	-	-	404	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	494	-	~ 30	387
Mov Cap-2 Maneuver	-	-	-	-	~ 30	-
Stage 1	-	-	-	-	219	-
Stage 2	-	-	-	-	271	-

Approach	EB	WB	NB
HCM Control Delay, s	0	2.4	$ 776.7
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	57	-	-	494	-
HCM Lane V/C Ratio	2.364	-	-	0.33	-
HCM Control Delay (s)	$ 776.7	-	-	15.8	-
HCM Lane LOS	F	-	-	C	-
HCM 95th %tile Q(veh)	13.5	-	-	1.4	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

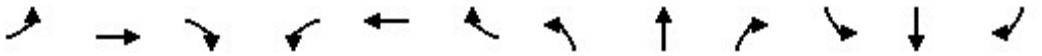
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	290	703	118	30	810	1030	216	1256	60	1063	1068	200
Future Volume (veh/h)	290	703	118	30	810	1030	216	1256	60	1063	1068	200
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	305	740	42	32	853	899	227	1322	61	1119	1124	90
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	214	1585	490	154	1496	462	221	1526	70	221	1559	475
Arrive On Green	0.06	0.32	0.32	0.05	0.30	0.30	0.13	0.31	0.31	0.13	0.31	0.31
Sat Flow, veh/h	3401	5025	1553	3401	5025	1552	1753	4918	227	1753	5025	1532
Grp Volume(v), veh/h	305	740	42	32	853	899	227	900	483	1119	1124	90
Grp Sat Flow(s),veh/h/ln	1700	1675	1553	1700	1675	1552	1753	1675	1795	1753	1675	1532
Q Serve(g_s), s	9.0	16.9	2.7	1.3	20.5	42.5	18.0	36.2	36.2	18.0	28.4	6.1
Cycle Q Clear(g_c), s	9.0	16.9	2.7	1.3	20.5	42.5	18.0	36.2	36.2	18.0	28.4	6.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.13	1.00		1.00
Lane Grp Cap(c), veh/h	214	1585	490	154	1496	462	221	1039	557	221	1559	475
V/C Ratio(X)	1.42	0.47	0.09	0.21	0.57	1.95	1.03	0.87	0.87	5.06	0.72	0.19
Avail Cap(c_a), veh/h	214	1585	490	214	1496	462	221	1091	585	221	1636	499
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	66.9	39.2	34.4	65.7	42.4	50.1	62.4	46.5	46.5	62.4	43.8	36.1
Incr Delay (d2), s/veh	215.3	0.3	0.1	0.5	0.6	433.6	67.8	7.6	13.1	1838.8	1.7	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.3	6.9	1.0	0.6	8.2	71.3	12.0	15.6	17.6	120.7	11.7	2.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	282.2	39.5	34.5	66.2	43.0	483.8	130.2	54.0	59.5	1901.2	45.4	36.4
LnGrp LOS	F	D	C	E	D	F	F	D	E	F	D	D
Approach Vol, veh/h		1087			1784			1610			2333	
Approach Delay, s/veh		107.4			265.5			66.4			935.2	
Approach LOS		F			F			E			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	25.0	51.3	14.0	52.5	25.0	51.3	16.5	50.0
Change Period (Y+Rc), s	7.0	7.0	7.5	7.5	7.0	7.0	7.5	7.5
Max Green Setting (Gmax), s	18.0	46.5	9.0	42.5	18.0	46.5	9.0	42.5
Max Q Clear Time (g_c+I1), s	20.0	38.2	3.3	18.9	20.0	30.4	11.0	44.5
Green Ext Time (p_c), s	0.0	5.9	0.0	5.9	0.0	9.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	422.5
HCM 6th LOS	F

Notes

User approved pedestrian interval to be less than phase max green.



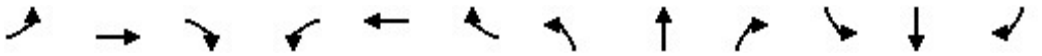
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	50	1460	385	300	1510	40	349	40	140	80	50	50
Future Volume (veh/h)	50	1460	385	300	1510	40	349	40	140	80	50	50
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	53	1537	193	316	1589	40	367	42	41	84	53	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	100	1563	479	312	2176	55	435	971	427	428	971	
Arrive On Green	0.06	0.31	0.31	0.18	0.43	0.43	0.28	0.28	0.28	0.28	0.28	0.00
Sat Flow, veh/h	1753	5025	1539	1753	5039	127	1330	3497	1539	1294	3589	0
Grp Volume(v), veh/h	53	1537	193	316	1056	573	367	42	41	84	53	0
Grp Sat Flow(s),veh/h/ln	1753	1675	1539	1753	1675	1816	1330	1749	1539	1294	1749	0
Q Serve(g_s), s	2.6	27.3	8.9	16.0	23.6	23.6	24.0	0.8	1.8	4.6	1.0	0.0
Cycle Q Clear(g_c), s	2.6	27.3	8.9	16.0	23.6	23.6	25.0	0.8	1.8	5.4	1.0	0.0
Prop In Lane	1.00		1.00	1.00		0.07	1.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	100	1563	479	312	1447	784	435	971	427	428	971	
V/C Ratio(X)	0.53	0.98	0.40	1.01	0.73	0.73	0.84	0.04	0.10	0.20	0.05	
Avail Cap(c_a), veh/h	136	1563	479	312	1447	784	435	971	427	428	971	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	41.3	30.8	24.4	37.0	21.2	21.2	33.4	23.8	24.1	25.7	23.8	0.0
Incr Delay (d2), s/veh	1.6	18.8	0.8	54.6	2.1	3.8	14.9	0.0	0.2	0.4	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	12.5	3.0	11.0	8.3	9.3	9.2	0.3	0.6	1.4	0.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	42.9	49.6	25.2	91.6	23.3	25.0	48.3	23.8	24.3	26.1	23.9	0.0
LnGrp LOS	D	D	C	F	C	C	D	C	C	C	C	
Approach Vol, veh/h		1783			1945			450			137	A
Approach Delay, s/veh		46.8			34.9			43.8			25.2	
Approach LOS		D			C			D			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	23.0	35.0		32.0	12.1	45.9		32.0				
Change Period (Y+Rc), s	7.0	7.0		7.0	7.0	7.0		7.0				
Max Green Setting (Gmax), s	16.0	28.0		25.0	7.0	37.0		25.0				
Max Q Clear Time (g_c+I1), s	18.0	29.3		27.0	4.6	25.6		7.4				
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	8.6		0.7				

Intersection Summary		
HCM 6th Ctrl Delay		40.4
HCM 6th LOS		D

Notes

Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.

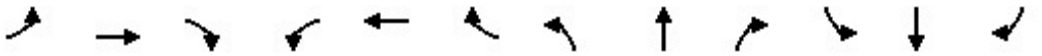


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	370	168	180	530	80	134	374	40	50	700	200
Future Volume (veh/h)	30	370	168	180	530	80	134	374	40	50	700	200
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	32	389	120	189	558	71	141	394	35	53	737	185
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	223	562	171	288	791	100	250	1086	96	403	865	217
Arrive On Green	0.04	0.21	0.21	0.08	0.25	0.25	0.07	0.33	0.33	0.05	0.31	0.31
Sat Flow, veh/h	1753	2626	799	1753	3114	395	1753	3245	287	1753	2758	692
Grp Volume(v), veh/h	32	257	252	189	313	316	141	211	218	53	467	455
Grp Sat Flow(s),veh/h/ln	1753	1749	1677	1753	1749	1760	1753	1749	1783	1753	1749	1701
Q Serve(g_s), s	1.2	11.3	11.6	6.5	13.6	13.7	4.5	7.6	7.7	1.7	20.9	20.9
Cycle Q Clear(g_c), s	1.2	11.3	11.6	6.5	13.6	13.7	4.5	7.6	7.7	1.7	20.9	20.9
Prop In Lane	1.00		0.48	1.00		0.22	1.00		0.16	1.00		0.41
Lane Grp Cap(c), veh/h	223	374	359	288	444	447	250	585	597	403	548	534
V/C Ratio(X)	0.14	0.69	0.70	0.66	0.70	0.71	0.56	0.36	0.36	0.13	0.85	0.85
Avail Cap(c_a), veh/h	283	565	542	288	575	579	250	596	608	440	596	580
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.5	30.3	30.4	25.5	28.3	28.4	20.6	21.1	21.1	17.6	26.9	26.9
Incr Delay (d2), s/veh	0.4	3.2	3.5	5.3	3.5	3.5	3.3	0.5	0.5	0.2	11.3	11.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	4.7	4.6	3.1	5.6	5.7	1.9	2.9	3.0	0.6	9.6	9.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	24.9	33.5	33.9	30.8	31.8	31.9	23.9	21.6	21.6	17.8	38.2	38.5
LnGrp LOS	C	C	C	C	C	C	C	C	C	B	D	D
Approach Vol, veh/h		541			818			570			975	
Approach Delay, s/veh		33.2			31.6			22.2			37.2	
Approach LOS		C			C			C			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.2	35.0	13.0	24.4	13.0	33.2	9.6	27.7
Change Period (Y+Rc), s	7.0	7.0	6.5	6.5	7.0	7.0	6.5	6.5
Max Green Setting (Gmax), s	6.0	28.5	6.5	27.0	6.0	28.5	6.0	27.5
Max Q Clear Time (g_c+I1), s	3.7	9.7	8.5	13.6	6.5	22.9	3.2	15.7
Green Ext Time (p_c), s	0.0	3.0	0.0	3.1	0.0	3.2	0.0	3.6

Intersection Summary	
HCM 6th Ctrl Delay	31.9
HCM 6th LOS	C

Min green cannot be greater than Max Green.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	450	20	490	266	1678	0	0	2336	940
Future Volume (veh/h)	0	0	0	450	20	490	266	1678	0	0	2336	940
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1841	1841	1841	1841	1841	0	0	1841	1841
Adj Flow Rate, veh/h				612	0	284	280	1766	0	0	2459	668
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				4	4	4	4	4	0	0	4	4
Cap, veh/h				701	0	312	378	3294	0	0	2446	757
Arrive On Green				0.20	0.00	0.20	0.11	0.66	0.00	0.00	0.49	0.49
Sat Flow, veh/h				3506	0	1560	3401	5191	0	0	5191	1555
Grp Volume(v), veh/h				612	0	284	280	1766	0	0	2459	668
Grp Sat Flow(s),veh/h/ln				1753	0	1560	1700	1675	0	0	1675	1555
Q Serve(g_s), s				15.2	0.0	16.0	7.2	16.8	0.0	0.0	43.8	34.8
Cycle Q Clear(g_c), s				15.2	0.0	16.0	7.2	16.8	0.0	0.0	43.8	34.8
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				701	0	312	378	3294	0	0	2446	757
V/C Ratio(X)				0.87	0.00	0.91	0.74	0.54	0.00	0.00	1.01	0.88
Avail Cap(c_a), veh/h				701	0	312	378	3294	0	0	2446	757
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.52	0.52	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				34.9	0.0	35.2	38.8	8.2	0.0	0.0	23.1	20.8
Incr Delay (d2), s/veh				12.0	0.0	29.6	4.1	0.3	0.0	0.0	19.5	14.1
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				7.5	0.0	8.5	3.1	4.9	0.0	0.0	19.5	14.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				46.9	0.0	64.8	42.8	8.6	0.0	0.0	42.6	34.9
LnGrp LOS				D	A	E	D	A	A	A	F	C
Approach Vol, veh/h					896			2046			3127	
Approach Delay, s/veh					52.6			13.3			40.9	
Approach LOS					D			B			D	

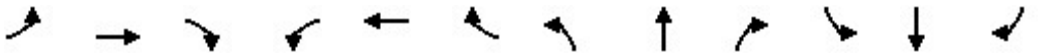
Timer - Assigned Phs	2		5	6		8						
Phs Duration (G+Y+Rc), s	65.0		15.2	49.8		25.0						
Change Period (Y+Rc), s	6.0		* 5.2	6.0		7.0						
Max Green Setting (Gmax), s	59.0		* 10	43.8		18.0						
Max Q Clear Time (g_c+I1), s	18.8		9.2	45.8		18.0						
Green Ext Time (p_c), s	25.1		0.1	0.0		0.0						

Intersection Summary		
HCM 6th Ctrl Delay	33.3	
HCM 6th LOS	C	

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	260	10	321	0	0	0	0	1684	320	410	2376	0
Future Volume (veh/h)	260	10	321	0	0	0	0	1684	320	410	2376	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841				0	1841	1841	1841	1841	0
Adj Flow Rate, veh/h	274	11	336				0	1773	140	432	2501	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4				0	4	4	4	4	0
Cap, veh/h	813	12	363				0	2094	648	501	3097	0
Arrive On Green	0.24	0.24	0.24				0.00	0.42	0.42	0.10	0.41	0.00
Sat Flow, veh/h	3401	50	1518				0	5191	1554	3401	5191	0
Grp Volume(v), veh/h	274	0	347				0	1773	140	432	2501	0
Grp Sat Flow(s),veh/h/ln	1700	0	1568				0	1675	1554	1700	1675	0
Q Serve(g_s), s	6.0	0.0	19.5				0.0	28.6	5.2	11.3	39.4	0.0
Cycle Q Clear(g_c), s	6.0	0.0	19.5				0.0	28.6	5.2	11.3	39.4	0.0
Prop In Lane	1.00		0.97				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	813	0	375				0	2094	648	501	3097	0
V/C Ratio(X)	0.34	0.00	0.93				0.00	0.85	0.22	0.86	0.81	0.00
Avail Cap(c_a), veh/h	831	0	383				0	2094	648	503	3097	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	0.67	0.67	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.09	0.09	0.00
Uniform Delay (d), s/veh	28.3	0.0	33.5				0.0	23.7	16.8	39.7	21.7	0.0
Incr Delay (d2), s/veh	0.3	0.0	28.2				0.0	4.5	0.8	1.5	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	0.0	10.1				0.0	11.1	1.9	4.8	15.6	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	28.7	0.0	61.6				0.0	28.1	17.6	41.2	21.9	0.0
LnGrp LOS	C	A	E				A	C	B	D	C	A
Approach Vol, veh/h		621						1913			2933	
Approach Delay, s/veh		47.1						27.3			24.8	
Approach LOS		D						C			C	

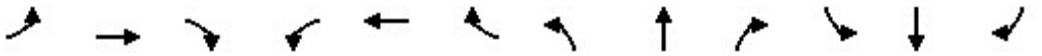
Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	18.0	43.5		28.5		61.5
Change Period (Y+Rc), s	* 4.7	6.0		7.0		6.0
Max Green Setting (Gmax), s	* 13	37.0		22.0		55.0
Max Q Clear Time (g_c+I1), s	13.3	30.6		21.5		41.4
Green Ext Time (p_c), s	0.0	5.9		0.1		12.8

Intersection Summary	
HCM 6th Ctrl Delay	28.2
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



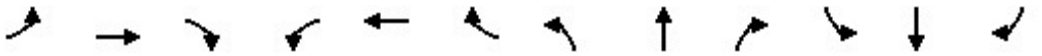
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	526	10	140	254	557	0	0	1491	510
Future Volume (veh/h)	0	0	0	526	10	140	254	557	0	0	1491	510
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		0.97
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1841	1841	1841	1841	1841	0	0	1841	1841
Adj Flow Rate, veh/h				562	0	27	267	586	0	0	1569	379
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				4	4	4	4	4	0	0	4	4
Cap, veh/h				622	0	554	263	2369	0	0	1626	706
Arrive On Green				0.18	0.00	0.18	0.30	1.00	0.00	0.00	0.47	0.47
Sat Flow, veh/h				3506	0	3120	1753	3589	0	0	3589	1518
Grp Volume(v), veh/h				562	0	27	267	586	0	0	1569	379
Grp Sat Flow(s),veh/h/ln				1753	0	1560	1753	1749	0	0	1749	1518
Q Serve(g_s), s				12.6	0.0	0.6	12.0	0.0	0.0	0.0	34.8	14.2
Cycle Q Clear(g_c), s				12.6	0.0	0.6	12.0	0.0	0.0	0.0	34.8	14.2
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				622	0	554	263	2369	0	0	1626	706
V/C Ratio(X)				0.90	0.00	0.05	1.02	0.25	0.00	0.00	0.96	0.54
Avail Cap(c_a), veh/h				622	0	554	263	2369	0	0	1626	706
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.62	0.62	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				32.2	0.0	27.3	28.0	0.0	0.0	0.0	20.8	15.3
Incr Delay (d2), s/veh				16.4	0.0	0.0	47.6	0.2	0.0	0.0	15.4	2.9
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				6.6	0.0	0.2	7.3	0.1	0.0	0.0	15.3	4.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				48.6	0.0	27.3	75.6	0.2	0.0	0.0	36.1	18.2
LnGrp LOS				D	A	C	F	A	A	A	D	B
Approach Vol, veh/h					589			853			1948	
Approach Delay, s/veh					47.6			23.8			32.7	
Approach LOS					D			C			C	

Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		60.0			17.0	43.0		20.0				
Change Period (Y+Rc), s		5.8			5.0	5.8		5.8				
Max Green Setting (Gmax), s		54.2			12.0	37.2		14.2				
Max Q Clear Time (g_c+I1), s		2.0			14.0	36.8		14.6				
Green Ext Time (p_c), s		3.2			0.0	0.3		0.0				

Intersection Summary		
HCM 6th Ctrl Delay	33.0	
HCM 6th LOS	C	

Notes

User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	130	10	334	0	0	0	0	681	306	390	1627	0
Future Volume (veh/h)	130	10	334	0	0	0	0	681	306	390	1627	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		0.97	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841				0	1841	1841	1841	1841	0
Adj Flow Rate, veh/h	137	0	233				0	717	262	411	1713	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4				0	4	4	4	4	0
Cap, veh/h	438	0	390				0	1024	374	448	2553	0
Arrive On Green	0.12	0.00	0.12				0.00	0.41	0.41	0.26	0.73	0.00
Sat Flow, veh/h	3506	0	3120				0	2579	909	1753	3589	0
Grp Volume(v), veh/h	137	0	233				0	504	475	411	1713	0
Grp Sat Flow(s),veh/h/ln	1753	0	1560				0	1749	1647	1753	1749	0
Q Serve(g_s), s	2.8	0.0	5.6				0.0	19.1	19.1	18.2	20.7	0.0
Cycle Q Clear(g_c), s	2.8	0.0	5.6				0.0	19.1	19.1	18.2	20.7	0.0
Prop In Lane	1.00		1.00				0.00		0.55	1.00		0.00
Lane Grp Cap(c), veh/h	438	0	390				0	720	678	448	2553	0
V/C Ratio(X)	0.31	0.00	0.60				0.00	0.70	0.70	0.92	0.67	0.00
Avail Cap(c_a), veh/h	517	0	460				0	720	678	504	2553	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.16	0.16	0.00
Uniform Delay (d), s/veh	31.9	0.0	33.1				0.0	19.4	19.4	29.0	5.7	0.0
Incr Delay (d2), s/veh	0.3	0.0	1.2				0.0	5.6	5.9	4.2	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	0.0	2.2				0.0	7.8	7.5	7.5	4.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	32.2	0.0	34.3				0.0	25.0	25.4	33.2	5.9	0.0
LnGrp LOS	C	A	C				A	C	C	C	A	A
Approach Vol, veh/h		370						979			2124	
Approach Delay, s/veh		33.5						25.2			11.2	
Approach LOS		C						C			B	

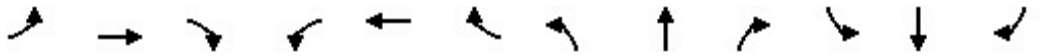
Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	25.4	38.8		15.8		64.2
Change Period (Y+Rc), s	5.0	5.8		5.8		5.8
Max Green Setting (Gmax), s	23.0	28.6		11.8		56.6
Max Q Clear Time (g_c+I1), s	20.2	21.1		7.6		22.7
Green Ext Time (p_c), s	0.2	3.0		0.5		13.7

Intersection Summary	
HCM 6th Ctrl Delay	17.5
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.

User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	664	10	340	460	768	0	0	2005	250
Future Volume (veh/h)	0	0	0	664	10	340	460	768	0	0	2005	250
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		0.97
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1841	1841	1841	1841	1841	0	0	1841	1841
Adj Flow Rate, veh/h				771	0	149	484	808	0	0	2111	160
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				4	4	4	4	4	0	0	4	4
Cap, veh/h				943	0	419	529	3026	0	0	2477	593
Arrive On Green				0.27	0.00	0.27	0.31	1.00	0.00	0.00	0.39	0.39
Sat Flow, veh/h				3506	0	1560	3401	5191	0	0	6590	1516
Grp Volume(v), veh/h				771	0	149	484	808	0	0	2111	160
Grp Sat Flow(s),veh/h/ln				1753	0	1560	1700	1675	0	0	1583	1516
Q Serve(g_s), s				18.5	0.0	6.9	12.3	0.0	0.0	0.0	27.4	6.5
Cycle Q Clear(g_c), s				18.5	0.0	6.9	12.3	0.0	0.0	0.0	27.4	6.5
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				943	0	419	529	3026	0	0	2477	593
V/C Ratio(X)				0.82	0.00	0.36	0.91	0.27	0.00	0.00	0.85	0.27
Avail Cap(c_a), veh/h				943	0	419	529	3026	0	0	2477	593
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.90	0.90	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				30.8	0.0	26.6	30.4	0.0	0.0	0.0	25.0	18.7
Incr Delay (d2), s/veh				7.8	0.0	2.3	21.2	0.2	0.0	0.0	4.0	1.1
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				8.6	0.0	6.7	5.5	0.1	0.0	0.0	9.9	2.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				38.7	0.0	28.9	51.6	0.2	0.0	0.0	29.0	19.8
LnGrp LOS				D	A	C	D	A	A	A	C	B
Approach Vol, veh/h					920			1292			2271	
Approach Delay, s/veh					37.1			19.5			28.3	
Approach LOS					D			B			C	

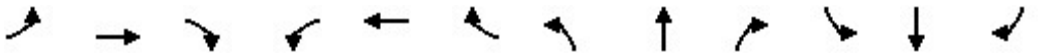
Timer - Assigned Phs	2	4	5	6
Phs Duration (G+Y+Rc), s	60.0	30.0	19.0	41.0
Change Period (Y+Rc), s	5.8	5.8	5.0	5.8
Max Green Setting (Gmax), s	54.2	24.2	14.0	35.2
Max Q Clear Time (g_c+I1), s	2.0	20.5	14.3	29.4
Green Ext Time (p_c), s	6.0	1.4	0.0	5.1

Intersection Summary	
HCM 6th Ctrl Delay	27.6
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

User approved volume balancing among the lanes for turning movement.



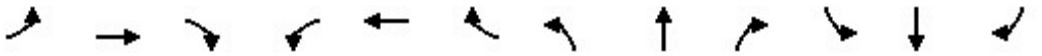
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	180	10	430	0	0	0	0	1048	624	500	2169	0
Future Volume (veh/h)	180	10	430	0	0	0	0	1048	624	500	2169	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		0.97	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841				0	1841	1841	1841	1841	0
Adj Flow Rate, veh/h	130	0	445				0	1103	317	526	2283	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4				0	4	4	4	4	0
Cap, veh/h	393	0	700				0	2547	610	642	3250	0
Arrive On Green	0.22	0.00	0.22				0.00	0.40	0.40	0.13	0.43	0.00
Sat Flow, veh/h	1753	0	3120				0	6590	1516	3401	5191	0
Grp Volume(v), veh/h	130	0	445				0	1103	317	526	2283	0
Grp Sat Flow(s),veh/h/ln	1753	0	1560				0	1583	1516	1700	1675	0
Q Serve(g_s), s	5.6	0.0	11.6				0.0	11.3	14.2	13.6	33.3	0.0
Cycle Q Clear(g_c), s	5.6	0.0	11.6				0.0	11.3	14.2	13.6	33.3	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	393	0	700				0	2547	610	642	3250	0
V/C Ratio(X)	0.33	0.00	0.64				0.00	0.43	0.52	0.82	0.70	0.00
Avail Cap(c_a), veh/h	393	0	700				0	2547	610	642	3250	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	0.67	0.67	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.40	0.40	0.00
Uniform Delay (d), s/veh	29.2	0.0	31.6				0.0	19.5	20.3	37.8	18.5	0.0
Incr Delay (d2), s/veh	2.2	0.0	4.4				0.0	0.5	3.1	4.8	0.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	0.0	4.7				0.0	3.9	5.1	6.1	13.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	31.5	0.0	35.9				0.0	20.0	23.5	42.6	19.0	0.0
LnGrp LOS	C	A	D				A	C	C	D	B	A
Approach Vol, veh/h		575						1420			2809	
Approach Delay, s/veh		34.9						20.8			23.4	
Approach LOS		C						C			C	

Timer - Assigned Phs	1	2				6		8				
Phs Duration (G+Y+Rc), s	22.0	42.0				64.0		26.0				
Change Period (Y+Rc), s	5.0	5.8				5.8		5.8				
Max Green Setting (Gmax), s	17.0	36.2				58.2		20.2				
Max Q Clear Time (g_c+I1), s	15.6	16.2				35.3		13.6				
Green Ext Time (p_c), s	0.2	8.5				17.3		1.3				

Intersection Summary			
HCM 6th Ctrl Delay			24.0
HCM 6th LOS			C

Notes

User approved pedestrian interval to be less than phase max green.
User approved volume balancing among the lanes for turning movement.



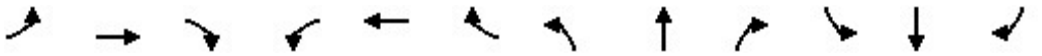
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	80	10	58	37	30	70	168	1522	47	120	2219	70
Future Volume (veh/h)	80	10	58	37	30	70	168	1522	47	120	2219	70
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.98		0.96	0.98		0.96	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	84	11	9	39	32	13	177	1602	48	126	2336	73
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	279	159	130	300	213	86	88	2778	83	78	2746	85
Arrive On Green	0.17	0.17	0.17	0.17	0.17	0.17	0.05	0.55	0.55	0.04	0.55	0.55
Sat Flow, veh/h	1319	920	753	1348	1230	500	1753	5008	150	1753	5001	155
Grp Volume(v), veh/h	84	0	20	39	0	45	177	1072	578	126	1561	848
Grp Sat Flow(s),veh/h/ln	1319	0	1673	1348	0	1729	1753	1675	1808	1753	1675	1807
Q Serve(g_s), s	5.2	0.0	0.9	2.2	0.0	2.0	4.5	18.8	18.9	4.0	35.4	35.9
Cycle Q Clear(g_c), s	7.2	0.0	0.9	3.1	0.0	2.0	4.5	18.8	18.9	4.0	35.4	35.9
Prop In Lane	1.00		0.45	1.00		0.29	1.00		0.08	1.00		0.09
Lane Grp Cap(c), veh/h	279	0	290	300	0	299	88	1858	1003	78	1840	992
V/C Ratio(X)	0.30	0.00	0.07	0.13	0.00	0.15	2.02	0.58	0.58	1.62	0.85	0.86
Avail Cap(c_a), veh/h	593	0	688	621	0	711	88	1858	1003	78	1840	992
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.6	0.0	31.1	32.5	0.0	31.6	42.8	13.1	13.1	43.0	17.1	17.2
Incr Delay (d2), s/veh	0.4	0.0	0.1	0.1	0.0	0.2	496.3	1.3	2.4	328.8	5.1	9.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	0.0	0.4	0.7	0.0	0.8	13.9	6.1	6.9	8.8	12.6	14.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	35.1	0.0	31.2	32.6	0.0	31.8	539.0	14.4	15.5	371.8	22.2	26.6
LnGrp LOS	D	A	C	C	A	C	F	B	B	F	C	C
Approach Vol, veh/h		104			84			1827			2535	
Approach Delay, s/veh		34.3			32.2			65.6			41.1	
Approach LOS		C			C			E			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.5	56.4		23.1	11.0	55.9		23.1				
Change Period (Y+Rc), s	6.5	6.5		7.5	6.5	6.5		7.5				
Max Green Setting (Gmax), s	4.0	28.5		37.0	4.5	28.0		37.0				
Max Q Clear Time (g_c+I1), s	6.0	20.9		9.2	6.5	37.9		5.1				
Green Ext Time (p_c), s	0.0	5.8		0.3	0.0	0.0		0.3				

Intersection Summary			
HCM 6th Ctrl Delay		50.6	
HCM 6th LOS		D	

Notes

User approved pedestrian interval to be less than phase max green.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	130	1229	810	150	1120	225	530	1499	653	247	2070	340
Future Volume (veh/h)	130	1229	810	150	1120	225	530	1499	653	247	2070	340
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.97	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	137	1294	0	158	1179	201	558	1578	651	260	2179	319
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	145	965		149	972	562	417	1967	729	306	1802	676
Arrive On Green	0.08	0.28	0.00	0.08	0.28	0.28	0.12	0.39	0.39	0.09	0.36	0.36
Sat Flow, veh/h	1753	3497	1560	1753	3497	1519	3401	5025	1525	3401	5025	1524
Grp Volume(v), veh/h	137	1294	0	158	1179	201	558	1578	651	260	2179	319
Grp Sat Flow(s),veh/h/ln	1753	1749	1560	1753	1749	1519	1700	1675	1525	1700	1675	1524
Q Serve(g_s), s	11.3	40.0	0.0	12.3	40.3	14.0	17.8	40.4	56.6	10.9	52.0	21.4
Cycle Q Clear(g_c), s	11.3	40.0	0.0	12.3	40.3	14.0	17.8	40.4	56.6	10.9	52.0	21.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	145	965		149	972	562	417	1967	729	306	1802	676
V/C Ratio(X)	0.94	1.34		1.06	1.21	0.36	1.34	0.80	0.89	0.85	1.21	0.47
Avail Cap(c_a), veh/h	145	965		149	972	562	417	1967	729	333	1802	676
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	66.2	52.5	0.0	66.4	52.3	33.4	63.6	39.1	34.7	65.0	46.5	28.6
Incr Delay (d2), s/veh	57.4	160.6	0.0	91.4	105.4	0.5	167.0	2.5	13.4	17.4	99.6	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.3	38.6	0.0	9.2	31.2	5.1	17.3	16.7	22.4	5.4	37.7	7.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	123.6	213.1	0.0	157.8	157.8	33.9	230.6	41.6	48.1	82.4	146.1	29.1
LnGrp LOS	F	F		F	F	C	F	D	D	F	F	C
Approach Vol, veh/h		1431	A		1538			2787			2758	
Approach Delay, s/veh		204.5			141.6			81.0			126.5	
Approach LOS		F			F			F			F	

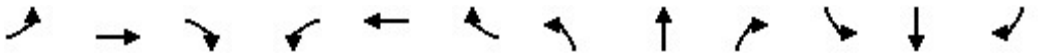
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.2	62.8	17.0	47.0	23.0	58.0	16.7	47.3
Change Period (Y+Rc), s	* 5.2	6.0	* 4.7	7.0	* 5.2	6.0	* 4.7	7.0
Max Green Setting (Gmax), s	* 14	55.6	* 12	40.0	* 18	52.0	* 12	40.3
Max Q Clear Time (g_c+I1), s	12.9	58.6	14.3	42.0	19.8	54.0	13.3	42.3
Green Ext Time (p_c), s	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	127.4
HCM 6th LOS	F

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



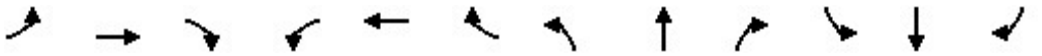
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	190	1608	130	276	1075	106	20	560	137	157	650	300
Future Volume (veh/h)	190	1608	130	276	1075	106	20	560	137	157	650	300
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	200	1693	57	291	1132	44	21	589	37	165	684	280
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	223	1374	603	230	1388	609	42	740	323	130	630	258
Arrive On Green	0.13	0.39	0.39	0.13	0.39	0.39	0.02	0.21	0.21	0.07	0.26	0.26
Sat Flow, veh/h	1767	3526	1546	1767	3526	1546	1767	3526	1539	1767	2424	992
Grp Volume(v), veh/h	200	1693	57	291	1132	44	21	589	37	165	497	467
Grp Sat Flow(s),veh/h/ln	1767	1763	1546	1767	1763	1546	1767	1763	1539	1767	1763	1654
Q Serve(g_s), s	15.9	55.5	3.3	18.5	40.8	2.5	1.7	22.6	2.8	10.5	37.0	37.0
Cycle Q Clear(g_c), s	15.9	55.5	3.3	18.5	40.8	2.5	1.7	22.6	2.8	10.5	37.0	37.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.60
Lane Grp Cap(c), veh/h	223	1374	603	230	1388	609	42	740	323	130	458	430
V/C Ratio(X)	0.90	1.23	0.09	1.27	0.82	0.07	0.50	0.80	0.11	1.27	1.09	1.09
Avail Cap(c_a), veh/h	261	1374	603	230	1388	609	74	805	351	130	458	430
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	61.3	43.4	27.5	61.9	38.6	26.9	68.7	53.4	45.5	65.9	52.7	52.7
Incr Delay (d2), s/veh	25.9	110.9	0.1	150.1	4.0	0.1	3.4	5.4	0.2	166.9	67.2	68.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.5	44.1	1.2	17.7	17.6	0.9	0.8	10.4	1.1	10.7	24.6	23.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	87.2	154.4	27.6	212.0	42.5	27.0	72.0	58.8	45.7	232.9	119.9	121.2
LnGrp LOS	F	F	C	F	D	C	E	E	D	F	F	F
Approach Vol, veh/h		1950			1467			647			1129	
Approach Delay, s/veh		143.8			75.7			58.5			136.9	
Approach LOS		F			E			E			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.0	36.4	26.0	63.0	9.9	43.5	25.5	63.5
Change Period (Y+Rc), s	6.5	6.5	7.5	7.5	6.5	6.5	7.5	7.5
Max Green Setting (Gmax), s	10.5	32.5	18.5	55.5	6.0	37.0	21.0	53.0
Max Q Clear Time (g_c+I1), s	12.5	24.6	20.5	57.5	3.7	39.0	17.9	42.8
Green Ext Time (p_c), s	0.0	2.5	0.0	0.0	0.0	0.0	0.1	5.6

Intersection Summary	
HCM 6th Ctrl Delay	112.4
HCM 6th LOS	F

Notes

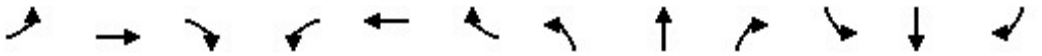
User approved pedestrian interval to be less than phase max green.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	1652	110	196	1226	36	80	30	217	67	80	50
Future Volume (veh/h)	40	1652	110	196	1226	36	80	30	217	67	80	50
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	0.99		0.98	0.99		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	42	1739	114	206	1291	38	84	32	111	71	84	36
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	63	1860	121	225	2257	66	184	59	205	156	202	87
Arrive On Green	0.04	0.55	0.55	0.13	0.65	0.65	0.17	0.17	0.17	0.17	0.17	0.17
Sat Flow, veh/h	1767	3355	218	1767	3494	103	1254	357	1240	1229	1222	524
Grp Volume(v), veh/h	42	905	948	206	651	678	84	0	143	71	0	120
Grp Sat Flow(s),veh/h/ln	1767	1763	1810	1767	1763	1834	1254	0	1597	1229	0	1746
Q Serve(g_s), s	3.1	62.9	65.6	15.4	27.7	27.8	8.6	0.0	11.0	7.5	0.0	8.2
Cycle Q Clear(g_c), s	3.1	62.9	65.6	15.4	27.7	27.8	16.9	0.0	11.0	18.5	0.0	8.2
Prop In Lane	1.00		0.12	1.00		0.06	1.00		0.78	1.00		0.30
Lane Grp Cap(c), veh/h	63	977	1003	225	1139	1185	184	0	264	156	0	289
V/C Ratio(X)	0.67	0.93	0.95	0.92	0.57	0.57	0.46	0.00	0.54	0.45	0.00	0.42
Avail Cap(c_a), veh/h	119	995	1021	225	1139	1185	276	0	382	247	0	418
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	63.8	27.3	27.9	57.7	13.3	13.3	57.6	0.0	51.2	59.7	0.0	50.0
Incr Delay (d2), s/veh	11.7	14.0	16.6	38.2	0.8	0.7	1.8	0.0	1.7	2.1	0.0	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	27.2	29.7	9.0	9.7	10.1	2.9	0.0	4.6	2.5	0.0	3.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	75.5	41.3	44.5	95.9	14.1	14.0	59.4	0.0	52.9	61.7	0.0	51.0
LnGrp LOS	E	D	D	F	B	B	E	A	D	E	A	D
Approach Vol, veh/h		1895			1535			227			191	
Approach Delay, s/veh		43.7			25.0			55.3			55.0	
Approach LOS		D			C			E			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.7	93.9		28.1	24.0	81.7		28.1				
Change Period (Y+Rc), s	7.0	7.5		6.0	7.0	7.5		6.0				
Max Green Setting (Gmax), s	9.0	83.5		32.0	17.0	75.5		32.0				
Max Q Clear Time (g_c+I1), s	5.1	29.8		20.5	17.4	67.6		18.9				
Green Ext Time (p_c), s	0.0	13.4		0.7	0.0	6.5		0.9				

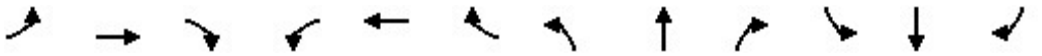
Intersection Summary			
HCM 6th Ctrl Delay		37.5	
HCM 6th LOS		D	



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	230	1541	64	33	1162	371	55	302	33	464	832	200
Future Volume (veh/h)	230	1541	64	33	1162	371	55	302	33	464	832	200
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.98	1.00		0.97	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	242	1622	66	35	1223	269	58	318	31	488	876	197
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	253	1429	58	45	1290	565	74	433	42	398	904	203
Arrive On Green	0.07	0.41	0.41	0.03	0.37	0.37	0.04	0.13	0.13	0.23	0.32	0.32
Sat Flow, veh/h	3428	3451	140	1767	3526	1545	1767	3239	313	1767	2852	641
Grp Volume(v), veh/h	242	825	863	35	1223	269	58	172	177	488	541	532
Grp Sat Flow(s),veh/h/ln	1714	1763	1828	1767	1763	1545	1767	1763	1789	1767	1763	1730
Q Serve(g_s), s	10.5	61.6	61.6	2.9	50.1	19.9	4.8	13.9	14.2	33.5	45.1	45.1
Cycle Q Clear(g_c), s	10.5	61.6	61.6	2.9	50.1	19.9	4.8	13.9	14.2	33.5	45.1	45.1
Prop In Lane	1.00		0.08	1.00		1.00	1.00		0.18	1.00		0.37
Lane Grp Cap(c), veh/h	253	730	757	45	1290	565	74	236	239	398	559	548
V/C Ratio(X)	0.96	1.13	1.14	0.77	0.95	0.48	0.79	0.73	0.74	1.23	0.97	0.97
Avail Cap(c_a), veh/h	253	730	757	59	1315	576	75	237	240	398	559	549
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	68.7	43.6	43.6	72.1	45.8	36.2	70.6	61.9	62.0	57.7	50.1	50.1
Incr Delay (d2), s/veh	44.0	75.5	78.5	31.7	14.2	0.8	39.5	11.2	11.9	122.5	30.3	30.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.0	40.8	42.9	1.7	23.5	7.5	3.0	6.9	7.1	28.2	24.0	23.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	112.6	119.1	122.1	103.8	60.1	37.0	110.1	73.1	73.9	180.1	80.4	80.9
LnGrp LOS	F	F	F	F	E	D	F	E	E	F	F	F
Approach Vol, veh/h		1930			1527			407			1561	
Approach Delay, s/veh		119.6			57.0			78.7			111.7	
Approach LOS		F			E			E			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.5	61.9	13.7	54.7	11.3	69.1	41.0	27.4
Change Period (Y+Rc), s	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5
Max Green Setting (Gmax), s	11.0	55.5	6.3	47.2	5.0	61.5	33.5	20.0
Max Q Clear Time (g_c+I1), s	12.5	52.1	6.8	47.1	4.9	63.6	35.5	16.2
Green Ext Time (p_c), s	0.0	2.3	0.0	0.1	0.0	0.0	0.0	0.7

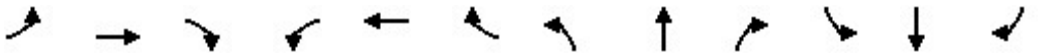
Intersection Summary	
HCM 6th Ctrl Delay	96.7
HCM 6th LOS	F



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	1678	180	140	1267	25	250	20	50	17	10	50
Future Volume (veh/h)	30	1678	180	140	1267	25	250	20	50	17	10	50
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.97	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	32	1766	185	147	1334	26	263	21	12	18	11	12
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	54	1815	186	150	2185	43	333	370	309	159	97	91
Arrive On Green	0.03	0.56	0.56	0.09	0.62	0.62	0.20	0.20	0.20	0.20	0.20	0.20
Sat Flow, veh/h	1767	3222	331	1767	3535	69	1377	1856	1550	613	487	455
Grp Volume(v), veh/h	32	950	1001	147	665	695	263	21	12	41	0	0
Grp Sat Flow(s),veh/h/ln	1767	1763	1790	1767	1763	1841	1377	1856	1550	1555	0	0
Q Serve(g_s), s	2.5	72.1	78.1	11.7	32.6	32.7	23.0	1.3	0.9	0.2	0.0	0.0
Cycle Q Clear(g_c), s	2.5	72.1	78.1	11.7	32.6	32.7	25.7	1.3	0.9	2.7	0.0	0.0
Prop In Lane	1.00		0.18	1.00		0.04	1.00		1.00	0.44		0.29
Lane Grp Cap(c), veh/h	54	993	1008	150	1089	1138	333	370	309	346	0	0
V/C Ratio(X)	0.60	0.96	0.99	0.98	0.61	0.61	0.79	0.06	0.04	0.12	0.00	0.00
Avail Cap(c_a), veh/h	88	993	1008	150	1089	1138	371	421	352	389	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	67.6	29.2	30.5	64.4	16.5	16.5	55.2	45.8	45.6	46.3	0.0	0.0
Incr Delay (d2), s/veh	10.1	19.0	26.3	66.6	1.0	1.0	10.0	0.1	0.1	0.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	32.3	37.1	7.9	12.0	12.5	10.2	0.6	0.4	1.2	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	77.7	48.2	56.8	131.0	17.5	17.5	65.2	45.8	45.6	46.5	0.0	0.0
LnGrp LOS	E	D	E	F	B	B	E	D	D	D	A	A
Approach Vol, veh/h		1983			1507			296			41	
Approach Delay, s/veh		53.0			28.6			63.0			46.5	
Approach LOS		D			C			E			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.3	94.7		35.1	19.0	87.0		35.1				
Change Period (Y+Rc), s	7.0	7.5		7.0	7.0	7.5		7.0				
Max Green Setting (Gmax), s	7.0	84.5		32.0	12.0	79.5		32.0				
Max Q Clear Time (g_c+I1), s	4.5	34.7		27.7	13.7	80.1		4.7				
Green Ext Time (p_c), s	0.0	10.5		0.4	0.0	0.0		0.2				

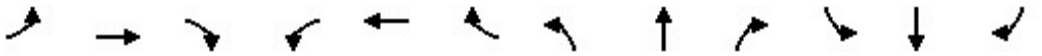
Intersection Summary			
HCM 6th Ctrl Delay		44.1	
HCM 6th LOS		D	



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	1665	50	36	1332	56	70	30	57	47	30	30
Future Volume (veh/h)	30	1665	50	36	1332	56	70	30	57	47	30	30
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	1.00		0.96	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	32	1753	53	38	1402	58	74	32	6	49	32	4
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	62	2067	62	68	2053	85	95	100	19	78	91	11
Arrive On Green	0.04	0.59	0.59	0.04	0.60	0.60	0.05	0.07	0.07	0.04	0.06	0.06
Sat Flow, veh/h	1767	3491	105	1767	3446	142	1767	1508	283	1767	1607	201
Grp Volume(v), veh/h	32	881	925	38	716	744	74	0	38	49	0	36
Grp Sat Flow(s),veh/h/ln	1767	1763	1833	1767	1763	1826	1767	0	1791	1767	0	1808
Q Serve(g_s), s	1.8	41.7	42.5	2.2	28.3	28.5	4.2	0.0	2.1	2.8	0.0	2.0
Cycle Q Clear(g_c), s	1.8	41.7	42.5	2.2	28.3	28.5	4.2	0.0	2.1	2.8	0.0	2.0
Prop In Lane	1.00		0.06	1.00		0.08	1.00		0.16	1.00		0.11
Lane Grp Cap(c), veh/h	62	1044	1086	68	1050	1088	95	0	119	78	0	103
V/C Ratio(X)	0.52	0.84	0.85	0.56	0.68	0.68	0.78	0.00	0.32	0.63	0.00	0.35
Avail Cap(c_a), veh/h	104	1197	1245	104	1197	1239	104	0	560	104	0	565
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	48.5	17.0	17.2	48.3	14.1	14.1	47.9	0.0	45.6	48.1	0.0	46.5
Incr Delay (d2), s/veh	6.5	5.3	5.5	6.9	1.5	1.5	29.2	0.0	1.5	8.1	0.0	2.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	14.9	15.8	1.0	9.4	9.8	2.6	0.0	1.0	1.4	0.0	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	55.1	22.3	22.6	55.2	15.5	15.6	77.1	0.0	47.1	56.2	0.0	48.5
LnGrp LOS	E	C	C	E	B	B	E	A	D	E	A	D
Approach Vol, veh/h		1838			1498			112			85	
Approach Delay, s/veh		23.1			16.6			66.9			52.9	
Approach LOS		C			B			E			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.6	68.5	11.5	11.8	11.0	68.1	10.5	12.8
Change Period (Y+Rc), s	7.0	7.5	6.0	6.0	7.0	7.5	6.0	6.0
Max Green Setting (Gmax), s	6.0	69.5	6.0	32.0	6.0	69.5	6.0	32.0
Max Q Clear Time (g_c+I1), s	3.8	30.5	6.2	4.0	4.2	44.5	4.8	4.1
Green Ext Time (p_c), s	0.0	14.7	0.0	0.1	0.0	16.1	0.0	0.1

Intersection Summary	
HCM 6th Ctrl Delay	22.4
HCM 6th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	330	1314	124	241	1114	317	86	473	49	408	1029	223
Future Volume (veh/h)	330	1314	124	241	1114	317	86	473	49	408	1029	223
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	347	1383	45	254	1173	293	91	498	11	429	1083	223
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	249	1192	532	150	1090	838	302	602	269	405	684	140
Arrive On Green	0.07	0.34	0.34	0.04	0.31	0.31	0.17	0.17	0.17	0.23	0.23	0.23
Sat Flow, veh/h	3428	3526	1572	3428	3526	1544	1767	3526	1572	1767	2984	612
Grp Volume(v), veh/h	347	1383	45	254	1173	293	91	498	11	429	671	635
Grp Sat Flow(s),veh/h/ln	1714	1763	1572	1714	1763	1544	1767	1763	1572	1767	1856	1741
Q Serve(g_s), s	10.0	46.5	2.7	6.0	42.5	14.9	6.2	18.8	0.8	31.5	31.5	31.5
Cycle Q Clear(g_c), s	10.0	46.5	2.7	6.0	42.5	14.9	6.2	18.8	0.8	31.5	31.5	31.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.35
Lane Grp Cap(c), veh/h	249	1192	532	150	1090	838	302	602	269	405	425	399
V/C Ratio(X)	1.39	1.16	0.08	1.70	1.08	0.35	0.30	0.83	0.04	1.06	1.58	1.59
Avail Cap(c_a), veh/h	249	1192	532	150	1090	838	398	795	355	405	425	399
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	63.7	45.5	31.0	65.7	47.5	18.1	49.8	55.0	47.6	53.0	53.0	53.0
Incr Delay (d2), s/veh	198.9	81.6	0.1	340.9	50.2	0.3	0.7	6.0	0.1	61.3	271.8	277.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.1	32.7	1.0	9.6	25.2	8.2	2.7	8.6	0.3	20.5	46.4	44.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	262.6	127.1	31.1	406.6	97.7	18.4	50.5	61.0	47.7	114.3	324.8	330.5
LnGrp LOS	F	F	C	F	F	B	D	E	D	F	F	F
Approach Vol, veh/h		1775			1720			600			1735	
Approach Delay, s/veh		151.1			129.8			59.2			274.8	
Approach LOS		F			F			E			F	

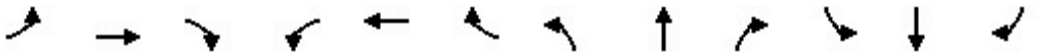
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		31.0	13.5	54.0		39.0	17.5	50.0				
Change Period (Y+Rc), s		7.5	7.5	7.5		7.5	7.5	7.5				
Max Green Setting (Gmax), s		31.0	6.0	46.5		31.5	10.0	42.5				
Max Q Clear Time (g_c+I1), s		20.8	8.0	48.5		33.5	12.0	44.5				
Green Ext Time (p_c), s		2.7	0.0	0.0		0.0	0.0	0.0				

Intersection Summary	
HCM 6th Ctrl Delay	172.2
HCM 6th LOS	F

Notes

User approved pedestrian interval to be less than phase max green.

User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	1616	151	92	1539	30	97	0	71	30	0	30
Future Volume (veh/h)	30	1616	151	92	1539	30	97	0	71	30	0	30
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.97	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	32	1701	122	97	1620	32	102	0	12	32	0	6
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	66	2067	918	123	2185	43	220	0	156	214	0	156
Arrive On Green	0.04	0.59	0.59	0.07	0.62	0.62	0.10	0.00	0.10	0.10	0.00	0.10
Sat Flow, veh/h	1767	3526	1566	1767	3534	70	1399	0	1572	1391	0	1572
Grp Volume(v), veh/h	32	1701	122	97	807	845	102	0	12	32	0	6
Grp Sat Flow(s),veh/h/ln	1767	1763	1566	1767	1763	1841	1399	0	1572	1391	0	1572
Q Serve(g_s), s	1.5	32.3	2.9	4.5	27.0	27.2	6.0	0.0	0.6	1.8	0.0	0.3
Cycle Q Clear(g_c), s	1.5	32.3	2.9	4.5	27.0	27.2	6.2	0.0	0.6	2.4	0.0	0.3
Prop In Lane	1.00		1.00	1.00		0.04	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	66	2067	918	123	1090	1138	220	0	156	214	0	156
V/C Ratio(X)	0.48	0.82	0.13	0.79	0.74	0.74	0.46	0.00	0.08	0.15	0.00	0.04
Avail Cap(c_a), veh/h	127	2378	1056	148	1210	1263	682	0	676	674	0	676
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	39.5	13.9	7.8	38.3	11.2	11.3	36.9	0.0	34.2	35.3	0.0	34.1
Incr Delay (d2), s/veh	5.3	2.3	0.1	20.4	2.3	2.3	1.5	0.0	0.2	0.3	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	9.9	0.8	2.5	7.9	8.3	2.1	0.0	0.2	0.6	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	44.8	16.1	7.9	58.8	13.6	13.6	38.5	0.0	34.5	35.6	0.0	34.2
LnGrp LOS	D	B	A	E	B	B	D	A	C	D	A	C
Approach Vol, veh/h		1855			1749			114			38	
Approach Delay, s/veh		16.1			16.1			38.0			35.4	
Approach LOS		B			B			D			D	

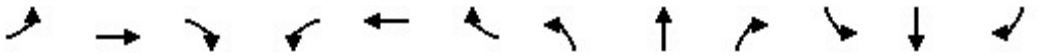
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.2	59.3		14.3	12.9	56.6		14.3				
Change Period (Y+Rc), s	7.0	7.5		6.0	7.0	7.5		6.0				
Max Green Setting (Gmax), s	6.0	57.5		36.0	7.0	56.5		36.0				
Max Q Clear Time (g_c+I1), s	3.5	29.2		4.4	6.5	34.3		8.2				
Green Ext Time (p_c), s	0.0	15.4		0.1	0.0	14.8		0.3				

Intersection Summary			
HCM 6th Ctrl Delay		16.9	
HCM 6th LOS		B	

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1570	148	198	1538	122	168
Future Volume (veh/h)	1570	148	198	1538	122	168
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		0.97	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	1653	116	208	1619	128	25
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	1954	849	242	2701	167	149
Arrive On Green	0.55	0.55	0.14	0.77	0.09	0.09
Sat Flow, veh/h	3618	1532	1767	3618	1767	1572
Grp Volume(v), veh/h	1653	116	208	1619	128	25
Grp Sat Flow(s),veh/h/ln	1763	1532	1767	1763	1767	1572
Q Serve(g_s), s	36.8	3.4	10.7	18.5	6.6	1.4
Cycle Q Clear(g_c), s	36.8	3.4	10.7	18.5	6.6	1.4
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1954	849	242	2701	167	149
V/C Ratio(X)	0.85	0.14	0.86	0.60	0.77	0.17
Avail Cap(c_a), veh/h	2190	952	284	3021	606	539
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.5	10.0	39.4	4.7	41.3	38.9
Incr Delay (d2), s/veh	3.1	0.1	19.9	0.3	7.2	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.6	1.0	5.7	3.2	3.1	0.5
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	20.6	10.1	59.3	5.0	48.4	39.4
LnGrp LOS	C	B	E	A	D	D
Approach Vol, veh/h	1769			1827	153	
Approach Delay, s/veh	19.9			11.2	46.9	
Approach LOS	B			B	D	

Timer - Assigned Phs		2			5	6	8
Phs Duration (G+Y+Rc), s		79.0			19.8	59.2	14.3
Change Period (Y+Rc), s		7.5			7.0	7.5	5.5
Max Green Setting (Gmax), s		80.0			15.0	58.0	32.0
Max Q Clear Time (g_c+I1), s		20.5			12.7	38.8	8.6
Green Ext Time (p_c), s		21.7			0.1	13.0	0.4

Intersection Summary	
HCM 6th Ctrl Delay	16.8
HCM 6th LOS	B



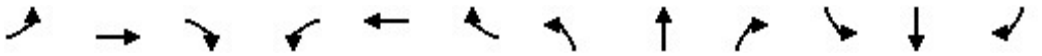
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	96	1597	46	100	1603	20	27	10	100	30	10	107
Future Volume (veh/h)	96	1597	46	100	1603	20	27	10	100	30	10	107
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	0.99		0.97	0.99		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	101	1681	47	105	1687	21	28	11	14	32	11	15
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	146	1961	55	148	2000	25	147	58	47	152	54	46
Arrive On Green	0.08	0.56	0.56	0.08	0.56	0.56	0.11	0.11	0.11	0.11	0.11	0.11
Sat Flow, veh/h	1767	3500	98	1767	3565	44	637	511	412	673	473	400
Grp Volume(v), veh/h	101	844	884	105	833	875	53	0	0	58	0	0
Grp Sat Flow(s),veh/h/ln	1767	1763	1835	1767	1763	1846	1560	0	0	1546	0	0
Q Serve(g_s), s	4.1	30.0	30.4	4.3	29.2	29.4	0.0	0.0	0.0	0.2	0.0	0.0
Cycle Q Clear(g_c), s	4.1	30.0	30.4	4.3	29.2	29.4	2.0	0.0	0.0	2.3	0.0	0.0
Prop In Lane	1.00		0.05	1.00		0.02	0.53		0.26	0.55		0.26
Lane Grp Cap(c), veh/h	146	987	1028	148	989	1036	252	0	0	251	0	0
V/C Ratio(X)	0.69	0.85	0.86	0.71	0.84	0.84	0.21	0.00	0.00	0.23	0.00	0.00
Avail Cap(c_a), veh/h	167	1116	1162	167	1116	1169	643	0	0	640	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	33.1	13.8	13.9	33.2	13.6	13.6	30.1	0.0	0.0	30.1	0.0	0.0
Incr Delay (d2), s/veh	9.9	6.1	6.1	11.6	5.4	5.3	0.3	0.0	0.0	0.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	9.9	10.4	2.2	9.8	10.3	0.9	0.0	0.0	1.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	43.1	19.8	20.0	44.8	19.0	18.9	30.4	0.0	0.0	30.5	0.0	0.0
LnGrp LOS	D	B	C	D	B	B	C	A	A	C	A	A
Approach Vol, veh/h		1829			1813			53			58	
Approach Delay, s/veh		21.2			20.4			30.4			30.5	
Approach LOS		C			C			C			C	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		14.5	11.2	48.6		14.5	11.1	48.7				
Change Period (Y+Rc), s		6.0	5.0	7.0		6.0	5.0	7.0				
Max Green Setting (Gmax), s		28.0	7.0	47.0		28.0	7.0	47.0				
Max Q Clear Time (g_c+I1), s		4.0	6.3	32.4		4.3	6.1	31.4				
Green Ext Time (p_c), s		0.2	0.0	9.2		0.2	0.0	9.7				

Intersection Summary		
HCM 6th Ctrl Delay		21.1
HCM 6th LOS		C

Notes

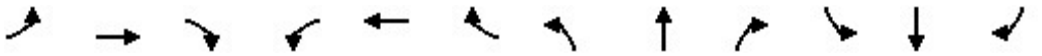
User approved pedestrian interval to be less than phase max green.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	439	1095	393	191	1056	190	273	1108	20	210	1560	474
Future Volume (veh/h)	439	1095	393	191	1056	190	273	1108	20	210	1560	474
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.97	1.00		0.97	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	462	1153	268	201	1112	191	287	1166	21	221	1642	463
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	292	1166	508	199	832	142	187	1561	28	244	1323	365
Arrive On Green	0.17	0.33	0.33	0.11	0.28	0.28	0.11	0.31	0.31	0.14	0.34	0.34
Sat Flow, veh/h	1753	3497	1525	1753	2973	509	1753	5080	91	1753	3892	1075
Grp Volume(v), veh/h	462	1153	268	201	652	651	287	769	418	221	1409	696
Grp Sat Flow(s),veh/h/ln	1753	1749	1525	1753	1749	1733	1753	1675	1821	1753	1675	1616
Q Serve(g_s), s	25.0	49.2	21.3	17.0	42.0	42.0	16.0	31.0	31.0	18.6	51.0	51.0
Cycle Q Clear(g_c), s	25.0	49.2	21.3	17.0	42.0	42.0	16.0	31.0	31.0	18.6	51.0	51.0
Prop In Lane	1.00		1.00	1.00		0.29	1.00		0.05	1.00		0.66
Lane Grp Cap(c), veh/h	292	1166	508	199	490	485	187	1029	560	244	1139	550
V/C Ratio(X)	1.58	0.99	0.53	1.01	1.33	1.34	1.53	0.75	0.75	0.90	1.24	1.27
Avail Cap(c_a), veh/h	292	1166	508	199	490	485	187	1029	560	269	1139	550
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	62.5	49.7	40.4	66.5	54.0	54.0	67.0	46.7	46.7	63.6	49.5	49.5
Incr Delay (d2), s/veh	277.4	23.7	1.9	66.9	163.0	166.9	265.7	3.6	6.5	32.2	114.3	134.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	33.3	24.5	8.1	11.1	40.0	40.2	20.8	13.0	14.6	10.3	38.5	40.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	339.9	73.4	42.4	133.4	217.0	220.9	332.7	50.4	53.3	95.8	163.8	183.6
LnGrp LOS	F	E	D	F	F	F	F	D	D	F	F	F
Approach Vol, veh/h		1883			1504			1474			2326	
Approach Delay, s/veh		134.4			207.5			106.2			163.2	
Approach LOS		F			F			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	24.9	50.1	21.0	54.0	20.0	55.0	29.0	46.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	23.0	44.0	17.0	50.0	16.0	51.0	25.0	42.0
Max Q Clear Time (g_c+I1), s	20.6	33.0	19.0	51.2	18.0	53.0	27.0	44.0
Green Ext Time (p_c), s	0.3	7.7	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	153.2
HCM 6th LOS	F



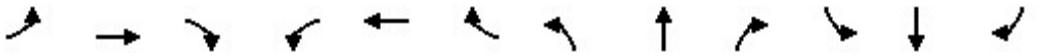
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	420	888	67	280	683	170	41	710	240	320	890	713
Future Volume (veh/h)	420	888	67	280	683	170	41	710	240	320	890	713
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	442	935	68	295	719	36	43	747	231	337	937	652
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	429	833	61	239	687	300	71	986	305	382	899	594
Arrive On Green	0.13	0.25	0.25	0.07	0.19	0.19	0.04	0.37	0.37	0.11	0.45	0.45
Sat Flow, veh/h	3428	3327	242	3428	3526	1538	1767	2639	816	3428	2018	1334
Grp Volume(v), veh/h	442	495	508	295	719	36	43	499	479	337	812	777
Grp Sat Flow(s),veh/h/ln	1714	1763	1806	1714	1763	1538	1767	1763	1692	1714	1763	1589
Q Serve(g_s), s	18.0	36.0	36.0	10.0	28.0	2.8	3.4	35.6	35.6	13.9	64.0	64.0
Cycle Q Clear(g_c), s	18.0	36.0	36.0	10.0	28.0	2.8	3.4	35.6	35.6	13.9	64.0	64.0
Prop In Lane	1.00		0.13	1.00		1.00	1.00		0.48	1.00		0.84
Lane Grp Cap(c), veh/h	429	441	452	239	687	300	71	659	632	382	785	708
V/C Ratio(X)	1.03	1.12	1.12	1.24	1.05	0.12	0.61	0.76	0.76	0.88	1.03	1.10
Avail Cap(c_a), veh/h	429	441	452	239	687	300	86	662	636	405	785	708
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	62.9	53.9	53.9	66.9	57.9	47.7	67.9	39.3	39.3	62.9	39.9	39.9
Incr Delay (d2), s/veh	51.2	80.5	80.1	137.2	47.3	0.2	6.2	4.8	5.0	18.6	41.4	63.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.7	25.3	25.8	8.8	16.6	1.1	1.7	15.8	15.2	6.9	35.3	36.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	114.1	134.4	133.9	204.1	105.1	47.9	74.0	44.1	44.3	81.5	81.3	103.6
LnGrp LOS	F	F	F	F	F	D	E	D	D	F	F	F
Approach Vol, veh/h		1445			1050			1021			1926	
Approach Delay, s/veh		128.0			131.0			45.5			90.3	
Approach LOS		F			F			D			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	23.0	60.7	17.0	43.0	12.7	71.0	25.0	35.0
Change Period (Y+Rc), s	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Max Green Setting (Gmax), s	17.0	54.0	10.0	36.0	7.0	64.0	18.0	28.0
Max Q Clear Time (g_c+I1), s	15.9	37.6	12.0	38.0	5.4	66.0	20.0	30.0
Green Ext Time (p_c), s	0.1	4.4	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	99.8
HCM 6th LOS	F

Notes

User approved pedestrian interval to be less than phase max green.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	290	944	190	84	696	169	280	2083	343	210	2450	170
Future Volume (veh/h)	290	944	190	84	696	169	280	2083	343	210	2450	170
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	305	994	183	88	733	158	295	2193	237	221	2579	68
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	88	911	168	88	884	190	340	1893	458	1212	5751	1414
Arrive On Green	0.05	0.31	0.31	0.05	0.31	0.31	0.10	0.30	0.30	0.69	0.91	0.91
Sat Flow, veh/h	1753	2940	540	1753	2851	614	3401	6332	1531	1753	6332	1557
Grp Volume(v), veh/h	305	591	586	88	450	441	295	2193	237	221	2579	68
Grp Sat Flow(s),veh/h/ln	1753	1749	1732	1753	1749	1717	1700	1583	1531	1753	1583	1557
Q Serve(g_s), s	5.0	31.0	31.0	5.0	23.9	23.9	8.5	29.9	20.8	4.5	6.3	0.4
Cycle Q Clear(g_c), s	5.0	31.0	31.0	5.0	23.9	23.9	8.5	29.9	20.8	4.5	6.3	0.4
Prop In Lane	1.00		0.31	1.00		0.36	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	88	542	537	88	542	532	340	1893	458	1212	5751	1414
V/C Ratio(X)	3.48	1.09	1.09	1.00	0.83	0.83	0.87	1.16	0.52	0.18	0.45	0.05
Avail Cap(c_a), veh/h	88	542	537	88	542	532	340	1893	458	1212	5751	1414
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.5	34.5	34.5	47.5	32.0	32.0	44.3	35.0	76.6	5.5	0.7	0.4
Incr Delay (d2), s/veh	1143.9	65.2	66.4	97.2	10.4	10.6	19.7	77.6	4.1	0.0	0.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	30.0	22.3	22.2	4.4	10.9	10.7	4.4	20.8	8.3	1.2	0.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	1191.4	99.7	100.9	144.7	42.4	42.6	64.0	112.7	80.8	5.5	1.0	0.5
LnGrp LOS	F	F	F	F	D	D	E	F	F	A	A	A
Approach Vol, veh/h		1482			979			2725			2868	
Approach Delay, s/veh		324.9			51.7			104.6			1.3	
Approach LOS		F			D			F			A	

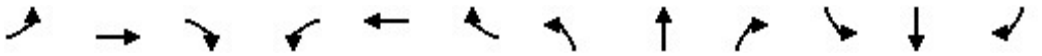
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	77.4	36.4	10.7	38.2	14.7	99.1	10.7	38.2
Change Period (Y+Rc), s	6.5	* 6.5	* 5.7	7.2	* 4.7	6.5	* 5.7	7.2
Max Green Setting (Gmax), s	10.0	* 30	* 5	31.0	* 10	29.9	* 5	31.0
Max Q Clear Time (g_c+I1), s	6.5	31.9	7.0	33.0	10.5	8.3	7.0	25.9
Green Ext Time (p_c), s	0.1	0.0	0.0	0.0	0.0	18.1	0.0	2.3

Intersection Summary	
HCM 6th Ctrl Delay	101.9
HCM 6th LOS	F

Notes

User approved pedestrian interval to be less than phase max green.

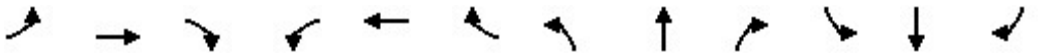
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	70	1037	90	246	709	97	100	293	160	136	533	180
Future Volume (veh/h)	70	1037	90	246	709	97	100	293	160	136	533	180
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	74	1092	91	259	746	96	105	308	119	143	561	167
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	93	1158	96	262	1403	180	112	523	198	150	617	183
Arrive On Green	0.05	0.35	0.35	0.15	0.45	0.45	0.06	0.21	0.21	0.08	0.23	0.23
Sat Flow, veh/h	1767	3289	274	1767	3135	403	1767	2487	939	1767	2666	791
Grp Volume(v), veh/h	74	585	598	259	419	423	105	216	211	143	370	358
Grp Sat Flow(s),veh/h/ln	1767	1763	1801	1767	1763	1775	1767	1763	1663	1767	1763	1694
Q Serve(g_s), s	5.9	45.6	45.7	20.7	24.4	24.5	8.4	15.6	16.3	11.4	29.0	29.2
Cycle Q Clear(g_c), s	5.9	45.6	45.7	20.7	24.4	24.5	8.4	15.6	16.3	11.4	29.0	29.2
Prop In Lane	1.00		0.15	1.00		0.23	1.00		0.56	1.00		0.47
Lane Grp Cap(c), veh/h	93	621	634	262	789	794	112	371	350	150	408	392
V/C Ratio(X)	0.79	0.94	0.94	0.99	0.53	0.53	0.94	0.58	0.60	0.96	0.91	0.91
Avail Cap(c_a), veh/h	150	634	648	262	789	794	112	398	375	150	435	418
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	66.4	44.5	44.5	60.3	28.4	28.4	66.1	50.4	50.6	64.6	53.0	53.1
Incr Delay (d2), s/veh	13.9	22.4	22.3	52.5	0.8	0.8	64.8	2.2	2.7	60.2	22.0	23.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.9	22.9	23.4	12.8	10.1	10.1	5.7	7.0	6.9	7.5	14.9	14.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	80.3	66.9	66.9	112.8	29.2	29.2	130.9	52.5	53.3	124.8	74.9	76.5
LnGrp LOS	F	E	E	F	C	C	F	D	D	F	E	E
Approach Vol, veh/h		1257			1101			532			871	
Approach Delay, s/veh		67.7			48.8			68.3			83.8	
Approach LOS		E			D			E			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.5	70.9	16.0	40.3	28.0	57.4	19.0	37.3
Change Period (Y+Rc), s	7.0	7.5	7.0	7.5	7.0	7.5	7.0	7.5
Max Green Setting (Gmax), s	12.0	60.0	9.0	35.0	21.0	51.0	12.0	32.0
Max Q Clear Time (g_c+I1), s	7.9	26.5	10.4	31.2	22.7	47.7	13.4	18.3
Green Ext Time (p_c), s	0.0	6.5	0.0	1.7	0.0	2.2	0.0	2.2

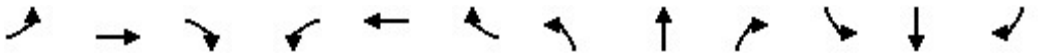
Intersection Summary	
HCM 6th Ctrl Delay	66.0
HCM 6th LOS	E



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	60	1104	170	108	901	30	30	230	160	50	160	120
Future Volume (veh/h)	60	1104	170	108	901	30	30	230	160	50	160	120
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.97	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	63	1162	171	114	948	31	32	242	55	53	168	23
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	88	1352	198	141	1635	53	62	414	92	82	485	65
Arrive On Green	0.05	0.44	0.44	0.08	0.47	0.47	0.04	0.15	0.15	0.05	0.16	0.16
Sat Flow, veh/h	1767	3077	451	1767	3482	114	1767	2851	634	1767	3112	419
Grp Volume(v), veh/h	63	664	669	114	480	499	32	148	149	53	94	97
Grp Sat Flow(s),veh/h/ln	1767	1763	1765	1767	1763	1833	1767	1763	1722	1767	1763	1768
Q Serve(g_s), s	3.5	33.9	34.3	6.4	19.9	19.9	1.8	7.8	8.1	3.0	4.8	4.9
Cycle Q Clear(g_c), s	3.5	33.9	34.3	6.4	19.9	19.9	1.8	7.8	8.1	3.0	4.8	4.9
Prop In Lane	1.00		0.26	1.00		0.06	1.00		0.37	1.00		0.24
Lane Grp Cap(c), veh/h	88	774	776	141	828	861	62	256	250	82	275	276
V/C Ratio(X)	0.72	0.86	0.86	0.81	0.58	0.58	0.51	0.58	0.60	0.65	0.34	0.35
Avail Cap(c_a), veh/h	141	875	876	141	875	909	106	568	555	106	568	570
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.9	25.3	25.4	45.3	19.4	19.4	47.5	39.9	40.1	47.0	37.7	37.8
Incr Delay (d2), s/veh	10.5	8.0	8.4	28.2	1.0	1.0	6.4	2.5	2.8	8.4	0.9	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	14.3	14.5	3.8	7.5	7.8	0.9	3.4	3.5	1.4	2.0	2.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	57.5	33.2	33.7	73.5	20.3	20.3	53.8	42.4	42.8	55.4	38.6	38.7
LnGrp LOS	E	C	C	E	C	C	D	D	D	E	D	D
Approach Vol, veh/h		1396			1093			329			244	
Approach Delay, s/veh		34.6			25.9			43.7			42.3	
Approach LOS		C			C			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.0	54.5	10.5	23.1	15.0	51.5	11.6	22.0
Change Period (Y+Rc), s	7.0	7.5	7.0	7.5	7.0	7.5	7.0	7.5
Max Green Setting (Gmax), s	8.0	49.7	6.0	32.3	8.0	49.7	6.0	32.3
Max Q Clear Time (g_c+I1), s	5.5	21.9	3.8	6.9	8.4	36.3	5.0	10.1
Green Ext Time (p_c), s	0.0	7.5	0.0	1.1	0.0	7.7	0.0	1.7

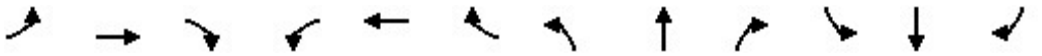
Intersection Summary	
HCM 6th Ctrl Delay	33.1
HCM 6th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	162	1032	80	98	695	158	30	296	40	215	885	254
Future Volume (veh/h)	162	1032	80	98	695	158	30	296	40	215	885	254
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	171	1086	80	103	732	151	32	312	27	226	932	225
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	154	1161	85	123	965	199	59	985	84	215	1205	290
Arrive On Green	0.09	0.35	0.35	0.07	0.33	0.33	0.03	0.21	0.21	0.12	0.30	0.30
Sat Flow, veh/h	1767	3324	245	1767	2908	600	1767	4750	404	1767	4076	981
Grp Volume(v), veh/h	171	576	590	103	444	439	32	220	119	226	772	385
Grp Sat Flow(s),veh/h/ln	1767	1763	1806	1767	1763	1744	1767	1689	1776	1767	1689	1679
Q Serve(g_s), s	10.0	36.3	36.3	6.6	25.9	25.9	2.1	6.4	6.5	14.0	24.0	24.1
Cycle Q Clear(g_c), s	10.0	36.3	36.3	6.6	25.9	25.9	2.1	6.4	6.5	14.0	24.0	24.1
Prop In Lane	1.00		0.14	1.00		0.34	1.00		0.23	1.00		0.58
Lane Grp Cap(c), veh/h	154	615	631	123	585	579	59	700	368	215	999	497
V/C Ratio(X)	1.11	0.94	0.94	0.84	0.76	0.76	0.54	0.31	0.32	1.05	0.77	0.78
Avail Cap(c_a), veh/h	154	628	644	123	598	592	92	969	510	215	1204	599
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.5	36.2	36.2	52.9	34.3	34.3	54.7	38.6	38.7	50.5	37.0	37.0
Incr Delay (d2), s/veh	106.1	21.3	21.2	37.3	5.7	5.8	7.5	0.3	0.6	75.3	2.8	5.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.8	18.2	18.6	4.1	11.3	11.2	1.0	2.6	2.8	10.7	10.2	10.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	158.6	57.5	57.3	90.2	40.0	40.1	62.2	38.9	39.3	125.8	39.8	42.6
LnGrp LOS	F	E	E	F	D	D	E	D	D	F	D	D
Approach Vol, veh/h		1337			986			371			1383	
Approach Delay, s/veh		70.4			45.3			41.1			54.6	
Approach LOS		E			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	21.0	31.4	15.0	47.7	10.8	41.5	17.0	45.7
Change Period (Y+Rc), s	7.0	7.5	7.0	7.5	7.0	7.5	7.0	7.5
Max Green Setting (Gmax), s	14.0	33.0	8.0	41.0	6.0	41.0	10.0	39.0
Max Q Clear Time (g_c+I1), s	16.0	8.5	8.6	38.3	4.1	26.1	12.0	27.9
Green Ext Time (p_c), s	0.0	2.2	0.0	1.8	0.0	7.9	0.0	4.4

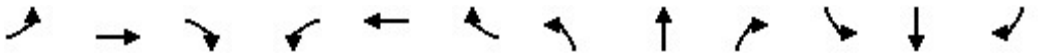
Intersection Summary	
HCM 6th Ctrl Delay	56.3
HCM 6th LOS	E



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	124	1181	30	140	988	196	51	36	120	169	35	122
Future Volume (veh/h)	124	1181	30	140	988	196	51	36	120	169	35	122
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	0.99		0.97	0.99		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	131	1243	32	147	1040	112	54	38	18	178	37	20
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	163	1473	38	180	1512	663	294	191	157	319	137	74
Arrive On Green	0.09	0.42	0.42	0.10	0.43	0.43	0.05	0.10	0.10	0.07	0.12	0.12
Sat Flow, veh/h	1767	3509	90	1767	3526	1547	1767	1856	1525	1767	1121	606
Grp Volume(v), veh/h	131	624	651	147	1040	112	54	38	18	178	0	57
Grp Sat Flow(s),veh/h/ln	1767	1763	1836	1767	1763	1547	1767	1856	1525	1767	0	1726
Q Serve(g_s), s	6.3	27.5	27.6	7.0	20.7	3.9	2.3	1.6	0.9	6.0	0.0	2.6
Cycle Q Clear(g_c), s	6.3	27.5	27.6	7.0	20.7	3.9	2.3	1.6	0.9	6.0	0.0	2.6
Prop In Lane	1.00		0.05	1.00		1.00	1.00		1.00	1.00		0.35
Lane Grp Cap(c), veh/h	163	740	771	180	1512	663	294	191	157	319	0	210
V/C Ratio(X)	0.80	0.84	0.84	0.82	0.69	0.17	0.18	0.20	0.11	0.56	0.00	0.27
Avail Cap(c_a), veh/h	225	846	881	184	1610	706	327	687	564	319	0	639
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	38.5	22.5	22.6	38.1	20.0	15.2	32.0	35.5	35.2	33.4	0.0	34.5
Incr Delay (d2), s/veh	13.4	7.3	7.1	24.0	1.2	0.1	0.3	0.5	0.3	2.2	0.0	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.2	11.3	11.7	4.1	7.6	1.3	1.0	0.7	0.3	3.6	0.0	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	51.9	29.8	29.6	62.1	21.3	15.4	32.3	36.0	35.5	35.6	0.0	35.2
LnGrp LOS	D	C	C	E	C	B	C	D	D	D	A	D
Approach Vol, veh/h		1406			1299			110			235	
Approach Delay, s/veh		31.8			25.4			34.1			35.5	
Approach LOS		C			C			C			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.0	44.6	10.4	16.5	15.8	43.8	12.0	14.9
Change Period (Y+Rc), s	7.0	7.5	6.0	6.0	7.0	7.5	6.0	6.0
Max Green Setting (Gmax), s	11.0	39.5	6.0	32.0	9.0	41.5	6.0	32.0
Max Q Clear Time (g_c+I1), s	8.3	22.7	4.3	4.6	9.0	29.6	8.0	3.6
Green Ext Time (p_c), s	0.1	7.6	0.0	0.2	0.0	6.7	0.0	0.2

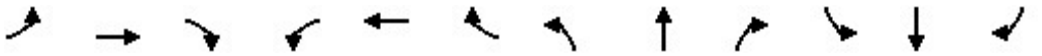
Intersection Summary	
HCM 6th Ctrl Delay	29.4
HCM 6th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	208	716	398	130	597	123	390	1070	180	102	1850	191
Future Volume (veh/h)	208	716	398	130	597	123	390	1070	180	102	1850	191
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.99	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	219	754	367	137	628	117	411	1126	173	107	1947	193
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	187	664	323	139	780	145	296	1583	243	128	1233	121
Arrive On Green	0.11	0.29	0.29	0.08	0.27	0.27	0.17	0.36	0.36	0.07	0.27	0.27
Sat Flow, veh/h	1753	2266	1101	1753	2936	546	1753	4383	673	1753	4644	457
Grp Volume(v), veh/h	219	581	540	137	374	371	411	861	438	107	1400	740
Grp Sat Flow(s),veh/h/ln	1753	1749	1618	1753	1749	1734	1753	1675	1706	1753	1675	1751
Q Serve(g_s), s	15.5	42.5	42.5	11.3	28.9	29.0	24.5	32.0	32.1	8.7	38.5	38.5
Cycle Q Clear(g_c), s	15.5	42.5	42.5	11.3	28.9	29.0	24.5	32.0	32.1	8.7	38.5	38.5
Prop In Lane	1.00		0.68	1.00		0.31	1.00		0.39	1.00		0.26
Lane Grp Cap(c), veh/h	187	513	474	139	464	460	296	1210	616	128	890	465
V/C Ratio(X)	1.17	1.13	1.14	0.99	0.80	0.81	1.39	0.71	0.71	0.83	1.57	1.59
Avail Cap(c_a), veh/h	187	513	474	139	464	460	296	1210	616	170	890	465
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	64.8	51.3	51.3	66.7	49.7	49.8	60.3	39.8	39.8	66.3	53.3	53.3
Incr Delay (d2), s/veh	118.5	82.3	84.8	71.5	10.4	10.7	194.0	2.2	4.2	17.8	263.8	276.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	13.0	29.9	28.0	7.8	13.8	13.8	26.5	13.1	13.7	4.5	48.2	52.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	183.3	133.5	136.1	138.2	60.1	60.5	254.2	42.0	44.0	84.1	317.1	329.3
LnGrp LOS	F	F	F	F	E	E	F	D	D	F	F	F
Approach Vol, veh/h		1340			882			1710			2247	
Approach Delay, s/veh		142.7			72.4			93.5			310.0	
Approach LOS		F			E			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.1	59.9	18.0	49.0	32.0	46.0	22.0	45.0
Change Period (Y+Rc), s	7.5	7.5	6.5	6.5	7.5	7.5	6.5	6.5
Max Green Setting (Gmax), s	14.1	48.9	11.5	42.5	24.5	38.5	15.5	38.5
Max Q Clear Time (g_c+I1), s	10.7	34.1	13.3	44.5	26.5	40.5	17.5	31.0
Green Ext Time (p_c), s	0.0	8.9	0.0	0.0	0.0	0.0	0.0	3.3

Intersection Summary	
HCM 6th Ctrl Delay	179.9
HCM 6th LOS	F



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	180	1667	220	205	1084	550	230	1725	226	680	1673	121
Future Volume (veh/h)	180	1667	220	205	1084	550	230	1725	226	680	1673	121
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	189	1755	164	216	1141	543	242	1816	159	716	1761	52
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	239	1448	441	239	1448	664	291	2132	516	485	2494	604
Arrive On Green	0.07	0.29	0.29	0.07	0.29	0.29	0.09	0.34	0.34	0.14	0.39	0.39
Sat Flow, veh/h	3401	5025	1531	3401	5025	1531	3401	6332	1532	3401	6332	1534
Grp Volume(v), veh/h	189	1755	164	216	1141	543	242	1816	159	716	1761	52
Grp Sat Flow(s),veh/h/ln	1700	1675	1531	1700	1675	1531	1700	1583	1532	1700	1583	1534
Q Serve(g_s), s	7.8	41.0	12.2	9.0	29.8	41.0	10.0	38.0	10.9	20.3	33.2	3.0
Cycle Q Clear(g_c), s	7.8	41.0	12.2	9.0	29.8	41.0	10.0	38.0	10.9	20.3	33.2	3.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	239	1448	441	239	1448	664	291	2132	516	485	2494	604
V/C Ratio(X)	0.79	1.21	0.37	0.90	0.79	0.82	0.83	0.85	0.31	1.48	0.71	0.09
Avail Cap(c_a), veh/h	239	1448	441	239	1448	664	404	2251	545	485	2494	604
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	65.1	50.7	40.4	65.7	46.7	35.7	64.1	43.9	34.9	61.0	36.2	27.1
Incr Delay (d2), s/veh	15.1	102.2	0.5	33.1	3.0	8.0	7.4	3.2	0.3	225.1	0.9	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.8	30.4	4.6	4.9	12.5	17.4	4.5	14.6	4.1	23.6	12.3	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	80.3	152.8	40.9	98.7	49.6	43.7	71.5	47.1	35.3	286.1	37.1	27.1
LnGrp LOS	F	F	D	F	D	D	E	D	D	F	D	C
Approach Vol, veh/h		2108			1900			2217			2529	
Approach Delay, s/veh		137.6			53.5			48.9			107.4	
Approach LOS		F			D			D			F	

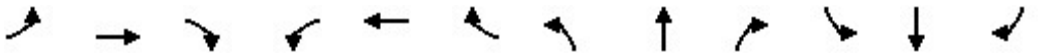
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	25.0	54.4	14.7	48.2	16.9	62.6	14.7	48.2
Change Period (Y+Rc), s	* 4.7	6.5	* 4.7	7.2	* 4.7	6.5	* 4.7	7.2
Max Green Setting (Gmax), s	* 20	50.6	* 10	41.0	* 17	54.0	* 10	41.0
Max Q Clear Time (g_c+I1), s	22.3	40.0	11.0	43.0	12.0	35.2	9.8	31.8
Green Ext Time (p_c), s	0.0	7.8	0.0	0.0	0.2	11.3	0.0	3.7

Intersection Summary	
HCM 6th Ctrl Delay	88.2
HCM 6th LOS	F

Notes

User approved pedestrian interval to be less than phase max green.

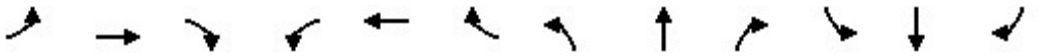
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	203	2300	70	120	1760	110	70	260	170	110	300	259
Future Volume (veh/h)	203	2300	70	120	1760	110	70	260	170	110	300	259
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	214	2421	33	126	1853	43	74	274	90	116	316	150
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	220	2725	660	117	2354	570	88	522	167	103	484	224
Arrive On Green	0.13	0.43	0.43	0.07	0.37	0.37	0.05	0.20	0.20	0.06	0.21	0.21
Sat Flow, veh/h	1753	6332	1534	1753	6332	1533	1753	2589	830	1753	2304	1067
Grp Volume(v), veh/h	214	2421	33	126	1853	43	74	183	181	116	238	228
Grp Sat Flow(s),veh/h/ln	1753	1583	1534	1753	1583	1533	1753	1749	1670	1753	1749	1622
Q Serve(g_s), s	14.5	42.2	1.5	8.0	31.1	2.2	5.0	11.1	11.6	7.0	14.9	15.5
Cycle Q Clear(g_c), s	14.5	42.2	1.5	8.0	31.1	2.2	5.0	11.1	11.6	7.0	14.9	15.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.50	1.00		0.66
Lane Grp Cap(c), veh/h	220	2725	660	117	2354	570	88	352	337	103	367	340
V/C Ratio(X)	0.97	0.89	0.05	1.07	0.79	0.08	0.84	0.52	0.54	1.13	0.65	0.67
Avail Cap(c_a), veh/h	220	2755	667	117	2384	577	88	717	685	103	731	678
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.1	31.4	19.8	55.8	33.3	24.3	56.3	42.5	42.7	56.3	43.2	43.4
Incr Delay (d2), s/veh	52.7	4.0	0.0	104.3	1.9	0.1	48.4	1.4	1.6	128.1	2.3	2.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.4	15.6	0.5	6.8	11.5	0.8	3.3	4.8	4.8	6.6	6.4	6.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	104.8	35.4	19.9	160.1	35.2	24.3	104.7	44.0	44.4	184.3	45.5	46.2
LnGrp LOS	F	D	B	F	D	C	F	D	D	F	D	D
Approach Vol, veh/h		2668			2022			438			582	
Approach Delay, s/veh		40.8			42.8			54.4			73.4	
Approach LOS		D			D			D			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	22.0	51.9	13.0	32.6	15.0	58.9	14.0	31.6
Change Period (Y+Rc), s	7.0	7.5	7.0	7.5	7.0	7.5	7.0	7.5
Max Green Setting (Gmax), s	15.0	45.0	6.0	50.0	8.0	52.0	7.0	49.0
Max Q Clear Time (g_c+I1), s	16.5	33.1	7.0	17.5	10.0	44.2	9.0	13.6
Green Ext Time (p_c), s	0.0	9.4	0.0	3.2	0.0	7.3	0.0	2.4

Intersection Summary	
HCM 6th Ctrl Delay	45.9
HCM 6th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	560	1701	400	390	1623	310	250	920	480	331	1198	470
Future Volume (veh/h)	560	1701	400	390	1623	310	250	920	480	331	1198	470
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	589	1791	0	411	1708	301	263	968	0	348	1261	395
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	576	2164		461	1675	295	288	1041		337	1582	482
Arrive On Green	0.17	0.34	0.00	0.14	0.31	0.31	0.08	0.21	0.00	0.19	0.31	0.31
Sat Flow, veh/h	3401	6332	1560	3401	5438	958	3401	5025	1560	1753	5025	1532
Grp Volume(v), veh/h	589	1791	0	411	1492	517	263	968	0	348	1261	395
Grp Sat Flow(s),veh/h/ln	1700	1583	1560	1700	1583	1647	1700	1675	1560	1753	1675	1532
Q Serve(g_s), s	22.0	33.7	0.0	15.4	40.0	40.0	10.0	24.6	0.0	25.0	29.8	30.9
Cycle Q Clear(g_c), s	22.0	33.7	0.0	15.4	40.0	40.0	10.0	24.6	0.0	25.0	29.8	30.9
Prop In Lane	1.00		1.00	1.00		0.58	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	576	2164		461	1462	507	288	1041		337	1582	482
V/C Ratio(X)	1.02	0.83		0.89	1.02	1.02	0.91	0.93		1.03	0.80	0.82
Avail Cap(c_a), veh/h	576	2164		471	1462	507	288	1044		337	1586	483
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.9	39.2	0.0	55.2	44.9	44.9	59.0	50.6	0.0	52.4	40.7	41.1
Incr Delay (d2), s/veh	43.3	3.1	0.0	19.7	28.7	45.1	32.5	14.5	0.0	57.3	3.4	11.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.5	12.9	0.0	7.7	18.8	21.9	5.4	11.2	0.0	15.9	12.1	12.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	97.3	42.4	0.0	74.9	73.6	90.1	91.5	65.1	0.0	109.8	44.1	52.9
LnGrp LOS	F	D		E	F	F	F	E		F	D	D
Approach Vol, veh/h		2380	A		2420			1231	A		2004	
Approach Delay, s/veh		56.0			77.4			70.7			57.2	
Approach LOS		E			E			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	29.0	30.9	21.6	48.4	15.0	44.9	26.0	44.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	25.0	27.0	18.0	44.0	11.0	41.0	22.0	40.0
Max Q Clear Time (g_c+I1), s	27.0	26.6	17.4	35.7	12.0	32.9	24.0	42.0
Green Ext Time (p_c), s	0.0	0.3	0.2	7.5	0.0	6.9	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	65.0
HCM 6th LOS	E

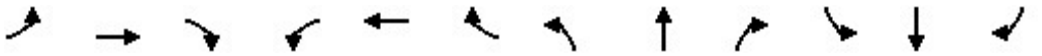
Notes

Unsignalized Delay for [NBR, EBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	450	1992	70	230	1988	385	85	256	80	372	365	300
Future Volume (veh/h)	450	1992	70	230	1988	385	85	256	80	372	365	300
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	474	2097	72	242	2093	204	89	269	61	392	384	200
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	409	2386	82	240	2073	501	112	450	100	312	607	311
Arrive On Green	0.12	0.38	0.38	0.07	0.33	0.33	0.06	0.16	0.16	0.18	0.27	0.27
Sat Flow, veh/h	3401	6329	217	3401	6332	1532	1753	2829	629	1753	2220	1138
Grp Volume(v), veh/h	474	1573	596	242	2093	204	89	164	166	392	301	283
Grp Sat Flow(s),veh/h/ln	1700	1583	1797	1700	1583	1532	1753	1749	1709	1753	1749	1610
Q Serve(g_s), s	14.5	37.2	37.3	8.5	39.5	12.5	6.0	10.5	10.9	21.5	18.2	18.7
Cycle Q Clear(g_c), s	14.5	37.2	37.3	8.5	39.5	12.5	6.0	10.5	10.9	21.5	18.2	18.7
Prop In Lane	1.00		0.12	1.00		1.00	1.00		0.37	1.00		0.71
Lane Grp Cap(c), veh/h	409	1791	678	240	2073	501	112	278	272	312	478	440
V/C Ratio(X)	1.16	0.88	0.88	1.01	1.01	0.41	0.80	0.59	0.61	1.26	0.63	0.64
Avail Cap(c_a), veh/h	409	1791	678	240	2073	501	222	703	687	312	793	730
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.1	35.0	35.0	56.1	40.6	31.5	55.7	47.1	47.3	49.6	38.5	38.6
Incr Delay (d2), s/veh	95.9	5.5	13.0	60.8	22.2	0.8	4.8	0.7	0.8	138.3	0.5	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.4	14.3	17.7	5.5	17.5	4.5	2.8	4.5	4.6	21.1	7.6	7.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	149.0	40.5	48.0	116.9	62.8	32.3	60.6	47.9	48.1	187.9	39.0	39.2
LnGrp LOS	F	D	D	F	F	C	E	D	D	F	D	D
Approach Vol, veh/h		2643			2539			419			976	
Approach Delay, s/veh		61.7			65.5			50.7			98.9	
Approach LOS		E			E			D			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	28.0	25.7	15.0	52.0	14.2	39.5	21.0	46.0
Change Period (Y+Rc), s	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
Max Green Setting (Gmax), s	21.5	48.5	8.5	45.5	15.3	54.7	14.5	39.5
Max Q Clear Time (g_c+I1), s	23.5	12.9	10.5	39.3	8.0	20.7	16.5	41.5
Green Ext Time (p_c), s	0.0	1.1	0.0	5.7	0.0	2.1	0.0	0.0

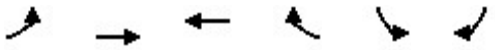
Intersection Summary	
HCM 6th Ctrl Delay	68.0
HCM 6th LOS	E



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	385	1774	285	713	1979	300	339	658	478	500	1170	285
Future Volume (veh/h)	385	1774	285	713	1979	300	339	658	478	500	1170	285
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	405	1867	281	751	2083	188	357	693	285	526	1232	148
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	329	1712	257	601	1943	593	306	851	258	501	1139	346
Arrive On Green	0.10	0.31	0.31	0.18	0.39	0.39	0.09	0.17	0.17	0.15	0.23	0.23
Sat Flow, veh/h	3401	5581	839	3401	5025	1534	3401	5025	1524	3401	5025	1528
Grp Volume(v), veh/h	405	1588	560	751	2083	188	357	693	285	526	1232	148
Grp Sat Flow(s),veh/h/ln	1700	1583	1671	1700	1675	1534	1700	1675	1524	1700	1675	1528
Q Serve(g_s), s	14.5	46.0	46.0	26.5	58.0	12.9	13.5	19.9	25.4	22.1	34.0	12.4
Cycle Q Clear(g_c), s	14.5	46.0	46.0	26.5	58.0	12.9	13.5	19.9	25.4	22.1	34.0	12.4
Prop In Lane	1.00		0.50	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	329	1456	513	601	1943	593	306	851	258	501	1139	346
V/C Ratio(X)	1.23	1.09	1.09	1.25	1.07	0.32	1.17	0.81	1.10	1.05	1.08	0.43
Avail Cap(c_a), veh/h	329	1456	513	601	1943	593	306	851	258	501	1139	346
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	67.8	52.0	52.0	61.8	46.0	32.2	68.3	60.0	62.3	64.0	58.0	49.7
Incr Delay (d2), s/veh	128.1	52.4	67.0	125.9	42.8	0.4	104.4	6.2	87.0	53.9	51.6	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.0	24.5	27.9	21.6	30.5	4.7	10.2	8.7	15.8	13.1	19.4	4.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	195.8	104.4	119.0	187.6	88.8	32.5	172.7	66.2	149.3	117.8	109.6	50.7
LnGrp LOS	F	F	F	F	F	C	F	E	F	F	F	D
Approach Vol, veh/h		2553			3022			1335			1906	
Approach Delay, s/veh		122.1			109.9			112.4			107.3	
Approach LOS		F			F			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	34.0	53.5	21.0	41.5	22.0	65.5	29.6	32.9
Change Period (Y+Rc), s	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5
Max Green Setting (Gmax), s	26.5	46.0	13.5	34.0	14.5	58.0	22.1	25.4
Max Q Clear Time (g_c+I1), s	28.5	48.0	15.5	36.0	16.5	60.0	24.1	27.4
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	113.2
HCM 6th LOS	F



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑	↑↑	↱	↰↰	↱
Traffic Volume (veh/h)	0	2007	1607	450	320	1507
Future Volume (veh/h)	0	2007	1607	450	320	1507
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	0	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	0	2113	1692	0	337	1582
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	4	4	4	4	4
Cap, veh/h	0	2233	1554		820	1460
Arrive On Green	0.00	0.44	0.44	0.00	0.47	0.47
Sat Flow, veh/h	0	5356	3589	1560	1753	3120
Grp Volume(v), veh/h	0	2113	1692	0	337	1582
Grp Sat Flow(s),veh/h/ln	0	1675	1749	1560	1753	1560
Q Serve(g_s), s	0.0	56.4	62.2	0.0	17.7	65.5
Cycle Q Clear(g_c), s	0.0	56.4	62.2	0.0	17.7	65.5
Prop In Lane	0.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	0	2233	1554		820	1460
V/C Ratio(X)	0.00	0.95	1.09		0.41	1.08
Avail Cap(c_a), veh/h	0	2233	1554		820	1460
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	37.3	38.9	0.0	24.5	37.2
Incr Delay (d2), s/veh	0.0	9.4	51.1	0.0	0.3	49.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	23.3	35.6	0.0	7.2	33.6
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.0	46.7	90.0	0.0	24.9	87.0
LnGrp LOS	A	D	F		C	F
Approach Vol, veh/h		2113	1692	A	1919	
Approach Delay, s/veh		46.7	90.0		76.1	
Approach LOS		D	F		E	

Timer - Assigned Phs	2	4	6
Phs Duration (G+Y+Rc), s	69.0	71.0	69.0
Change Period (Y+Rc), s	6.8	5.5	6.8
Max Green Setting (Gmax), s	62.2	65.5	62.2
Max Q Clear Time (g_c+I1), s	58.4	67.5	64.2
Green Ext Time (p_c), s	3.3	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	69.4
HCM 6th LOS	E

Notes

User approved volume balancing among the lanes for turning movement.

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	717	1610	260	782	1275	150
Future Volume (veh/h)	717	1610	260	782	1275	150
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		0.97	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	755	1691	274	823	1342	79
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	4	4	4
Cap, veh/h	1417	2098	277	2668	1299	578
Arrive On Green	0.41	0.41	0.08	0.53	0.37	0.37
Sat Flow, veh/h	3589	2669	3401	5191	3506	1560
Grp Volume(v), veh/h	755	1691	274	823	1342	79
Grp Sat Flow(s),veh/h/ln	1749	1334	1700	1675	1753	1560
Q Serve(g_s), s	22.1	52.4	10.9	12.4	50.0	4.5
Cycle Q Clear(g_c), s	22.1	52.4	10.9	12.4	50.0	4.5
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1417	2098	277	2668	1299	578
V/C Ratio(X)	0.53	0.81	0.99	0.31	1.03	0.14
Avail Cap(c_a), veh/h	1417	2099	277	2669	1299	578
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.5	9.3	61.9	17.8	42.5	28.2
Incr Delay (d2), s/veh	0.4	2.4	50.8	0.1	33.9	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.9	29.0	6.5	4.5	27.7	1.8
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	30.8	11.7	112.7	17.8	76.4	28.3
LnGrp LOS	C	B	F	B	F	C
Approach Vol, veh/h	2446			1097	1421	
Approach Delay, s/veh	17.6			41.5	73.8	
Approach LOS	B			D	E	

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	17.0	62.0			79.0	56.0
Change Period (Y+Rc), s	6.0	7.3			7.3	6.0
Max Green Setting (Gmax), s	11.0	54.7			71.7	50.0
Max Q Clear Time (g_c+I1), s	12.9	54.4			14.4	52.0
Green Ext Time (p_c), s	0.0	0.3			5.7	0.0

Intersection Summary		
HCM 6th Ctrl Delay		39.0
HCM 6th LOS		D

Notes

User approved pedestrian interval to be less than phase max green.
User approved volume balancing among the lanes for turning movement.

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	7	17	592	24	48	1346
Future Volume (veh/h)	7	17	592	24	48	1346
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	7	18	623	25	51	1417
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	56	50	1664	516	103	3031
Arrive On Green	0.03	0.03	0.33	0.33	0.06	0.60
Sat Flow, veh/h	1767	1572	5233	1572	1767	5233
Grp Volume(v), veh/h	7	18	623	25	51	1417
Grp Sat Flow(s),veh/h/ln	1767	1572	1689	1572	1767	1689
Q Serve(g_s), s	0.1	0.3	2.7	0.3	0.8	4.4
Cycle Q Clear(g_c), s	0.1	0.3	2.7	0.3	0.8	4.4
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	56	50	1664	516	103	3031
V/C Ratio(X)	0.13	0.36	0.37	0.05	0.49	0.47
Avail Cap(c_a), veh/h	1994	1774	3661	1136	374	5804
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	13.4	13.5	7.3	6.5	12.9	3.2
Incr Delay (d2), s/veh	1.0	4.4	0.1	0.0	3.6	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.1	0.4	0.0	0.3	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	14.4	17.9	7.4	6.5	16.6	3.3
LnGrp LOS	B	B	A	A	B	A
Approach Vol, veh/h	25		648			1468
Approach Delay, s/veh	16.9		7.4			3.8
Approach LOS	B		A			A

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	7.7	15.3			23.0	5.4
Change Period (Y+Rc), s	6.0	6.0			6.0	4.5
Max Green Setting (Gmax), s	6.0	20.5			32.5	32.0
Max Q Clear Time (g_c+I1), s	2.8	4.7			6.4	2.3
Green Ext Time (p_c), s	0.0	3.4			10.5	0.0

Intersection Summary	
HCM 6th Ctrl Delay	5.0
HCM 6th LOS	A

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↱			↱
Traffic Vol, veh/h	0	1771	1632	30	0	20
Future Vol, veh/h	0	1771	1632	30	0	20
Conflicting Peds, #/hr	5	0	0	5	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	0	1864	1718	32	0	21

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	880
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.96
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.33
Pot Cap-1 Maneuver	0	-	-	-	0	288
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	287
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	18.5
HCM LOS			C

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	287
HCM Lane V/C Ratio	-	-	-	0.073
HCM Control Delay (s)	-	-	-	18.5
HCM Lane LOS	-	-	-	C
HCM 95th %tile Q(veh)	-	-	-	0.2

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↱			↱
Traffic Vol, veh/h	0	1771	1642	20	0	20
Future Vol, veh/h	0	1771	1642	20	0	20
Conflicting Peds, #/hr	5	0	0	5	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	0	1864	1728	21	0	21

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	880
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.96
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.33
Pot Cap-1 Maneuver	0	-	-	-	0	288
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	287
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	18.5
HCM LOS			C

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	287
HCM Lane V/C Ratio	-	-	-	0.073
HCM Control Delay (s)	-	-	-	18.5
HCM Lane LOS	-	-	-	C
HCM 95th %tile Q(veh)	-	-	-	0.2

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	20	1751	1652	20	30	10
Future Vol, veh/h	20	1751	1652	20	30	10
Conflicting Peds, #/hr	5	0	0	5	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	21	1843	1739	21	32	11

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1765	0	-	0	2719	885
Stage 1	-	-	-	-	1755	-
Stage 2	-	-	-	-	964	-
Critical Hdwy	4.16	-	-	-	6.86	6.96
Critical Hdwy Stg 1	-	-	-	-	5.86	-
Critical Hdwy Stg 2	-	-	-	-	5.86	-
Follow-up Hdwy	2.23	-	-	-	3.53	3.33
Pot Cap-1 Maneuver	345	-	-	-	~ 16	286
Stage 1	-	-	-	-	123	-
Stage 2	-	-	-	-	328	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	343	-	-	-	~ 15	285
Mov Cap-2 Maneuver	-	-	-	-	83	-
Stage 1	-	-	-	-	115	-
Stage 2	-	-	-	-	326	-

Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	64
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	343	-	-	-	101
HCM Lane V/C Ratio	0.061	-	-	-	0.417
HCM Control Delay (s)	16.2	-	-	-	64
HCM Lane LOS	C	-	-	-	F
HCM 95th %tile Q(veh)	0.2	-	-	-	1.7

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	3.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	30	1741	1631	35	56	41
Future Vol, veh/h	30	1741	1631	35	56	41
Conflicting Peds, #/hr	5	0	0	5	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	350	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	32	1833	1717	37	59	43

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1759	0	-	0	2722	882
Stage 1	-	-	-	-	1741	-
Stage 2	-	-	-	-	981	-
Critical Hdwy	4.16	-	-	-	6.86	6.96
Critical Hdwy Stg 1	-	-	-	-	5.86	-
Critical Hdwy Stg 2	-	-	-	-	5.86	-
Follow-up Hdwy	2.23	-	-	-	3.53	3.33
Pot Cap-1 Maneuver	347	-	-	-	~ 16	287
Stage 1	-	-	-	-	125	-
Stage 2	-	-	-	-	322	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	345	-	-	-	~ 14	286
Mov Cap-2 Maneuver	-	-	-	-	81	-
Stage 1	-	-	-	-	113	-
Stage 2	-	-	-	-	320	-

Approach	EB	WB	SB
HCM Control Delay, s	0.3	0	123.2
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	345	-	-	-	116
HCM Lane V/C Ratio	0.092	-	-	-	0.88
HCM Control Delay (s)	16.5	-	-	-	123.2
HCM Lane LOS	C	-	-	-	F
HCM 95th %tile Q(veh)	0.3	-	-	-	5.4

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	41.4

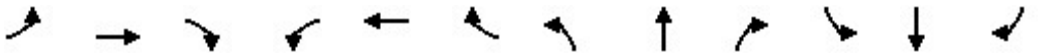
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1156	131	155	889	62	66
Future Vol, veh/h	1156	131	155	889	62	66
Conflicting Peds, #/hr	0	5	5	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	100	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	1217	138	163	936	65	69

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1360	0	2085	683
Stage 1	-	-	-	-	1291	-
Stage 2	-	-	-	-	794	-
Critical Hdwy	-	-	4.16	-	6.86	6.96
Critical Hdwy Stg 1	-	-	-	-	5.86	-
Critical Hdwy Stg 2	-	-	-	-	5.86	-
Follow-up Hdwy	-	-	2.23	-	3.53	3.33
Pot Cap-1 Maneuver	-	-	496	-	~ 45	389
Stage 1	-	-	-	-	220	-
Stage 2	-	-	-	-	403	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	494	-	~ 30	387
Mov Cap-2 Maneuver	-	-	-	-	~ 30	-
Stage 1	-	-	-	-	219	-
Stage 2	-	-	-	-	270	-

Approach	EB	WB	NB
HCM Control Delay, s	0	2.4	$ 776.7
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	57	-	-	494	-
HCM Lane V/C Ratio	2.364	-	-	0.33	-
HCM Control Delay (s)	$ 776.7	-	-	15.8	-
HCM Lane LOS	F	-	-	C	-
HCM 95th %tile Q(veh)	13.5	-	-	1.4	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon



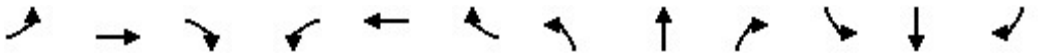
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	260	637	111	30	738	937	202	1142	50	967	962	180
Future Volume (veh/h)	260	637	111	30	738	937	202	1142	50	967	962	180
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	274	671	39	32	777	798	213	1202	50	1018	1013	60
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	217	1603	495	155	1511	467	223	1463	61	236	1522	464
Arrive On Green	0.06	0.32	0.32	0.05	0.30	0.30	0.13	0.30	0.30	0.13	0.30	0.30
Sat Flow, veh/h	3401	5025	1553	3401	5025	1552	1753	4944	206	1753	5025	1531
Grp Volume(v), veh/h	274	671	39	32	777	798	213	814	438	1018	1013	60
Grp Sat Flow(s),veh/h/ln	1700	1675	1553	1700	1675	1552	1753	1675	1799	1753	1675	1531
Q Serve(g_s), s	9.0	14.8	2.5	1.3	18.1	42.5	17.1	32.0	32.0	19.0	24.9	4.0
Cycle Q Clear(g_c), s	9.0	14.8	2.5	1.3	18.1	42.5	17.1	32.0	32.0	19.0	24.9	4.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.11	1.00		1.00
Lane Grp Cap(c), veh/h	217	1603	495	155	1511	467	223	991	532	236	1522	464
V/C Ratio(X)	1.26	0.42	0.08	0.21	0.51	1.71	0.95	0.82	0.82	4.32	0.67	0.13
Avail Cap(c_a), veh/h	217	1603	495	217	1511	467	223	1079	579	236	1654	504
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	66.2	37.8	33.6	65.0	40.9	49.4	61.2	46.3	46.3	61.2	43.0	35.7
Incr Delay (d2), s/veh	150.6	0.2	0.1	0.5	0.4	328.3	47.0	5.2	9.3	1503.3	1.1	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.4	6.0	0.9	0.6	7.2	58.2	10.3	13.5	15.2	106.7	10.2	1.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	216.8	38.0	33.7	65.5	41.2	377.7	108.3	51.5	55.6	1564.4	44.1	35.9
LnGrp LOS	F	D	C	E	D	F	F	D	E	F	D	D
Approach Vol, veh/h		984			1607			1465			2091	
Approach Delay, s/veh		87.6			208.8			61.0			784.0	
Approach LOS		F			F			E			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	26.0	48.8	13.9	52.6	25.0	49.8	16.5	50.0
Change Period (Y+Rc), s	7.0	7.0	7.5	7.5	7.0	7.0	7.5	7.5
Max Green Setting (Gmax), s	19.0	45.5	9.0	42.5	18.0	46.5	9.0	42.5
Max Q Clear Time (g_c+I1), s	21.0	34.0	3.3	16.8	19.1	26.9	11.0	44.5
Green Ext Time (p_c), s	0.0	7.1	0.0	5.5	0.0	9.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	349.8
HCM 6th LOS	F

Notes

User approved pedestrian interval to be less than phase max green.



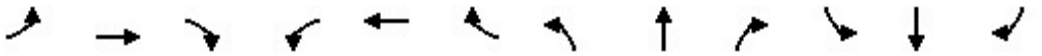
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	50	1310	354	270	1360	40	335	40	130	70	50	50
Future Volume (veh/h)	50	1310	354	270	1360	40	335	40	130	70	50	50
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	53	1379	155	284	1432	40	353	42	38	74	53	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	100	1547	474	294	2100	59	452	1015	447	446	1015	
Arrive On Green	0.06	0.31	0.31	0.17	0.42	0.42	0.29	0.29	0.29	0.29	0.29	0.00
Sat Flow, veh/h	1753	5025	1539	1753	5023	140	1330	3497	1539	1298	3589	0
Grp Volume(v), veh/h	53	1379	155	284	955	517	353	42	38	74	53	0
Grp Sat Flow(s),veh/h/ln	1753	1675	1539	1753	1675	1813	1330	1749	1539	1298	1749	0
Q Serve(g_s), s	2.6	23.4	6.9	14.4	20.8	20.8	23.3	0.8	1.6	3.9	1.0	0.0
Cycle Q Clear(g_c), s	2.6	23.4	6.9	14.4	20.8	20.8	24.3	0.8	1.6	4.7	1.0	0.0
Prop In Lane	1.00		1.00	1.00		0.08	1.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	100	1547	474	294	1401	758	452	1015	447	446	1015	
V/C Ratio(X)	0.53	0.89	0.33	0.97	0.68	0.68	0.78	0.04	0.09	0.17	0.05	
Avail Cap(c_a), veh/h	137	1571	481	294	1401	758	452	1015	447	446	1015	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	41.0	29.6	23.9	37.0	21.2	21.2	31.7	22.8	23.1	24.5	22.9	0.0
Incr Delay (d2), s/veh	1.6	6.9	0.6	43.3	1.5	2.8	9.4	0.0	0.1	0.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	9.4	2.3	9.2	7.3	8.2	8.0	0.3	0.6	1.2	0.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	42.6	36.5	24.4	80.4	22.7	24.0	41.1	22.9	23.3	24.8	22.9	0.0
LnGrp LOS	D	D	C	F	C	C	D	C	C	C	C	
Approach Vol, veh/h		1587			1756			433			127	A
Approach Delay, s/veh		35.5			32.4			37.8			24.0	
Approach LOS		D			C			D			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	22.0	34.6		33.0	12.1	44.5		33.0				
Change Period (Y+Rc), s	7.0	7.0		7.0	7.0	7.0		7.0				
Max Green Setting (Gmax), s	15.0	28.0		26.0	7.0	36.0		26.0				
Max Q Clear Time (g_c+I1), s	16.4	25.4		26.3	4.6	22.8		6.7				
Green Ext Time (p_c), s	0.0	2.1		0.0	0.0	8.9		0.7				

Intersection Summary												
HCM 6th Ctrl Delay			34.0									
HCM 6th LOS			C									

Notes

Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.

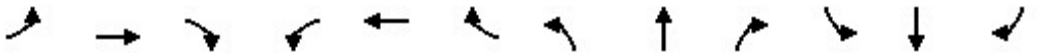


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	330	151	160	480	70	132	355	40	50	644	180
Future Volume (veh/h)	30	330	151	160	480	70	132	355	40	50	644	180
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	32	347	99	168	505	62	139	374	35	53	678	164
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	235	535	150	302	752	92	275	1062	99	413	852	206
Arrive On Green	0.04	0.20	0.20	0.08	0.24	0.24	0.07	0.33	0.33	0.05	0.31	0.31
Sat Flow, veh/h	1753	2682	753	1753	3129	383	1753	3229	300	1753	2781	672
Grp Volume(v), veh/h	32	224	222	168	281	286	139	202	207	53	426	416
Grp Sat Flow(s),veh/h/ln	1753	1749	1686	1753	1749	1763	1753	1749	1780	1753	1749	1705
Q Serve(g_s), s	1.1	9.4	9.6	6.1	11.6	11.7	4.2	6.9	7.0	1.6	17.7	17.8
Cycle Q Clear(g_c), s	1.1	9.4	9.6	6.1	11.6	11.7	4.2	6.9	7.0	1.6	17.7	17.8
Prop In Lane	1.00		0.45	1.00		0.22	1.00		0.17	1.00		0.39
Lane Grp Cap(c), veh/h	235	349	336	302	420	424	275	575	586	413	536	522
V/C Ratio(X)	0.14	0.64	0.66	0.56	0.67	0.67	0.51	0.35	0.35	0.13	0.80	0.80
Avail Cap(c_a), veh/h	301	595	573	302	601	606	276	632	644	454	632	616
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.0	29.2	29.3	23.6	27.3	27.3	19.0	20.2	20.2	17.0	25.3	25.3
Incr Delay (d2), s/veh	0.3	2.8	3.1	2.2	2.6	2.7	1.8	0.5	0.5	0.2	6.7	6.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	3.8	3.8	2.4	4.6	4.7	1.7	2.6	2.7	0.6	7.6	7.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	24.3	32.0	32.4	25.8	29.9	30.0	20.8	20.7	20.7	17.2	31.9	32.2
LnGrp LOS	C	C	C	C	C	C	C	C	C	B	C	C
Approach Vol, veh/h		478			735			548			895	
Approach Delay, s/veh		31.7			29.0			20.7			31.2	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.1	33.1	12.8	22.3	12.9	31.3	9.5	25.6
Change Period (Y+Rc), s	7.0	7.0	6.5	6.5	7.0	7.0	6.5	6.5
Max Green Setting (Gmax), s	6.0	28.7	6.3	27.0	6.0	28.7	6.0	27.3
Max Q Clear Time (g_c+I1), s	3.6	9.0	8.1	11.6	6.2	19.8	3.1	13.7
Green Ext Time (p_c), s	0.0	2.9	0.0	2.9	0.0	4.2	0.0	3.5

Intersection Summary	
HCM 6th Ctrl Delay	28.5
HCM 6th LOS	C

Min green cannot be greater than Max Green.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	410	20	440	261	1522	0	0	2114	850
Future Volume (veh/h)	0	0	0	410	20	440	261	1522	0	0	2114	850
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1841	1841	1841	1841	1841	0	0	1841	1841
Adj Flow Rate, veh/h				551	0	244	275	1602	0	0	2225	558
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				4	4	4	4	4	0	0	4	4
Cap, veh/h				674	0	300	387	3315	0	0	2445	757
Arrive On Green				0.19	0.00	0.19	0.11	0.66	0.00	0.00	0.49	0.49
Sat Flow, veh/h				3506	0	1560	3401	5191	0	0	5191	1555
Grp Volume(v), veh/h				551	0	244	275	1602	0	0	2225	558
Grp Sat Flow(s),veh/h/ln				1753	0	1560	1700	1675	0	0	1675	1555
Q Serve(g_s), s				13.2	0.0	13.1	6.8	14.0	0.0	0.0	35.8	25.2
Cycle Q Clear(g_c), s				13.2	0.0	13.1	6.8	14.0	0.0	0.0	35.8	25.2
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				674	0	300	387	3315	0	0	2445	757
V/C Ratio(X)				0.82	0.00	0.81	0.71	0.48	0.00	0.00	0.91	0.74
Avail Cap(c_a), veh/h				760	0	338	388	3323	0	0	2452	759
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				34.0	0.0	33.9	37.5	7.5	0.0	0.0	20.8	18.0
Incr Delay (d2), s/veh				6.9	0.0	13.9	5.9	0.2	0.0	0.0	5.7	4.1
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				6.1	0.0	6.0	3.0	3.9	0.0	0.0	13.5	8.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				40.8	0.0	47.8	43.4	7.6	0.0	0.0	26.5	22.1
LnGrp LOS				D	A	D	D	A	A	A	C	C
Approach Vol, veh/h					795			1877			2783	
Approach Delay, s/veh					43.0			12.9			25.6	
Approach LOS					D			B			C	

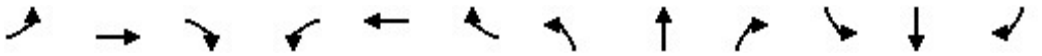
Timer - Assigned Phs	2		5	6		8						
Phs Duration (G+Y+Rc), s	63.9		15.2	48.7		23.8						
Change Period (Y+Rc), s	6.0		* 5.2	6.0		7.0						
Max Green Setting (Gmax), s	58.0		* 10	42.8		19.0						
Max Q Clear Time (g_c+I1), s	16.0		8.8	37.8		15.2						
Green Ext Time (p_c), s	22.7		0.1	4.9		1.6						

Intersection Summary		
HCM 6th Ctrl Delay	23.7	
HCM 6th LOS	C	

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	230	10	299	0	0	0	0	1553	290	370	2154	0
Future Volume (veh/h)	230	10	299	0	0	0	0	1553	290	370	2154	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841				0	1841	1841	1841	1841	0
Adj Flow Rate, veh/h	242	11	311				0	1635	119	389	2267	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4				0	4	4	4	4	0
Cap, veh/h	736	12	328				0	1929	596	491	2994	0
Arrive On Green	0.22	0.22	0.22				0.00	0.38	0.38	0.14	0.60	0.00
Sat Flow, veh/h	3401	54	1515				0	5191	1554	3401	5191	0
Grp Volume(v), veh/h	242	0	322				0	1635	119	389	2267	0
Grp Sat Flow(s),veh/h/ln	1700	0	1568				0	1675	1554	1700	1675	0
Q Serve(g_s), s	4.2	0.0	14.0				0.0	20.6	3.5	7.7	23.0	0.0
Cycle Q Clear(g_c), s	4.2	0.0	14.0				0.0	20.6	3.5	7.7	23.0	0.0
Prop In Lane	1.00		0.97				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	736	0	339				0	1929	596	491	2994	0
V/C Ratio(X)	0.33	0.00	0.95				0.00	0.85	0.20	0.79	0.76	0.00
Avail Cap(c_a), veh/h	736	0	339				0	1958	606	506	3046	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	22.9	0.0	26.8				0.0	19.5	14.2	28.6	10.3	0.0
Incr Delay (d2), s/veh	0.4	0.0	35.7				0.0	3.9	0.3	8.2	1.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	0.0	8.3				0.0	7.6	1.1	3.4	6.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.3	0.0	62.5				0.0	23.4	14.5	36.9	11.5	0.0
LnGrp LOS	C	A	E				A	C	B	D	B	A
Approach Vol, veh/h		564						1754			2656	
Approach Delay, s/veh		45.6						22.8			15.2	
Approach LOS		D						C			B	

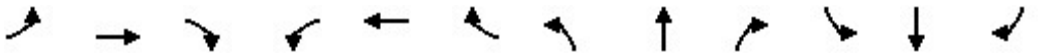
Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	14.7	32.6		22.0		47.3
Change Period (Y+Rc), s	* 4.7	6.0		7.0		6.0
Max Green Setting (Gmax), s	* 10	27.0		15.0		42.0
Max Q Clear Time (g_c+I1), s	9.7	22.6		16.0		25.0
Green Ext Time (p_c), s	0.1	4.0		0.0		15.3

Intersection Summary		
HCM 6th Ctrl Delay		21.3
HCM 6th LOS		C

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



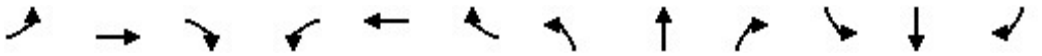
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	489	10	130	293	539	0	0	1366	460
Future Volume (veh/h)	0	0	0	489	10	130	293	539	0	0	1366	460
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		0.97
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1841	1841	1841	1841	1841	0	0	1841	1841
Adj Flow Rate, veh/h				523	0	24	308	567	0	0	1438	329
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				4	4	4	4	4	0	0	4	4
Cap, veh/h				599	0	533	329	2393	0	0	1518	659
Arrive On Green				0.17	0.00	0.17	0.06	0.23	0.00	0.00	0.43	0.43
Sat Flow, veh/h				3506	0	3120	1753	3589	0	0	3589	1517
Grp Volume(v), veh/h				523	0	24	308	567	0	0	1438	329
Grp Sat Flow(s),veh/h/ln				1753	0	1560	1753	1749	0	0	1749	1517
Q Serve(g_s), s				11.6	0.0	0.5	14.0	10.6	0.0	0.0	31.6	12.5
Cycle Q Clear(g_c), s				11.6	0.0	0.5	14.0	10.6	0.0	0.0	31.6	12.5
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				599	0	533	329	2393	0	0	1518	659
V/C Ratio(X)				0.87	0.00	0.05	0.94	0.24	0.00	0.00	0.95	0.50
Avail Cap(c_a), veh/h				605	0	538	329	2393	0	0	1518	659
HCM Platoon Ratio				1.00	1.00	1.00	0.33	0.33	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.63	0.63	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				32.3	0.0	27.7	37.1	13.9	0.0	0.0	21.8	16.4
Incr Delay (d2), s/veh				13.0	0.0	0.0	24.6	0.1	0.0	0.0	13.5	2.7
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				5.9	0.0	0.2	8.7	4.0	0.0	0.0	13.8	4.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				45.3	0.0	27.7	61.6	14.0	0.0	0.0	35.3	19.0
LnGrp LOS				D	A	C	E	B	A	A	D	B
Approach Vol, veh/h					547			875			1767	
Approach Delay, s/veh					44.6			30.8			32.3	
Approach LOS					D			C			C	

Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		60.5			20.0	40.5		19.5				
Change Period (Y+Rc), s		5.8			5.0	5.8		5.8				
Max Green Setting (Gmax), s		54.6			15.0	34.6		13.8				
Max Q Clear Time (g_c+I1), s		12.6			16.0	33.6		13.6				
Green Ext Time (p_c), s		3.0			0.0	0.7		0.0				

Intersection Summary		
HCM 6th Ctrl Delay	34.0	
HCM 6th LOS	C	

Notes

User approved volume balancing among the lanes for turning movement.



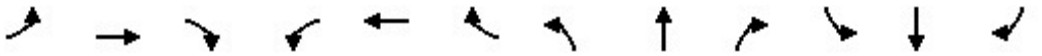
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	120	10	346	0	0	0	0	713	314	350	1495	0
Future Volume (veh/h)	120	10	346	0	0	0	0	713	314	350	1495	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		0.97	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841				0	1841	1841	1841	1841	0
Adj Flow Rate, veh/h	126	0	233				0	751	271	368	1574	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4				0	4	4	4	4	0
Cap, veh/h	438	0	390				0	1103	398	396	2553	0
Arrive On Green	0.12	0.00	0.12				0.00	0.44	0.44	0.45	1.00	0.00
Sat Flow, veh/h	3506	0	3120				0	2589	901	1753	3589	0
Grp Volume(v), veh/h	126	0	233				0	526	496	368	1574	0
Grp Sat Flow(s),veh/h/ln	1753	0	1560				0	1749	1649	1753	1749	0
Q Serve(g_s), s	2.6	0.0	5.7				0.0	19.2	19.2	15.9	0.0	0.0
Cycle Q Clear(g_c), s	2.6	0.0	5.7				0.0	19.2	19.2	15.9	0.0	0.0
Prop In Lane	1.00		1.00				0.00		0.55	1.00		0.00
Lane Grp Cap(c), veh/h	438	0	390				0	772	728	396	2553	0
V/C Ratio(X)	0.29	0.00	0.60				0.00	0.68	0.68	0.93	0.62	0.00
Avail Cap(c_a), veh/h	508	0	452				0	772	728	460	2553	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.20	0.20	0.00
Uniform Delay (d), s/veh	31.8	0.0	33.1				0.0	17.8	17.8	21.3	0.0	0.0
Incr Delay (d2), s/veh	0.3	0.0	1.3				0.0	4.8	5.1	6.3	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	0.0	2.2				0.0	7.7	7.3	4.9	0.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	32.0	0.0	34.4				0.0	22.6	22.9	27.6	0.2	0.0
LnGrp LOS	C	A	C				A	C	C	C	A	A
Approach Vol, veh/h		359						1022			1942	
Approach Delay, s/veh		33.5						22.8			5.4	
Approach LOS		C						C			A	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	23.1	41.1		15.8		64.2
Change Period (Y+Rc), s	5.0	5.8		5.8		5.8
Max Green Setting (Gmax), s	21.0	30.8		11.6		56.8
Max Q Clear Time (g_c+I1), s	17.9	21.2		7.7		2.0
Green Ext Time (p_c), s	0.2	3.6		0.4		13.3

Intersection Summary	
HCM 6th Ctrl Delay	13.8
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	677	10	310	410	713	0	0	1812	230
Future Volume (veh/h)	0	0	0	677	10	310	410	713	0	0	1812	230
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		0.97
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1841	1841	1841	1841	1841	0	0	1841	1841
Adj Flow Rate, veh/h				774	0	126	432	751	0	0	1907	137
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				4	4	4	4	4	0	0	4	4
Cap, veh/h				1028	0	458	491	2903	0	0	2392	573
Arrive On Green				0.29	0.00	0.29	0.29	1.00	0.00	0.00	0.38	0.38
Sat Flow, veh/h				3506	0	1560	3401	5191	0	0	6590	1516
Grp Volume(v), veh/h				774	0	126	432	751	0	0	1907	137
Grp Sat Flow(s),veh/h/ln				1753	0	1560	1700	1675	0	0	1583	1516
Q Serve(g_s), s				18.0	0.0	5.6	10.9	0.0	0.0	0.0	24.1	5.6
Cycle Q Clear(g_c), s				18.0	0.0	5.6	10.9	0.0	0.0	0.0	24.1	5.6
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				1028	0	458	491	2903	0	0	2392	573
V/C Ratio(X)				0.75	0.00	0.28	0.88	0.26	0.00	0.00	0.80	0.24
Avail Cap(c_a), veh/h				1028	0	458	491	2903	0	0	2392	573
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.93	0.93	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				28.8	0.0	24.4	31.3	0.0	0.0	0.0	24.9	19.2
Incr Delay (d2), s/veh				5.1	0.0	1.5	18.5	0.2	0.0	0.0	2.9	1.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				8.1	0.0	5.6	4.8	0.1	0.0	0.0	8.6	2.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				33.9	0.0	25.9	49.8	0.2	0.0	0.0	27.8	20.1
LnGrp LOS				C	A	C	D	A	A	A	C	C
Approach Vol, veh/h					900			1183			2044	
Approach Delay, s/veh					32.8			18.3			27.3	
Approach LOS					C			B			C	

Timer - Assigned Phs	2	4	5	6
Phs Duration (G+Y+Rc), s	57.8	32.2	18.0	39.8
Change Period (Y+Rc), s	5.8	5.8	5.0	5.8
Max Green Setting (Gmax), s	52.0	26.4	13.0	34.0
Max Q Clear Time (g_c+I1), s	2.0	20.0	12.9	26.1
Green Ext Time (p_c), s	5.5	2.1	0.0	6.4

Intersection Summary	
HCM 6th Ctrl Delay	25.9
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

User approved volume balancing among the lanes for turning movement.

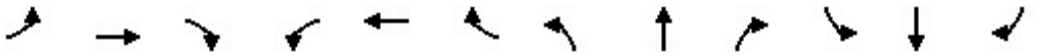
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	160	10	390	0	0	0	0	963	688	450	2039	0
Future Volume (veh/h)	160	10	390	0	0	0	0	963	688	450	2039	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		0.97	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841				0	1841	1841	1841	1841	0
Adj Flow Rate, veh/h	116	0	389				0	1014	411	474	2146	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4				0	4	4	4	4	0
Cap, veh/h	355	0	631				0	2758	661	605	3361	0
Arrive On Green	0.20	0.00	0.20				0.00	0.44	0.44	0.06	0.22	0.00
Sat Flow, veh/h	1753	0	3120				0	6590	1517	3401	5191	0
Grp Volume(v), veh/h	116	0	389				0	1014	411	474	2146	0
Grp Sat Flow(s),veh/h/ln	1753	0	1560				0	1583	1517	1700	1675	0
Q Serve(g_s), s	5.1	0.0	10.2				0.0	9.7	18.9	12.4	34.9	0.0
Cycle Q Clear(g_c), s	5.1	0.0	10.2				0.0	9.7	18.9	12.4	34.9	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	355	0	631				0	2758	661	605	3361	0
V/C Ratio(X)	0.33	0.00	0.62				0.00	0.37	0.62	0.78	0.64	0.00
Avail Cap(c_a), veh/h	355	0	631				0	2758	661	605	3361	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	0.33	0.33	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.50	0.50	0.00
Uniform Delay (d), s/veh	30.7	0.0	32.7				0.0	17.1	19.7	40.7	25.2	0.0
Incr Delay (d2), s/veh	2.4	0.0	4.5				0.0	0.4	4.4	5.1	0.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	0.0	4.2				0.0	3.2	6.7	5.9	15.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	33.1	0.0	37.2				0.0	17.4	24.0	45.8	25.7	0.0
LnGrp LOS	C	A	D				A	B	C	D	C	A
Approach Vol, veh/h		505						1425			2620	
Approach Delay, s/veh		36.3						19.3			29.3	
Approach LOS		D						B			C	

Timer - Assigned Phs	1	2				6		8				
Phs Duration (G+Y+Rc), s	21.0	45.0				66.0		24.0				
Change Period (Y+Rc), s	5.0	5.8				5.8		5.8				
Max Green Setting (Gmax), s	16.0	39.2				60.2		18.2				
Max Q Clear Time (g_c+I1), s	14.4	20.9				36.9		12.2				
Green Ext Time (p_c), s	0.2	7.9				16.6		1.1				

Intersection Summary			
HCM 6th Ctrl Delay			27.0
HCM 6th LOS			C

Notes

User approved volume balancing among the lanes for turning movement.



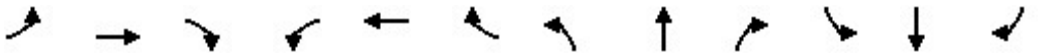
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	70	10	60	38	30	60	150	1511	49	110	2089	60
Future Volume (veh/h)	70	10	60	38	30	60	150	1511	49	110	2089	60
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.98		0.96	0.98		0.96	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	74	11	9	40	32	9	158	1591	51	116	2199	62
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	253	146	120	270	218	61	187	2805	90	144	2693	76
Arrive On Green	0.16	0.16	0.16	0.16	0.16	0.16	0.11	0.56	0.56	0.08	0.54	0.54
Sat Flow, veh/h	1322	919	752	1346	1369	385	1753	4996	160	1753	5019	141
Grp Volume(v), veh/h	74	0	20	40	0	41	158	1067	575	116	1465	796
Grp Sat Flow(s),veh/h/ln	1322	0	1671	1346	0	1754	1753	1675	1806	1753	1675	1810
Q Serve(g_s), s	5.3	0.0	1.1	2.7	0.0	2.1	9.2	21.3	21.3	6.8	37.5	37.8
Cycle Q Clear(g_c), s	7.4	0.0	1.1	3.8	0.0	2.1	9.2	21.3	21.3	6.8	37.5	37.8
Prop In Lane	1.00		0.45	1.00		0.22	1.00		0.09	1.00		0.08
Lane Grp Cap(c), veh/h	253	0	266	270	0	279	187	1881	1014	144	1797	971
V/C Ratio(X)	0.29	0.00	0.08	0.15	0.00	0.15	0.84	0.57	0.57	0.81	0.82	0.82
Avail Cap(c_a), veh/h	514	0	596	536	0	626	221	1881	1014	278	1911	1032
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.8	0.0	37.2	38.8	0.0	37.6	45.6	14.7	14.7	46.9	19.8	19.9
Incr Delay (d2), s/veh	0.5	0.0	0.1	0.2	0.0	0.2	19.3	0.5	0.8	4.0	2.8	5.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	0.0	0.4	0.9	0.0	0.9	4.8	7.1	7.7	3.0	13.5	15.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	41.3	0.0	37.3	39.0	0.0	37.8	64.8	15.1	15.5	50.9	22.6	25.2
LnGrp LOS	D	A	D	D	A	D	E	B	B	D	C	C
Approach Vol, veh/h		94			81			1800			2377	
Approach Delay, s/veh		40.4			38.4			19.6			24.9	
Approach LOS		D			D			B			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	15.0	64.9		24.1	17.6	62.3		24.1				
Change Period (Y+Rc), s	6.5	6.5		7.5	6.5	6.5		7.5				
Max Green Setting (Gmax), s	16.5	55.9		37.1	13.1	59.3		37.1				
Max Q Clear Time (g_c+I1), s	8.8	23.3		9.4	11.2	39.8		5.8				
Green Ext Time (p_c), s	0.1	15.9		0.2	0.0	16.0		0.2				

Intersection Summary			
HCM 6th Ctrl Delay		23.3	
HCM 6th LOS		C	

Notes

User approved pedestrian interval to be less than phase max green.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	120	1117	731	147	1026	234	481	1349	600	244	1859	310
Future Volume (veh/h)	120	1117	731	147	1026	234	481	1349	600	244	1859	310
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.97	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	126	1176	0	155	1080	210	506	1420	596	257	1957	287
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	145	965		149	972	561	417	1972	731	303	1802	676
Arrive On Green	0.08	0.28	0.00	0.08	0.28	0.28	0.12	0.39	0.39	0.09	0.36	0.36
Sat Flow, veh/h	1753	3497	1560	1753	3497	1519	3401	5025	1525	3401	5025	1524
Grp Volume(v), veh/h	126	1176	0	155	1080	210	506	1420	596	257	1957	287
Grp Sat Flow(s),veh/h/ln	1753	1749	1560	1753	1749	1519	1700	1675	1525	1700	1675	1524
Q Serve(g_s), s	10.3	40.0	0.0	12.3	40.3	14.7	17.8	34.7	48.6	10.8	52.0	18.8
Cycle Q Clear(g_c), s	10.3	40.0	0.0	12.3	40.3	14.7	17.8	34.7	48.6	10.8	52.0	18.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	145	965		149	972	561	417	1972	731	303	1802	676
V/C Ratio(X)	0.87	1.22		1.04	1.11	0.37	1.21	0.72	0.82	0.85	1.09	0.42
Avail Cap(c_a), veh/h	145	965		149	972	561	417	1972	731	328	1802	676
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	65.7	52.5	0.0	66.4	52.3	33.7	63.6	37.3	32.5	65.1	46.5	27.9
Incr Delay (d2), s/veh	37.9	108.0	0.0	85.5	64.4	0.6	115.7	1.3	7.1	17.5	48.7	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.1	31.5	0.0	8.9	25.7	5.4	14.3	14.2	18.4	5.4	29.2	6.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	103.6	160.5	0.0	151.8	116.7	34.3	179.3	38.6	39.7	82.6	95.2	28.3
LnGrp LOS	F	F		F	F	C	F	D	D	F	F	C
Approach Vol, veh/h		1302	A		1445			2522			2501	
Approach Delay, s/veh		155.0			108.5			67.1			86.2	
Approach LOS		F			F			E			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.1	62.9	17.0	47.0	23.0	58.0	16.7	47.3
Change Period (Y+Rc), s	* 5.2	6.0	* 4.7	7.0	* 5.2	6.0	* 4.7	7.0
Max Green Setting (Gmax), s	* 14	55.8	* 12	40.0	* 18	52.0	* 12	40.3
Max Q Clear Time (g_c+I1), s	12.8	50.6	14.3	42.0	19.8	54.0	12.3	42.3
Green Ext Time (p_c), s	0.1	4.2	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	95.7
HCM 6th LOS	F

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

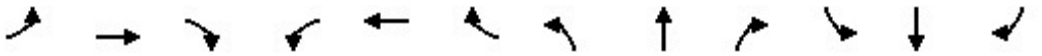
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	170	1491	120	249	1027	99	20	500	129	149	590	270
Future Volume (veh/h)	170	1491	120	249	1027	99	20	500	129	149	590	270
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	179	1569	49	262	1081	42	21	526	30	157	621	248
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	202	1374	603	230	1430	627	42	715	312	143	635	253
Arrive On Green	0.11	0.39	0.39	0.13	0.41	0.41	0.02	0.20	0.20	0.08	0.26	0.26
Sat Flow, veh/h	1767	3526	1546	1767	3526	1546	1767	3526	1539	1767	2445	975
Grp Volume(v), veh/h	179	1569	49	262	1081	42	21	526	30	157	448	421
Grp Sat Flow(s),veh/h/ln	1767	1763	1546	1767	1763	1546	1767	1763	1539	1767	1763	1657
Q Serve(g_s), s	14.2	55.5	2.8	18.5	37.4	2.4	1.7	19.9	2.3	11.5	35.9	35.9
Cycle Q Clear(g_c), s	14.2	55.5	2.8	18.5	37.4	2.4	1.7	19.9	2.3	11.5	35.9	35.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.59
Lane Grp Cap(c), veh/h	202	1374	603	230	1430	627	42	715	312	143	458	431
V/C Ratio(X)	0.89	1.14	0.08	1.14	0.76	0.07	0.50	0.74	0.10	1.10	0.98	0.98
Avail Cap(c_a), veh/h	236	1374	603	230	1430	627	74	780	340	143	458	431
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	62.2	43.4	27.4	61.9	36.3	25.9	68.7	53.2	46.1	65.4	52.3	52.3
Incr Delay (d2), s/veh	25.8	73.0	0.1	102.7	2.4	0.1	3.4	3.5	0.2	104.6	36.0	37.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.7	36.9	1.0	14.6	15.9	0.9	0.8	9.1	0.9	9.3	20.1	19.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	88.0	116.4	27.4	164.6	38.7	25.9	72.0	56.7	46.3	170.1	88.3	89.9
LnGrp LOS	F	F	C	F	D	C	E	E	D	F	F	F
Approach Vol, veh/h		1797			1385			577			1026	
Approach Delay, s/veh		111.2			62.2			56.7			101.5	
Approach LOS		F			E			E			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.0	35.4	26.0	63.0	9.9	43.5	23.8	65.2
Change Period (Y+Rc), s	6.5	6.5	7.5	7.5	6.5	6.5	7.5	7.5
Max Green Setting (Gmax), s	11.5	31.5	18.5	55.5	6.0	37.0	19.0	55.0
Max Q Clear Time (g_c+I1), s	13.5	21.9	20.5	57.5	3.7	37.9	16.2	39.4
Green Ext Time (p_c), s	0.0	2.5	0.0	0.0	0.0	0.0	0.1	7.0

Intersection Summary	
HCM 6th Ctrl Delay	88.3
HCM 6th LOS	F

Notes

User approved pedestrian interval to be less than phase max green.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	1539	100	179	1175	39	70	30	199	59	70	50
Future Volume (veh/h)	40	1539	100	179	1175	39	70	30	199	59	70	50
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	0.99		0.98	0.99		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	42	1620	103	188	1237	41	74	32	103	62	74	30
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	70	1767	111	209	2103	70	214	64	207	180	211	85
Arrive On Green	0.04	0.53	0.53	0.12	0.60	0.60	0.17	0.17	0.17	0.17	0.17	0.17
Sat Flow, veh/h	1767	3361	212	1767	3479	115	1272	380	1222	1237	1246	505
Grp Volume(v), veh/h	42	844	879	188	626	652	74	0	135	62	0	104
Grp Sat Flow(s),veh/h/ln	1767	1763	1811	1767	1763	1831	1272	0	1601	1237	0	1750
Q Serve(g_s), s	2.6	47.8	49.2	11.5	23.9	24.0	6.0	0.0	8.4	5.3	0.0	5.8
Cycle Q Clear(g_c), s	2.6	47.8	49.2	11.5	23.9	24.0	11.8	0.0	8.4	13.7	0.0	5.8
Prop In Lane	1.00		0.12	1.00		0.06	1.00		0.76	1.00		0.29
Lane Grp Cap(c), veh/h	70	927	952	209	1066	1107	214	0	271	180	0	296
V/C Ratio(X)	0.60	0.91	0.92	0.90	0.59	0.59	0.35	0.00	0.50	0.34	0.00	0.35
Avail Cap(c_a), veh/h	113	955	981	209	1066	1107	370	0	467	332	0	510
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	51.9	23.7	24.0	47.7	13.3	13.3	45.5	0.0	41.4	47.6	0.0	40.3
Incr Delay (d2), s/veh	8.1	12.5	13.8	35.8	0.9	0.9	1.0	0.0	1.4	1.1	0.0	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	20.1	21.5	6.9	8.1	8.4	2.0	0.0	3.5	1.7	0.0	2.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	59.9	36.2	37.8	83.6	14.2	14.2	46.4	0.0	42.8	48.7	0.0	41.0
LnGrp LOS	E	D	D	F	B	B	D	A	D	D	A	D
Approach Vol, veh/h		1765			1466			209			166	
Approach Delay, s/veh		37.6			23.1			44.1			43.9	
Approach LOS		D			C			D			D	

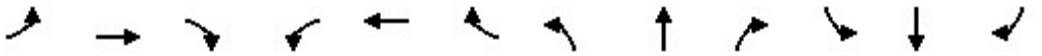
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.3	73.9		24.6	20.0	65.2		24.6				
Change Period (Y+Rc), s	7.0	7.5		6.0	7.0	7.5		6.0				
Max Green Setting (Gmax), s	7.0	65.5		32.0	13.0	59.5		32.0				
Max Q Clear Time (g_c+I1), s	4.6	26.0		15.7	13.5	51.2		13.8				
Green Ext Time (p_c), s	0.0	11.7		0.7	0.0	6.5		1.0				

Intersection Summary												
HCM 6th Ctrl Delay			32.4									
HCM 6th LOS			C									

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	210	1443	53	36	1119	341	54	272	34	430	752	180
Future Volume (veh/h)	210	1443	53	36	1119	341	54	272	34	430	752	180
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.98	1.00		0.97	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	221	1519	55	38	1178	237	57	286	31	453	792	175
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	253	1447	52	49	1308	573	73	354	38	420	880	194
Arrive On Green	0.07	0.42	0.42	0.03	0.37	0.37	0.04	0.11	0.11	0.24	0.31	0.31
Sat Flow, veh/h	3428	3469	125	1767	3526	1546	1767	3201	343	1767	2862	632
Grp Volume(v), veh/h	221	770	804	38	1178	237	57	156	161	453	488	479
Grp Sat Flow(s),veh/h/ln	1714	1763	1831	1767	1763	1546	1767	1763	1782	1767	1763	1732
Q Serve(g_s), s	9.3	60.5	60.5	3.1	45.8	16.5	4.6	12.5	12.8	34.5	38.4	38.4
Cycle Q Clear(g_c), s	9.3	60.5	60.5	3.1	45.8	16.5	4.6	12.5	12.8	34.5	38.4	38.4
Prop In Lane	1.00		0.07	1.00		1.00	1.00		0.19	1.00		0.37
Lane Grp Cap(c), veh/h	253	735	764	49	1308	573	73	195	197	420	542	532
V/C Ratio(X)	0.87	1.05	1.05	0.78	0.90	0.41	0.78	0.80	0.82	1.08	0.90	0.90
Avail Cap(c_a), veh/h	253	735	764	61	1332	584	77	243	246	420	586	575
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	66.5	42.3	42.3	70.1	43.1	33.9	68.9	62.9	63.0	55.3	48.1	48.1
Incr Delay (d2), s/veh	26.5	46.3	47.3	35.6	8.7	0.6	37.0	15.0	16.5	66.3	16.5	16.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.9	34.3	35.9	1.9	20.6	6.2	2.8	6.3	6.6	22.7	18.9	18.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	93.0	88.5	89.6	105.7	51.8	34.5	105.9	77.9	79.5	121.6	64.6	64.8
LnGrp LOS	F	F	F	F	D	C	F	E	E	F	E	E
Approach Vol, veh/h		1795			1453			374			1420	
Approach Delay, s/veh		89.6			50.4			82.9			82.9	
Approach LOS		F			D			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.2	61.3	13.5	52.1	11.5	68.0	42.0	23.6
Change Period (Y+Rc), s	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5
Max Green Setting (Gmax), s	10.7	54.8	6.3	48.2	5.0	60.5	34.5	20.0
Max Q Clear Time (g_c+I1), s	11.3	47.8	6.6	40.4	5.1	62.5	36.5	14.8
Green Ext Time (p_c), s	0.0	4.1	0.0	3.9	0.0	0.0	0.0	0.8

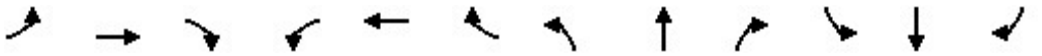
Intersection Summary	
HCM 6th Ctrl Delay	75.9
HCM 6th LOS	E



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	1578	160	130	1226	28	230	20	50	19	10	50
Future Volume (veh/h)	30	1578	160	130	1226	28	230	20	50	19	10	50
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.97	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	32	1661	164	137	1291	29	242	21	12	20	11	12
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	57	1787	174	156	2140	48	324	347	290	162	89	81
Arrive On Green	0.03	0.55	0.55	0.09	0.61	0.61	0.19	0.19	0.19	0.19	0.19	0.19
Sat Flow, veh/h	1767	3240	315	1767	3523	79	1377	1856	1550	640	477	432
Grp Volume(v), veh/h	32	893	932	137	646	674	242	21	12	43	0	0
Grp Sat Flow(s),veh/h/ln	1767	1763	1793	1767	1763	1839	1377	1856	1550	1550	0	0
Q Serve(g_s), s	2.2	57.2	60.4	9.5	28.2	28.2	18.1	1.2	0.8	0.3	0.0	0.0
Cycle Q Clear(g_c), s	2.2	57.2	60.4	9.5	28.2	28.2	20.7	1.2	0.8	2.6	0.0	0.0
Prop In Lane	1.00		0.18	1.00		0.04	1.00		1.00	0.47		0.28
Lane Grp Cap(c), veh/h	57	972	989	156	1071	1117	324	347	290	332	0	0
V/C Ratio(X)	0.56	0.92	0.94	0.88	0.60	0.60	0.75	0.06	0.04	0.13	0.00	0.00
Avail Cap(c_a), veh/h	85	1000	1017	156	1071	1117	421	478	399	440	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	59.3	25.3	26.1	56.0	15.1	15.1	49.2	41.5	41.4	42.1	0.0	0.0
Incr Delay (d2), s/veh	8.4	12.9	16.1	38.7	1.0	0.9	5.3	0.1	0.1	0.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	24.2	26.7	5.8	10.0	10.4	7.9	0.5	0.3	1.1	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	67.6	38.2	42.1	94.7	16.1	16.0	54.4	41.6	41.4	42.3	0.0	0.0
LnGrp LOS	E	D	D	F	B	B	D	D	D	D	A	A
Approach Vol, veh/h		1857			1457			275			43	
Approach Delay, s/veh		40.7			23.4			52.9			42.3	
Approach LOS		D			C			D			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.0	83.0		30.3	18.0	76.1		30.3				
Change Period (Y+Rc), s	7.0	7.5		7.0	7.0	7.5		7.0				
Max Green Setting (Gmax), s	6.0	75.5		32.0	11.0	70.5		32.0				
Max Q Clear Time (g_c+I1), s	4.2	30.2		22.7	11.5	62.4		4.6				
Green Ext Time (p_c), s	0.0	9.9		0.6	0.0	6.2		0.2				

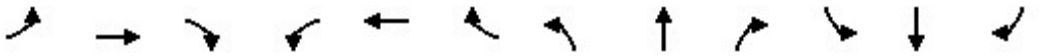
Intersection Summary			
HCM 6th Ctrl Delay		34.7	
HCM 6th LOS		C	



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	1566	50	39	1294	59	60	30	59	49	30	30
Future Volume (veh/h)	30	1566	50	39	1294	59	60	30	59	49	30	30
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	1.00		0.96	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	32	1648	53	41	1362	61	63	32	6	52	32	4
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	64	1954	63	75	1946	87	92	95	18	84	94	12
Arrive On Green	0.04	0.56	0.56	0.04	0.57	0.57	0.05	0.06	0.06	0.05	0.06	0.06
Sat Flow, veh/h	1767	3483	112	1767	3432	153	1767	1508	283	1767	1608	201
Grp Volume(v), veh/h	32	831	870	41	698	725	63	0	38	52	0	36
Grp Sat Flow(s),veh/h/ln	1767	1763	1832	1767	1763	1823	1767	0	1790	1767	0	1809
Q Serve(g_s), s	1.6	36.3	36.8	2.1	26.3	26.5	3.2	0.0	1.9	2.7	0.0	1.8
Cycle Q Clear(g_c), s	1.6	36.3	36.8	2.1	26.3	26.5	3.2	0.0	1.9	2.7	0.0	1.8
Prop In Lane	1.00		0.06	1.00		0.08	1.00		0.16	1.00		0.11
Lane Grp Cap(c), veh/h	64	989	1028	75	999	1034	92	0	112	84	0	106
V/C Ratio(X)	0.50	0.84	0.85	0.55	0.70	0.70	0.69	0.00	0.34	0.62	0.00	0.34
Avail Cap(c_a), veh/h	114	1133	1177	114	1133	1171	114	0	619	114	0	625
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	43.8	16.9	17.0	43.5	14.4	14.4	43.2	0.0	41.6	43.3	0.0	41.9
Incr Delay (d2), s/veh	5.9	5.4	5.5	6.2	1.8	1.8	11.7	0.0	1.8	7.1	0.0	1.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	12.9	13.6	1.0	8.8	9.1	1.7	0.0	0.9	1.3	0.0	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	49.7	22.3	22.5	49.7	16.2	16.2	54.8	0.0	43.3	50.3	0.0	43.7
LnGrp LOS	D	C	C	D	B	B	D	A	D	D	A	D
Approach Vol, veh/h		1733			1464			101			88	
Approach Delay, s/veh		22.9			17.1			50.5			47.6	
Approach LOS		C			B			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.4	60.0	10.8	11.4	10.9	59.5	10.4	11.8
Change Period (Y+Rc), s	7.0	7.5	6.0	6.0	7.0	7.5	6.0	6.0
Max Green Setting (Gmax), s	6.0	59.5	6.0	32.0	6.0	59.5	6.0	32.0
Max Q Clear Time (g_c+I1), s	3.6	28.5	5.2	3.8	4.1	38.8	4.7	3.9
Green Ext Time (p_c), s	0.0	12.9	0.0	0.1	0.0	13.2	0.0	0.1

Intersection Summary	
HCM 6th Ctrl Delay	21.9
HCM 6th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	300	1245	119	241	1085	358	97	499	74	421	950	200
Future Volume (veh/h)	300	1245	119	241	1085	358	97	499	74	421	950	200
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	316	1311	42	254	1142	337	102	525	16	443	1000	200
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	161	1174	524	149	1161	867	316	630	281	403	684	137
Arrive On Green	0.05	0.33	0.33	0.04	0.33	0.33	0.18	0.18	0.18	0.23	0.23	0.23
Sat Flow, veh/h	3428	3526	1572	3428	3526	1544	1767	3526	1572	1767	3000	599
Grp Volume(v), veh/h	316	1311	42	254	1142	337	102	525	16	443	618	582
Grp Sat Flow(s),veh/h/ln	1714	1763	1572	1714	1763	1544	1767	1763	1572	1767	1856	1743
Q Serve(g_s), s	6.5	46.0	2.5	6.0	44.4	17.1	7.0	19.9	1.2	31.5	31.5	31.5
Cycle Q Clear(g_c), s	6.5	46.0	2.5	6.0	44.4	17.1	7.0	19.9	1.2	31.5	31.5	31.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.34
Lane Grp Cap(c), veh/h	161	1174	524	149	1161	867	316	630	281	403	423	397
V/C Ratio(X)	1.96	1.12	0.08	1.71	0.98	0.39	0.32	0.83	0.06	1.10	1.46	1.47
Avail Cap(c_a), veh/h	161	1174	524	149	1161	867	403	804	358	403	423	397
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	65.8	46.1	31.6	66.1	46.0	17.3	49.5	54.8	47.1	53.3	53.3	53.3
Incr Delay (d2), s/veh	453.4	64.6	0.1	344.7	22.5	0.3	0.7	6.4	0.1	74.5	219.9	222.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.9	29.5	0.9	9.7	22.0	9.4	3.1	9.1	0.5	21.9	40.1	38.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	519.3	110.7	31.7	410.8	68.4	17.7	50.2	61.2	47.2	127.8	273.2	276.1
LnGrp LOS	F	F	C	F	E	B	D	E	D	F	F	F
Approach Vol, veh/h		1669			1733			643			1643	
Approach Delay, s/veh		186.0			108.7			59.1			235.0	
Approach LOS		F			F			E			F	

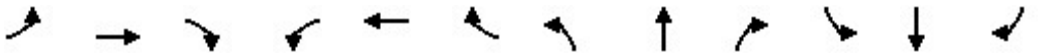
Timer - Assigned Phs	2	3	4	6	7	8
Phs Duration (G+Y+Rc), s	32.2	13.5	53.5	39.0	14.0	53.0
Change Period (Y+Rc), s	7.5	7.5	7.5	7.5	7.5	7.5
Max Green Setting (Gmax), s	31.5	6.0	46.0	31.5	6.5	45.5
Max Q Clear Time (g_c+I1), s	21.9	8.0	48.0	33.5	8.5	46.4
Green Ext Time (p_c), s	2.8	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	162.3
HCM 6th LOS	F

Notes

User approved pedestrian interval to be less than phase max green.

User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	1505	221	145	1415	30	225	0	149	30	0	30
Future Volume (veh/h)	30	1505	221	145	1415	30	225	0	149	30	0	30
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.97	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	32	1584	167	153	1489	32	237	0	65	32	0	8
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	62	1752	778	183	1993	43	342	0	311	288	0	311
Arrive On Green	0.04	0.50	0.50	0.10	0.57	0.57	0.20	0.00	0.20	0.20	0.00	0.20
Sat Flow, veh/h	1767	3526	1565	1767	3527	76	1396	0	1572	1326	0	1572
Grp Volume(v), veh/h	32	1584	167	153	743	778	237	0	65	32	0	8
Grp Sat Flow(s),veh/h/ln	1767	1763	1565	1767	1763	1840	1396	0	1572	1326	0	1572
Q Serve(g_s), s	1.8	41.7	6.1	8.6	32.2	32.4	16.8	0.0	3.5	2.1	0.0	0.4
Cycle Q Clear(g_c), s	1.8	41.7	6.1	8.6	32.2	32.4	17.2	0.0	3.5	5.6	0.0	0.4
Prop In Lane	1.00		1.00	1.00		0.04	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	62	1752	778	183	996	1040	342	0	311	288	0	311
V/C Ratio(X)	0.52	0.90	0.21	0.84	0.75	0.75	0.69	0.00	0.21	0.11	0.00	0.03
Avail Cap(c_a), veh/h	104	1820	808	191	997	1040	559	0	557	494	0	557
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	48.2	23.4	14.4	44.7	16.6	16.6	39.8	0.0	34.1	36.5	0.0	32.9
Incr Delay (d2), s/veh	6.5	6.8	0.2	25.8	3.2	3.1	2.5	0.0	0.3	0.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	16.3	1.9	4.9	11.5	12.1	5.9	0.0	1.4	0.7	0.0	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	54.7	30.1	14.6	70.5	19.8	19.8	42.3	0.0	34.4	36.6	0.0	32.9
LnGrp LOS	D	C	B	E	B	B	D	A	C	D	A	C
Approach Vol, veh/h		1783			1674			302			40	
Approach Delay, s/veh		29.1			24.4			40.6			35.9	
Approach LOS		C			C			D			D	

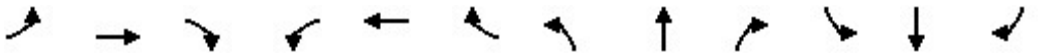
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.6	65.0		26.1	17.5	58.0		26.1				
Change Period (Y+Rc), s	7.0	7.5		6.0	7.0	7.5		6.0				
Max Green Setting (Gmax), s	6.0	57.5		36.0	11.0	52.5		36.0				
Max Q Clear Time (g_c+I1), s	3.8	34.4		7.6	10.6	43.7		19.2				
Green Ext Time (p_c), s	0.0	12.3		0.1	0.0	6.8		1.0				

Intersection Summary												
HCM 6th Ctrl Delay			28.0									
HCM 6th LOS			C									

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1516	177	231	1450	140	233
Future Volume (veh/h)	1516	177	231	1450	140	233
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		0.97	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	1596	135	243	1526	147	37
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	1864	810	277	2674	188	167
Arrive On Green	0.53	0.53	0.16	0.76	0.11	0.11
Sat Flow, veh/h	3618	1532	1767	3618	1767	1572
Grp Volume(v), veh/h	1596	135	243	1526	147	37
Grp Sat Flow(s),veh/h/ln	1763	1532	1767	1763	1767	1572
Q Serve(g_s), s	37.4	4.4	12.9	17.7	7.8	2.1
Cycle Q Clear(g_c), s	37.4	4.4	12.9	17.7	7.8	2.1
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1864	810	277	2674	188	167
V/C Ratio(X)	0.86	0.17	0.88	0.57	0.78	0.22
Avail Cap(c_a), veh/h	2058	894	313	2939	589	524
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.5	11.7	39.6	4.9	41.8	39.3
Incr Delay (d2), s/veh	3.6	0.1	21.8	0.3	7.0	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	13.4	1.3	6.9	3.4	3.7	0.8
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	23.1	11.8	61.4	5.2	48.8	39.9
LnGrp LOS	C	B	E	A	D	D
Approach Vol, veh/h	1731			1769	184	
Approach Delay, s/veh	22.2			12.9	47.0	
Approach LOS	C			B	D	

Timer - Assigned Phs		2			5	6	8
Phs Duration (G+Y+Rc), s		80.3			22.0	58.2	15.7
Change Period (Y+Rc), s		7.5			7.0	7.5	5.5
Max Green Setting (Gmax), s		80.0			17.0	56.0	32.0
Max Q Clear Time (g_c+I1), s		19.7			14.9	39.4	9.8
Green Ext Time (p_c), s		19.5			0.1	11.3	0.5

Intersection Summary	
HCM 6th Ctrl Delay	19.0
HCM 6th LOS	B



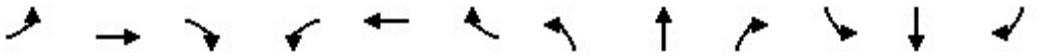
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	89	1611	49	90	1553	20	29	10	90	30	10	99
Future Volume (veh/h)	89	1611	49	90	1553	20	29	10	90	30	10	99
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	0.99		0.97	0.99		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	94	1696	51	95	1635	21	31	11	14	32	11	15
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	142	1968	59	143	2009	26	153	55	44	152	54	46
Arrive On Green	0.08	0.56	0.56	0.08	0.56	0.56	0.11	0.11	0.11	0.11	0.11	0.11
Sat Flow, veh/h	1767	3492	105	1767	3563	46	682	484	389	676	473	401
Grp Volume(v), veh/h	94	853	894	95	808	848	56	0	0	58	0	0
Grp Sat Flow(s),veh/h/ln	1767	1763	1833	1767	1763	1846	1555	0	0	1550	0	0
Q Serve(g_s), s	3.9	30.5	31.0	3.9	27.5	27.6	0.0	0.0	0.0	0.1	0.0	0.0
Cycle Q Clear(g_c), s	3.9	30.5	31.0	3.9	27.5	27.6	2.2	0.0	0.0	2.3	0.0	0.0
Prop In Lane	1.00		0.06	1.00		0.02	0.55		0.25	0.55		0.26
Lane Grp Cap(c), veh/h	142	994	1033	143	994	1041	253	0	0	252	0	0
V/C Ratio(X)	0.66	0.86	0.87	0.67	0.81	0.81	0.22	0.00	0.00	0.23	0.00	0.00
Avail Cap(c_a), veh/h	166	1111	1156	166	1111	1164	639	0	0	638	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	33.3	13.8	13.9	33.3	13.1	13.1	30.2	0.0	0.0	30.2	0.0	0.0
Incr Delay (d2), s/veh	7.5	6.4	6.5	7.9	4.3	4.2	0.3	0.0	0.0	0.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	10.1	10.7	1.8	9.0	9.5	0.9	0.0	0.0	1.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	40.8	20.1	20.4	41.2	17.4	17.3	30.5	0.0	0.0	30.6	0.0	0.0
LnGrp LOS	D	C	C	D	B	B	C	A	A	C	A	A
Approach Vol, veh/h		1841			1751			56			58	
Approach Delay, s/veh		21.3			18.6			30.5			30.6	
Approach LOS		C			B			C			C	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		14.5	11.0	49.0		14.5	11.0	49.0				
Change Period (Y+Rc), s		6.0	5.0	7.0		6.0	5.0	7.0				
Max Green Setting (Gmax), s		28.0	7.0	47.0		28.0	7.0	47.0				
Max Q Clear Time (g_c+I1), s		4.2	5.9	33.0		4.3	5.9	29.6				
Green Ext Time (p_c), s		0.2	0.0	9.1		0.2	0.0	10.1				

Intersection Summary		
HCM 6th Ctrl Delay		20.3
HCM 6th LOS		C

Notes

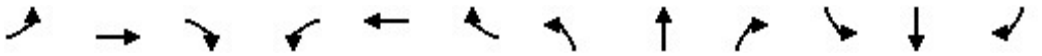
User approved pedestrian interval to be less than phase max green.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	531	1015	356	171	978	170	245	1010	22	190	1417	510
Future Volume (veh/h)	531	1015	356	171	978	170	245	1010	22	190	1417	510
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.97	1.00		0.97	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	559	1068	221	180	1029	170	258	1063	23	200	1492	492
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	351	1218	532	203	790	130	163	1483	32	225	1225	397
Arrive On Green	0.20	0.35	0.35	0.12	0.26	0.26	0.09	0.29	0.29	0.13	0.33	0.33
Sat Flow, veh/h	1753	3497	1526	1753	2991	493	1753	5058	109	1753	3728	1210
Grp Volume(v), veh/h	559	1068	221	180	601	598	258	704	382	200	1338	646
Grp Sat Flow(s),veh/h/ln	1753	1749	1526	1753	1749	1736	1753	1675	1818	1753	1675	1587
Q Serve(g_s), s	28.0	40.1	15.4	14.2	37.0	37.0	13.0	26.3	26.3	15.7	46.0	46.0
Cycle Q Clear(g_c), s	28.0	40.1	15.4	14.2	37.0	37.0	13.0	26.3	26.3	15.7	46.0	46.0
Prop In Lane	1.00		1.00	1.00		0.28	1.00		0.06	1.00		0.76
Lane Grp Cap(c), veh/h	351	1218	532	203	462	459	163	982	533	225	1101	522
V/C Ratio(X)	1.59	0.88	0.42	0.89	1.30	1.30	1.58	0.72	0.72	0.89	1.22	1.24
Avail Cap(c_a), veh/h	351	1218	532	213	462	459	163	982	533	250	1101	522
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	56.0	42.8	34.8	61.0	51.5	51.5	63.5	44.3	44.3	60.0	47.0	47.0
Incr Delay (d2), s/veh	280.6	8.0	1.1	34.3	150.2	152.0	290.4	3.1	5.7	31.1	105.6	122.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	39.3	17.9	5.7	8.1	34.9	34.8	18.8	11.0	12.3	8.7	34.4	35.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	336.6	50.8	35.9	95.3	201.7	203.5	353.9	47.4	50.0	91.1	152.6	169.7
LnGrp LOS	F	D	D	F	F	F	F	D	D	F	F	F
Approach Vol, veh/h		1848			1379			1344			2184	
Approach Delay, s/veh		135.4			188.6			107.0			152.0	
Approach LOS		F			F			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	22.0	45.0	20.2	52.8	17.0	50.0	32.0	41.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	20.0	39.0	17.0	48.0	13.0	46.0	28.0	37.0
Max Q Clear Time (g_c+I1), s	17.7	28.3	16.2	42.1	15.0	48.0	30.0	39.0
Green Ext Time (p_c), s	0.2	7.0	0.1	4.2	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	146.0
HCM 6th LOS	F



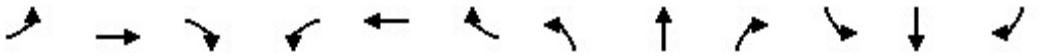
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	394	806	77	250	618	150	47	640	220	290	800	654
Future Volume (veh/h)	394	806	77	250	618	150	47	640	220	290	800	654
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	415	848	77	263	651	34	49	674	210	305	842	588
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	428	838	76	262	734	321	74	971	302	356	859	583
Arrive On Green	0.12	0.26	0.26	0.08	0.21	0.21	0.04	0.37	0.37	0.10	0.43	0.43
Sat Flow, veh/h	3428	3262	296	3428	3526	1539	1767	2634	820	3428	1995	1353
Grp Volume(v), veh/h	415	458	467	263	651	34	49	451	433	305	741	689
Grp Sat Flow(s),veh/h/ln	1714	1763	1795	1714	1763	1539	1767	1763	1691	1714	1763	1585
Q Serve(g_s), s	17.4	37.0	37.0	11.0	25.8	2.6	3.9	31.3	31.3	12.6	59.5	62.0
Cycle Q Clear(g_c), s	17.4	37.0	37.0	11.0	25.8	2.6	3.9	31.3	31.3	12.6	59.5	62.0
Prop In Lane	1.00		0.16	1.00		1.00	1.00		0.49	1.00		0.85
Lane Grp Cap(c), veh/h	428	453	461	262	734	321	74	650	623	356	759	682
V/C Ratio(X)	0.97	1.01	1.01	1.00	0.89	0.11	0.66	0.69	0.69	0.86	0.98	1.01
Avail Cap(c_a), veh/h	428	453	461	262	734	321	86	650	623	452	759	682
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	62.7	53.5	53.5	66.5	55.4	46.2	68.0	38.6	38.6	63.5	40.3	41.0
Incr Delay (d2), s/veh	35.0	45.3	44.9	56.7	12.6	0.1	12.4	3.0	3.1	11.7	26.9	36.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.5	21.5	21.9	6.8	12.4	1.0	2.0	13.7	13.2	6.0	30.2	30.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	97.8	98.8	98.4	123.2	68.0	46.3	80.4	41.6	41.7	75.2	67.2	77.7
LnGrp LOS	F	F	F	F	E	D	F	D	D	E	E	F
Approach Vol, veh/h		1340			948			933			1735	
Approach Delay, s/veh		98.3			82.5			43.7			72.8	
Approach LOS		F			F			D			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	21.9	60.1	18.0	44.0	13.0	69.0	25.0	37.0
Change Period (Y+Rc), s	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Max Green Setting (Gmax), s	19.0	50.0	11.0	37.0	7.0	62.0	18.0	30.0
Max Q Clear Time (g_c+I1), s	14.6	33.3	13.0	39.0	5.9	64.0	19.4	27.8
Green Ext Time (p_c), s	0.3	3.9	0.0	0.0	0.0	0.0	0.0	0.8

Intersection Summary	
HCM 6th Ctrl Delay	76.1
HCM 6th LOS	E

Notes

User approved pedestrian interval to be less than phase max green.



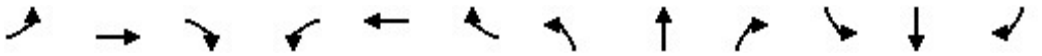
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	260	864	170	88	643	150	250	1880	315	190	2217	150
Future Volume (veh/h)	260	864	170	88	643	150	250	1880	315	190	2217	150
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	274	909	167	93	677	144	263	1979	208	200	2334	59
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	270	937	172	108	646	137	265	2135	517	204	2380	584
Arrive On Green	0.15	0.32	0.32	0.06	0.23	0.23	0.08	0.34	0.34	0.12	0.38	0.38
Sat Flow, veh/h	1753	2941	540	1753	2858	607	3401	6332	1532	1753	6332	1554
Grp Volume(v), veh/h	274	540	536	93	414	407	263	1979	208	200	2334	59
Grp Sat Flow(s),veh/h/ln	1753	1749	1732	1753	1749	1716	1700	1583	1532	1753	1583	1554
Q Serve(g_s), s	22.3	44.2	44.2	7.6	32.8	32.8	11.2	43.7	15.1	16.5	52.8	3.6
Cycle Q Clear(g_c), s	22.3	44.2	44.2	7.6	32.8	32.8	11.2	43.7	15.1	16.5	52.8	3.6
Prop In Lane	1.00		0.31	1.00		0.35	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	270	557	552	108	396	388	265	2135	517	204	2380	584
V/C Ratio(X)	1.02	0.97	0.97	0.86	1.05	1.05	0.99	0.93	0.40	0.98	0.98	0.10
Avail Cap(c_a), veh/h	270	557	552	108	396	388	265	2135	517	204	2380	584
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	61.3	48.7	48.7	67.5	56.1	56.1	66.8	46.3	36.8	63.9	44.7	29.4
Incr Delay (d2), s/veh	59.0	30.5	30.8	45.7	57.9	58.9	53.0	7.7	0.5	56.5	14.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	14.2	23.6	23.4	4.7	20.4	20.1	6.7	17.6	5.6	10.4	22.1	1.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	120.4	79.2	79.6	113.2	114.0	115.0	119.8	54.0	37.4	120.4	58.9	29.4
LnGrp LOS	F	E	E	F	F	F	F	D	D	F	E	C
Approach Vol, veh/h		1350			914			2450			2593	
Approach Delay, s/veh		87.7			114.4			59.6			63.0	
Approach LOS		F			F			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	21.6	55.4	14.6	53.4	16.0	61.0	28.0	40.0
Change Period (Y+Rc), s	* 4.7	6.5	* 5.7	7.2	* 4.7	6.5	* 5.7	7.2
Max Green Setting (Gmax), s	* 17	48.9	* 8.9	46.2	* 11	54.5	* 22	32.8
Max Q Clear Time (g_c+I1), s	18.5	45.7	9.6	46.2	13.2	54.8	24.3	34.8
Green Ext Time (p_c), s	0.0	2.8	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	72.8
HCM 6th LOS	E

Notes

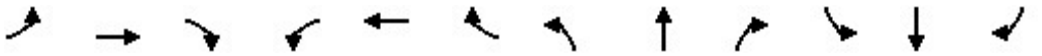
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	60	949	80	232	671	87	90	264	153	126	486	160
Future Volume (veh/h)	60	949	80	232	671	87	90	264	153	126	486	160
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	63	999	80	244	706	85	95	278	93	133	512	142
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	81	1067	85	239	1305	157	118	572	187	134	624	172
Arrive On Green	0.05	0.32	0.32	0.14	0.41	0.41	0.07	0.22	0.22	0.08	0.23	0.23
Sat Flow, veh/h	1767	3301	264	1767	3162	380	1767	2597	848	1767	2716	749
Grp Volume(v), veh/h	63	533	546	244	393	398	95	186	185	133	331	323
Grp Sat Flow(s),veh/h/ln	1767	1763	1802	1767	1763	1779	1767	1763	1682	1767	1763	1702
Q Serve(g_s), s	4.2	34.7	34.8	16.0	20.0	20.0	6.3	10.9	11.4	8.9	21.1	21.3
Cycle Q Clear(g_c), s	4.2	34.7	34.8	16.0	20.0	20.0	6.3	10.9	11.4	8.9	21.1	21.3
Prop In Lane	1.00		0.15	1.00		0.21	1.00		0.50	1.00		0.44
Lane Grp Cap(c), veh/h	81	570	582	239	727	734	118	388	371	134	405	391
V/C Ratio(X)	0.78	0.94	0.94	1.02	0.54	0.54	0.80	0.48	0.50	0.99	0.82	0.83
Avail Cap(c_a), veh/h	149	581	594	239	727	734	120	477	455	134	492	475
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	55.8	38.9	38.9	51.1	26.3	26.3	54.4	40.2	40.4	54.6	43.2	43.3
Incr Delay (d2), s/veh	14.7	22.8	22.5	63.6	0.9	0.9	31.3	1.1	1.3	74.1	9.3	10.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	17.7	18.1	11.0	8.0	8.1	3.7	4.7	4.6	6.6	9.8	9.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	70.5	61.6	61.4	114.8	27.2	27.2	85.7	41.3	41.6	128.7	52.5	53.5
LnGrp LOS	E	E	E	F	C	C	F	D	D	F	D	D
Approach Vol, veh/h		1142			1035			466			787	
Approach Delay, s/veh		62.0			47.8			50.5			65.8	
Approach LOS		E			D			D			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.4	56.3	14.9	34.7	23.0	45.7	16.0	33.6
Change Period (Y+Rc), s	7.0	7.5	7.0	7.5	7.0	7.5	7.0	7.5
Max Green Setting (Gmax), s	10.0	45.0	8.0	33.0	16.0	39.0	9.0	32.0
Max Q Clear Time (g_c+I1), s	6.2	22.0	8.3	23.3	18.0	36.8	10.9	13.4
Green Ext Time (p_c), s	0.0	5.4	0.0	2.9	0.0	1.5	0.0	2.1

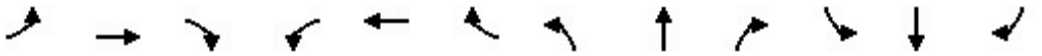
Intersection Summary	
HCM 6th Ctrl Delay	57.0
HCM 6th LOS	E



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	50	1017	150	104	859	30	30	210	154	50	140	110
Future Volume (veh/h)	50	1017	150	104	859	30	30	210	154	50	140	110
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.97	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	53	1071	150	109	904	31	32	221	28	53	147	20
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	88	1263	177	137	1514	52	65	427	53	88	462	62
Arrive On Green	0.05	0.41	0.41	0.08	0.44	0.44	0.04	0.14	0.14	0.05	0.15	0.15
Sat Flow, veh/h	1767	3098	433	1767	3475	119	1767	3143	393	1767	3115	416
Grp Volume(v), veh/h	53	609	612	109	459	476	32	123	126	53	82	85
Grp Sat Flow(s),veh/h/ln	1767	1763	1769	1767	1763	1832	1767	1763	1772	1767	1763	1768
Q Serve(g_s), s	2.6	27.5	27.6	5.3	17.5	17.5	1.6	5.7	5.8	2.6	3.7	3.8
Cycle Q Clear(g_c), s	2.6	27.5	27.6	5.3	17.5	17.5	1.6	5.7	5.8	2.6	3.7	3.8
Prop In Lane	1.00		0.24	1.00		0.07	1.00		0.22	1.00		0.24
Lane Grp Cap(c), veh/h	88	719	721	137	768	798	65	239	241	88	261	262
V/C Ratio(X)	0.61	0.85	0.85	0.80	0.60	0.60	0.49	0.51	0.53	0.61	0.31	0.32
Avail Cap(c_a), veh/h	121	819	822	141	839	872	121	643	647	121	643	645
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.0	23.6	23.6	39.9	18.9	18.9	41.6	35.3	35.4	41.0	33.5	33.5
Incr Delay (d2), s/veh	6.6	7.7	7.9	25.8	1.1	1.1	5.6	2.0	2.1	6.6	0.8	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	11.5	11.6	3.2	6.4	6.7	0.7	2.4	2.5	1.2	1.5	1.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	47.6	31.3	31.5	65.7	20.1	20.0	47.1	37.4	37.5	47.6	34.3	34.4
LnGrp LOS	D	C	C	E	C	C	D	D	D	D	C	C
Approach Vol, veh/h		1274			1044			281			220	
Approach Delay, s/veh		32.1			24.8			38.5			37.5	
Approach LOS		C			C			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.4	45.8	10.3	20.5	13.8	43.4	11.4	19.4
Change Period (Y+Rc), s	7.0	7.5	7.0	7.5	7.0	7.5	7.0	7.5
Max Green Setting (Gmax), s	6.0	41.9	6.0	32.1	7.0	40.9	6.0	32.1
Max Q Clear Time (g_c+I1), s	4.6	19.5	3.6	5.8	7.3	29.6	4.6	7.8
Green Ext Time (p_c), s	0.0	6.6	0.0	0.9	0.0	6.3	0.0	1.4

Intersection Summary	
HCM 6th Ctrl Delay	30.5
HCM 6th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	157	945	70	91	661	164	30	273	42	228	815	253
Future Volume (veh/h)	157	945	70	91	661	164	30	273	42	228	815	253
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	165	995	71	96	696	156	32	287	26	240	858	221
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	147	1142	81	114	927	208	60	927	82	228	1169	299
Arrive On Green	0.08	0.34	0.34	0.06	0.32	0.32	0.03	0.20	0.20	0.13	0.29	0.29
Sat Flow, veh/h	1767	3333	238	1767	2859	640	1767	4730	420	1767	4018	1029
Grp Volume(v), veh/h	165	526	540	96	429	423	32	203	110	240	720	359
Grp Sat Flow(s),veh/h/ln	1767	1763	1808	1767	1763	1737	1767	1689	1773	1767	1689	1670
Q Serve(g_s), s	9.0	30.3	30.3	5.8	23.6	23.6	1.9	5.6	5.7	14.0	20.8	21.0
Cycle Q Clear(g_c), s	9.0	30.3	30.3	5.8	23.6	23.6	1.9	5.6	5.7	14.0	20.8	21.0
Prop In Lane	1.00		0.13	1.00		0.37	1.00		0.24	1.00		0.62
Lane Grp Cap(c), veh/h	147	604	620	114	572	563	60	662	347	228	982	486
V/C Ratio(X)	1.12	0.87	0.87	0.84	0.75	0.75	0.53	0.31	0.32	1.05	0.73	0.74
Avail Cap(c_a), veh/h	147	667	684	114	634	625	98	1059	556	228	1309	647
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	49.7	33.4	33.4	50.1	32.7	32.7	51.5	37.3	37.3	47.2	34.6	34.7
Incr Delay (d2), s/veh	111.6	11.6	11.3	40.1	4.7	4.8	7.0	0.3	0.6	73.7	1.7	3.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.4	14.0	14.3	3.7	10.1	10.0	0.9	2.2	2.4	10.8	8.7	8.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	161.3	44.9	44.7	90.3	37.4	37.5	58.5	37.6	38.0	120.9	36.3	38.2
LnGrp LOS	F	D	D	F	D	D	E	D	D	F	D	D
Approach Vol, veh/h		1231			948			345			1319	
Approach Delay, s/veh		60.4			42.8			39.6			52.2	
Approach LOS		E			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	21.0	28.7	14.0	44.6	10.7	39.0	16.0	42.6
Change Period (Y+Rc), s	7.0	7.5	7.0	7.5	7.0	7.5	7.0	7.5
Max Green Setting (Gmax), s	14.0	34.0	7.0	41.0	6.0	42.0	9.0	39.0
Max Q Clear Time (g_c+I1), s	16.0	7.7	7.8	32.3	3.9	23.0	11.0	25.6
Green Ext Time (p_c), s	0.0	2.0	0.0	4.5	0.0	8.5	0.0	4.7

Intersection Summary	
HCM 6th Ctrl Delay	51.4
HCM 6th LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	139	1167	32	130	945	259	51	38	110	275	37	158
Future Volume (veh/h)	139	1167	32	130	945	259	51	38	110	275	37	158
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	1.00		0.97	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	146	1228	34	137	995	168	54	40	13	289	39	48
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	175	1419	39	164	1408	617	77	162	132	318	167	206
Arrive On Green	0.10	0.41	0.41	0.09	0.40	0.40	0.04	0.09	0.09	0.18	0.22	0.22
Sat Flow, veh/h	1767	3501	97	1767	3526	1546	1767	1856	1519	1767	747	920
Grp Volume(v), veh/h	146	618	644	137	995	168	54	40	13	289	0	87
Grp Sat Flow(s),veh/h/ln	1767	1763	1835	1767	1763	1546	1767	1856	1519	1767	0	1667
Q Serve(g_s), s	9.2	36.3	36.3	8.6	26.7	8.3	3.4	2.3	0.9	18.1	0.0	4.8
Cycle Q Clear(g_c), s	9.2	36.3	36.3	8.6	26.7	8.3	3.4	2.3	0.9	18.1	0.0	4.8
Prop In Lane	1.00		0.05	1.00		1.00	1.00		1.00	1.00		0.55
Lane Grp Cap(c), veh/h	175	715	744	164	1408	617	77	162	132	318	0	373
V/C Ratio(X)	0.84	0.86	0.87	0.84	0.71	0.27	0.70	0.25	0.10	0.91	0.00	0.23
Avail Cap(c_a), veh/h	235	819	853	172	1514	664	156	526	430	360	0	664
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	50.0	30.8	30.8	50.4	28.4	22.9	53.3	48.1	47.5	45.4	0.0	35.9
Incr Delay (d2), s/veh	17.3	8.9	8.7	27.6	1.5	0.3	11.2	0.8	0.3	24.2	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.7	15.9	16.5	4.9	10.7	2.9	1.7	1.1	0.3	10.0	0.0	2.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	67.3	39.7	39.5	78.0	29.9	23.1	64.5	48.9	47.8	69.6	0.0	36.2
LnGrp LOS	E	D	D	E	C	C	E	D	D	E	A	D
Approach Vol, veh/h		1408			1300			107			376	
Approach Delay, s/veh		42.5			34.1			56.6			61.9	
Approach LOS		D			C			E			E	

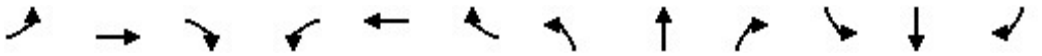
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.2	52.6	10.9	31.3	17.5	53.3	26.4	15.8
Change Period (Y+Rc), s	7.0	7.5	6.0	6.0	7.0	7.5	6.0	6.0
Max Green Setting (Gmax), s	15.0	48.5	10.0	45.0	11.0	52.5	23.0	32.0
Max Q Clear Time (g_c+I1), s	11.2	28.7	5.4	6.8	10.6	38.3	20.1	4.3
Green Ext Time (p_c), s	0.1	8.2	0.0	0.5	0.0	7.5	0.3	0.2

Intersection Summary	
HCM 6th Ctrl Delay	41.8
HCM 6th LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	202	649	482	120	539	115	432	960	160	95	1672	178
Future Volume (veh/h)	202	649	482	120	539	115	432	960	160	95	1672	178
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.99	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	213	683	414	126	567	109	455	1011	153	100	1760	179
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	235	609	368	127	676	130	320	1636	247	121	1197	121
Arrive On Green	0.13	0.29	0.29	0.07	0.23	0.23	0.18	0.37	0.37	0.07	0.26	0.26
Sat Flow, veh/h	1753	2078	1257	1753	2920	559	1753	4394	664	1753	4630	469
Grp Volume(v), veh/h	213	575	522	126	339	337	455	770	394	100	1272	667
Grp Sat Flow(s),veh/h/ln	1753	1749	1586	1753	1749	1731	1753	1675	1708	1753	1675	1749
Q Serve(g_s), s	17.4	42.5	42.5	10.4	26.8	27.0	26.5	27.2	27.3	8.2	37.5	37.5
Cycle Q Clear(g_c), s	17.4	42.5	42.5	10.4	26.8	27.0	26.5	27.2	27.3	8.2	37.5	37.5
Prop In Lane	1.00		0.79	1.00		0.32	1.00		0.39	1.00		0.27
Lane Grp Cap(c), veh/h	235	513	465	127	405	401	320	1247	636	121	866	452
V/C Ratio(X)	0.91	1.12	1.12	0.99	0.84	0.84	1.42	0.62	0.62	0.82	1.47	1.48
Avail Cap(c_a), veh/h	255	513	465	127	405	401	320	1247	636	190	866	452
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	61.9	51.3	51.3	67.2	53.1	53.2	59.3	37.1	37.1	66.6	53.7	53.8
Incr Delay (d2), s/veh	30.3	77.4	80.0	77.4	14.7	15.3	206.5	1.1	2.2	8.2	216.8	225.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.6	29.2	26.9	7.3	13.3	13.3	29.8	10.9	11.4	3.9	41.3	44.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	92.2	128.6	131.3	144.6	67.8	68.5	265.7	38.2	39.3	74.8	270.6	279.5
LnGrp LOS	F	F	F	F	E	E	F	D	D	E	F	F
Approach Vol, veh/h		1310			802			1619			2039	
Approach Delay, s/veh		123.8			80.1			102.4			263.9	
Approach LOS		F			F			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.5	61.5	17.0	49.0	34.0	45.0	25.9	40.1
Change Period (Y+Rc), s	7.5	7.5	6.5	6.5	7.5	7.5	6.5	6.5
Max Green Setting (Gmax), s	15.7	48.3	10.5	42.5	26.5	37.5	21.1	31.9
Max Q Clear Time (g_c+I1), s	10.2	29.3	12.4	44.5	28.5	39.5	19.4	29.0
Green Ext Time (p_c), s	0.0	9.4	0.0	0.0	0.0	0.0	0.1	1.4

Intersection Summary	
HCM 6th Ctrl Delay	161.2
HCM 6th LOS	F



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	166	1500	200	189	979	500	210	1559	207	610	1512	123
Future Volume (veh/h)	166	1500	200	189	979	500	210	1559	207	610	1512	123
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	175	1579	116	199	1031	494	221	1641	114	642	1592	48
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	243	1547	471	243	1547	766	270	1692	409	641	2383	577
Arrive On Green	0.07	0.31	0.31	0.07	0.31	0.31	0.08	0.27	0.27	0.19	0.38	0.38
Sat Flow, veh/h	3401	5025	1532	3401	5025	1532	3401	6332	1530	3401	6332	1533
Grp Volume(v), veh/h	175	1579	116	199	1031	494	221	1641	114	642	1592	48
Grp Sat Flow(s),veh/h/ln	1700	1675	1532	1700	1675	1532	1700	1583	1530	1700	1583	1533
Q Serve(g_s), s	7.1	43.1	7.9	8.1	25.0	33.6	9.0	35.9	8.3	26.4	29.3	2.8
Cycle Q Clear(g_c), s	7.1	43.1	7.9	8.1	25.0	33.6	9.0	35.9	8.3	26.4	29.3	2.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	243	1547	471	243	1547	766	270	1692	409	641	2383	577
V/C Ratio(X)	0.72	1.02	0.25	0.82	0.67	0.65	0.82	0.97	0.28	1.00	0.67	0.08
Avail Cap(c_a), veh/h	243	1547	471	243	1547	766	372	1692	409	641	2383	577
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	63.6	48.5	36.3	64.1	42.2	26.2	63.5	50.7	40.6	56.8	36.4	28.1
Incr Delay (d2), s/veh	8.7	28.2	0.3	18.3	1.1	1.9	7.1	15.4	0.4	35.8	0.7	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.3	21.4	3.0	4.1	10.2	12.1	4.0	15.4	3.1	14.1	10.9	1.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	72.4	76.7	36.6	82.4	43.3	28.1	70.5	66.1	41.0	92.6	37.1	28.2
LnGrp LOS	E	F	D	F	D	C	E	E	D	F	D	C
Approach Vol, veh/h		1870			1724			1976			2282	
Approach Delay, s/veh		73.8			43.4			65.2			52.5	
Approach LOS		E			D			E			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	31.1	43.9	14.7	50.3	15.8	59.2	14.7	50.3
Change Period (Y+Rc), s	* 4.7	6.5	* 4.7	7.2	* 4.7	6.5	* 4.7	7.2
Max Green Setting (Gmax), s	* 26	37.4	* 10	43.1	* 15	48.5	* 10	43.1
Max Q Clear Time (g_c+I1), s	28.4	37.9	10.1	45.1	11.0	31.3	9.1	27.0
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.1	9.6	0.0	4.2

Intersection Summary	
HCM 6th Ctrl Delay	58.8
HCM 6th LOS	E

Notes

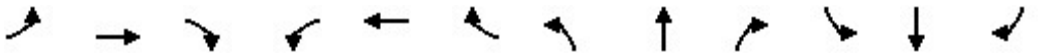
User approved pedestrian interval to be less than phase max green.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	187	2070	60	110	1580	100	60	230	150	100	270	248
Future Volume (veh/h)	187	2070	60	110	1580	100	60	230	150	100	270	248
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	197	2179	26	116	1663	38	63	242	70	105	284	124
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	226	2677	649	139	2364	573	81	459	129	124	466	198
Arrive On Green	0.13	0.42	0.42	0.08	0.37	0.37	0.05	0.17	0.17	0.07	0.20	0.20
Sat Flow, veh/h	1753	6332	1534	1753	6332	1533	1753	2678	755	1753	2374	1008
Grp Volume(v), veh/h	197	2179	26	116	1663	38	63	156	156	105	207	201
Grp Sat Flow(s),veh/h/ln	1753	1583	1534	1753	1583	1533	1753	1749	1684	1753	1749	1633
Q Serve(g_s), s	12.5	34.3	1.1	7.4	25.3	1.8	4.0	9.2	9.6	6.7	12.2	12.8
Cycle Q Clear(g_c), s	12.5	34.3	1.1	7.4	25.3	1.8	4.0	9.2	9.6	6.7	12.2	12.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.45	1.00		0.62
Lane Grp Cap(c), veh/h	226	2677	649	139	2364	573	81	300	289	124	343	320
V/C Ratio(X)	0.87	0.81	0.04	0.83	0.70	0.07	0.78	0.52	0.54	0.85	0.60	0.63
Avail Cap(c_a), veh/h	263	2792	676	139	2364	573	124	756	728	124	756	706
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	48.5	28.8	19.2	51.5	30.2	22.8	53.5	42.7	42.9	52.1	41.6	41.8
Incr Delay (d2), s/veh	23.6	1.9	0.0	33.2	1.0	0.1	15.8	1.7	1.9	39.5	2.1	2.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.7	12.3	0.4	4.4	9.1	0.6	2.1	4.0	4.0	4.2	5.3	5.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	72.0	30.7	19.2	84.7	31.2	22.9	69.4	44.4	44.8	91.6	43.6	44.2
LnGrp LOS	E	C	B	F	C	C	E	D	D	F	D	D
Approach Vol, veh/h		2402			1817			375			513	
Approach Delay, s/veh		34.0			34.4			48.8			53.7	
Approach LOS		C			C			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	21.6	49.8	12.2	29.7	16.0	55.4	15.0	27.0
Change Period (Y+Rc), s	7.0	7.5	7.0	7.5	7.0	7.5	7.0	7.5
Max Green Setting (Gmax), s	17.0	42.0	8.0	49.0	9.0	50.0	8.0	49.0
Max Q Clear Time (g_c+I1), s	14.5	27.3	6.0	14.8	9.4	36.3	8.7	11.6
Green Ext Time (p_c), s	0.1	10.2	0.0	2.8	0.0	11.6	0.0	2.1

Intersection Summary	
HCM 6th Ctrl Delay	37.2
HCM 6th LOS	D



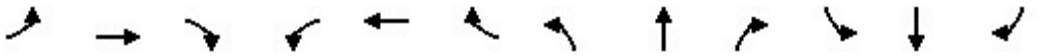
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	500	1538	360	350	1466	343	230	839	430	407	1097	420
Future Volume (veh/h)	500	1538	360	350	1466	343	230	839	430	407	1097	420
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	526	1619	0	368	1543	329	242	883	0	428	1155	344
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	503	1982		417	1510	322	295	1038		409	1775	541
Arrive On Green	0.15	0.31	0.00	0.12	0.29	0.29	0.09	0.21	0.00	0.23	0.35	0.35
Sat Flow, veh/h	3401	6332	1560	3401	5245	1118	3401	5025	1560	1753	5025	1533
Grp Volume(v), veh/h	526	1619	0	368	1397	475	242	883	0	428	1155	344
Grp Sat Flow(s),veh/h/ln	1700	1583	1560	1700	1583	1614	1700	1675	1560	1753	1675	1533
Q Serve(g_s), s	19.0	30.3	0.0	13.7	37.0	37.0	9.0	21.7	0.0	30.0	24.8	24.1
Cycle Q Clear(g_c), s	19.0	30.3	0.0	13.7	37.0	37.0	9.0	21.7	0.0	30.0	24.8	24.1
Prop In Lane	1.00		1.00	1.00		0.69	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	503	1982		417	1367	465	295	1038		409	1775	541
V/C Ratio(X)	1.05	0.82		0.88	1.02	1.02	0.82	0.85		1.05	0.65	0.64
Avail Cap(c_a), veh/h	503	1982		423	1367	465	317	1095		409	1798	548
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	54.8	40.8	0.0	55.5	45.8	45.8	57.7	49.1	0.0	49.3	34.9	34.7
Incr Delay (d2), s/veh	52.8	3.1	0.0	20.1	30.1	47.5	17.1	7.1	0.0	57.1	1.2	3.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.5	11.7	0.0	6.8	17.7	20.3	4.4	9.4	0.0	19.0	9.7	9.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	107.6	43.9	0.0	75.6	75.8	93.3	74.8	56.2	0.0	106.3	36.1	38.1
LnGrp LOS	F	D		E	F	F	E	E		F	D	D
Approach Vol, veh/h		2145	A		2240			1125	A		1927	
Approach Delay, s/veh		59.5			79.5			60.2			52.0	
Approach LOS		E			E			E			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	34.0	30.5	19.8	44.2	15.1	49.4	23.0	41.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	30.0	28.0	16.0	40.0	12.0	46.0	19.0	37.0
Max Q Clear Time (g_c+I1), s	32.0	23.7	15.7	32.3	11.0	26.8	21.0	39.0
Green Ext Time (p_c), s	0.0	2.8	0.1	6.7	0.2	13.6	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	63.7
HCM 6th LOS	E

Notes

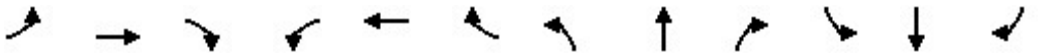
Unsignalized Delay for [NBR, EBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	410	1893	72	210	1846	349	83	239	70	339	328	270
Future Volume (veh/h)	410	1893	72	210	1846	349	83	239	70	339	328	270
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	432	1993	74	221	1943	170	87	252	52	357	345	168
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	412	2344	87	241	2035	492	109	439	89	329	634	302
Arrive On Green	0.12	0.37	0.37	0.07	0.32	0.32	0.06	0.15	0.15	0.19	0.28	0.28
Sat Flow, veh/h	3401	6309	234	3401	6332	1532	1753	2883	584	1753	2281	1088
Grp Volume(v), veh/h	432	1500	567	221	1943	170	87	151	153	357	263	250
Grp Sat Flow(s),veh/h/ln	1700	1583	1794	1700	1583	1532	1753	1749	1718	1753	1749	1620
Q Serve(g_s), s	14.5	34.7	34.7	7.7	36.0	10.1	5.9	9.6	9.9	22.5	15.3	15.8
Cycle Q Clear(g_c), s	14.5	34.7	34.7	7.7	36.0	10.1	5.9	9.6	9.9	22.5	15.3	15.8
Prop In Lane	1.00		0.13	1.00		1.00	1.00		0.34	1.00		0.67
Lane Grp Cap(c), veh/h	412	1764	666	241	2035	492	109	266	262	329	486	450
V/C Ratio(X)	1.05	0.85	0.85	0.92	0.95	0.35	0.80	0.57	0.58	1.08	0.54	0.56
Avail Cap(c_a), veh/h	412	1765	667	241	2036	493	223	708	696	329	815	755
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.6	34.6	34.6	55.2	39.8	31.0	55.4	47.1	47.2	48.6	36.7	36.9
Incr Delay (d2), s/veh	57.7	4.3	10.5	35.3	11.3	0.6	4.9	0.7	0.8	73.7	0.3	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.3	13.2	16.1	4.4	14.6	3.6	2.7	4.1	4.2	16.3	6.4	6.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	110.3	38.9	45.1	90.5	51.0	31.6	60.2	47.8	48.0	122.3	37.1	37.3
LnGrp LOS	F	D	D	F	D	C	E	D	D	F	D	D
Approach Vol, veh/h		2499			2334			391			870	
Approach Delay, s/veh		52.6			53.3			50.6			72.1	
Approach LOS		D			D			D			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	29.0	24.7	15.0	51.0	14.0	39.8	21.0	45.0
Change Period (Y+Rc), s	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
Max Green Setting (Gmax), s	22.5	48.5	8.5	44.5	15.2	55.8	14.5	38.5
Max Q Clear Time (g_c+I1), s	24.5	11.9	9.7	36.7	7.9	17.8	16.5	38.0
Green Ext Time (p_c), s	0.0	1.0	0.0	6.9	0.0	1.8	0.0	0.5

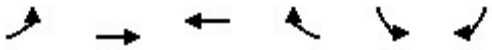
Intersection Summary	
HCM 6th Ctrl Delay	55.6
HCM 6th LOS	E



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	350	1692	269	640	1837	270	318	590	430	450	1050	260
Future Volume (veh/h)	350	1692	269	640	1837	270	318	590	430	450	1050	260
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	368	1781	264	674	1934	160	335	621	235	474	1105	122
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	356	1715	254	601	1903	581	306	851	258	501	1139	346
Arrive On Green	0.10	0.31	0.31	0.18	0.38	0.38	0.09	0.17	0.17	0.15	0.23	0.23
Sat Flow, veh/h	3401	5593	829	3401	5025	1533	3401	5025	1524	3401	5025	1528
Grp Volume(v), veh/h	368	1512	533	674	1934	160	335	621	235	474	1105	122
Grp Sat Flow(s),veh/h/ln	1700	1583	1673	1700	1675	1533	1700	1675	1524	1700	1675	1528
Q Serve(g_s), s	15.7	46.0	46.0	26.5	56.8	10.9	13.5	17.6	22.7	20.7	32.7	10.1
Cycle Q Clear(g_c), s	15.7	46.0	46.0	26.5	56.8	10.9	13.5	17.6	22.7	20.7	32.7	10.1
Prop In Lane	1.00		0.50	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	356	1456	513	601	1903	581	306	851	258	501	1139	346
V/C Ratio(X)	1.03	1.04	1.04	1.12	1.02	0.28	1.09	0.73	0.91	0.95	0.97	0.35
Avail Cap(c_a), veh/h	356	1456	513	601	1903	581	306	851	258	501	1139	346
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	67.2	52.0	52.0	61.8	46.6	32.3	68.3	59.0	61.2	63.4	57.5	48.7
Incr Delay (d2), s/veh	56.7	34.1	50.1	75.0	24.8	0.3	79.1	3.3	33.5	27.1	19.8	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.4	22.0	25.5	17.3	26.7	4.0	9.1	7.5	11.0	10.6	15.5	3.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	123.9	86.1	102.1	136.7	71.4	32.6	147.4	62.3	94.7	90.4	77.3	49.5
LnGrp LOS	F	F	F	F	F	C	F	E	F	F	E	D
Approach Vol, veh/h		2413			2768			1191			1701	
Approach Delay, s/veh		95.4			85.1			92.6			79.0	
Approach LOS		F			F			F			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	34.0	53.5	21.0	41.5	23.2	64.3	29.6	32.9
Change Period (Y+Rc), s	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5
Max Green Setting (Gmax), s	26.5	46.0	13.5	34.0	15.7	56.8	22.1	25.4
Max Q Clear Time (g_c+I1), s	28.5	48.0	15.5	34.7	17.7	58.8	22.7	24.7
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4

Intersection Summary	
HCM 6th Ctrl Delay	88.0
HCM 6th LOS	F



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	1832	1495	410	290	1362
Future Volume (veh/h)	0	1832	1495	410	290	1362
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	0	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	0	1928	1574	0	305	1428
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	4	4	4	4	4
Cap, veh/h	0	2228	1550		796	1417
Arrive On Green	0.00	0.44	0.44	0.00	0.45	0.45
Sat Flow, veh/h	0	5356	3589	1560	1753	3120
Grp Volume(v), veh/h	0	1928	1574	0	305	1428
Grp Sat Flow(s),veh/h/ln	0	1675	1749	1560	1753	1560
Q Serve(g_s), s	0.0	41.6	53.2	0.0	13.8	54.5
Cycle Q Clear(g_c), s	0.0	41.6	53.2	0.0	13.8	54.5
Prop In Lane	0.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	0	2228	1550		796	1417
V/C Ratio(X)	0.00	0.87	1.02		0.38	1.01
Avail Cap(c_a), veh/h	0	2228	1550		796	1417
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	30.2	33.4	0.0	21.6	32.7
Incr Delay (d2), s/veh	0.0	3.9	26.7	0.0	0.3	25.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	16.0	26.0	0.0	5.5	24.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.0	34.0	60.1	0.0	21.9	58.6
LnGrp LOS	A	C	F		C	F
Approach Vol, veh/h		1928	1574	A	1733	
Approach Delay, s/veh		34.0	60.1		52.1	
Approach LOS		C	E		D	

Timer - Assigned Phs	2		4		6
Phs Duration (G+Y+Rc), s	60.0		60.0		60.0
Change Period (Y+Rc), s	6.8		5.5		6.8
Max Green Setting (Gmax), s	53.2		54.5		53.2
Max Q Clear Time (g_c+I1), s	43.6		56.5		55.2
Green Ext Time (p_c), s	7.3		0.0		0.0

Intersection Summary	
HCM 6th Ctrl Delay	47.9
HCM 6th LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	663	1459	230	712	1183	140
Future Volume (veh/h)	663	1459	230	712	1183	140
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		0.97	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	698	1532	242	749	1245	72
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	4	4	4
Cap, veh/h	1457	2069	254	2719	1222	544
Arrive On Green	0.42	0.42	0.07	0.54	0.35	0.35
Sat Flow, veh/h	3589	2670	3401	5191	3506	1560
Grp Volume(v), veh/h	698	1532	242	749	1245	72
Grp Sat Flow(s),veh/h/ln	1749	1335	1700	1675	1753	1560
Q Serve(g_s), s	17.5	38.1	8.5	9.7	42.0	3.8
Cycle Q Clear(g_c), s	17.5	38.1	8.5	9.7	42.0	3.8
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1457	2069	254	2719	1222	544
V/C Ratio(X)	0.48	0.74	0.95	0.28	1.02	0.13
Avail Cap(c_a), veh/h	1587	2168	254	2906	1222	544
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.6	7.8	55.5	14.9	39.3	26.8
Incr Delay (d2), s/veh	0.2	1.3	43.5	0.1	30.6	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.8	22.9	5.0	3.3	23.2	1.5
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	25.9	9.1	99.0	15.0	69.8	26.9
LnGrp LOS	C	A	F	B	F	C
Approach Vol, veh/h	2230			991	1317	
Approach Delay, s/veh	14.4			35.5	67.5	
Approach LOS	B			D	E	

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	15.0	57.5			72.5	48.0
Change Period (Y+Rc), s	6.0	7.3			7.3	6.0
Max Green Setting (Gmax), s	9.0	54.7			69.7	42.0
Max Q Clear Time (g_c+I1), s	10.5	40.1			11.7	44.0
Green Ext Time (p_c), s	0.0	9.8			5.1	0.0

Intersection Summary	
HCM 6th Ctrl Delay	34.4
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.
User approved volume balancing among the lanes for turning movement.

Movement	WBL	WBR	NBT	NBR	SBL	SBT	
Lane Configurations							
Traffic Volume (veh/h)	58	117	553	41	83	1227	
Future Volume (veh/h)	58	117	553	41	83	1227	
Initial Q (Qb), veh	0	0	0	0	0	0	
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	
Work Zone On Approach	No		No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	
Adj Flow Rate, veh/h	61	123	582	43	87	1292	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	
Percent Heavy Veh, %	3	3	3	3	3	3	
Cap, veh/h	226	201	1305	405	150	2710	
Arrive On Green	0.13	0.13	0.26	0.26	0.08	0.54	
Sat Flow, veh/h	1767	1572	5233	1572	1767	5233	
Grp Volume(v), veh/h	61	123	582	43	87	1292	
Grp Sat Flow(s),veh/h/ln	1767	1572	1689	1572	1767	1689	
Q Serve(g_s), s	1.0	2.3	3.0	0.7	1.5	5.0	
Cycle Q Clear(g_c), s	1.0	2.3	3.0	0.7	1.5	5.0	
Prop In Lane	1.00	1.00		1.00	1.00		
Lane Grp Cap(c), veh/h	226	201	1305	405	150	2710	
V/C Ratio(X)	0.27	0.61	0.45	0.11	0.58	0.48	
Avail Cap(c_a), veh/h	1815	1615	3009	934	454	5285	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	
Uniform Delay (d), s/veh	12.3	12.9	9.7	8.8	13.7	4.5	
Incr Delay (d2), s/veh	0.6	3.0	0.2	0.1	3.5	0.1	
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(50%),veh/ln	0.3	0.8	0.6	0.1	0.5	0.2	
Unsig. Movement Delay, s/veh							
LnGrp Delay(d),s/veh	12.9	15.8	9.9	8.9	17.2	4.7	
LnGrp LOS	B	B	A	A	B	A	
Approach Vol, veh/h	184		625			1379	
Approach Delay, s/veh	14.9		9.9			5.4	
Approach LOS	B		A			A	

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	8.6	14.0			22.7	8.5
Change Period (Y+Rc), s	6.0	6.0			6.0	4.5
Max Green Setting (Gmax), s	8.0	18.5			32.5	32.0
Max Q Clear Time (g_c+I1), s	3.5	5.0			7.0	4.3
Green Ext Time (p_c), s	0.1	3.0			9.3	0.6

Intersection Summary	
HCM 6th Ctrl Delay	7.5
HCM 6th LOS	A

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↱			↱
Traffic Vol, veh/h	0	1740	1634	30	0	20
Future Vol, veh/h	0	1740	1634	30	0	20
Conflicting Peds, #/hr	5	0	0	5	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	0	1832	1720	32	0	21

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	881
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.96
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.33
Pot Cap-1 Maneuver	0	-	-	-	0	288
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	287
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	18.5
HCM LOS			C

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	287
HCM Lane V/C Ratio	-	-	-	0.073
HCM Control Delay (s)	-	-	-	18.5
HCM Lane LOS	-	-	-	C
HCM 95th %tile Q(veh)	-	-	-	0.2

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↱			↱
Traffic Vol, veh/h	0	1740	1644	20	0	20
Future Vol, veh/h	0	1740	1644	20	0	20
Conflicting Peds, #/hr	5	0	0	5	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	0	1832	1731	21	0	21

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	881
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.96
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.33
Pot Cap-1 Maneuver	0	-	-	-	0	288
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	287
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	18.5
HCM LOS			C

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	287
HCM Lane V/C Ratio	-	-	-	0.073
HCM Control Delay (s)	-	-	-	18.5
HCM Lane LOS	-	-	-	C
HCM 95th %tile Q(veh)	-	-	-	0.2

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	20	1720	1654	20	30	10
Future Vol, veh/h	20	1720	1654	20	30	10
Conflicting Peds, #/hr	5	0	0	5	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	21	1811	1741	21	32	11

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1767	0	-	0	2705	886
Stage 1	-	-	-	-	1757	-
Stage 2	-	-	-	-	948	-
Critical Hdwy	4.16	-	-	-	6.86	6.96
Critical Hdwy Stg 1	-	-	-	-	5.86	-
Critical Hdwy Stg 2	-	-	-	-	5.86	-
Follow-up Hdwy	2.23	-	-	-	3.53	3.33
Pot Cap-1 Maneuver	345	-	-	-	~ 17	286
Stage 1	-	-	-	-	122	-
Stage 2	-	-	-	-	335	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	343	-	-	-	~ 16	285
Mov Cap-2 Maneuver	-	-	-	-	83	-
Stage 1	-	-	-	-	114	-
Stage 2	-	-	-	-	333	-

Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	64
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	343	-	-	-	101
HCM Lane V/C Ratio	0.061	-	-	-	0.417
HCM Control Delay (s)	16.2	-	-	-	64
HCM Lane LOS	C	-	-	-	F
HCM 95th %tile Q(veh)	0.2	-	-	-	1.7

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	3.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	32	1708	1633	37	58	41
Future Vol, veh/h	32	1708	1633	37	58	41
Conflicting Peds, #/hr	5	0	0	5	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	350	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	34	1798	1719	39	61	43

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1763	0	-	0	2711	884
Stage 1	-	-	-	-	1744	-
Stage 2	-	-	-	-	967	-
Critical Hdwy	4.16	-	-	-	6.86	6.96
Critical Hdwy Stg 1	-	-	-	-	5.86	-
Critical Hdwy Stg 2	-	-	-	-	5.86	-
Follow-up Hdwy	2.23	-	-	-	3.53	3.33
Pot Cap-1 Maneuver	346	-	-	-	~ 17	287
Stage 1	-	-	-	-	125	-
Stage 2	-	-	-	-	327	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	344	-	-	-	~ 15	286
Mov Cap-2 Maneuver	-	-	-	-	81	-
Stage 1	-	-	-	-	112	-
Stage 2	-	-	-	-	325	-

Approach	EB	WB	SB
HCM Control Delay, s	0.3	0	130.1
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	344	-	-	-	115
HCM Lane V/C Ratio	0.098	-	-	-	0.906
HCM Control Delay (s)	16.6	-	-	-	130.1
HCM Lane LOS	C	-	-	-	F
HCM 95th %tile Q(veh)	0.3	-	-	-	5.6

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	23.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1090	124	148	853	54	58
Future Vol, veh/h	1090	124	148	853	54	58
Conflicting Peds, #/hr	0	5	5	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	100	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	1147	131	156	898	57	61

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1283	0	1979	644
Stage 1	-	-	-	-	1218	-
Stage 2	-	-	-	-	761	-
Critical Hdwy	-	-	4.16	-	6.86	6.96
Critical Hdwy Stg 1	-	-	-	-	5.86	-
Critical Hdwy Stg 2	-	-	-	-	5.86	-
Follow-up Hdwy	-	-	2.23	-	3.53	3.33
Pot Cap-1 Maneuver	-	-	531	-	~ 53	413
Stage 1	-	-	-	-	241	-
Stage 2	-	-	-	-	419	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	528	-	~ 37	411
Mov Cap-2 Maneuver	-	-	-	-	~ 37	-
Stage 1	-	-	-	-	240	-
Stage 2	-	-	-	-	295	-

Approach	EB	WB	NB
HCM Control Delay, s	0	2.2	$ 460.7
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	70	-	-	528	-
HCM Lane V/C Ratio	1.684	-	-	0.295	-
HCM Control Delay (s)	$ 460.7	-	-	14.6	-
HCM Lane LOS	F	-	-	B	-
HCM 95th %tile Q(veh)	10.3	-	-	1.2	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

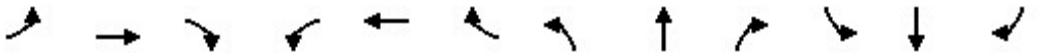
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	230	564	100	20	658	837	182	1012	50	856	860	160
Future Volume (veh/h)	230	564	100	20	658	837	182	1012	50	856	860	160
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	242	594	37	21	693	701	192	1065	50	901	905	51
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	223	1665	514	123	1517	469	215	1393	65	242	1503	458
Arrive On Green	0.07	0.33	0.33	0.04	0.30	0.30	0.12	0.28	0.28	0.14	0.30	0.30
Sat Flow, veh/h	3401	5025	1553	3401	5025	1552	1753	4914	230	1753	5025	1531
Grp Volume(v), veh/h	242	594	37	21	693	701	192	726	389	901	905	51
Grp Sat Flow(s),veh/h/ln	1700	1675	1553	1700	1675	1552	1753	1675	1794	1753	1675	1531
Q Serve(g_s), s	9.0	12.3	2.2	0.8	15.3	41.5	14.8	27.2	27.3	19.0	21.2	3.3
Cycle Q Clear(g_c), s	9.0	12.3	2.2	0.8	15.3	41.5	14.8	27.2	27.3	19.0	21.2	3.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.13	1.00		1.00
Lane Grp Cap(c), veh/h	223	1665	514	123	1517	469	215	949	508	242	1503	458
V/C Ratio(X)	1.09	0.36	0.07	0.17	0.46	1.50	0.89	0.76	0.77	3.72	0.60	0.11
Avail Cap(c_a), veh/h	223	1665	514	223	1517	469	217	1133	607	242	1773	540
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	64.2	34.9	31.5	64.3	38.9	48.0	59.4	45.1	45.1	59.2	41.2	34.9
Incr Delay (d2), s/veh	85.4	0.2	0.1	0.5	0.3	234.2	33.6	3.0	5.5	1233.3	0.6	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.5	5.0	0.8	0.4	6.1	45.7	8.4	11.3	12.5	91.3	8.6	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	149.6	35.0	31.6	64.7	39.1	282.2	93.0	48.1	50.6	1292.5	41.8	35.1
LnGrp LOS	F	D	C	E	D	F	F	D	D	F	D	D
Approach Vol, veh/h		873			1415			1307			1857	
Approach Delay, s/veh		66.6			159.9			55.4			648.4	
Approach LOS		E			F			E			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	26.0	46.0	12.5	53.0	23.8	48.1	16.5	49.0
Change Period (Y+Rc), s	7.0	7.0	7.5	7.5	7.0	7.0	7.5	7.5
Max Green Setting (Gmax), s	19.0	46.5	9.0	41.5	17.0	48.5	9.0	41.5
Max Q Clear Time (g_c+I1), s	21.0	29.3	2.8	14.3	16.8	23.2	11.0	43.5
Green Ext Time (p_c), s	0.0	8.4	0.0	4.8	0.0	9.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	286.3
HCM 6th LOS	F

Notes

User approved pedestrian interval to be less than phase max green.



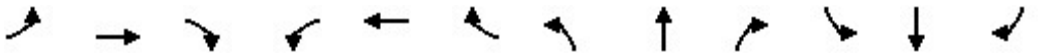
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	1170	320	240	1210	30	295	30	110	60	40	40
Future Volume (veh/h)	40	1170	320	240	1210	30	295	30	110	60	40	40
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	42	1232	114	253	1274	30	311	32	30	63	42	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	94	1522	466	290	2094	49	432	916	403	429	916	
Arrive On Green	0.05	0.30	0.30	0.17	0.41	0.41	0.26	0.26	0.26	0.26	0.26	0.00
Sat Flow, veh/h	1753	5025	1539	1753	5049	119	1343	3497	1539	1319	3589	0
Grp Volume(v), veh/h	42	1232	114	253	845	459	311	32	30	63	42	0
Grp Sat Flow(s),veh/h/ln	1753	1675	1539	1753	1675	1817	1343	1749	1539	1319	1749	0
Q Serve(g_s), s	1.8	17.6	4.3	11.0	15.4	15.4	17.5	0.5	1.1	2.9	0.7	0.0
Cycle Q Clear(g_c), s	1.8	17.6	4.3	11.0	15.4	15.4	18.2	0.5	1.1	3.4	0.7	0.0
Prop In Lane	1.00		1.00	1.00		0.07	1.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	94	1522	466	290	1390	754	432	916	403	429	916	
V/C Ratio(X)	0.45	0.81	0.24	0.87	0.61	0.61	0.72	0.03	0.07	0.15	0.05	
Avail Cap(c_a), veh/h	157	1612	494	292	1390	754	442	942	415	439	942	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	35.8	25.1	20.5	31.7	17.8	17.8	28.3	21.4	21.6	22.7	21.5	0.0
Incr Delay (d2), s/veh	1.2	3.3	0.4	22.6	0.9	1.7	6.4	0.0	0.1	0.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	6.5	1.4	6.0	5.1	5.7	5.8	0.2	0.4	0.9	0.3	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	37.0	28.4	20.8	54.3	18.8	19.5	34.7	21.4	21.8	23.0	21.5	0.0
LnGrp LOS	D	C	C	D	B	B	C	C	C	C	C	
Approach Vol, veh/h		1388			1557			373			105	A
Approach Delay, s/veh		28.0			24.8			32.5			22.4	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	19.9	30.6		27.4	11.2	39.3		27.4				
Change Period (Y+Rc), s	7.0	7.0		7.0	7.0	7.0		7.0				
Max Green Setting (Gmax), s	13.0	25.0		21.0	7.0	31.0		21.0				
Max Q Clear Time (g_c+I1), s	13.0	19.6		20.2	3.8	17.4		5.4				
Green Ext Time (p_c), s	0.0	3.9		0.2	0.0	8.2		0.5				

Intersection Summary			
HCM 6th Ctrl Delay		26.8	
HCM 6th LOS		C	

Notes

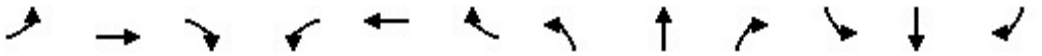
Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	300	141	140	420	60	108	315	30	40	570	160
Future Volume (veh/h)	20	300	141	140	420	60	108	315	30	40	570	160
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	21	316	88	147	442	51	114	332	25	42	600	142
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	258	515	141	326	786	90	290	1039	78	417	809	191
Arrive On Green	0.03	0.19	0.19	0.09	0.25	0.25	0.07	0.32	0.32	0.05	0.29	0.29
Sat Flow, veh/h	1753	2699	738	1753	3154	362	1753	3293	247	1753	2796	660
Grp Volume(v), veh/h	21	203	201	147	244	249	114	175	182	42	375	367
Grp Sat Flow(s),veh/h/ln	1753	1749	1688	1753	1749	1767	1753	1749	1791	1753	1749	1707
Q Serve(g_s), s	0.7	7.9	8.2	5.0	9.1	9.2	3.3	5.7	5.8	1.2	14.5	14.6
Cycle Q Clear(g_c), s	0.7	7.9	8.2	5.0	9.1	9.2	3.3	5.7	5.8	1.2	14.5	14.6
Prop In Lane	1.00		0.44	1.00		0.20	1.00		0.14	1.00		0.39
Lane Grp Cap(c), veh/h	258	334	322	326	436	440	290	552	565	417	506	494
V/C Ratio(X)	0.08	0.61	0.62	0.45	0.56	0.57	0.39	0.32	0.32	0.10	0.74	0.74
Avail Cap(c_a), veh/h	348	630	608	326	642	648	303	665	681	476	665	649
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.3	27.7	27.9	21.9	24.5	24.6	18.0	19.5	19.5	17.0	24.1	24.1
Incr Delay (d2), s/veh	0.2	2.5	2.8	1.0	1.6	1.6	1.0	0.5	0.5	0.1	3.9	4.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	3.2	3.2	1.9	3.5	3.6	1.3	2.1	2.2	0.5	5.9	5.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.4	30.3	30.7	22.8	26.1	26.2	19.0	20.0	20.0	17.1	27.9	28.2
LnGrp LOS	C	C	C	C	C	C	B	B	C	B	C	C
Approach Vol, veh/h		425			640			471			784	
Approach Delay, s/veh		30.1			25.4			19.8			27.5	
Approach LOS		C			C			B			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.5	30.6	13.0	20.8	12.4	28.7	8.6	25.2
Change Period (Y+Rc), s	7.0	7.0	6.5	6.5	7.0	7.0	6.5	6.5
Max Green Setting (Gmax), s	6.0	28.5	6.5	27.0	6.0	28.5	6.0	27.5
Max Q Clear Time (g_c+I1), s	3.2	7.8	7.0	10.2	5.3	16.6	2.7	11.2
Green Ext Time (p_c), s	0.0	2.5	0.0	2.7	0.0	4.5	0.0	3.3

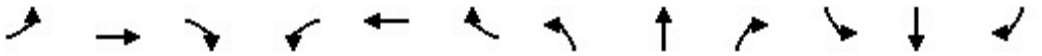
Intersection Summary	
HCM 6th Ctrl Delay	25.8
HCM 6th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	440	350	190	620	100	88	303	110	50	881	100
Future Volume (veh/h)	20	440	350	190	620	100	88	303	110	50	881	100
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.99	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	21	463	242	200	653	94	93	319	36	53	927	98
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	194	518	269	242	876	126	100	1274	561	68	1101	116
Arrive On Green	0.03	0.23	0.23	0.09	0.29	0.29	0.06	0.36	0.36	0.04	0.35	0.35
Sat Flow, veh/h	1753	2209	1146	1753	3060	440	1753	3497	1539	1753	3185	337
Grp Volume(v), veh/h	21	366	339	200	373	374	93	319	36	53	509	516
Grp Sat Flow(s),veh/h/ln	1753	1749	1607	1753	1749	1752	1753	1749	1539	1753	1749	1773
Q Serve(g_s), s	0.9	21.3	21.5	9.1	20.3	20.4	5.5	6.7	1.6	3.1	28.2	28.2
Cycle Q Clear(g_c), s	0.9	21.3	21.5	9.1	20.3	20.4	5.5	6.7	1.6	3.1	28.2	28.2
Prop In Lane	1.00		0.71	1.00		0.25	1.00		1.00	1.00		0.19
Lane Grp Cap(c), veh/h	194	410	377	242	500	501	100	1274	561	68	604	613
V/C Ratio(X)	0.11	0.89	0.90	0.83	0.74	0.75	0.93	0.25	0.06	0.78	0.84	0.84
Avail Cap(c_a), veh/h	267	433	398	242	500	501	100	1274	561	134	604	613
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.5	38.9	39.0	30.2	34.0	34.0	49.3	23.4	21.7	50.0	31.7	31.7
Incr Delay (d2), s/veh	0.1	19.3	22.0	19.4	5.7	5.8	66.2	0.5	0.2	7.1	13.4	13.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	10.8	10.3	4.9	8.9	8.9	4.2	2.7	0.6	1.5	13.4	13.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	29.6	58.2	61.0	49.5	39.7	39.8	115.5	23.8	22.0	57.2	45.1	44.9
LnGrp LOS	C	E	E	D	D	D	F	C	C	E	D	D
Approach Vol, veh/h		726			947			448			1078	
Approach Delay, s/veh		58.7			41.8			42.7			45.6	
Approach LOS		E			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.1	45.2	16.6	32.1	13.0	43.3	11.2	37.5
Change Period (Y+Rc), s	7.0	7.0	7.5	7.5	7.0	7.0	7.5	7.5
Max Green Setting (Gmax), s	8.0	32.9	9.1	26.0	6.0	34.9	8.0	27.1
Max Q Clear Time (g_c+I1), s	5.1	8.7	11.1	23.5	7.5	30.2	2.9	22.4
Green Ext Time (p_c), s	0.0	1.6	0.0	0.9	0.0	2.2	0.0	1.5

Intersection Summary	
HCM 6th Ctrl Delay	47.0
HCM 6th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	360	20	390	231	1360	0	0	1886	750
Future Volume (veh/h)	0	0	0	360	20	390	231	1360	0	0	1886	750
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1841	1841	1841	1841	1841	0	0	1841	1841
Adj Flow Rate, veh/h				472	0	188	243	1432	0	0	1985	456
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				4	4	4	4	4	0	0	4	4
Cap, veh/h				595	0	265	462	3279	0	0	2240	693
Arrive On Green				0.17	0.00	0.17	0.14	0.65	0.00	0.00	0.45	0.45
Sat Flow, veh/h				3506	0	1560	3401	5191	0	0	5191	1555
Grp Volume(v), veh/h				472	0	188	243	1432	0	0	1985	456
Grp Sat Flow(s),veh/h/ln				1753	0	1560	1700	1675	0	0	1675	1555
Q Serve(g_s), s				9.4	0.0	8.3	4.9	10.1	0.0	0.0	26.5	16.8
Cycle Q Clear(g_c), s				9.4	0.0	8.3	4.9	10.1	0.0	0.0	26.5	16.8
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				595	0	265	462	3279	0	0	2240	693
V/C Ratio(X)				0.79	0.00	0.71	0.53	0.44	0.00	0.00	0.89	0.66
Avail Cap(c_a), veh/h				671	0	299	465	3297	0	0	2253	697
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				29.1	0.0	28.7	29.4	6.2	0.0	0.0	18.6	15.9
Incr Delay (d2), s/veh				6.4	0.0	7.7	1.1	0.1	0.0	0.0	4.8	2.6
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				4.3	0.0	3.6	1.9	2.5	0.0	0.0	9.6	5.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				35.5	0.0	36.3	30.5	6.3	0.0	0.0	23.4	18.5
LnGrp LOS				D	A	D	C	A	A	A	C	B
Approach Vol, veh/h					660			1675			2441	
Approach Delay, s/veh					35.8			9.8			22.4	
Approach LOS					D			A			C	

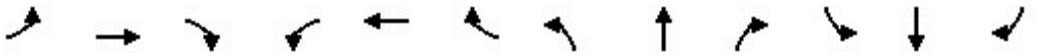
Timer - Assigned Phs	2		5	6		8						
Phs Duration (G+Y+Rc), s	53.7		15.1	38.6		19.4						
Change Period (Y+Rc), s	6.0		* 5.2	6.0		7.0						
Max Green Setting (Gmax), s	48.0		* 10	32.8		14.0						
Max Q Clear Time (g_c+I1), s	12.1		6.9	28.5		11.4						
Green Ext Time (p_c), s	18.1		0.2	4.1		1.0						

Intersection Summary		
HCM 6th Ctrl Delay	19.9	
HCM 6th LOS	B	

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	210	10	268	0	0	0	0	1381	260	330	1916	0
Future Volume (veh/h)	210	10	268	0	0	0	0	1381	260	330	1916	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841				0	1841	1841	1841	1841	0
Adj Flow Rate, veh/h	221	11	276				0	1454	98	347	2017	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4				0	4	4	4	4	0
Cap, veh/h	712	13	316				0	1787	552	533	2946	0
Arrive On Green	0.21	0.21	0.21				0.00	0.36	0.36	0.16	0.59	0.00
Sat Flow, veh/h	3401	60	1509				0	5191	1553	3401	5191	0
Grp Volume(v), veh/h	221	0	287				0	1454	98	347	2017	0
Grp Sat Flow(s),veh/h/ln	1700	0	1569				0	1675	1553	1700	1675	0
Q Serve(g_s), s	3.5	0.0	11.3				0.0	16.7	2.8	6.1	17.6	0.0
Cycle Q Clear(g_c), s	3.5	0.0	11.3				0.0	16.7	2.8	6.1	17.6	0.0
Prop In Lane	1.00		0.96				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	712	0	328				0	1787	552	533	2946	0
V/C Ratio(X)	0.31	0.00	0.87				0.00	0.81	0.18	0.65	0.68	0.00
Avail Cap(c_a), veh/h	748	0	345				0	1833	566	540	3002	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	21.3	0.0	24.3				0.0	18.6	14.1	25.2	9.1	0.0
Incr Delay (d2), s/veh	0.4	0.0	21.2				0.0	3.1	0.3	2.7	0.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	0.0	5.8				0.0	6.0	0.9	2.4	4.7	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	21.6	0.0	45.5				0.0	21.7	14.4	27.9	9.8	0.0
LnGrp LOS	C	A	D				A	C	B	C	A	A
Approach Vol, veh/h		508						1552			2364	
Approach Delay, s/veh		35.1						21.3			12.5	
Approach LOS		D						C			B	

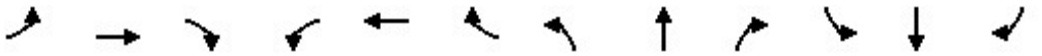
Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	14.7	28.6		20.3		43.3
Change Period (Y+Rc), s	* 4.7	6.0		7.0		6.0
Max Green Setting (Gmax), s	* 10	23.2		14.0		38.0
Max Q Clear Time (g_c+I1), s	8.1	18.7		13.3		19.6
Green Ext Time (p_c), s	0.3	3.9		0.1		15.5

Intersection Summary	
HCM 6th Ctrl Delay	18.2
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



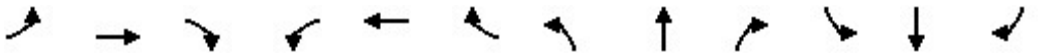
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	431	10	110	274	471	0	0	1211	410
Future Volume (veh/h)	0	0	0	431	10	110	274	471	0	0	1211	410
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		0.97
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1841	1841	1841	1841	1841	0	0	1841	1841
Adj Flow Rate, veh/h				462	0	20	288	496	0	0	1275	275
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				4	4	4	4	4	0	0	4	4
Cap, veh/h				568	0	505	330	2364	0	0	1461	634
Arrive On Green				0.16	0.00	0.16	0.19	0.68	0.00	0.00	0.42	0.42
Sat Flow, veh/h				3506	0	3120	1753	3589	0	0	3589	1517
Grp Volume(v), veh/h				462	0	20	288	496	0	0	1275	275
Grp Sat Flow(s),veh/h/ln				1753	0	1560	1753	1749	0	0	1749	1517
Q Serve(g_s), s				9.1	0.0	0.4	11.4	3.8	0.0	0.0	23.9	9.2
Cycle Q Clear(g_c), s				9.1	0.0	0.4	11.4	3.8	0.0	0.0	23.9	9.2
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				568	0	505	330	2364	0	0	1461	634
V/C Ratio(X)				0.81	0.00	0.04	0.87	0.21	0.00	0.00	0.87	0.43
Avail Cap(c_a), veh/h				696	0	619	368	2649	0	0	1672	725
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				28.9	0.0	25.3	28.2	4.4	0.0	0.0	19.1	14.8
Incr Delay (d2), s/veh				5.7	0.0	0.0	18.0	0.0	0.0	0.0	4.7	0.3
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				4.1	0.0	0.1	6.0	0.8	0.0	0.0	9.0	2.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				34.6	0.0	25.3	46.2	4.4	0.0	0.0	23.8	15.2
LnGrp LOS				C	A	C	D	A	A	A	C	B
Approach Vol, veh/h					482			784			1550	
Approach Delay, s/veh					34.2			19.8			22.3	
Approach LOS					C			B			C	

Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		54.2			18.5	35.7		17.4				
Change Period (Y+Rc), s		5.8			5.0	5.8		5.8				
Max Green Setting (Gmax), s		54.2			15.0	34.2		14.2				
Max Q Clear Time (g_c+I1), s		5.8			13.4	25.9		11.1				
Green Ext Time (p_c), s		2.6			0.1	4.0		0.5				

Intersection Summary		
HCM 6th Ctrl Delay	23.6	
HCM 6th LOS	C	

Notes

User approved volume balancing among the lanes for turning movement.



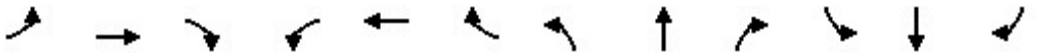
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	100	10	313	0	0	0	0	645	274	310	1332	0
Future Volume (veh/h)	100	10	313	0	0	0	0	645	274	310	1332	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		0.97	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841				0	1841	1841	1841	1841	0
Adj Flow Rate, veh/h	105	0	173				0	679	212	326	1402	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4				0	4	4	4	4	0
Cap, veh/h	600	0	534				0	850	265	376	2196	0
Arrive On Green	0.17	0.00	0.17				0.00	0.33	0.33	0.21	0.63	0.00
Sat Flow, veh/h	3506	0	3120				0	2694	812	1753	3589	0
Grp Volume(v), veh/h	105	0	173				0	456	435	326	1402	0
Grp Sat Flow(s),veh/h/ln	1753	0	1560				0	1749	1665	1753	1749	0
Q Serve(g_s), s	1.5	0.0	2.8				0.0	13.7	13.7	10.4	14.4	0.0
Cycle Q Clear(g_c), s	1.5	0.0	2.8				0.0	13.7	13.7	10.4	14.4	0.0
Prop In Lane	1.00		1.00				0.00		0.49	1.00		0.00
Lane Grp Cap(c), veh/h	600	0	534				0	571	544	376	2196	0
V/C Ratio(X)	0.17	0.00	0.32				0.00	0.80	0.80	0.87	0.64	0.00
Avail Cap(c_a), veh/h	607	0	540				0	739	704	425	2629	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	20.4	0.0	21.0				0.0	17.7	17.7	21.9	6.7	0.0
Incr Delay (d2), s/veh	0.1	0.0	0.3				0.0	4.3	4.5	14.3	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.0	1.0				0.0	5.1	4.9	5.1	2.9	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	20.5	0.0	21.2				0.0	22.0	22.2	36.2	7.0	0.0
LnGrp LOS	C	A	C				A	C	C	D	A	A
Approach Vol, veh/h		278						891			1728	
Approach Delay, s/veh		21.0						22.1			12.5	
Approach LOS		C						C			B	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	17.4	24.7		15.7		42.0
Change Period (Y+Rc), s	5.0	5.8		5.8		5.8
Max Green Setting (Gmax), s	14.0	24.4		10.0		43.4
Max Q Clear Time (g_c+I1), s	12.4	15.7		4.8		16.4
Green Ext Time (p_c), s	0.1	2.9		0.4		9.3

Intersection Summary	
HCM 6th Ctrl Delay	16.3
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	620	10	270	370	631	0	0	1612	200
Future Volume (veh/h)	0	0	0	620	10	270	370	631	0	0	1612	200
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		0.97
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1841	1841	1841	1841	1841	0	0	1841	1841
Adj Flow Rate, veh/h				691	0	75	389	664	0	0	1697	108
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				4	4	4	4	4	0	0	4	4
Cap, veh/h				1021	0	454	491	2915	0	0	2406	576
Arrive On Green				0.29	0.00	0.29	0.29	1.00	0.00	0.00	0.38	0.38
Sat Flow, veh/h				3506	0	1560	3401	5191	0	0	6590	1516
Grp Volume(v), veh/h				691	0	75	389	664	0	0	1697	108
Grp Sat Flow(s),veh/h/ln				1753	0	1560	1700	1675	0	0	1583	1516
Q Serve(g_s), s				15.7	0.0	3.2	9.5	0.0	0.0	0.0	20.4	4.3
Cycle Q Clear(g_c), s				15.7	0.0	3.2	9.5	0.0	0.0	0.0	20.4	4.3
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				1021	0	454	491	2915	0	0	2406	576
V/C Ratio(X)				0.68	0.00	0.17	0.79	0.23	0.00	0.00	0.71	0.19
Avail Cap(c_a), veh/h				1021	0	454	491	2915	0	0	2406	576
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.95	0.95	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				28.2	0.0	23.8	30.8	0.0	0.0	0.0	23.6	18.6
Incr Delay (d2), s/veh				3.6	0.0	0.8	11.8	0.2	0.0	0.0	1.8	0.7
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				6.9	0.0	3.3	4.0	0.0	0.0	0.0	7.2	1.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				31.8	0.0	24.5	42.5	0.2	0.0	0.0	25.4	19.3
LnGrp LOS				C	A	C	D	A	A	A	C	B
Approach Vol, veh/h					766			1053			1805	
Approach Delay, s/veh					31.1			15.8			25.0	
Approach LOS					C			B			C	

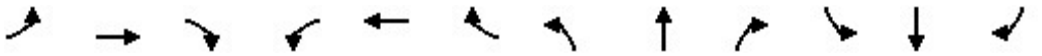
Timer - Assigned Phs	2	4	5	6
Phs Duration (G+Y+Rc), s	58.0	32.0	18.0	40.0
Change Period (Y+Rc), s	5.8	5.8	5.0	5.8
Max Green Setting (Gmax), s	52.2	26.2	13.0	34.2
Max Q Clear Time (g_c+I1), s	2.0	17.7	11.5	22.4
Green Ext Time (p_c), s	4.7	2.1	0.1	8.3

Intersection Summary	
HCM 6th Ctrl Delay	23.6
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

User approved volume balancing among the lanes for turning movement.



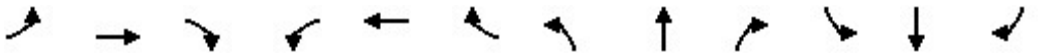
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	140	10	340	0	0	0	0	851	634	400	1842	0
Future Volume (veh/h)	140	10	340	0	0	0	0	851	634	400	1842	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		0.97	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841				0	1841	1841	1841	1841	0
Adj Flow Rate, veh/h	102	0	321				0	896	349	421	1939	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4				0	4	4	4	4	0
Cap, veh/h	355	0	631				0	2758	661	605	3361	0
Arrive On Green	0.20	0.00	0.20				0.00	0.44	0.44	0.06	0.22	0.00
Sat Flow, veh/h	1753	0	3120				0	6590	1517	3401	5191	0
Grp Volume(v), veh/h	102	0	321				0	896	349	421	1939	0
Grp Sat Flow(s),veh/h/ln	1753	0	1560				0	1583	1517	1700	1675	0
Q Serve(g_s), s	4.4	0.0	8.2				0.0	8.4	15.2	10.9	31.0	0.0
Cycle Q Clear(g_c), s	4.4	0.0	8.2				0.0	8.4	15.2	10.9	31.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	355	0	631				0	2758	661	605	3361	0
V/C Ratio(X)	0.29	0.00	0.51				0.00	0.32	0.53	0.70	0.58	0.00
Avail Cap(c_a), veh/h	355	0	631				0	2758	661	605	3361	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	0.33	0.33	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.63	0.63	0.00
Uniform Delay (d), s/veh	30.4	0.0	31.9				0.0	16.7	18.6	40.0	23.7	0.0
Incr Delay (d2), s/veh	2.0	0.0	2.9				0.0	0.3	3.0	4.2	0.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	0.0	3.3				0.0	2.8	5.3	5.1	13.7	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	32.4	0.0	34.8				0.0	17.0	21.6	44.1	24.2	0.0
LnGrp LOS	C	A	C				A	B	C	D	C	A
Approach Vol, veh/h		423						1245			2360	
Approach Delay, s/veh		34.3						18.3			27.7	
Approach LOS		C						B			C	

Timer - Assigned Phs	1	2				6		8				
Phs Duration (G+Y+Rc), s	21.0	45.0				66.0		24.0				
Change Period (Y+Rc), s	5.0	5.8				5.8		5.8				
Max Green Setting (Gmax), s	16.0	39.2				60.2		18.2				
Max Q Clear Time (g_c+I1), s	12.9	17.2				33.0		10.2				
Green Ext Time (p_c), s	0.3	7.3				16.5		1.0				

Intersection Summary			
HCM 6th Ctrl Delay			25.5
HCM 6th LOS			C

Notes

User approved volume balancing among the lanes for turning movement.



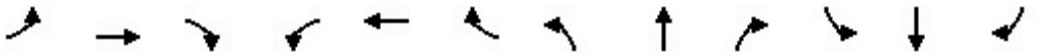
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	60	10	50	28	20	60	140	1375	38	100	1882	60
Future Volume (veh/h)	60	10	50	28	20	60	140	1375	38	100	1882	60
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.98		0.96	0.98		0.96	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	63	11	8	29	21	8	147	1447	39	105	1981	62
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	290	162	118	298	209	80	180	2570	69	133	2422	76
Arrive On Green	0.17	0.17	0.17	0.17	0.17	0.17	0.10	0.51	0.51	0.08	0.48	0.48
Sat Flow, veh/h	1336	974	708	1348	1255	478	1753	5026	135	1753	5000	156
Grp Volume(v), veh/h	63	0	19	29	0	29	147	965	521	105	1326	717
Grp Sat Flow(s),veh/h/ln	1336	0	1682	1348	0	1733	1753	1675	1811	1753	1675	1806
Q Serve(g_s), s	3.5	0.0	0.8	1.5	0.0	1.2	6.8	16.4	16.4	4.9	28.1	28.2
Cycle Q Clear(g_c), s	4.7	0.0	0.8	2.3	0.0	1.2	6.8	16.4	16.4	4.9	28.1	28.2
Prop In Lane	1.00		0.42	1.00		0.28	1.00		0.07	1.00		0.09
Lane Grp Cap(c), veh/h	290	0	280	298	0	288	180	1713	926	133	1623	875
V/C Ratio(X)	0.22	0.00	0.07	0.10	0.00	0.10	0.82	0.56	0.56	0.79	0.82	0.82
Avail Cap(c_a), veh/h	664	0	750	675	0	773	209	1713	926	211	1711	923
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.4	0.0	29.2	30.2	0.0	29.4	36.5	14.0	14.0	37.8	18.3	18.3
Incr Delay (d2), s/veh	0.3	0.0	0.1	0.1	0.0	0.1	16.8	0.5	0.9	3.9	3.2	5.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	0.0	0.3	0.5	0.0	0.5	3.6	5.2	5.7	2.1	9.9	11.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	31.7	0.0	29.3	30.3	0.0	29.5	53.3	14.4	14.8	41.7	21.5	24.2
LnGrp LOS	C	A	C	C	A	C	D	B	B	D	C	C
Approach Vol, veh/h		82			58			1633			2148	
Approach Delay, s/veh		31.1			29.9			18.1			23.4	
Approach LOS		C			C			B			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	12.8	49.0		21.3	15.1	46.8		21.3				
Change Period (Y+Rc), s	6.5	6.5		7.5	6.5	6.5		7.5				
Max Green Setting (Gmax), s	10.0	42.4		37.1	9.9	42.5		37.1				
Max Q Clear Time (g_c+I1), s	6.9	18.4		6.7	8.8	30.2		4.3				
Green Ext Time (p_c), s	0.0	12.0		0.2	0.0	10.1		0.2				

Intersection Summary			
HCM 6th Ctrl Delay		21.4	
HCM 6th LOS		C	

Notes

User approved pedestrian interval to be less than phase max green.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	100	998	650	129	916	214	421	1197	530	226	1658	270
Future Volume (veh/h)	100	998	650	129	916	214	421	1197	530	226	1658	270
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.97	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	105	1051	0	136	964	190	443	1260	520	238	1745	244
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	143	989		158	1019	575	441	1931	726	289	1706	644
Arrive On Green	0.08	0.28	0.00	0.09	0.29	0.29	0.13	0.38	0.38	0.08	0.34	0.34
Sat Flow, veh/h	1753	3497	1560	1753	3497	1520	3401	5025	1525	3401	5025	1523
Grp Volume(v), veh/h	105	1051	0	136	964	190	443	1260	520	238	1745	244
Grp Sat Flow(s),veh/h/ln	1753	1749	1560	1753	1749	1520	1700	1675	1525	1700	1675	1523
Q Serve(g_s), s	8.5	41.0	0.0	11.1	39.1	12.9	18.8	29.9	39.4	10.0	49.2	16.0
Cycle Q Clear(g_c), s	8.5	41.0	0.0	11.1	39.1	12.9	18.8	29.9	39.4	10.0	49.2	16.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	143	989		158	1019	575	441	1931	726	289	1706	644
V/C Ratio(X)	0.73	1.06		0.86	0.95	0.33	1.00	0.65	0.72	0.82	1.02	0.38
Avail Cap(c_a), veh/h	146	989		158	1019	575	441	1931	726	390	1706	644
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	65.0	52.0	0.0	65.1	50.3	32.2	63.1	36.7	30.4	65.3	47.9	28.9
Incr Delay (d2), s/veh	14.8	46.7	0.0	34.1	17.0	0.5	43.9	0.8	3.4	10.2	27.8	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.3	23.9	0.0	6.3	18.9	4.7	10.7	12.2	14.4	4.7	24.4	5.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	79.9	98.7	0.0	99.2	67.2	32.7	107.0	37.5	33.8	75.4	75.7	29.3
LnGrp LOS	E	F		F	E	C	F	D	C	E	F	C
Approach Vol, veh/h		1156	A		1290			2223			2227	
Approach Delay, s/veh		96.9			65.5			50.4			70.6	
Approach LOS		F			E			D			E	

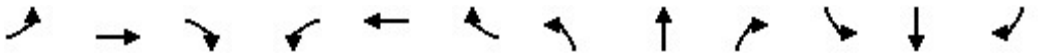
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.5	61.7	17.7	48.0	24.0	55.2	16.5	49.2
Change Period (Y+Rc), s	* 5.2	6.0	* 4.7	7.0	* 5.2	6.0	* 4.7	7.0
Max Green Setting (Gmax), s	* 17	51.4	* 13	41.0	* 19	49.2	* 12	42.0
Max Q Clear Time (g_c+I1), s	12.0	41.4	13.1	43.0	20.8	51.2	10.5	41.1
Green Ext Time (p_c), s	0.3	6.7	0.0	0.0	0.0	0.0	0.0	0.7

Intersection Summary	
HCM 6th Ctrl Delay	67.6
HCM 6th LOS	E

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



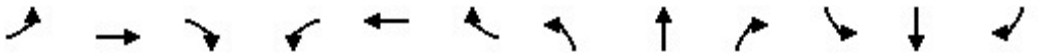
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	150	1344	100	229	928	89	20	450	109	129	520	240
Future Volume (veh/h)	150	1344	100	229	928	89	20	450	109	129	520	240
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	158	1415	41	241	977	38	21	474	24	136	547	216
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	182	1381	606	241	1499	658	42	672	293	141	605	238
Arrive On Green	0.10	0.39	0.39	0.14	0.43	0.43	0.02	0.19	0.19	0.08	0.25	0.25
Sat Flow, veh/h	1767	3526	1546	1767	3526	1547	1767	3526	1538	1767	2455	966
Grp Volume(v), veh/h	158	1415	41	241	977	38	21	474	24	136	392	371
Grp Sat Flow(s),veh/h/ln	1767	1763	1546	1767	1763	1547	1767	1763	1538	1767	1763	1659
Q Serve(g_s), s	12.3	54.5	2.3	19.0	30.7	2.0	1.6	17.5	1.8	10.7	30.0	30.2
Cycle Q Clear(g_c), s	12.3	54.5	2.3	19.0	30.7	2.0	1.6	17.5	1.8	10.7	30.0	30.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.58
Lane Grp Cap(c), veh/h	182	1381	606	241	1499	658	42	672	293	141	435	409
V/C Ratio(X)	0.87	1.02	0.07	1.00	0.65	0.06	0.50	0.70	0.08	0.96	0.90	0.91
Avail Cap(c_a), veh/h	278	1381	606	241	1499	658	76	821	358	141	475	447
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	61.5	42.3	26.4	60.1	31.8	23.6	67.1	52.6	46.3	63.8	50.8	50.9
Incr Delay (d2), s/veh	11.2	30.7	0.0	57.5	1.1	0.0	3.3	2.4	0.1	64.5	19.3	20.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.9	28.3	0.8	12.1	12.7	0.7	0.8	7.9	0.7	7.3	15.3	14.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	72.7	73.0	26.5	117.6	32.9	23.6	70.4	55.0	46.4	128.3	70.1	71.8
LnGrp LOS	E	F	C	F	C	C	E	D	D	F	E	E
Approach Vol, veh/h		1614			1256			519			899	
Approach Delay, s/veh		71.8			48.8			55.2			79.6	
Approach LOS		E			D			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.6	33.0	26.5	62.0	9.8	40.8	21.8	66.7
Change Period (Y+Rc), s	6.5	6.5	7.5	7.5	6.5	6.5	7.5	7.5
Max Green Setting (Gmax), s	11.1	32.4	19.0	54.5	6.0	37.5	21.9	51.6
Max Q Clear Time (g_c+I1), s	12.7	19.5	21.0	56.5	3.6	32.2	14.3	32.7
Green Ext Time (p_c), s	0.0	2.7	0.0	0.0	0.0	2.1	0.1	6.9

Intersection Summary	
HCM 6th Ctrl Delay	64.7
HCM 6th LOS	E

Notes

User approved pedestrian interval to be less than phase max green.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	1382	90	159	1055	29	60	20	179	59	60	40
Future Volume (veh/h)	30	1382	90	159	1055	29	60	20	179	59	60	40
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	0.99		0.98	0.99		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	32	1455	93	167	1111	31	63	21	81	62	63	18
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	64	1696	108	200	2035	57	232	52	200	207	218	62
Arrive On Green	0.04	0.50	0.50	0.11	0.58	0.58	0.16	0.16	0.16	0.16	0.16	0.16
Sat Flow, veh/h	1767	3359	214	1767	3500	98	1297	328	1264	1274	1379	394
Grp Volume(v), veh/h	32	760	788	167	559	583	63	0	102	62	0	81
Grp Sat Flow(s),veh/h/ln	1767	1763	1810	1767	1763	1835	1297	0	1591	1274	0	1773
Q Serve(g_s), s	1.6	34.4	34.9	8.5	17.8	17.8	4.1	0.0	5.3	4.2	0.0	3.7
Cycle Q Clear(g_c), s	1.6	34.4	34.9	8.5	17.8	17.8	7.8	0.0	5.3	9.5	0.0	3.7
Prop In Lane	1.00		0.12	1.00		0.05	1.00		0.79	1.00		0.22
Lane Grp Cap(c), veh/h	64	890	914	200	1025	1067	232	0	252	207	0	281
V/C Ratio(X)	0.50	0.85	0.86	0.84	0.55	0.55	0.27	0.00	0.41	0.30	0.00	0.29
Avail Cap(c_a), veh/h	116	991	1018	212	1088	1132	480	0	556	450	0	620
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	43.3	19.7	19.9	39.8	11.8	11.8	37.4	0.0	34.7	38.9	0.0	34.0
Incr Delay (d2), s/veh	5.8	7.0	7.3	23.3	0.6	0.6	0.6	0.0	1.0	0.8	0.0	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	13.2	13.8	4.7	5.6	5.8	1.3	0.0	2.1	1.4	0.0	1.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	49.1	26.8	27.2	63.1	12.3	12.3	38.1	0.0	35.7	39.7	0.0	34.6
LnGrp LOS	D	C	C	E	B	B	D	A	D	D	A	C
Approach Vol, veh/h		1580			1309			165			143	
Approach Delay, s/veh		27.4			18.8			36.6			36.8	
Approach LOS		C			B			D			D	

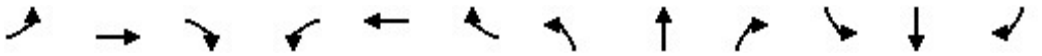
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.3	60.7		20.5	17.3	53.7		20.5				
Change Period (Y+Rc), s	7.0	7.5		6.0	7.0	7.5		6.0				
Max Green Setting (Gmax), s	6.0	56.5		32.0	11.0	51.5		32.0				
Max Q Clear Time (g_c+I1), s	3.6	19.8		11.5	10.5	36.9		9.8				
Green Ext Time (p_c), s	0.0	9.7		0.6	0.0	9.3		0.8				

Intersection Summary			
HCM 6th Ctrl Delay		24.8	
HCM 6th LOS		C	

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	180	1297	53	26	1009	311	44	242	24	379	661	160
Future Volume (veh/h)	180	1297	53	26	1009	311	44	242	24	379	661	160
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.98	1.00		0.97	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	189	1365	55	27	1062	204	46	255	21	399	696	154
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	237	1462	59	41	1331	584	63	333	27	420	867	192
Arrive On Green	0.07	0.42	0.42	0.02	0.38	0.38	0.04	0.10	0.10	0.24	0.30	0.30
Sat Flow, veh/h	3428	3452	139	1767	3526	1546	1767	3291	269	1767	2861	633
Grp Volume(v), veh/h	189	696	724	27	1062	204	46	136	140	399	429	421
Grp Sat Flow(s),veh/h/ln	1714	1763	1828	1767	1763	1546	1767	1763	1797	1767	1763	1731
Q Serve(g_s), s	7.6	52.6	52.9	2.1	37.5	13.2	3.6	10.5	10.7	31.1	31.3	31.3
Cycle Q Clear(g_c), s	7.6	52.6	52.9	2.1	37.5	13.2	3.6	10.5	10.7	31.1	31.3	31.3
Prop In Lane	1.00		0.08	1.00		1.00	1.00		0.15	1.00		0.37
Lane Grp Cap(c), veh/h	237	746	774	41	1331	584	63	179	182	420	534	525
V/C Ratio(X)	0.80	0.93	0.94	0.66	0.80	0.35	0.73	0.76	0.77	0.95	0.80	0.80
Avail Cap(c_a), veh/h	272	768	796	64	1384	607	87	252	257	430	594	583
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	64.1	38.4	38.5	67.7	38.8	31.2	66.7	61.2	61.2	52.5	44.9	44.9
Incr Delay (d2), s/veh	12.8	18.0	18.0	12.5	3.4	0.4	14.2	9.3	10.0	30.6	7.4	7.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.7	25.1	26.2	1.1	16.1	4.9	1.8	5.1	5.3	17.0	14.4	14.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	77.0	56.4	56.5	80.2	42.1	31.6	80.9	70.4	71.3	83.1	52.3	52.5
LnGrp LOS	E	E	E	F	D	C	F	E	E	F	D	D
Approach Vol, veh/h		1609			1293			322			1249	
Approach Delay, s/veh		58.8			41.3			72.3			62.2	
Approach LOS		E			D			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.2	60.3	12.5	49.9	10.7	66.7	40.7	21.7
Change Period (Y+Rc), s	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5
Max Green Setting (Gmax), s	11.1	54.9	6.9	47.1	5.1	60.9	34.0	20.0
Max Q Clear Time (g_c+I1), s	9.6	39.5	5.6	33.3	4.1	54.9	33.1	12.7
Green Ext Time (p_c), s	0.1	6.2	0.0	4.9	0.0	4.3	0.1	0.9

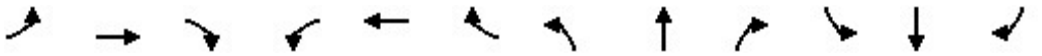
Intersection Summary	
HCM 6th Ctrl Delay	55.7
HCM 6th LOS	E



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	1420	140	110	1116	28	200	20	40	19	10	40
Future Volume (veh/h)	20	1420	140	110	1116	28	200	20	40	19	10	40
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.97	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	21	1495	142	116	1175	29	211	21	8	20	11	8
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	48	1687	159	144	2015	50	320	318	266	176	94	55
Arrive On Green	0.03	0.52	0.52	0.08	0.57	0.57	0.17	0.17	0.17	0.17	0.17	0.17
Sat Flow, veh/h	1767	3251	306	1767	3513	87	1382	1856	1550	690	546	319
Grp Volume(v), veh/h	21	805	832	116	589	615	211	21	8	39	0	0
Grp Sat Flow(s),veh/h/ln	1767	1763	1795	1767	1763	1837	1382	1856	1550	1555	0	0
Q Serve(g_s), s	1.1	38.1	39.2	6.1	20.2	20.2	11.8	0.9	0.4	0.0	0.0	0.0
Cycle Q Clear(g_c), s	1.1	38.1	39.2	6.1	20.2	20.2	13.5	0.9	0.4	1.7	0.0	0.0
Prop In Lane	1.00		0.17	1.00		0.05	1.00		1.00	0.51		0.21
Lane Grp Cap(c), veh/h	48	915	931	144	1011	1054	320	318	266	324	0	0
V/C Ratio(X)	0.44	0.88	0.89	0.80	0.58	0.58	0.66	0.07	0.03	0.12	0.00	0.00
Avail Cap(c_a), veh/h	112	1000	1018	150	1038	1081	553	630	526	580	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	45.2	20.1	20.3	42.6	12.9	12.9	37.8	32.7	32.5	33.1	0.0	0.0
Incr Delay (d2), s/veh	6.3	8.6	9.6	25.6	0.8	0.8	2.3	0.1	0.0	0.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	14.9	15.8	3.5	6.6	6.8	4.9	0.4	0.2	0.8	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	51.5	28.7	30.0	68.2	13.7	13.6	40.1	32.8	32.6	33.3	0.0	0.0
LnGrp LOS	D	C	C	E	B	B	D	C	C	C	A	A
Approach Vol, veh/h		1658			1320			240			39	
Approach Delay, s/veh		29.6			18.4			39.2			33.3	
Approach LOS		C			B			D			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.5	61.6		23.2	14.7	56.4		23.2				
Change Period (Y+Rc), s	7.0	7.5		7.0	7.0	7.5		7.0				
Max Green Setting (Gmax), s	6.0	55.5		32.0	8.0	53.5		32.0				
Max Q Clear Time (g_c+I1), s	3.1	22.2		15.5	8.1	41.2		3.7				
Green Ext Time (p_c), s	0.0	8.1		0.7	0.0	7.7		0.2				

Intersection Summary			
HCM 6th Ctrl Delay		25.8	
HCM 6th LOS		C	



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	1409	40	29	1164	49	60	20	49	39	20	20
Future Volume (veh/h)	20	1409	40	29	1164	49	60	20	49	39	20	20
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	1.00		0.96	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	21	1483	42	31	1225	51	63	21	6	41	21	2
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	50	1819	51	66	1824	76	100	86	24	80	84	8
Arrive On Green	0.03	0.52	0.52	0.04	0.53	0.53	0.06	0.06	0.06	0.05	0.05	0.05
Sat Flow, veh/h	1767	3498	99	1767	3445	143	1767	1374	393	1767	1662	158
Grp Volume(v), veh/h	21	746	779	31	626	650	63	0	27	41	0	23
Grp Sat Flow(s),veh/h/ln	1767	1763	1835	1767	1763	1825	1767	0	1767	1767	0	1820
Q Serve(g_s), s	0.9	27.8	28.0	1.4	20.5	20.6	2.8	0.0	1.2	1.8	0.0	1.0
Cycle Q Clear(g_c), s	0.9	27.8	28.0	1.4	20.5	20.6	2.8	0.0	1.2	1.8	0.0	1.0
Prop In Lane	1.00		0.05	1.00		0.08	1.00		0.22	1.00		0.09
Lane Grp Cap(c), veh/h	50	917	954	66	933	966	100	0	110	80	0	92
V/C Ratio(X)	0.42	0.81	0.82	0.47	0.67	0.67	0.63	0.00	0.25	0.52	0.00	0.25
Avail Cap(c_a), veh/h	134	1104	1148	134	1104	1143	134	0	715	134	0	737
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	37.8	15.8	15.8	37.3	13.6	13.6	36.5	0.0	35.3	36.9	0.0	36.1
Incr Delay (d2), s/veh	5.7	4.3	4.2	5.1	1.4	1.4	6.3	0.0	1.1	5.1	0.0	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	9.5	10.0	0.6	6.5	6.8	1.4	0.0	0.5	0.9	0.0	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	43.4	20.0	20.0	42.3	15.0	15.0	42.7	0.0	36.4	42.0	0.0	37.5
LnGrp LOS	D	C	C	D	B	B	D	A	D	D	A	D
Approach Vol, veh/h		1546			1307			90			64	
Approach Delay, s/veh		20.4			15.6			40.8			40.4	
Approach LOS		C			B			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.2	49.4	10.5	10.0	10.0	48.6	9.6	10.9
Change Period (Y+Rc), s	7.0	7.5	6.0	6.0	7.0	7.5	6.0	6.0
Max Green Setting (Gmax), s	6.0	49.5	6.0	32.0	6.0	49.5	6.0	32.0
Max Q Clear Time (g_c+I1), s	2.9	22.6	4.8	3.0	3.4	30.0	3.8	3.2
Green Ext Time (p_c), s	0.0	10.4	0.0	0.1	0.0	11.1	0.0	0.1

Intersection Summary	
HCM 6th Ctrl Delay	19.3
HCM 6th LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	260	1133	104	219	991	333	80	426	60	383	832	180
Future Volume (veh/h)	260	1133	104	219	991	333	80	426	60	383	832	180
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	274	1193	36	231	1043	310	84	448	11	403	876	178
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	279	1199	535	165	1081	840	278	555	248	411	696	141
Arrive On Green	0.08	0.34	0.34	0.05	0.31	0.31	0.16	0.16	0.16	0.23	0.23	0.23
Sat Flow, veh/h	3428	3526	1572	3428	3526	1544	1767	3526	1572	1767	2990	607
Grp Volume(v), veh/h	274	1193	36	231	1043	310	84	448	11	403	544	510
Grp Sat Flow(s),veh/h/ln	1714	1763	1572	1714	1763	1544	1767	1763	1572	1767	1856	1742
Q Serve(g_s), s	10.8	45.7	2.1	6.5	39.4	15.7	5.7	16.6	0.8	30.7	31.5	31.5
Cycle Q Clear(g_c), s	10.8	45.7	2.1	6.5	39.4	15.7	5.7	16.6	0.8	30.7	31.5	31.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.35
Lane Grp Cap(c), veh/h	279	1199	535	165	1081	840	278	555	248	411	432	405
V/C Ratio(X)	0.98	1.00	0.07	1.40	0.96	0.37	0.30	0.81	0.04	0.98	1.26	1.26
Avail Cap(c_a), veh/h	279	1199	535	165	1081	840	405	808	360	411	432	405
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	62.1	44.5	30.2	64.4	46.2	17.9	50.4	55.0	48.4	51.6	51.9	51.9
Incr Delay (d2), s/veh	49.0	24.8	0.1	213.5	19.4	0.3	0.7	4.4	0.1	38.9	133.9	135.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.4	22.9	0.8	7.6	19.3	8.6	2.5	7.5	0.3	17.6	30.3	28.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	111.1	69.4	30.2	277.9	65.5	18.3	51.2	59.4	48.5	90.5	185.8	187.0
LnGrp LOS	F	E	C	F	E	B	D	E	D	F	F	F
Approach Vol, veh/h		1503			1584			543			1457	
Approach Delay, s/veh		76.0			87.3			57.9			159.8	
Approach LOS		E			F			E			F	

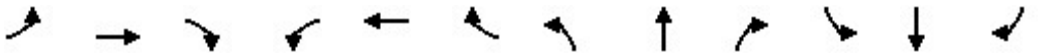
Timer - Assigned Phs	2	3	4	6	7	8
Phs Duration (G+Y+Rc), s	28.8	14.0	53.5	39.0	18.5	49.0
Change Period (Y+Rc), s	7.5	7.5	7.5	7.5	7.5	7.5
Max Green Setting (Gmax), s	31.0	6.5	46.0	31.5	11.0	41.5
Max Q Clear Time (g_c+I1), s	18.6	8.5	47.7	33.5	12.8	41.4
Green Ext Time (p_c), s	2.7	0.0	0.0	0.0	0.0	0.1

Intersection Summary	
HCM 6th Ctrl Delay	101.6
HCM 6th LOS	F

Notes

User approved pedestrian interval to be less than phase max green.

User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	1355	228	156	1282	20	228	0	159	20	0	20
Future Volume (veh/h)	20	1355	228	156	1282	20	228	0	159	20	0	20
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.97	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	21	1426	159	164	1349	21	240	0	60	21	0	5
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	48	1617	718	197	1928	30	359	0	317	306	0	317
Arrive On Green	0.03	0.46	0.46	0.11	0.54	0.54	0.20	0.00	0.20	0.20	0.00	0.20
Sat Flow, veh/h	1767	3526	1564	1767	3551	55	1400	0	1572	1332	0	1572
Grp Volume(v), veh/h	21	1426	159	164	669	701	240	0	60	21	0	5
Grp Sat Flow(s),veh/h/ln	1767	1763	1564	1767	1763	1844	1400	0	1572	1332	0	1572
Q Serve(g_s), s	1.0	33.0	5.5	8.2	25.1	25.1	14.9	0.0	2.8	1.2	0.0	0.2
Cycle Q Clear(g_c), s	1.0	33.0	5.5	8.2	25.1	25.1	15.1	0.0	2.8	4.0	0.0	0.2
Prop In Lane	1.00		1.00	1.00		0.03	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	48	1617	718	197	957	1001	359	0	317	306	0	317
V/C Ratio(X)	0.44	0.88	0.22	0.83	0.70	0.70	0.67	0.00	0.19	0.07	0.00	0.02
Avail Cap(c_a), veh/h	118	1709	758	197	957	1001	638	0	631	572	0	631
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	43.0	22.1	14.6	39.1	15.1	15.1	34.8	0.0	29.7	31.4	0.0	28.7
Incr Delay (d2), s/veh	6.1	5.7	0.2	25.3	2.4	2.3	2.2	0.0	0.3	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	12.6	1.7	4.7	8.6	9.0	5.2	0.0	1.1	0.4	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	49.1	27.7	14.8	64.4	17.5	17.4	36.9	0.0	30.0	31.5	0.0	28.7
LnGrp LOS	D	C	B	E	B	B	D	A	C	C	A	C
Approach Vol, veh/h		1606			1534			300			26	
Approach Delay, s/veh		26.7			22.5			35.5			31.0	
Approach LOS		C			C			D			C	

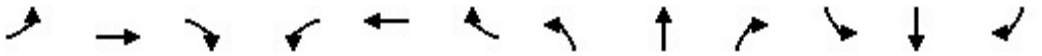
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.4	56.2		24.1	17.0	48.7		24.1				
Change Period (Y+Rc), s	7.0	7.5		6.0	7.0	7.5		6.0				
Max Green Setting (Gmax), s	6.0	47.5		36.0	10.0	43.5		36.0				
Max Q Clear Time (g_c+I1), s	3.0	27.1		6.0	10.2	35.0		17.1				
Green Ext Time (p_c), s	0.0	10.0		0.1	0.0	6.2		1.0				

Intersection Summary			
HCM 6th Ctrl Delay		25.6	
HCM 6th LOS		C	

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1373	172	218	1318	140	217
Future Volume (veh/h)	1373	172	218	1318	140	217
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		0.97	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	1445	122	229	1387	147	36
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	1758	764	268	2589	193	172
Arrive On Green	0.50	0.50	0.15	0.73	0.11	0.11
Sat Flow, veh/h	3618	1531	1767	3618	1767	1572
Grp Volume(v), veh/h	1445	122	229	1387	147	36
Grp Sat Flow(s),veh/h/ln	1763	1531	1767	1763	1767	1572
Q Serve(g_s), s	28.9	3.6	10.5	14.3	6.7	1.7
Cycle Q Clear(g_c), s	28.9	3.6	10.5	14.3	6.7	1.7
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1758	764	268	2589	193	172
V/C Ratio(X)	0.82	0.16	0.86	0.54	0.76	0.21
Avail Cap(c_a), veh/h	2036	884	319	2970	680	606
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.7	11.3	34.4	4.8	36.0	33.8
Incr Delay (d2), s/veh	2.6	0.1	17.5	0.2	6.1	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.9	1.0	5.4	2.5	3.1	0.7
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	20.3	11.5	51.9	5.0	42.1	34.4
LnGrp LOS	C	B	D	A	D	C
Approach Vol, veh/h	1567			1616	183	
Approach Delay, s/veh	19.6			11.7	40.6	
Approach LOS	B			B	D	

Timer - Assigned Phs		2			5	6	8
Phs Duration (G+Y+Rc), s		68.5			19.6	48.9	14.6
Change Period (Y+Rc), s		7.5			7.0	7.5	5.5
Max Green Setting (Gmax), s		70.0			15.0	48.0	32.0
Max Q Clear Time (g_c+I1), s		16.3			12.5	30.9	8.7
Green Ext Time (p_c), s		16.0			0.2	10.5	0.5

Intersection Summary	
HCM 6th Ctrl Delay	16.9
HCM 6th LOS	B



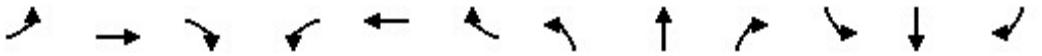
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	79	1472	39	80	1428	20	29	10	80	20	10	89
Future Volume (veh/h)	79	1472	39	80	1428	20	29	10	80	20	10	89
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	0.99		0.97	0.99		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	83	1549	41	84	1503	21	31	11	10	21	11	13
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	149	1811	48	149	1839	26	177	61	35	143	72	54
Arrive On Green	0.08	0.52	0.52	0.08	0.52	0.52	0.12	0.12	0.12	0.12	0.12	0.12
Sat Flow, veh/h	1767	3506	93	1767	3558	50	734	506	295	514	605	455
Grp Volume(v), veh/h	83	777	813	84	744	780	52	0	0	45	0	0
Grp Sat Flow(s),veh/h/ln	1767	1763	1836	1767	1763	1845	1535	0	0	1574	0	0
Q Serve(g_s), s	2.9	24.6	24.7	2.9	22.7	22.8	0.2	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	2.9	24.6	24.7	2.9	22.7	22.8	1.7	0.0	0.0	1.5	0.0	0.0
Prop In Lane	1.00		0.05	1.00		0.03	0.60		0.19	0.47		0.29
Lane Grp Cap(c), veh/h	149	910	948	149	911	954	273	0	0	270	0	0
V/C Ratio(X)	0.56	0.85	0.86	0.56	0.82	0.82	0.19	0.00	0.00	0.17	0.00	0.00
Avail Cap(c_a), veh/h	192	1012	1055	192	1012	1060	738	0	0	746	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	28.4	13.5	13.5	28.3	13.0	13.0	25.7	0.0	0.0	25.6	0.0	0.0
Incr Delay (d2), s/veh	3.3	6.7	6.6	3.3	4.8	4.7	0.2	0.0	0.0	0.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	8.1	8.5	1.2	7.5	7.8	0.7	0.0	0.0	0.6	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	31.6	20.1	20.1	31.6	17.9	17.7	26.0	0.0	0.0	25.8	0.0	0.0
LnGrp LOS	C	C	C	C	B	B	C	A	A	C	A	A
Approach Vol, veh/h		1673			1608			52			45	
Approach Delay, s/veh		20.7			18.5			26.0			25.8	
Approach LOS		C			B			C			C	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		13.7	10.4	40.3		13.7	10.4	40.3				
Change Period (Y+Rc), s		6.0	5.0	7.0		6.0	5.0	7.0				
Max Green Setting (Gmax), s		28.0	7.0	37.0		28.0	7.0	37.0				
Max Q Clear Time (g_c+I1), s		3.7	4.9	26.7		3.5	4.9	24.8				
Green Ext Time (p_c), s		0.2	0.0	6.5		0.1	0.0	7.2				

Intersection Summary		
HCM 6th Ctrl Delay		19.8
HCM 6th LOS		B

Notes

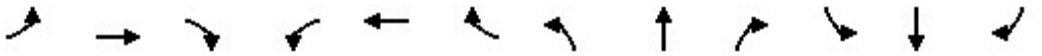
User approved pedestrian interval to be less than phase max green.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	499	917	316	150	884	150	226	893	21	170	1252	489
Future Volume (veh/h)	499	917	316	150	884	150	226	893	21	170	1252	489
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.97	1.00		0.97	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	525	965	170	158	931	147	238	940	21	179	1318	456
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	351	1234	538	185	778	123	161	1467	33	207	1161	399
Arrive On Green	0.20	0.35	0.35	0.11	0.26	0.26	0.09	0.29	0.29	0.12	0.32	0.32
Sat Flow, veh/h	1753	3497	1526	1753	3012	475	1753	5054	113	1753	3666	1261
Grp Volume(v), veh/h	525	965	170	158	540	538	238	623	338	179	1204	570
Grp Sat Flow(s),veh/h/ln	1753	1749	1526	1753	1749	1739	1753	1675	1817	1753	1675	1576
Q Serve(g_s), s	24.0	29.6	9.7	10.6	31.0	31.0	11.0	19.4	19.5	12.0	38.0	38.0
Cycle Q Clear(g_c), s	24.0	29.6	9.7	10.6	31.0	31.0	11.0	19.4	19.5	12.0	38.0	38.0
Prop In Lane	1.00		1.00	1.00		0.27	1.00		0.06	1.00		0.80
Lane Grp Cap(c), veh/h	351	1234	538	185	452	449	161	972	527	207	1061	499
V/C Ratio(X)	1.50	0.78	0.32	0.85	1.20	1.20	1.48	0.64	0.64	0.86	1.13	1.14
Avail Cap(c_a), veh/h	351	1234	538	205	452	449	161	972	527	234	1061	499
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	48.0	34.7	28.3	52.7	44.5	44.5	54.5	37.1	37.1	52.0	41.0	41.0
Incr Delay (d2), s/veh	238.3	3.9	0.7	29.5	108.1	108.4	246.7	2.0	3.7	28.3	72.6	85.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	33.2	12.5	3.5	6.0	26.3	26.2	15.7	7.9	8.8	6.7	25.4	25.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	286.3	38.6	29.0	82.3	152.6	152.9	301.2	39.1	40.8	80.2	113.6	126.7
LnGrp LOS	F	D	C	F	F	F	F	D	D	F	F	F
Approach Vol, veh/h		1660			1236			1199			1953	
Approach Delay, s/veh		116.0			143.7			91.6			114.4	
Approach LOS		F			F			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.2	38.8	16.7	46.3	15.0	42.0	28.0	35.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	16.0	33.0	14.0	41.0	11.0	38.0	24.0	31.0
Max Q Clear Time (g_c+I1), s	14.0	21.5	12.6	31.6	13.0	40.0	26.0	33.0
Green Ext Time (p_c), s	0.2	6.8	0.1	5.7	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	116.3
HCM 6th LOS	F



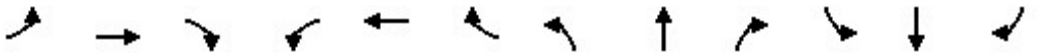
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	352	717	69	220	550	140	39	570	190	260	710	585
Future Volume (veh/h)	352	717	69	220	550	140	39	570	190	260	710	585
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	371	755	67	232	579	32	41	600	173	274	747	492
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	400	831	74	277	770	336	80	850	245	333	747	488
Arrive On Green	0.12	0.25	0.25	0.08	0.22	0.22	0.05	0.32	0.32	0.10	0.37	0.37
Sat Flow, veh/h	3428	3269	290	3428	3526	1540	1767	2689	773	3428	2029	1324
Grp Volume(v), veh/h	371	407	415	232	579	32	41	393	380	274	648	591
Grp Sat Flow(s),veh/h/ln	1714	1763	1797	1714	1763	1540	1767	1763	1700	1714	1763	1590
Q Serve(g_s), s	11.9	24.9	24.9	7.4	17.1	1.8	2.5	21.8	21.9	8.7	40.9	41.0
Cycle Q Clear(g_c), s	11.9	24.9	24.9	7.4	17.1	1.8	2.5	21.8	21.9	8.7	40.9	41.0
Prop In Lane	1.00		0.16	1.00		1.00	1.00		0.46	1.00		0.83
Lane Grp Cap(c), veh/h	400	448	457	277	770	336	80	557	537	333	649	586
V/C Ratio(X)	0.93	0.91	0.91	0.84	0.75	0.10	0.51	0.70	0.71	0.82	1.00	1.01
Avail Cap(c_a), veh/h	400	475	484	277	823	360	111	570	550	370	649	586
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	48.7	40.3	40.3	50.4	40.7	34.7	52.0	33.5	33.5	49.3	35.1	35.2
Incr Delay (d2), s/veh	27.0	20.6	20.4	18.6	3.7	0.1	3.8	3.6	3.8	12.2	34.9	39.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.4	12.8	13.0	3.8	7.5	0.7	1.2	9.4	9.2	4.2	22.7	21.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	75.7	60.8	60.6	69.1	44.4	34.9	55.7	37.1	37.3	61.5	70.0	74.6
LnGrp LOS	E	E	E	E	D	C	E	D	D	E	E	F
Approach Vol, veh/h		1193			843			814			1513	
Approach Delay, s/veh		65.4			50.8			38.1			70.3	
Approach LOS		E			D			D			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.8	42.2	16.0	35.3	12.0	48.0	20.0	31.3
Change Period (Y+Rc), s	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Max Green Setting (Gmax), s	12.0	36.0	9.0	30.0	7.0	41.0	13.0	26.0
Max Q Clear Time (g_c+I1), s	10.7	23.9	9.4	26.9	4.5	43.0	13.9	19.1
Green Ext Time (p_c), s	0.1	2.9	0.0	1.4	0.0	0.0	0.0	1.9

Intersection Summary	
HCM 6th Ctrl Delay	59.2
HCM 6th LOS	E

Notes

User approved pedestrian interval to be less than phase max green.



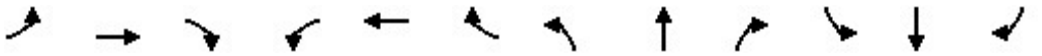
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	230	773	150	86	573	138	220	1680	285	168	1968	140
Future Volume (veh/h)	230	773	150	86	573	138	220	1680	285	168	1968	140
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	242	814	144	91	603	126	232	1768	172	177	2072	47
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	243	916	162	114	703	147	305	1901	460	191	2020	495
Arrive On Green	0.14	0.31	0.31	0.07	0.25	0.25	0.09	0.30	0.30	0.11	0.32	0.32
Sat Flow, veh/h	1753	2960	524	1753	2869	598	3401	6332	1531	1753	6332	1553
Grp Volume(v), veh/h	242	481	477	91	367	362	232	1768	172	177	2072	47
Grp Sat Flow(s),veh/h/ln	1753	1749	1735	1753	1749	1719	1700	1583	1531	1753	1583	1553
Q Serve(g_s), s	15.4	29.1	29.1	5.7	22.3	22.4	7.4	30.2	9.9	11.1	35.5	2.4
Cycle Q Clear(g_c), s	15.4	29.1	29.1	5.7	22.3	22.4	7.4	30.2	9.9	11.1	35.5	2.4
Prop In Lane	1.00		0.30	1.00		0.35	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	243	541	537	114	429	421	305	1901	460	191	2020	495
V/C Ratio(X)	1.00	0.89	0.89	0.80	0.86	0.86	0.76	0.93	0.37	0.93	1.03	0.09
Avail Cap(c_a), veh/h	243	599	594	115	487	479	306	1901	460	191	2020	495
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.9	36.6	36.6	51.3	40.1	40.2	49.5	37.8	30.7	49.1	37.9	26.6
Incr Delay (d2), s/veh	56.9	14.3	14.4	29.2	12.8	13.4	9.5	8.8	0.5	44.6	26.8	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.4	14.1	14.0	3.3	10.6	10.5	3.4	12.1	3.5	7.0	16.6	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	104.8	50.9	51.0	80.4	52.9	53.5	59.0	46.6	31.2	93.7	64.7	26.7
LnGrp LOS	F	D	D	F	D	D	E	D	C	F	F	C
Approach Vol, veh/h		1200			820			2172			2296	
Approach Delay, s/veh		61.8			56.2			46.7			66.1	
Approach LOS		E			E			D			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.8	39.9	12.9	41.6	14.7	42.0	20.1	34.5
Change Period (Y+Rc), s	* 4.7	6.5	* 5.7	7.2	* 4.7	6.5	* 4.7	7.2
Max Green Setting (Gmax), s	* 12	33.4	* 7.3	38.1	* 10	35.5	* 15	31.0
Max Q Clear Time (g_c+I1), s	13.1	32.2	7.7	31.1	9.4	37.5	17.4	24.4
Green Ext Time (p_c), s	0.0	1.1	0.0	3.2	0.0	0.0	0.0	2.2

Intersection Summary	
HCM 6th Ctrl Delay	57.6
HCM 6th LOS	E

Notes

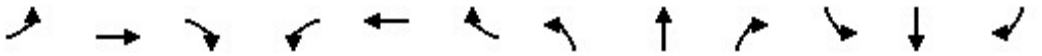
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	60	846	70	201	607	76	80	234	133	104	426	140
Future Volume (veh/h)	60	846	70	201	607	76	80	234	133	104	426	140
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	63	891	70	212	639	73	84	246	57	109	448	113
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	94	1058	83	119	1063	121	107	626	142	119	631	158
Arrive On Green	0.05	0.32	0.32	0.07	0.33	0.33	0.06	0.22	0.22	0.07	0.23	0.23
Sat Flow, veh/h	1767	3306	260	1767	3182	363	1767	2842	645	1767	2781	695
Grp Volume(v), veh/h	63	475	486	212	354	358	84	151	152	109	283	278
Grp Sat Flow(s),veh/h/ln	1767	1763	1803	1767	1763	1782	1767	1763	1723	1767	1763	1713
Q Serve(g_s), s	3.1	22.4	22.4	6.0	14.9	15.0	4.2	6.5	6.7	5.5	13.2	13.4
Cycle Q Clear(g_c), s	3.1	22.4	22.4	6.0	14.9	15.0	4.2	6.5	6.7	5.5	13.2	13.4
Prop In Lane	1.00		0.14	1.00		0.20	1.00		0.37	1.00		0.41
Lane Grp Cap(c), veh/h	94	564	577	119	589	596	107	388	380	119	400	389
V/C Ratio(X)	0.67	0.84	0.84	1.78	0.60	0.60	0.78	0.39	0.40	0.92	0.71	0.72
Avail Cap(c_a), veh/h	119	632	647	119	632	639	119	632	618	119	632	615
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.5	28.2	28.2	41.6	24.7	24.7	41.3	29.6	29.7	41.4	31.7	31.8
Incr Delay (d2), s/veh	9.6	9.5	9.3	384.2	1.6	1.6	25.9	0.8	0.8	57.4	2.8	3.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	10.0	10.2	15.1	5.9	6.0	2.5	2.6	2.7	4.1	5.5	5.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	51.1	37.7	37.5	425.8	26.3	26.3	67.3	30.4	30.6	98.7	34.5	34.8
LnGrp LOS	D	D	D	F	C	C	E	C	C	F	C	C
Approach Vol, veh/h		1024			924			387			670	
Approach Delay, s/veh		38.4			118.0			38.5			45.1	
Approach LOS		D			F			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.7	37.3	12.4	27.7	13.0	36.0	13.0	27.1
Change Period (Y+Rc), s	7.0	7.5	7.0	7.5	7.0	7.5	7.0	7.5
Max Green Setting (Gmax), s	6.0	32.0	6.0	32.0	6.0	32.0	6.0	32.0
Max Q Clear Time (g_c+I1), s	5.1	17.0	6.2	15.4	8.0	24.4	7.5	8.7
Green Ext Time (p_c), s	0.0	4.1	0.0	3.3	0.0	3.7	0.0	1.8

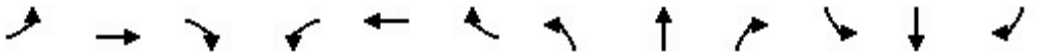
Intersection Summary	
HCM 6th Ctrl Delay	64.4
HCM 6th LOS	E



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	50	903	140	93	764	20	20	180	135	40	130	100
Future Volume (veh/h)	50	903	140	93	764	20	20	180	135	40	130	100
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.97	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	53	951	138	98	804	20	21	189	23	42	137	20
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	94	1147	166	125	1369	34	50	414	50	82	460	66
Arrive On Green	0.05	0.37	0.37	0.07	0.39	0.39	0.03	0.13	0.13	0.05	0.15	0.15
Sat Flow, veh/h	1767	3082	447	1767	3513	87	1767	3159	379	1767	3084	441
Grp Volume(v), veh/h	53	544	545	98	403	421	21	104	108	42	77	80
Grp Sat Flow(s),veh/h/ln	1767	1763	1766	1767	1763	1838	1767	1763	1775	1767	1763	1763
Q Serve(g_s), s	2.2	21.4	21.4	4.2	13.8	13.8	0.9	4.2	4.3	1.8	3.0	3.1
Cycle Q Clear(g_c), s	2.2	21.4	21.4	4.2	13.8	13.8	0.9	4.2	4.3	1.8	3.0	3.1
Prop In Lane	1.00		0.25	1.00		0.05	1.00		0.21	1.00		0.25
Lane Grp Cap(c), veh/h	94	656	657	125	687	716	50	231	233	82	263	263
V/C Ratio(X)	0.57	0.83	0.83	0.78	0.59	0.59	0.42	0.45	0.46	0.51	0.29	0.30
Avail Cap(c_a), veh/h	139	739	740	139	739	770	139	739	744	139	739	739
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.3	21.8	21.8	34.9	18.4	18.4	36.5	30.6	30.7	35.6	28.9	28.9
Incr Delay (d2), s/veh	5.3	7.4	7.4	22.9	1.2	1.2	5.5	1.7	1.7	4.9	0.7	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	8.8	8.9	2.4	5.0	5.2	0.4	1.7	1.8	0.8	1.2	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	40.6	29.2	29.2	57.8	19.7	19.6	42.0	32.3	32.4	40.5	29.6	29.7
LnGrp LOS	D	C	C	E	B	B	D	C	C	D	C	C
Approach Vol, veh/h		1142			922			233			199	
Approach Delay, s/veh		29.7			23.7			33.2			32.0	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.1	37.3	9.2	18.9	12.4	35.9	10.5	17.5
Change Period (Y+Rc), s	7.0	7.5	7.0	7.5	7.0	7.5	7.0	7.5
Max Green Setting (Gmax), s	6.0	32.0	6.0	32.0	6.0	32.0	6.0	32.0
Max Q Clear Time (g_c+I1), s	4.2	15.8	2.9	5.1	6.2	23.4	3.8	6.3
Green Ext Time (p_c), s	0.0	4.9	0.0	0.9	0.0	4.6	0.0	1.2

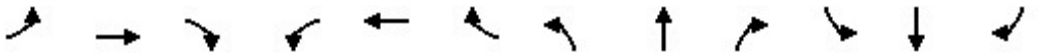
Intersection Summary	
HCM 6th Ctrl Delay	28.0
HCM 6th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	135	853	60	82	588	143	20	251	30	194	724	220
Future Volume (veh/h)	135	853	60	82	588	143	20	251	30	194	724	220
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	142	898	59	86	619	132	21	264	18	204	762	184
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	115	1129	74	110	964	205	48	973	65	153	1063	254
Arrive On Green	0.06	0.34	0.34	0.06	0.33	0.33	0.03	0.20	0.20	0.09	0.26	0.26
Sat Flow, veh/h	1767	3354	220	1767	2889	615	1767	4844	325	1767	4081	976
Grp Volume(v), veh/h	142	472	485	86	377	374	21	183	99	204	629	317
Grp Sat Flow(s),veh/h/ln	1767	1763	1811	1767	1763	1742	1767	1689	1791	1767	1689	1680
Q Serve(g_s), s	6.0	22.4	22.4	4.4	16.8	16.8	1.1	4.2	4.3	8.0	15.6	15.9
Cycle Q Clear(g_c), s	6.0	22.4	22.4	4.4	16.8	16.8	1.1	4.2	4.3	8.0	15.6	15.9
Prop In Lane	1.00		0.12	1.00		0.35	1.00		0.18	1.00		0.58
Lane Grp Cap(c), veh/h	115	594	610	110	588	581	48	678	360	153	879	437
V/C Ratio(X)	1.24	0.80	0.80	0.79	0.64	0.64	0.44	0.27	0.28	1.33	0.72	0.72
Avail Cap(c_a), veh/h	115	744	765	115	744	735	115	1206	640	153	1279	636
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.2	27.8	27.8	42.7	26.1	26.1	44.3	31.2	31.2	42.2	31.1	31.1
Incr Delay (d2), s/veh	161.0	5.1	5.0	28.2	1.5	1.5	6.2	0.3	0.5	187.6	1.3	2.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.6	9.4	9.6	2.7	6.6	6.6	0.5	1.6	1.8	11.3	6.0	6.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	204.2	32.9	32.8	71.0	27.6	27.6	50.5	31.4	31.7	229.8	32.4	33.9
LnGrp LOS	F	C	C	E	C	C	D	C	C	F	C	C
Approach Vol, veh/h		1099			837			303			1150	
Approach Delay, s/veh		55.0			32.0			32.9			67.8	
Approach LOS		D			C			C			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.0	26.1	12.7	38.6	9.5	31.6	13.0	38.3
Change Period (Y+Rc), s	7.0	7.5	7.0	7.5	7.0	7.5	7.0	7.5
Max Green Setting (Gmax), s	8.0	33.0	6.0	39.0	6.0	35.0	6.0	39.0
Max Q Clear Time (g_c+I1), s	10.0	6.3	6.4	24.4	3.1	17.9	8.0	18.8
Green Ext Time (p_c), s	0.0	1.8	0.0	5.6	0.0	6.2	0.0	4.9

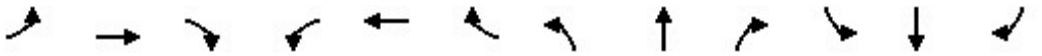
Intersection Summary	
HCM 6th Ctrl Delay	51.7
HCM 6th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	129	1027	21	110	841	252	41	28	100	250	27	141
Future Volume (veh/h)	129	1027	21	110	841	252	41	28	100	250	27	141
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	1.00		0.97	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	136	1081	22	116	885	129	43	29	13	263	28	39
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	167	1285	26	145	1239	543	77	182	150	299	155	216
Arrive On Green	0.09	0.36	0.36	0.08	0.35	0.35	0.04	0.10	0.10	0.17	0.22	0.22
Sat Flow, veh/h	1767	3531	72	1767	3526	1545	1767	1856	1523	1767	693	965
Grp Volume(v), veh/h	136	540	563	116	885	129	43	29	13	263	0	67
Grp Sat Flow(s),veh/h/ln	1767	1763	1840	1767	1763	1545	1767	1856	1523	1767	0	1658
Q Serve(g_s), s	7.0	25.9	25.9	6.0	20.1	5.5	2.2	1.3	0.7	13.4	0.0	3.0
Cycle Q Clear(g_c), s	7.0	25.9	25.9	6.0	20.1	5.5	2.2	1.3	0.7	13.4	0.0	3.0
Prop In Lane	1.00		0.04	1.00		1.00	1.00		1.00	1.00		0.58
Lane Grp Cap(c), veh/h	167	641	669	145	1239	543	77	182	150	299	0	371
V/C Ratio(X)	0.81	0.84	0.84	0.80	0.71	0.24	0.56	0.16	0.09	0.88	0.00	0.18
Avail Cap(c_a), veh/h	191	754	787	172	1470	644	134	643	528	344	0	772
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	41.0	26.9	26.9	41.6	25.9	21.2	43.3	38.1	37.9	37.5	0.0	29.0
Incr Delay (d2), s/veh	20.7	7.8	7.5	19.9	1.5	0.3	6.3	0.4	0.2	20.4	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.8	11.1	11.6	3.3	7.9	1.9	1.1	0.6	0.3	7.3	0.0	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	61.7	34.7	34.4	61.6	27.4	21.5	49.6	38.5	38.1	57.8	0.0	29.2
LnGrp LOS	E	C	C	E	C	C	D	D	D	E	A	C
Approach Vol, veh/h		1239			1130			85			330	
Approach Delay, s/veh		37.6			30.3			44.1			52.0	
Approach LOS		D			C			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.7	39.9	10.0	26.7	14.6	41.1	21.6	15.1
Change Period (Y+Rc), s	7.0	7.5	6.0	6.0	7.0	7.5	6.0	6.0
Max Green Setting (Gmax), s	10.0	38.5	7.0	43.0	9.0	39.5	18.0	32.0
Max Q Clear Time (g_c+I1), s	9.0	22.1	4.2	5.0	8.0	27.9	15.4	3.3
Green Ext Time (p_c), s	0.0	6.4	0.0	0.4	0.0	5.7	0.2	0.1

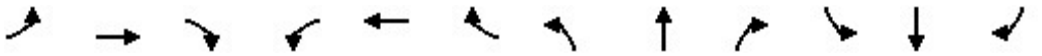
Intersection Summary	
HCM 6th Ctrl Delay	36.5
HCM 6th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	174	579	438	100	479	106	405	860	140	85	1481	152
Future Volume (veh/h)	174	579	438	100	479	106	405	860	140	85	1481	152
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.99	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	183	609	366	105	504	99	426	905	132	89	1559	152
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	205	568	341	115	643	126	345	1797	261	110	1266	123
Arrive On Green	0.12	0.27	0.27	0.07	0.22	0.22	0.20	0.41	0.41	0.06	0.27	0.27
Sat Flow, veh/h	1753	2083	1252	1753	2909	568	1753	4421	642	1753	4649	453
Grp Volume(v), veh/h	183	511	464	105	302	301	426	685	352	89	1123	588
Grp Sat Flow(s),veh/h/ln	1753	1749	1587	1753	1749	1729	1753	1675	1712	1753	1675	1752
Q Serve(g_s), s	14.9	39.5	39.5	8.6	23.6	23.8	28.5	22.1	22.3	7.3	39.5	39.5
Cycle Q Clear(g_c), s	14.9	39.5	39.5	8.6	23.6	23.8	28.5	22.1	22.3	7.3	39.5	39.5
Prop In Lane	1.00		0.79	1.00		0.33	1.00		0.37	1.00		0.26
Lane Grp Cap(c), veh/h	205	476	432	115	386	382	345	1362	696	110	913	477
V/C Ratio(X)	0.89	1.07	1.07	0.91	0.78	0.79	1.24	0.50	0.51	0.81	1.23	1.23
Avail Cap(c_a), veh/h	226	476	432	115	386	382	345	1362	696	204	913	477
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	63.1	52.8	52.8	67.3	53.2	53.3	58.3	32.1	32.1	67.1	52.8	52.8
Incr Delay (d2), s/veh	29.4	62.2	64.2	56.9	10.5	11.1	128.9	0.4	0.8	5.4	113.3	121.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.3	25.2	23.1	5.6	11.3	11.4	24.6	8.7	9.1	3.3	30.4	32.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	92.6	115.0	117.0	124.2	63.7	64.4	187.1	32.5	33.0	72.5	166.1	174.4
LnGrp LOS	F	F	F	F	E	E	F	C	C	E	F	F
Approach Vol, veh/h		1158			708			1463			1800	
Approach Delay, s/veh		112.2			72.9			77.7			164.2	
Approach LOS		F			E			E			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.6	66.4	16.0	46.0	36.0	47.0	23.5	38.5
Change Period (Y+Rc), s	7.5	7.5	6.5	6.5	7.5	7.5	6.5	6.5
Max Green Setting (Gmax), s	16.9	51.1	9.5	39.5	28.5	39.5	18.7	30.3
Max Q Clear Time (g_c+I1), s	9.3	24.3	10.6	41.5	30.5	41.5	16.9	25.8
Green Ext Time (p_c), s	0.0	9.7	0.0	0.0	0.0	0.0	0.0	1.8

Intersection Summary	
HCM 6th Ctrl Delay	115.2
HCM 6th LOS	F



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	155	1340	180	168	869	440	180	1390	187	540	1352	113
Future Volume (veh/h)	155	1340	180	168	869	440	180	1390	187	540	1352	113
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	163	1411	84	177	915	425	189	1463	69	568	1423	37
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	288	1646	502	289	1647	758	289	1434	346	559	1937	468
Arrive On Green	0.08	0.33	0.33	0.08	0.33	0.33	0.08	0.23	0.23	0.16	0.31	0.31
Sat Flow, veh/h	3401	5025	1532	3401	5025	1532	3401	6332	1528	3401	6332	1531
Grp Volume(v), veh/h	163	1411	84	177	915	425	189	1463	69	568	1423	37
Grp Sat Flow(s),veh/h/ln	1700	1675	1532	1700	1675	1532	1700	1583	1528	1700	1583	1531
Q Serve(g_s), s	5.4	30.8	4.6	5.9	17.6	22.9	6.3	26.6	4.3	19.3	23.6	2.0
Cycle Q Clear(g_c), s	5.4	30.8	4.6	5.9	17.6	22.9	6.3	26.6	4.3	19.3	23.6	2.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	288	1646	502	289	1647	758	289	1434	346	559	1937	468
V/C Ratio(X)	0.57	0.86	0.17	0.61	0.56	0.56	0.65	1.02	0.20	1.02	0.73	0.08
Avail Cap(c_a), veh/h	290	1754	535	290	1754	791	290	1434	346	559	1937	468
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	51.7	36.9	28.1	51.9	32.4	21.0	52.1	45.4	36.8	49.1	36.5	29.0
Incr Delay (d2), s/veh	1.6	4.3	0.2	2.8	0.3	0.8	4.1	28.9	0.3	42.2	1.5	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.3	12.7	1.7	2.6	6.9	7.8	2.7	12.7	1.6	11.0	8.7	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	53.2	41.2	28.2	54.6	32.8	21.8	56.2	74.4	37.1	91.3	38.0	29.1
LnGrp LOS	D	D	C	D	C	C	E	F	D	F	D	C
Approach Vol, veh/h		1658			1517			1721			2028	
Approach Delay, s/veh		41.7			32.3			70.9			52.7	
Approach LOS		D			C			E			D	

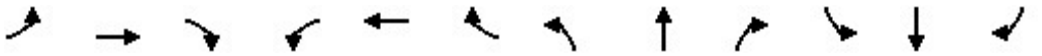
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	24.0	33.1	14.7	45.7	14.7	42.4	14.7	45.7
Change Period (Y+Rc), s	* 4.7	6.5	* 4.7	7.2	* 4.7	6.5	* 4.7	7.2
Max Green Setting (Gmax), s	* 19	26.6	* 10	41.0	* 10	35.9	* 10	41.0
Max Q Clear Time (g_c+I1), s	21.3	28.6	7.9	32.8	8.3	25.6	7.4	19.6
Green Ext Time (p_c), s	0.0	0.0	0.1	5.4	0.1	6.1	0.1	3.9

Intersection Summary	
HCM 6th Ctrl Delay	50.1
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

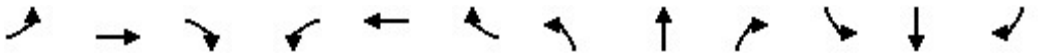
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	167	1840	60	100	1410	90	60	210	140	90	240	217
Future Volume (veh/h)	167	1840	60	100	1410	90	60	210	140	90	240	217
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	176	1937	24	105	1484	32	63	221	42	95	253	77
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	209	2501	606	131	2222	538	89	476	89	120	477	141
Arrive On Green	0.12	0.40	0.40	0.07	0.35	0.35	0.05	0.16	0.16	0.07	0.18	0.18
Sat Flow, veh/h	1753	6332	1534	1753	6332	1533	1753	2930	546	1753	2643	784
Grp Volume(v), veh/h	176	1937	24	105	1484	32	63	130	133	95	165	165
Grp Sat Flow(s),veh/h/ln	1753	1583	1534	1753	1583	1533	1753	1749	1727	1753	1749	1678
Q Serve(g_s), s	9.5	25.9	0.9	5.7	19.3	1.3	3.4	6.5	6.8	5.2	8.3	8.7
Cycle Q Clear(g_c), s	9.5	25.9	0.9	5.7	19.3	1.3	3.4	6.5	6.8	5.2	8.3	8.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.32	1.00		0.47
Lane Grp Cap(c), veh/h	209	2501	606	131	2222	538	89	284	281	120	316	303
V/C Ratio(X)	0.84	0.77	0.04	0.80	0.67	0.06	0.71	0.46	0.47	0.79	0.52	0.54
Avail Cap(c_a), veh/h	253	2677	648	145	2286	553	127	884	873	145	902	865
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.8	25.6	18.0	44.1	26.7	20.9	45.3	36.7	36.8	44.5	36.0	36.1
Incr Delay (d2), s/veh	19.2	1.4	0.0	24.5	0.8	0.1	10.0	1.4	1.5	21.5	1.6	1.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.0	9.0	0.3	3.3	6.8	0.5	1.7	2.7	2.8	2.9	3.5	3.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	61.0	27.0	18.1	68.6	27.5	20.9	55.4	38.1	38.3	66.0	37.6	37.9
LnGrp LOS	E	C	B	E	C	C	E	D	D	E	D	D
Approach Vol, veh/h		2137			1621			326			425	
Approach Delay, s/veh		29.7			30.0			41.5			44.1	
Approach LOS		C			C			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.5	41.5	11.9	25.0	14.3	45.8	13.6	23.3
Change Period (Y+Rc), s	7.0	7.5	7.0	7.5	7.0	7.5	7.0	7.5
Max Green Setting (Gmax), s	14.0	35.0	7.0	50.0	8.0	41.0	8.0	49.0
Max Q Clear Time (g_c+I1), s	11.5	21.3	5.4	10.7	7.7	27.9	7.2	8.8
Green Ext Time (p_c), s	0.1	8.8	0.0	2.2	0.0	10.4	0.0	1.7

Intersection Summary	
HCM 6th Ctrl Delay	32.0
HCM 6th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	450	1367	320	310	1304	325	200	750	380	363	986	380
Future Volume (veh/h)	450	1367	320	310	1304	325	200	750	380	363	986	380
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	474	1439	0	326	1373	302	211	789	0	382	1038	283
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	480	1896		391	1424	312	283	1050		396	1768	539
Arrive On Green	0.14	0.30	0.00	0.11	0.27	0.27	0.08	0.21	0.00	0.23	0.35	0.35
Sat Flow, veh/h	3401	6332	1560	3401	5213	1144	3401	5025	1560	1753	5025	1533
Grp Volume(v), veh/h	474	1439	0	326	1250	425	211	789	0	382	1038	283
Grp Sat Flow(s),veh/h/ln	1700	1583	1560	1700	1583	1609	1700	1675	1560	1753	1675	1533
Q Serve(g_s), s	14.8	21.9	0.0	10.0	27.6	27.7	6.4	15.6	0.0	22.9	17.9	15.6
Cycle Q Clear(g_c), s	14.8	21.9	0.0	10.0	27.6	27.7	6.4	15.6	0.0	22.9	17.9	15.6
Prop In Lane	1.00		1.00	1.00		0.71	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	480	1896		391	1297	439	283	1050		396	1768	539
V/C Ratio(X)	0.99	0.76		0.83	0.96	0.97	0.75	0.75		0.96	0.59	0.52
Avail Cap(c_a), veh/h	480	1896		416	1297	439	384	1230		396	1798	548
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.5	33.7	0.0	46.0	38.1	38.1	47.6	39.4	0.0	40.7	28.1	27.4
Incr Delay (d2), s/veh	37.6	2.2	0.0	14.8	17.3	34.6	8.9	3.1	0.0	36.2	0.8	1.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.4	8.1	0.0	4.8	12.1	14.4	2.9	6.3	0.0	13.2	6.7	5.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	83.1	35.9	0.0	60.8	55.4	72.7	56.5	42.5	0.0	76.9	28.9	29.1
LnGrp LOS	F	D		E	E	E	E	D		E	C	C
Approach Vol, veh/h		1913	A		2001			1000	A		1703	
Approach Delay, s/veh		47.6			60.0			45.5			39.7	
Approach LOS		D			E			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	28.0	26.2	16.2	35.8	12.8	41.4	19.0	33.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	24.0	26.0	13.0	31.0	12.0	38.0	15.0	29.0
Max Q Clear Time (g_c+I1), s	24.9	17.6	12.0	23.9	8.4	19.9	16.8	29.7
Green Ext Time (p_c), s	0.0	4.5	0.2	6.0	0.4	11.8	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	49.0
HCM 6th LOS	D

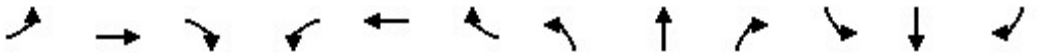
Notes

Unsignalized Delay for [NBR, EBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	360	1688	72	180	1660	309	80	210	60	310	299	240
Future Volume (veh/h)	360	1688	72	180	1660	309	80	210	60	310	299	240
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.97	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	379	1777	73	189	1747	131	84	221	42	326	315	138
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	419	2295	94	244	1988	481	106	417	78	350	667	285
Arrive On Green	0.12	0.37	0.37	0.07	0.31	0.31	0.06	0.14	0.14	0.20	0.28	0.28
Sat Flow, veh/h	3401	6280	258	3401	6332	1532	1753	2929	546	1753	2370	1014
Grp Volume(v), veh/h	379	1344	506	189	1747	131	84	130	133	326	230	223
Grp Sat Flow(s),veh/h/ln	1700	1583	1789	1700	1583	1532	1753	1749	1726	1753	1749	1635
Q Serve(g_s), s	12.9	29.5	29.5	6.4	30.8	7.6	5.6	8.1	8.4	21.5	12.8	13.3
Cycle Q Clear(g_c), s	12.9	29.5	29.5	6.4	30.8	7.6	5.6	8.1	8.4	21.5	12.8	13.3
Prop In Lane	1.00		0.14	1.00		1.00	1.00		0.32	1.00		0.62
Lane Grp Cap(c), veh/h	419	1736	654	244	1988	481	106	249	246	350	492	460
V/C Ratio(X)	0.90	0.77	0.77	0.78	0.88	0.27	0.79	0.52	0.54	0.93	0.47	0.48
Avail Cap(c_a), veh/h	419	1736	654	263	2017	488	222	721	711	350	848	793
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.9	33.1	33.1	53.7	38.3	30.3	54.6	46.8	46.9	46.3	35.0	35.2
Incr Delay (d2), s/veh	22.2	2.4	6.1	11.1	4.9	0.4	4.9	0.6	0.7	30.6	0.3	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.6	11.0	13.1	3.0	11.8	2.7	2.5	3.5	3.6	12.0	5.3	5.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	73.1	35.4	39.2	64.8	43.2	30.7	59.5	47.4	47.6	77.0	35.2	35.5
LnGrp LOS	E	D	D	E	D	C	E	D	D	E	D	D
Approach Vol, veh/h		2229			2067			347			779	
Approach Delay, s/veh		42.7			44.4			50.4			52.8	
Approach LOS		D			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	30.0	23.3	14.9	49.5	13.6	39.6	21.0	43.5
Change Period (Y+Rc), s	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
Max Green Setting (Gmax), s	23.5	48.5	9.1	42.9	14.9	57.1	14.5	37.5
Max Q Clear Time (g_c+I1), s	23.5	10.4	8.4	31.5	7.6	15.3	14.9	32.8
Green Ext Time (p_c), s	0.0	0.9	0.0	9.3	0.0	1.6	0.0	4.2

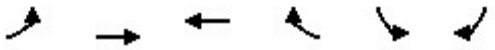
Intersection Summary	
HCM 6th Ctrl Delay	45.3
HCM 6th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	310	1509	248	570	1641	240	288	530	380	400	940	230
Future Volume (veh/h)	310	1509	248	570	1641	240	288	530	380	400	940	230
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	326	1588	241	600	1727	130	303	558	180	421	989	90
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	355	1692	257	611	1904	581	318	903	274	460	1112	338
Arrive On Green	0.10	0.30	0.30	0.18	0.38	0.38	0.09	0.18	0.18	0.14	0.22	0.22
Sat Flow, veh/h	3401	5573	846	3401	5025	1533	3401	5025	1525	3401	5025	1528
Grp Volume(v), veh/h	326	1353	476	600	1727	130	303	558	180	421	989	90
Grp Sat Flow(s),veh/h/ln	1700	1583	1670	1700	1675	1533	1700	1675	1525	1700	1675	1528
Q Serve(g_s), s	14.1	41.2	41.3	26.1	48.3	8.5	13.2	15.2	16.3	18.2	28.4	7.2
Cycle Q Clear(g_c), s	14.1	41.2	41.3	26.1	48.3	8.5	13.2	15.2	16.3	18.2	28.4	7.2
Prop In Lane	1.00		0.51	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	355	1442	507	611	1904	581	318	903	274	460	1112	338
V/C Ratio(X)	0.92	0.94	0.94	0.98	0.91	0.22	0.95	0.62	0.66	0.92	0.89	0.27
Avail Cap(c_a), veh/h	355	1451	510	611	1914	584	318	940	285	460	1150	350
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	65.9	50.4	50.4	60.7	43.7	31.3	67.0	56.3	56.7	63.4	56.1	47.9
Incr Delay (d2), s/veh	28.1	12.0	25.5	31.7	6.8	0.2	37.8	1.2	5.3	22.7	8.8	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.3	17.2	20.0	13.6	20.1	3.1	7.3	6.4	6.5	9.1	12.5	2.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	94.0	62.4	75.9	92.4	50.4	31.5	104.8	57.5	62.0	86.1	64.9	48.4
LnGrp LOS	F	E	E	F	D	C	F	E	E	F	E	D
Approach Vol, veh/h		2155			2457			1041			1500	
Approach Delay, s/veh		70.1			59.7			72.0			69.8	
Approach LOS		E			E			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	34.2	52.6	21.4	40.4	23.0	63.8	27.6	34.2
Change Period (Y+Rc), s	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5
Max Green Setting (Gmax), s	26.7	45.4	13.9	34.0	15.5	56.6	20.1	27.8
Max Q Clear Time (g_c+I1), s	28.1	43.3	15.2	30.4	16.1	50.3	20.2	18.3
Green Ext Time (p_c), s	0.0	1.9	0.0	2.3	0.0	5.2	0.0	2.9

Intersection Summary	
HCM 6th Ctrl Delay	66.8
HCM 6th LOS	E



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	1626	1341	360	260	1210
Future Volume (veh/h)	0	1626	1341	360	260	1210
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	0	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	0	1712	1412	0	274	1263
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	4	4	4	4	4
Cap, veh/h	0	2148	1495		759	1351
Arrive On Green	0.00	0.43	0.43	0.00	0.43	0.43
Sat Flow, veh/h	0	5356	3589	1560	1753	3120
Grp Volume(v), veh/h	0	1712	1412	0	274	1263
Grp Sat Flow(s),veh/h/ln	0	1675	1749	1560	1753	1560
Q Serve(g_s), s	0.0	26.1	34.2	0.0	9.3	34.0
Cycle Q Clear(g_c), s	0.0	26.1	34.2	0.0	9.3	34.0
Prop In Lane	0.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	0	2148	1495		759	1351
V/C Ratio(X)	0.00	0.80	0.94		0.36	0.93
Avail Cap(c_a), veh/h	0	2176	1514		785	1397
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	21.9	24.3	0.0	16.8	23.8
Incr Delay (d2), s/veh	0.0	2.1	12.3	0.0	0.3	11.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	9.1	14.4	0.0	3.4	13.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.0	24.1	36.5	0.0	17.1	35.4
LnGrp LOS	A	C	D		B	D
Approach Vol, veh/h		1712	1412	A	1537	
Approach Delay, s/veh		24.1	36.5		32.1	
Approach LOS		C	D		C	

Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		44.5		43.7		44.5
Change Period (Y+Rc), s		6.8		5.5		6.8
Max Green Setting (Gmax), s		38.2		39.5		38.2
Max Q Clear Time (g_c+I1), s		28.1		36.0		36.2
Green Ext Time (p_c), s		7.0		2.2		1.5

Intersection Summary		
HCM 6th Ctrl Delay		30.5
HCM 6th LOS		C

Notes

User approved volume balancing among the lanes for turning movement.

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	590	1296	210	644	1057	120
Future Volume (veh/h)	590	1296	210	644	1057	120
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		0.97	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1841	1841	1841	1841	1841	1841
Adj Flow Rate, veh/h	621	1361	221	678	1113	60
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	4	4	4
Cap, veh/h	1440	2009	232	2707	1162	517
Arrive On Green	0.41	0.41	0.07	0.54	0.33	0.33
Sat Flow, veh/h	3589	2669	3401	5191	3506	1560
Grp Volume(v), veh/h	621	1361	221	678	1113	60
Grp Sat Flow(s),veh/h/ln	1749	1335	1700	1675	1753	1560
Q Serve(g_s), s	13.0	27.4	6.6	7.4	31.8	2.7
Cycle Q Clear(g_c), s	13.0	27.4	6.6	7.4	31.8	2.7
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1440	2009	232	2707	1162	517
V/C Ratio(X)	0.43	0.68	0.95	0.25	0.96	0.12
Avail Cap(c_a), veh/h	1868	2336	232	3322	1164	518
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.5	6.9	47.5	12.6	33.5	23.8
Incr Delay (d2), s/veh	0.2	0.6	45.3	0.0	17.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.8	16.8	4.1	2.4	16.1	1.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	21.7	7.5	92.8	12.6	50.7	23.9
LnGrp LOS	C	A	F	B	D	C
Approach Vol, veh/h	1982			899	1173	
Approach Delay, s/veh	12.0			32.3	49.4	
Approach LOS	B			C	D	

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	13.0	49.5				62.5	39.9
Change Period (Y+Rc), s	6.0	7.3				7.3	6.0
Max Green Setting (Gmax), s	7.0	54.7				67.7	34.0
Max Q Clear Time (g_c+I1), s	8.6	29.4				9.4	33.8
Green Ext Time (p_c), s	0.0	11.9				4.5	0.1

Intersection Summary	
HCM 6th Ctrl Delay	27.3
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.
User approved volume balancing among the lanes for turning movement.

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	44	88	500	29	62	1094
Future Volume (veh/h)	44	88	500	29	62	1094
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	46	93	526	31	65	1152
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	204	182	1271	395	124	2664
Arrive On Green	0.12	0.12	0.25	0.25	0.07	0.53
Sat Flow, veh/h	1767	1572	5233	1572	1767	5233
Grp Volume(v), veh/h	46	93	526	31	65	1152
Grp Sat Flow(s),veh/h/ln	1767	1572	1689	1572	1767	1689
Q Serve(g_s), s	0.7	1.6	2.5	0.4	1.0	4.1
Cycle Q Clear(g_c), s	0.7	1.6	2.5	0.4	1.0	4.1
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	204	182	1271	395	124	2664
V/C Ratio(X)	0.23	0.51	0.41	0.08	0.52	0.43
Avail Cap(c_a), veh/h	1931	1718	3373	1047	422	5621
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	11.8	12.2	9.2	8.4	13.1	4.3
Incr Delay (d2), s/veh	0.6	2.2	0.2	0.1	3.4	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.5	0.5	0.1	0.4	0.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	12.3	14.4	9.4	8.5	16.6	4.4
LnGrp LOS	B	B	A	A	B	A
Approach Vol, veh/h	139		557			1217
Approach Delay, s/veh	13.7		9.3			5.0
Approach LOS	B		A			A

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	8.1	13.3			21.4	7.9
Change Period (Y+Rc), s	6.0	6.0			6.0	4.5
Max Green Setting (Gmax), s	7.0	19.5			32.5	32.0
Max Q Clear Time (g_c+I1), s	3.0	4.5			6.1	3.6
Green Ext Time (p_c), s	0.0	2.8			8.1	0.4

Intersection Summary	
HCM 6th Ctrl Delay	6.9
HCM 6th LOS	A

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↱			↱
Traffic Vol, veh/h	0	1576	1504	20	0	20
Future Vol, veh/h	0	1576	1504	20	0	20
Conflicting Peds, #/hr	5	0	0	5	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	0	1659	1583	21	0	21

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	807
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.96
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.33
Pot Cap-1 Maneuver	0	-	-	-	0	322
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	320
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	17
HCM LOS			C

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	320
HCM Lane V/C Ratio	-	-	-	0.066
HCM Control Delay (s)	-	-	-	17
HCM Lane LOS	-	-	-	C
HCM 95th %tile Q(veh)	-	-	-	0.2

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↱			↱
Traffic Vol, veh/h	0	1576	1504	20	0	20
Future Vol, veh/h	0	1576	1504	20	0	20
Conflicting Peds, #/hr	5	0	0	5	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	0	1659	1583	21	0	21

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	807
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.96
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.33
Pot Cap-1 Maneuver	0	-	-	-	0	322
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	320
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	17
HCM LOS			C

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	320
HCM Lane V/C Ratio	-	-	-	0.066
HCM Control Delay (s)	-	-	-	17
HCM Lane LOS	-	-	-	C
HCM 95th %tile Q(veh)	-	-	-	0.2

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	20	1556	1514	20	20	10
Future Vol, veh/h	20	1556	1514	20	20	10
Conflicting Peds, #/hr	5	0	0	5	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	21	1638	1594	21	21	11

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1620	0	-	0	2471	813
Stage 1	-	-	-	-	1610	-
Stage 2	-	-	-	-	861	-
Critical Hdwy	4.16	-	-	-	6.86	6.96
Critical Hdwy Stg 1	-	-	-	-	5.86	-
Critical Hdwy Stg 2	-	-	-	-	5.86	-
Follow-up Hdwy	2.23	-	-	-	3.53	3.33
Pot Cap-1 Maneuver	393	-	-	-	24	319
Stage 1	-	-	-	-	148	-
Stage 2	-	-	-	-	372	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	391	-	-	-	22	317
Mov Cap-2 Maneuver	-	-	-	-	100	-
Stage 1	-	-	-	-	139	-
Stage 2	-	-	-	-	370	-

Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	41.4
HCM LOS			E

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	391	-	-	-	130
HCM Lane V/C Ratio	0.054	-	-	-	0.243
HCM Control Delay (s)	14.7	-	-	-	41.4
HCM Lane LOS	B	-	-	-	E
HCM 95th %tile Q(veh)	0.2	-	-	-	0.9

Intersection	
Int Delay, s/veh	1.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	21	1565	1503	27	48	31
Future Vol, veh/h	21	1565	1503	27	48	31
Conflicting Peds, #/hr	5	0	0	5	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	350	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	22	1647	1582	28	51	33

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1615	0	-	0	2469	810
Stage 1	-	-	-	-	1601	-
Stage 2	-	-	-	-	868	-
Critical Hdwy	4.16	-	-	-	6.86	6.96
Critical Hdwy Stg 1	-	-	-	-	5.86	-
Critical Hdwy Stg 2	-	-	-	-	5.86	-
Follow-up Hdwy	2.23	-	-	-	3.53	3.33
Pot Cap-1 Maneuver	395	-	-	-	~ 25	321
Stage 1	-	-	-	-	149	-
Stage 2	-	-	-	-	369	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	393	-	-	-	~ 23	319
Mov Cap-2 Maneuver	-	-	-	-	101	-
Stage 1	-	-	-	-	140	-
Stage 2	-	-	-	-	367	-

Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	64.4
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	393	-	-	-	138
HCM Lane V/C Ratio	0.056	-	-	-	0.603
HCM Control Delay (s)	14.7	-	-	-	64.4
HCM Lane LOS	B	-	-	-	F
HCM 95th %tile Q(veh)	0.2	-	-	-	3.1

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	10.9

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	972	104	128	759	54	58
Future Vol, veh/h	972	104	128	759	54	58
Conflicting Peds, #/hr	0	5	5	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	100	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	1023	109	135	799	57	61

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1137	0	1753	571
Stage 1	-	-	-	-	1083	-
Stage 2	-	-	-	-	670	-
Critical Hdwy	-	-	4.16	-	6.86	6.96
Critical Hdwy Stg 1	-	-	-	-	5.86	-
Critical Hdwy Stg 2	-	-	-	-	5.86	-
Follow-up Hdwy	-	-	2.23	-	3.53	3.33
Pot Cap-1 Maneuver	-	-	604	-	76	461
Stage 1	-	-	-	-	284	-
Stage 2	-	-	-	-	467	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	601	-	59	459
Mov Cap-2 Maneuver	-	-	-	-	59	-
Stage 1	-	-	-	-	283	-
Stage 2	-	-	-	-	362	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.8	188.6
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	108	-	-	601	-
HCM Lane V/C Ratio	1.092	-	-	0.224	-
HCM Control Delay (s)	188.6	-	-	12.7	-
HCM Lane LOS	F	-	-	B	-
HCM 95th %tile Q(veh)	7.3	-	-	0.9	-

Appendix G
Traffic Signal Warrants

Appendix G: Summary of Traffic Signal Warrants

	Intersection		Existing Conditions	OYNP	OYPP	CYNP	CYPP
14	Bon View Avenue and Riverside Drive	AM	Unsignalized	Warrant Met	Warrant Met	Warrant Met	Warrant Met
		PM		Warrant Met	Warrant Met	Warrant Met	Warrant Met
16	Walker Avenue and Riverside Drive	AM	Unsignalized	Warrant Met	Warrant Met	Warrant Met	Warrant Met
		PM		Warrant Met	Warrant Met	Warrant Met	Warrant Met
17	Baker Avenue and Riverside Drive	AM	Unsignalized	Warrant Not Met	Warrant Not Met	Warrant Met	Warrant Met
		PM		Warrant Not Met	Warrant Not Met	Warrant Met	Warrant Met
22	Whispering Lakes Lane and Riverside Drive	AM	Unsignalized	Warrant Not Met	Warrant Not Met	Warrant Not Met	Warrant Not Met
		PM		Warrant Not Met	Warrant Not Met	Warrant Not Met	Warrant Not Met
23	Whispering Lakes Golf Course/Street A and Riverside Drive	AM	Unsignalized	N/A	Warrant Not Met	N/A	Warrant Not Met
		PM			Warrant Met		Warrant Met
		Weekend MD			Warrant Met		Warrant Met
		Weekend PM			Warrant Met		Warrant Met
24	Ontario Avenue and Riverside Drive	AM	Unsignalized	Warrant Not Met	Warrant Met	Warrant Met	Warrant Met
		PM		Warrant Not Met	Warrant Met	Warrant Not Met	Warrant Met
		Weekend MD		N/A	Warrant Met	N/A	Warrant Met
		Weekend PM			Warrant Met		Warrant Met
29	Grove Avenue and Chino Avenue	AM	Unsignalized	Warrant Not Met	Warrant Not Met	Warrant Met	Warrant Met
		PM		Warrant Not Met	Warrant Not Met	Warrant Met	Warrant Met
30	Walker Avenue and Chino Avenue	AM	Unsignalized	Warrant Not Met	Warrant Not Met	Warrant Met	Warrant Met
		PM		Warrant Not Met	Warrant Not Met	Warrant Met	Warrant Met
31	Vineyard Avenue and Chino Avenue	AM	Unsignalized	Warrant Not Met	Warrant Not Met	Warrant Met	Warrant Met
		PM		Warrant Not Met	Warrant Not Met	Warrant Met	Warrant Met
32	Whispering Lakes Lane and Chino Avenue	AM	Unsignalized	Warrant Not Met	Warrant Not Met	Warrant Met	Warrant Met
		PM		Warrant Not Met	Warrant Not Met	Warrant Not Met	Warrant Met
33	Ontario Avenue and Chino Avenue	AM	Unsignalized	Warrant Not Met	Warrant Not Met	Warrant Met	Warrant Met
		PM		Warrant Not Met	Warrant Not Met	Warrant Met	Warrant Met
		Weekend MD		N/A	Warrant Met	N/A	Warrant Met
		Weekend PM			Warrant Met		Warrant Met
36	Grove Avenue and Edison Avenue	AM	Unsignalized	Warrant Not Met	Warrant Not Met	Warrant Met	Warrant Met
		PM		Warrant Met	Warrant Met	Warrant Met	Warrant Met
42	Vineyard Avenue and Western Project Dwy	AM	N/A	N/A	Warrant Not Met	N/A	Warrant Not Met
		PM			Warrant Not Met		Warrant Not Met
		Weekend MD			Warrant Not Met		Warrant Met
		Weekend PM			Warrant Not Met		Warrant Met

FEHR PEERS

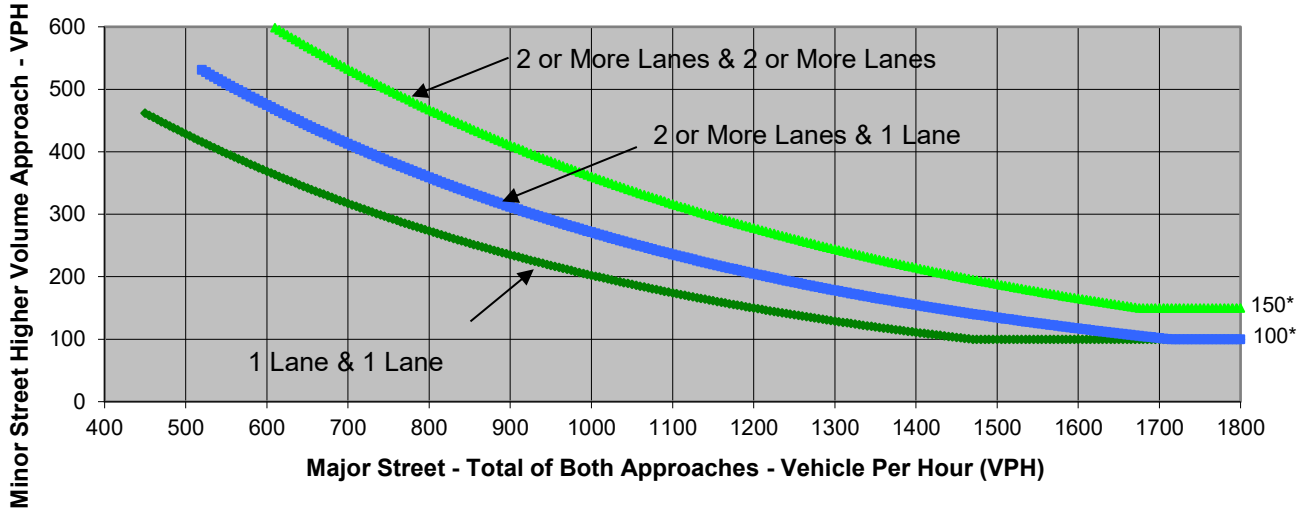
Major Street	Riverside	Project	Ontario Ranch Sports Complex
Minor Street	Bon View	Scenario	CYNP
		Peak Hour	AM

Turn Movement Volumes

	NB	SB	EB	WB
Left	80	10	110	190
Through	60	30	940	1590
Right	150	80	30	120
Total	290	120	1,080	1,900

Major Street Direction

	North/South
x	East/West



* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Riverside	Bon View	
Number of Approach Lanes	**2**	**1**	**YES**
Traffic Volume (VPH) *	**2,980**	**290**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Major Street	Riverside Dr
Minor Street	Bon View Ave

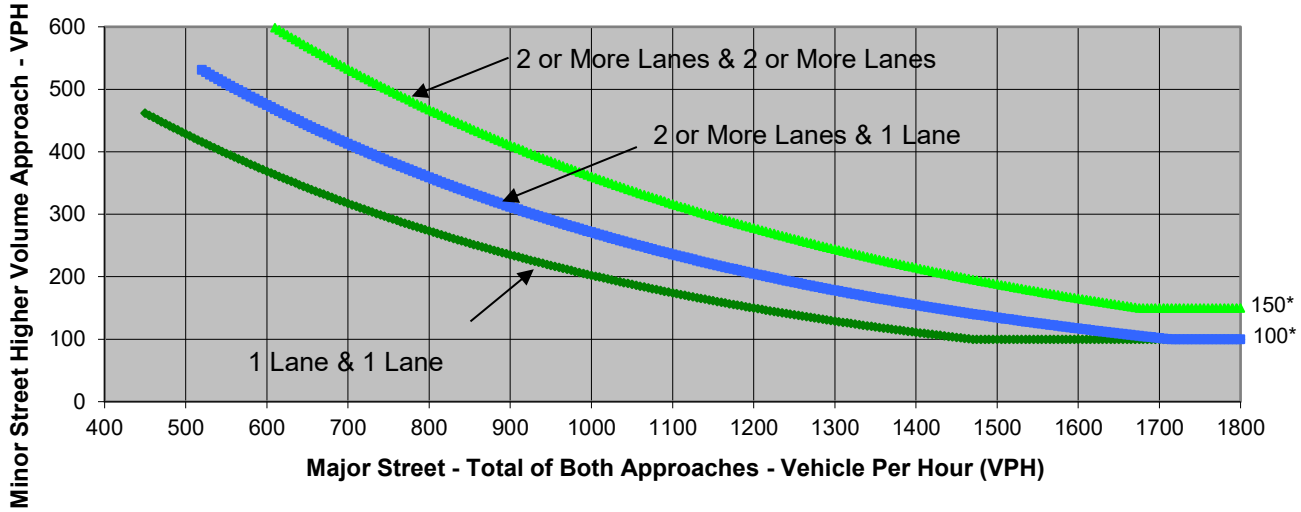
Project	Ontario Ranch Sports Complex
Scenario	CYPP
Peak Hour	AM

Turn Movement Volumes

	NB	SB	EB	WB
Left	80	13	110	192
Through	70	30	997	1614
Right	153	80	30	112
Total	303	123	1,137	1,918

Major Street Direction

	North/South
x	East/West



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Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Riverside Dr	Bon View Ave	
Number of Approach Lanes	**2**	**1**	**YES**
Traffic Volume (VPH) *	**3,055**	**303**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Major Street	Riverside Dr
Minor Street	Bon View Ave

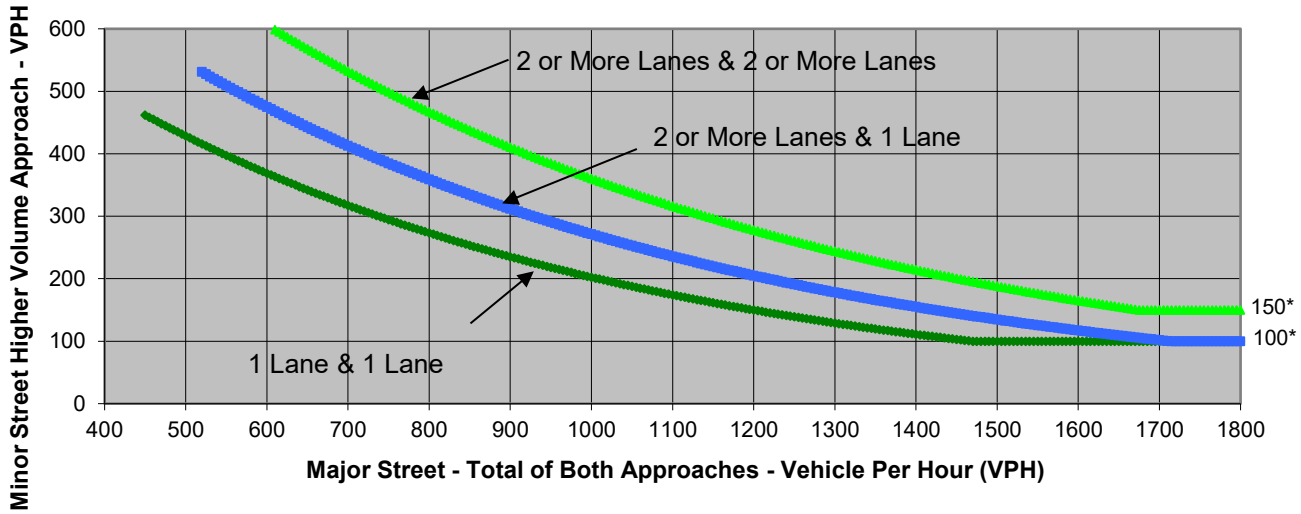
Project	Ontario Ranch Sports Complex
Scenario	OYNP
Peak Hour	AM

Turn Movement Volumes

	NB	SB	EB	WB
Left	14	11	86	193
Through	22	22	675	1126
Right	151	93	25	50
Total	187	126	786	1,369

Major Street Direction

	North/South
x	East/West



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Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Riverside Dr	Bon View Ave	
Number of Approach Lanes	**2**	**1**	**YES**
Traffic Volume (VPH) *	**2,155**	**187**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Major Street	Riverside Dr
Minor Street	Bon View Ave

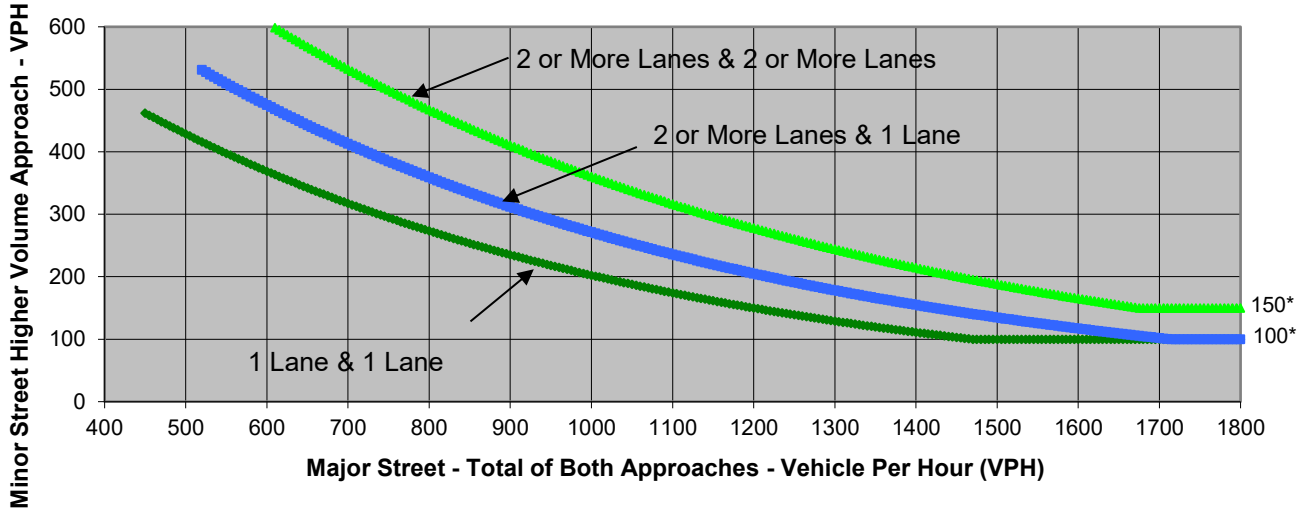
Project	Ontario Ranch Sports Complex
Scenario	OYPP
Peak Hour	AM

Turn Movement Volumes

	NB	SB	EB	WB
Left	14	12	86	194
Through	22	22	711	1150
Right	152	93	25	51
Total	188	127	822	1,395

Major Street Direction

	North/South
x	East/West



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Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Riverside Dr	Bon View Ave	
Number of Approach Lanes	**2**	**1**	**YES**
Traffic Volume (VPH) *	**2,217**	**188**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

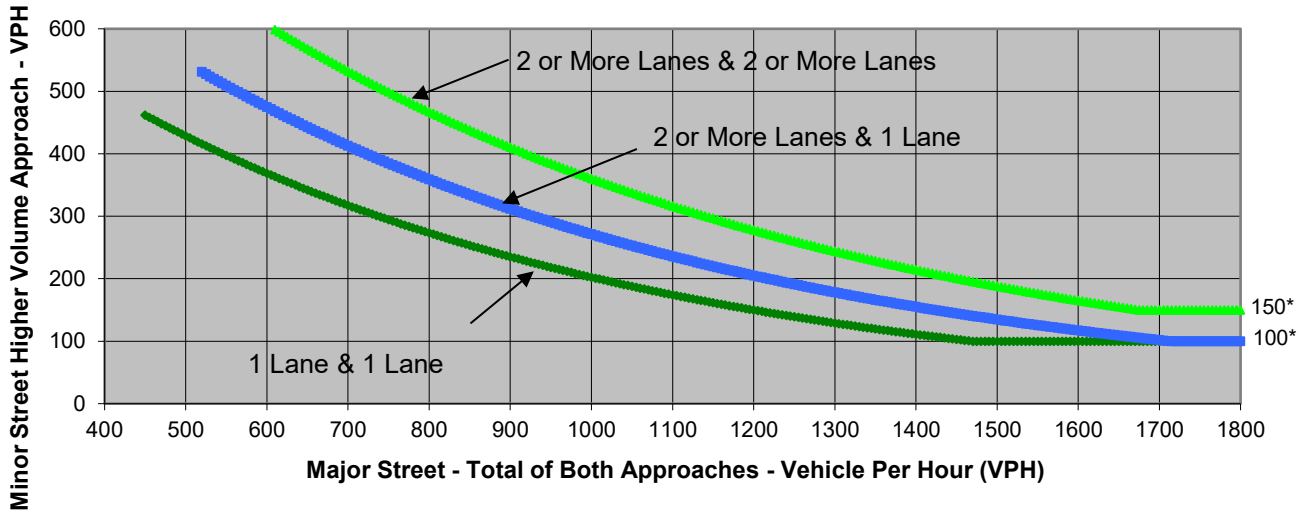
Major Street	Riverside	Project	Ontario Ranch Sports Complex
Minor Street	Bon View	Scenario	CYNP
		Peak Hour	PM

Turn Movement Volumes

	NB	SB	EB	WB
Left	80	50	40	210
Through	30	70	1570	1140
Right	210	50	110	30
Total	320	170	1,720	1,380

Major Street Direction

	North/South
x	East/West



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Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Riverside	Bon View	
Number of Approach Lanes	**2**	**1**	**YES**
Traffic Volume (VPH) *	**3,100**	**320**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Major Street	Riverside Dr
Minor Street	Bon View Ave

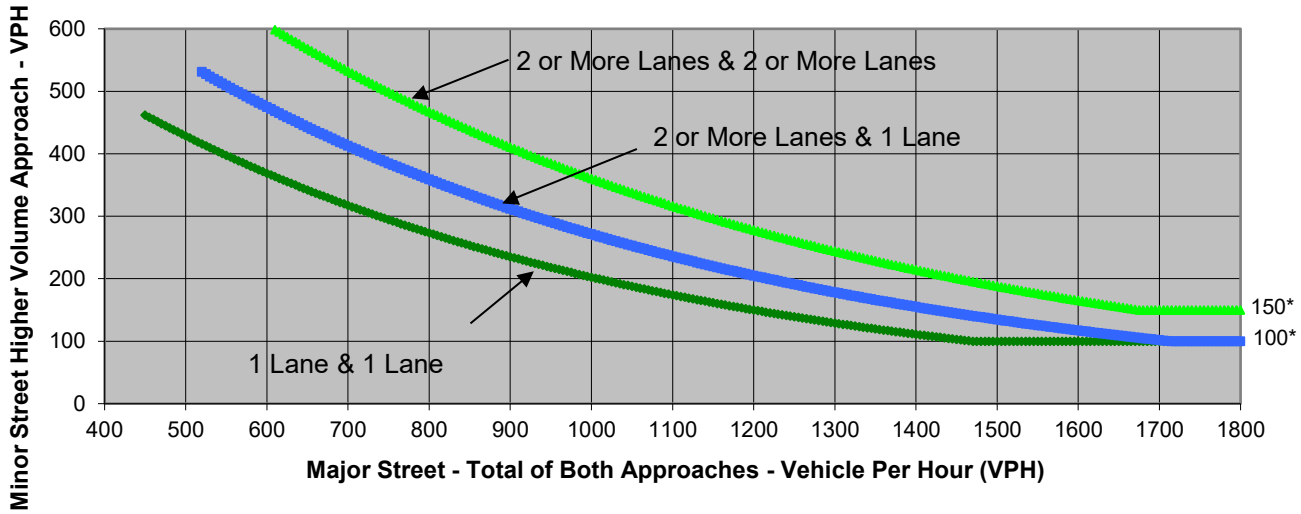
Project	Ontario Ranch Sports Complex
Scenario	CYPP
Peak Hour	PM

Turn Movement Volumes

	NB	SB	EB	WB
Left	80	67	40	196
Through	30	80	1646	1225
Right	217	50	110	36
Total	327	197	1,796	1,457

Major Street Direction

	North/South
x	East/West



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Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Riverside Dr	Bon View Ave	
Number of Approach Lanes	**2**	**1**	**YES**
Traffic Volume (VPH) *	**3,253**	**327**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

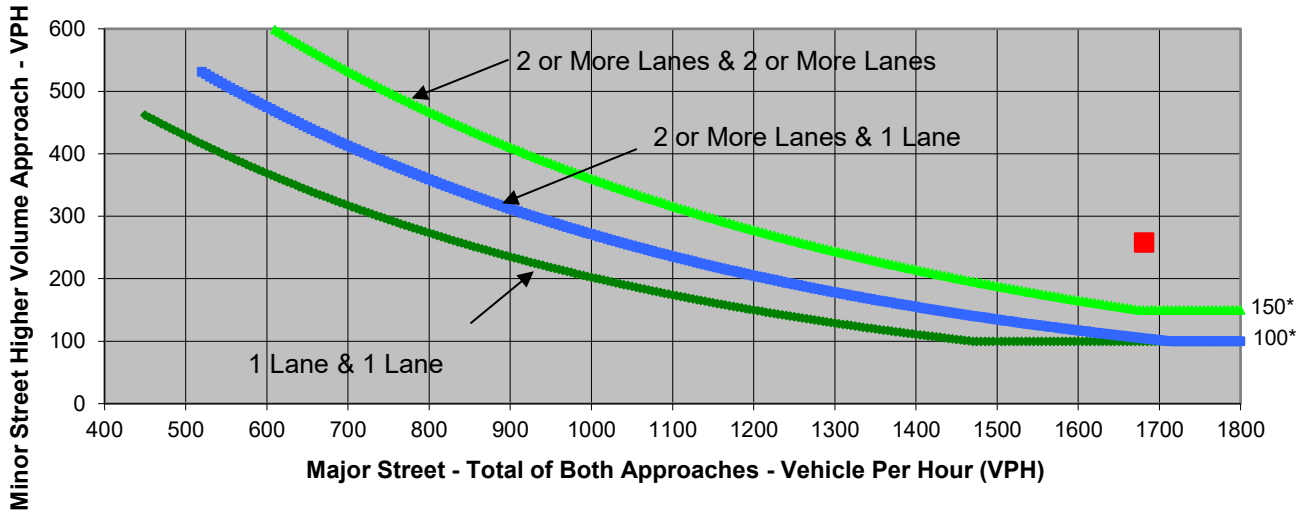
Project	Ontario Ranch Sports Complex
Scenario	OYNP
Peak Hour	PM
Major Street	Riverside Dr
Minor Street	Bon View Ave

Turn Movement Volumes

	NB	SB	EB	WB
Left	24	3	40	100
Through	21	14	872	623
Right	213	32	32	14
Total	258	49	944	737

Major Street Direction

	North/South
x	East/West



* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Riverside Dr	Bon View Ave	
Number of Approach Lanes	**2**	**1**	**YES**
Traffic Volume (VPH) *	**1,681**	**258**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Major Street	Riverside Dr
Minor Street	Bon View Ave

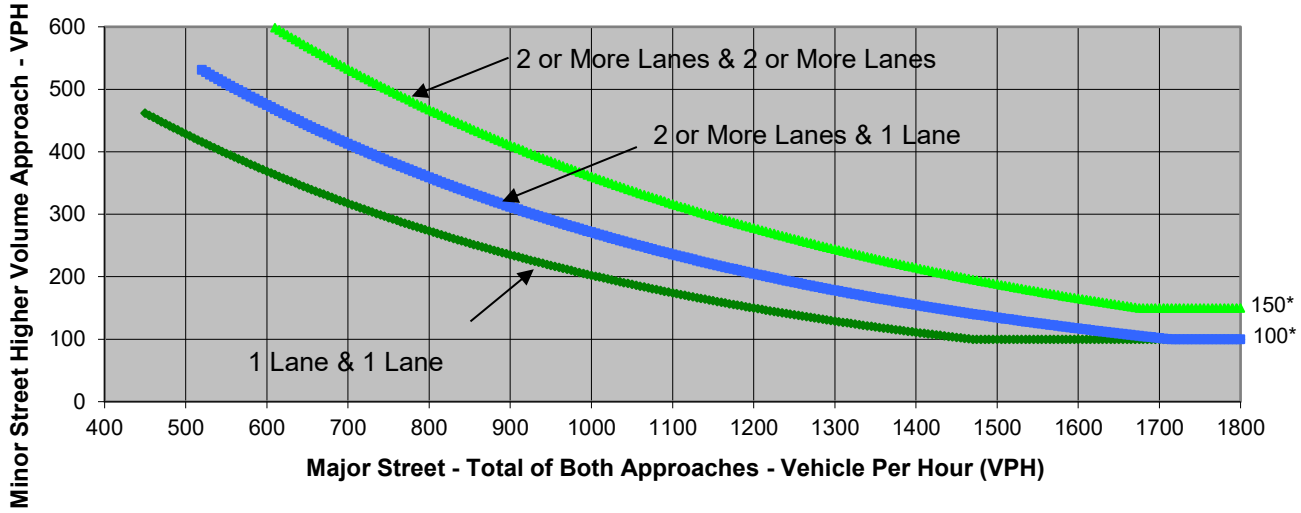
Project	Ontario Ranch Sports Complex
Scenario	OYPP
Peak Hour	PM

Turn Movement Volumes

	NB	SB	EB	WB
Left	24	5	40	102
Through	21	14	964	695
Right	215	32	32	16
Total	260	51	1,036	813

Major Street Direction

	North/South
x	East/West



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Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Riverside Dr	Bon View Ave	
Number of Approach Lanes	**2**	**1**	**YES**
Traffic Volume (VPH) *	**1,849**	**260**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

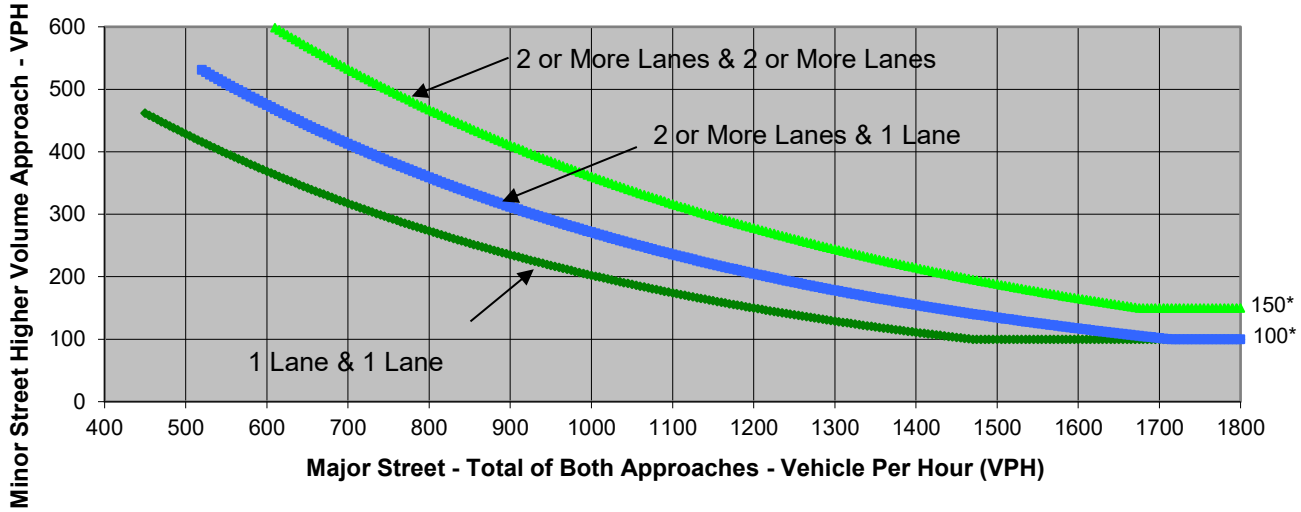
Project	Ontario Ranch Sports Complex
Scenario	CYNP
Peak Hour	AM
Major Street	Riverside
Minor Street	Walker

Turn Movement Volumes

	NB	SB	EB	WB
Left	270	20	70	100
Through	20	10	930	1490
Right	180	100	240	80
Total	470	130	1,240	1,670

Major Street Direction

	North/South
x	East/West



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Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Riverside	Walker	
Number of Approach Lanes	**2**	**1**	**YES**
Traffic Volume (VPH) *	**2,910**	**470**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

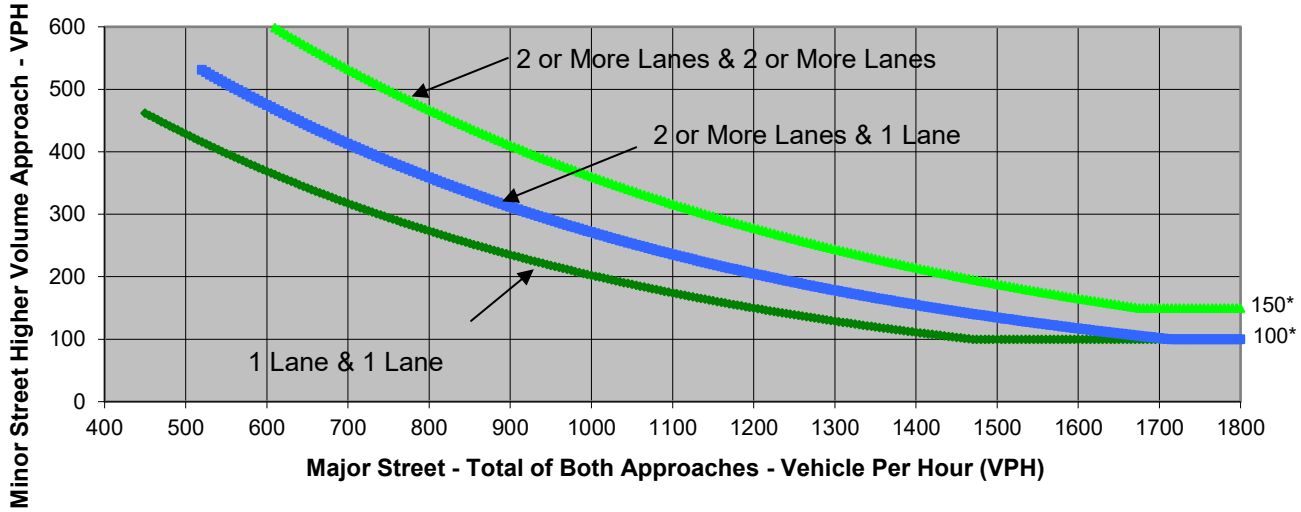
Major Street	Riverside Dr	Project	Ontario Ranch Sports Complex
Minor Street	Walker Avenue	Scenario	CYPP
		Peak Hour	AM

Turn Movement Volumes

	NB	SB	EB	WB
Left	300	23	70	100
Through	20	10	987	1448
Right	170	100	270	82
Total	490	133	1,327	1,630

Major Street Direction

	North/South
x	East/West



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Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Riverside Dr	Walker Avenue	
Number of Approach Lanes	**2**	**1**	**YES**
Traffic Volume (VPH) *	**2,957**	**490**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Major Street	Riverside Dr
Minor Street	Walker Avenue

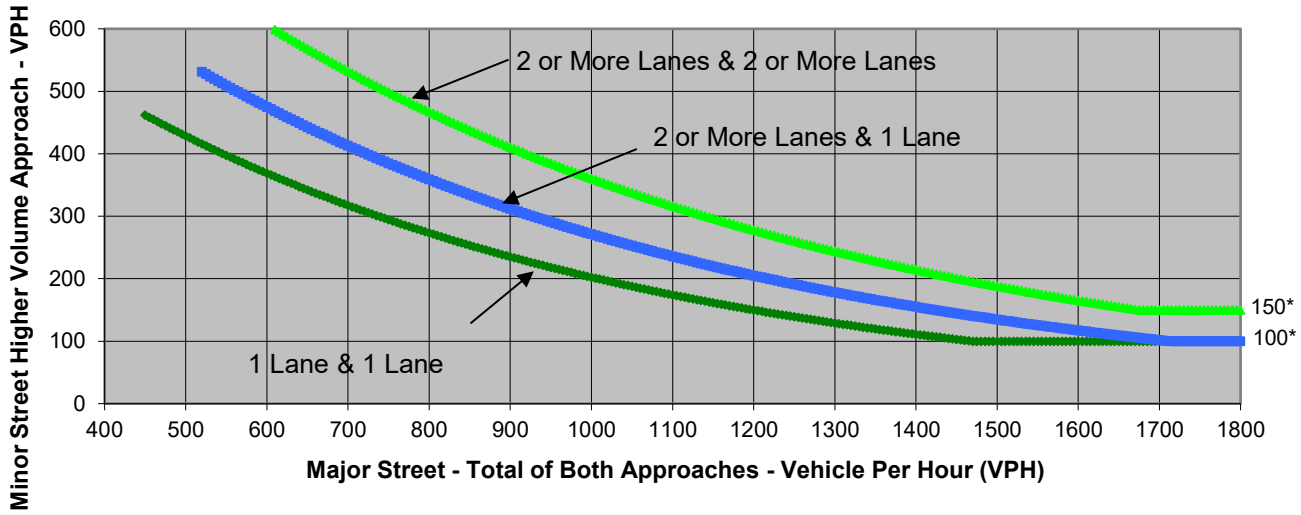
Project	Ontario Ranch Sports Complex
Scenario	OYNP
Peak Hour	AM

Turn Movement Volumes

	NB	SB	EB	WB
Left	108	21	11	59
Through	13	11	710	1150
Right	87	45	125	18
Total	208	77	846	1,227

Major Street Direction

	North/South
x	East/West



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Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Riverside Dr	Walker Avenue	
Number of Approach Lanes	**2**	**1**	**YES**
Traffic Volume (VPH) *	**2,073**	**208**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

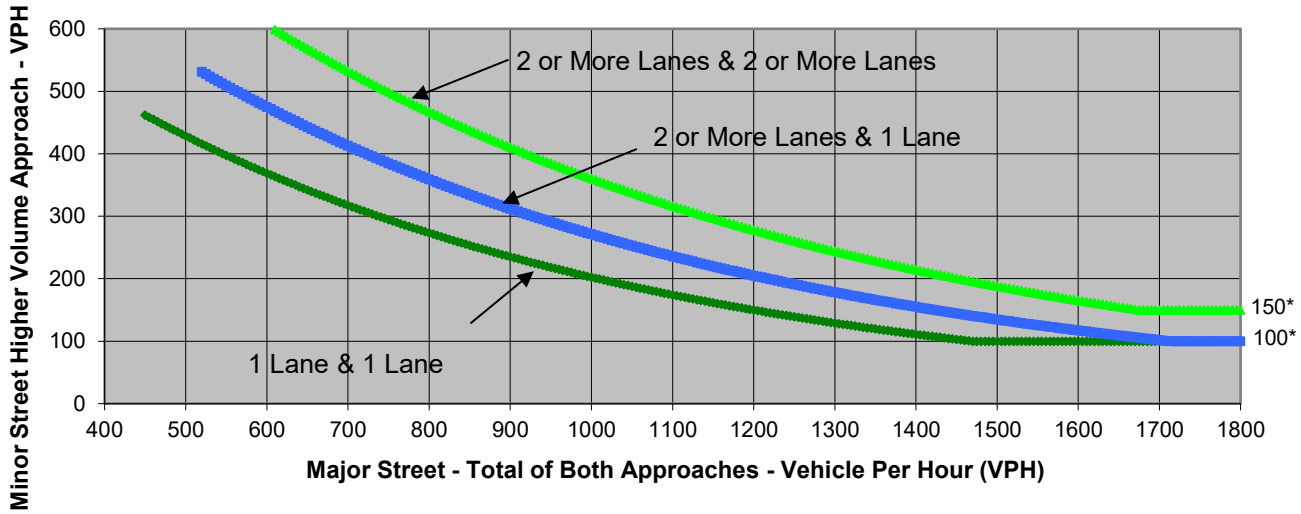
Major Street	Riverside Dr	Project	Ontario Ranch Sports Complex
Minor Street	Walker Avenue	Scenario	OYPP
		Peak Hour	AM

Turn Movement Volumes

	NB	SB	EB	WB
Left	108	22	11	59
Through	13	11	755	1180
Right	87	45	125	19
Total	208	78	891	1,258

Major Street Direction

	North/South
x	East/West



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Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Riverside Dr	Walker Avenue	
Number of Approach Lanes	**2**	**1**	**YES**
Traffic Volume (VPH) *	**2,149**	**208**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

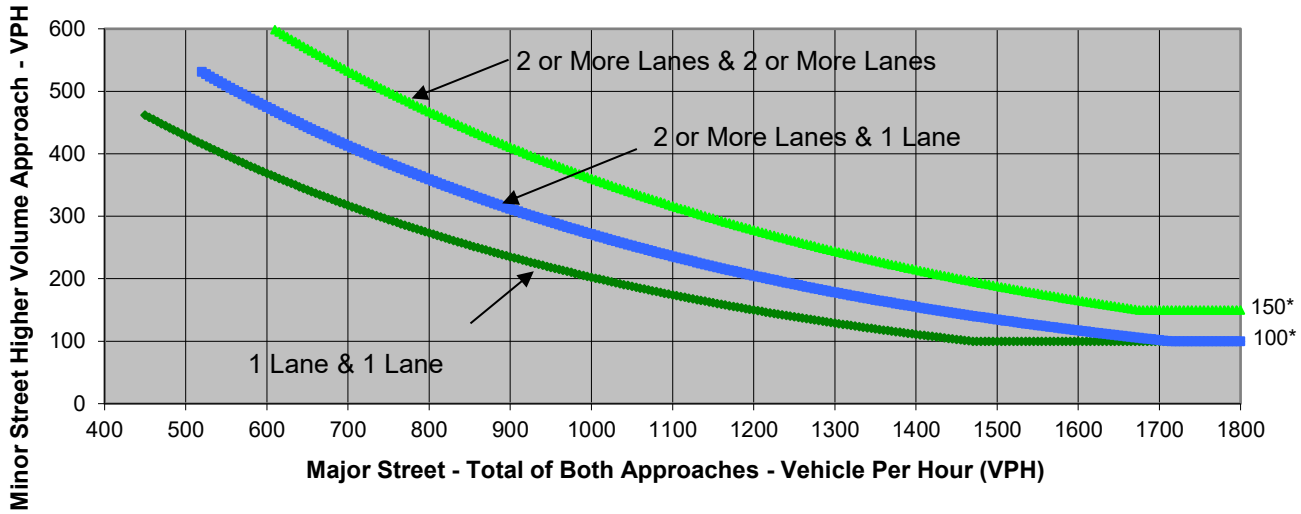
Major Street	Riverside	Project	Ontario Ranch Sports Complex
Minor Street	Walker	Scenario	CYNP
		Peak Hour	PM

Turn Movement Volumes

	NB	SB	EB	WB
Left	240	10	30	120
Through	20	10	1600	1210
Right	70	50	170	20
Total	330	70	1,800	1,350

Major Street Direction

	North/South
x	East/West



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Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Riverside	Walker	
Number of Approach Lanes	**2**	**1**	**YES**
Traffic Volume (VPH) *	**3,150**	**330**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

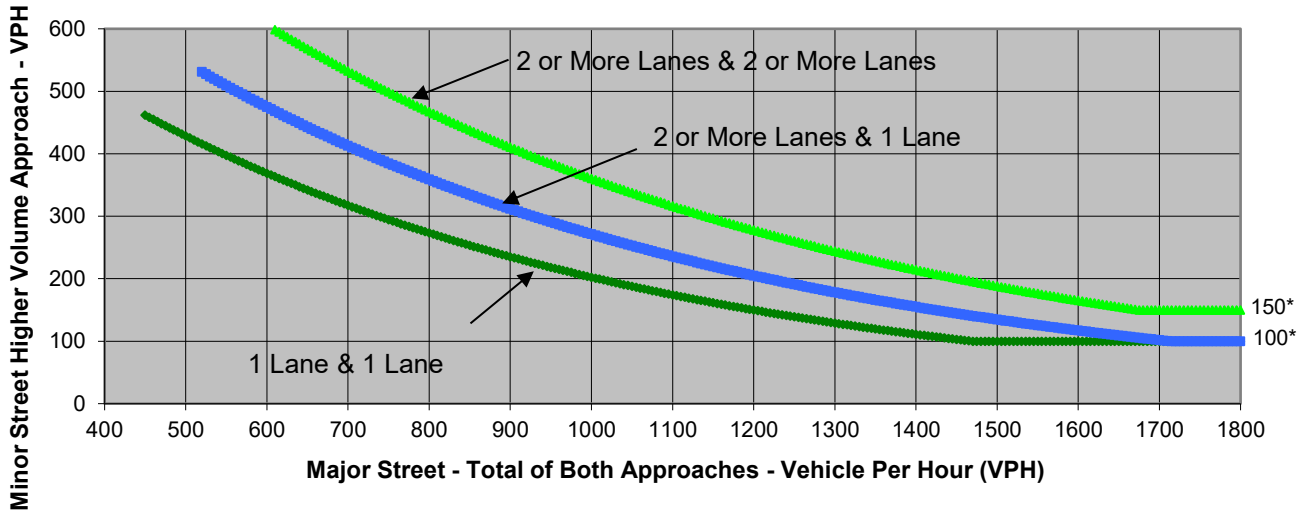
Major Street	Riverside Dr	Project	Ontario Ranch Sports Complex
Minor Street	Walker Avenue	Scenario	CYPP
		Peak Hour	PM

Turn Movement Volumes

	NB	SB	EB	WB
Left	250	17	30	140
Through	20	10	1678	1267
Right	50	50	180	25
Total	320	77	1,888	1,432

Major Street Direction

	North/South
x	East/West



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Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Riverside Dr	Walker Avenue	
Number of Approach Lanes	**2**	**1**	**YES**
Traffic Volume (VPH) *	**3,320**	**320**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

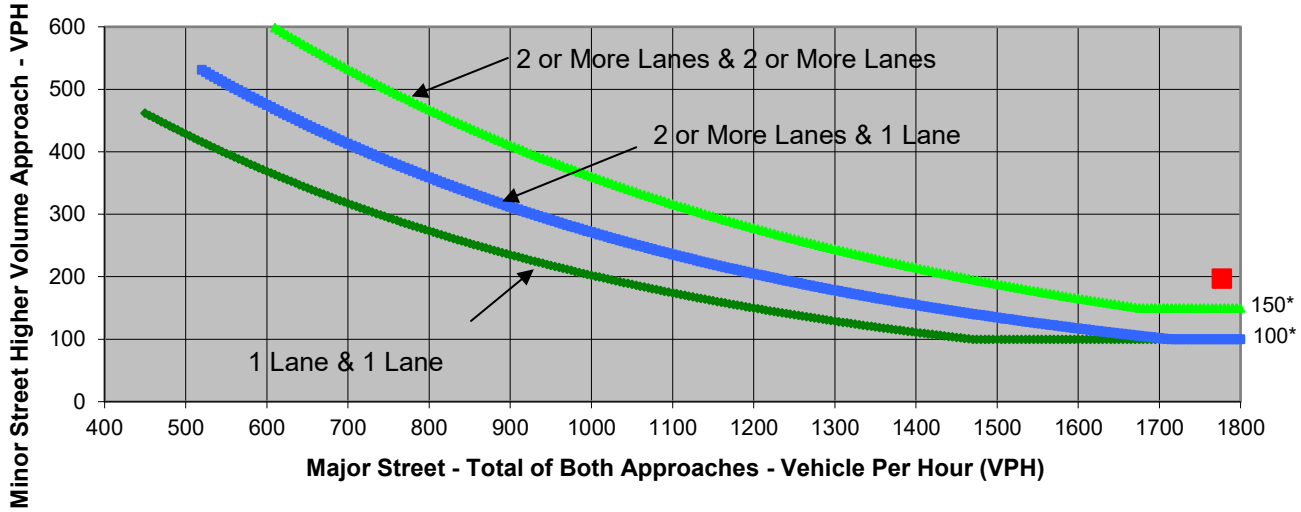
Major Street	Riverside Dr	Project	Ontario Ranch Sports Complex
Minor Street	Walker Avenue	Scenario	OYNP
		Peak Hour	PM

Turn Movement Volumes

	NB	SB	EB	WB
Left	94	10	23	50
Through	16	2	927	592
Right	87	23	164	21
Total	197	35	1,114	663

Major Street Direction

	North/South
x	East/West



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Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Riverside Dr	Walker Avenue	
Number of Approach Lanes	**2**	**1**	**YES**
Traffic Volume (VPH) *	**1,777**	**197**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

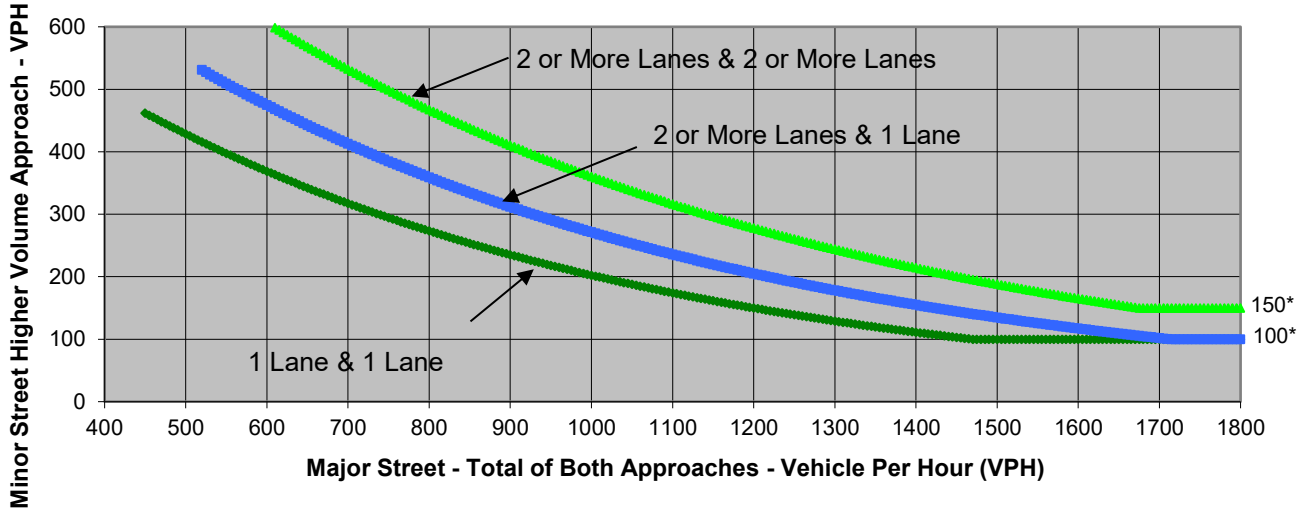
Major Street	Riverside Dr	Project	Ontario Ranch Sports Complex
Minor Street	Walker Avenue	Scenario	OYPP
		Peak Hour	PM

Turn Movement Volumes

	NB	SB	EB	WB
Left	94	12	23	50
Through	16	2	1042	684
Right	87	23	164	23
Total	197	37	1,229	757

Major Street Direction

	North/South
x	East/West



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Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Riverside Dr	Walker Avenue	
Number of Approach Lanes	**2**	**1**	**YES**
Traffic Volume (VPH) *	**1,986**	**197**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

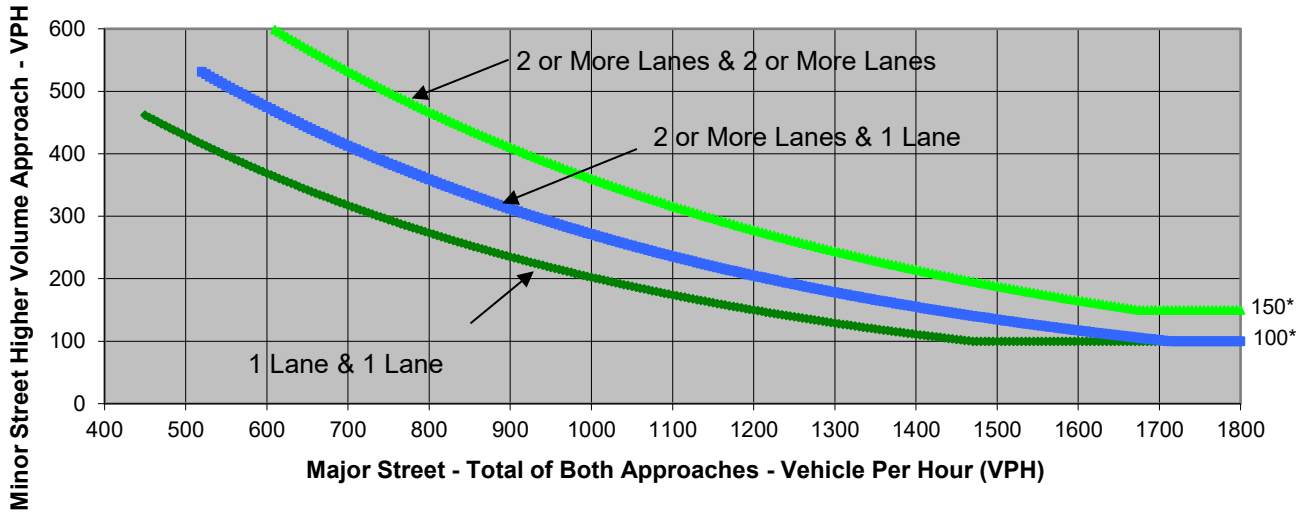
Project	Ontario Ranch Sports Complex
Scenario	CYNP
Peak Hour	AM
Major Street	Riverside
Minor Street	Baker

Turn Movement Volumes

	NB	SB	EB	WB
Left	330	40	40	110
Through	30	30	940	1300
Right	370	40	150	30
Total	730	110	1,130	1,440

Major Street Direction

	North/South
x	East/West



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Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Riverside	Baker	
Number of Approach Lanes	**2**	**1**	**YES**
Traffic Volume (VPH) *	**2,570**	**730**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Major Street	Riverside Dr
Minor Street	Baker Ave

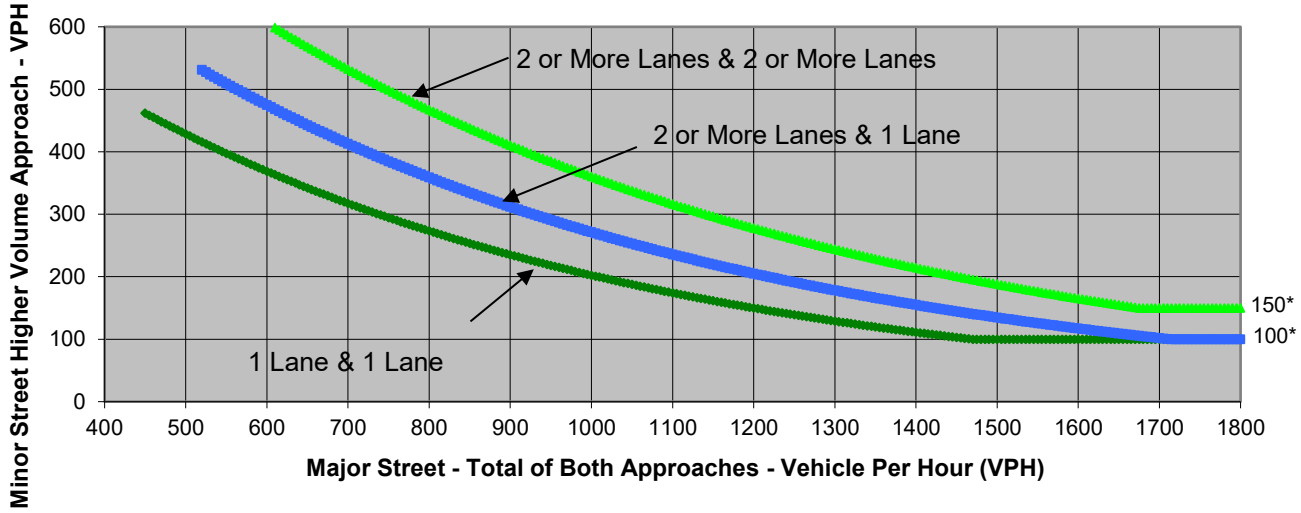
Project	Ontario Ranch Sports Complex
Scenario	CYPP
Peak Hour	AM

Turn Movement Volumes

	NB	SB	EB	WB
Left	100	33	40	42
Through	30	30	1060	1480
Right	33	50	80	32
Total	163	113	1,180	1,554

Major Street Direction

	North/South
x	East/West



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Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Riverside Dr	Baker Ave	
Number of Approach Lanes	**2**	**1**	**YES**
Traffic Volume (VPH) *	**2,734**	**163**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Major Street	Riverside Dr
Minor Street	Baker Ave

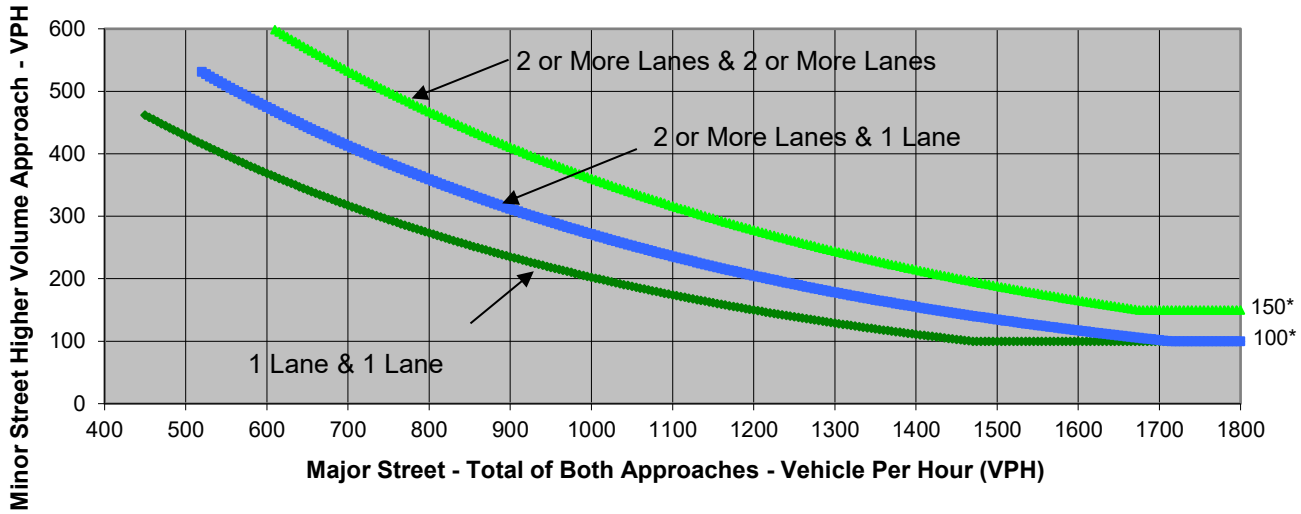
Project	Ontario Ranch Sports Complex
Scenario	OYNP
Peak Hour	AM

Turn Movement Volumes

	NB	SB	EB	WB
Left	58	14	29	6
Through	4	3	769	1125
Right	21	42	16	12
Total	83	59	814	1,143

Major Street Direction

	North/South
x	East/West



* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Riverside Dr	Baker Ave	
Number of Approach Lanes	**2**	**1**	**NO**
Traffic Volume (VPH) *	**1,957**	**83**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Major Street	Riverside Dr
Minor Street	Baker Ave

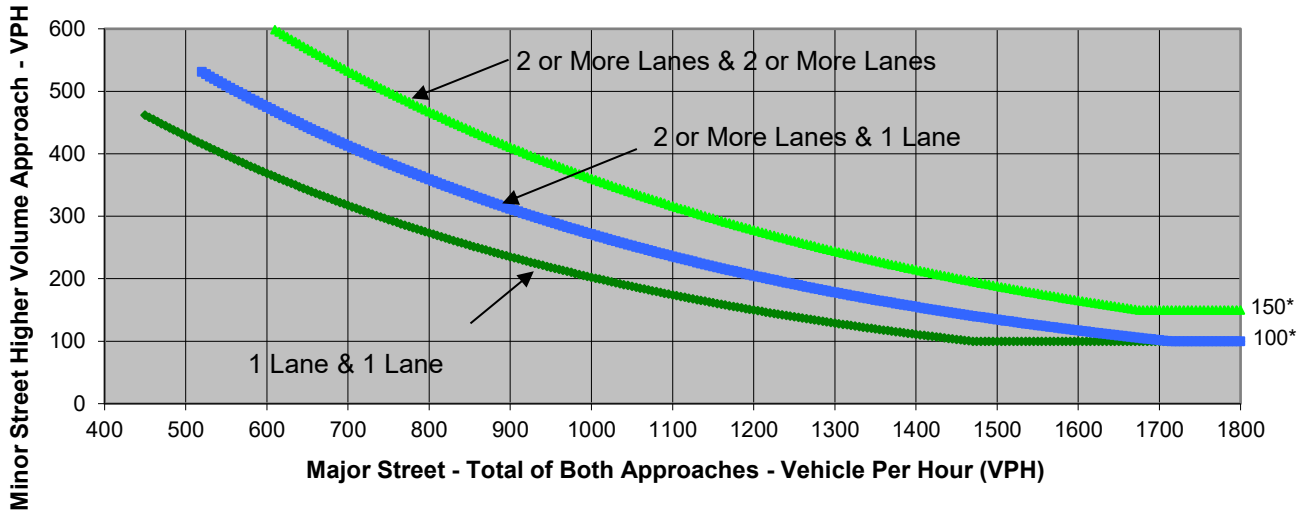
Project	Ontario Ranch Sports Complex
Scenario	OYPP
Peak Hour	AM

Turn Movement Volumes

	NB	SB	EB	WB
Left	58	15	29	7
Through	4	3	815	1155
Right	22	42	16	13
Total	84	60	860	1,175

Major Street Direction

	North/South
x	East/West



* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Riverside Dr	Baker Ave	
Number of Approach Lanes	**2**	**1**	**NO**
Traffic Volume (VPH) *	**2,035**	**84**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

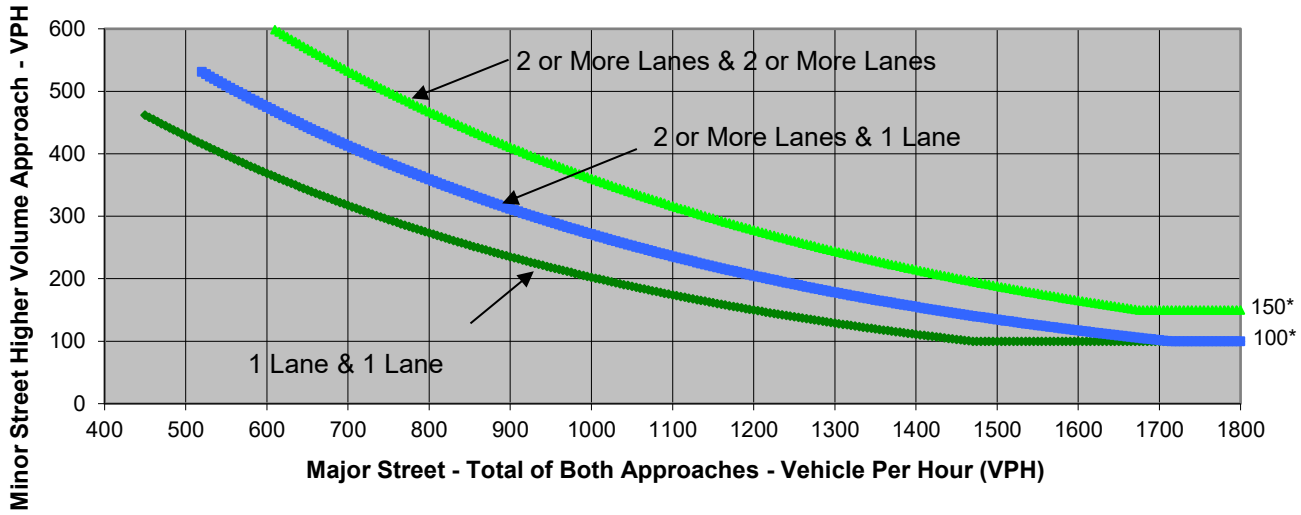
Project	Ontario Ranch Sports Complex
Scenario	CYNP
Peak Hour	PM
Major Street	Riverside
Minor Street	Baker

Turn Movement Volumes

	NB	SB	EB	WB
Left	200	40	30	320
Through	30	40	1300	1120
Right	180	30	350	10
Total	410	110	1,680	1,450

Major Street Direction

	North/South
x	East/West



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Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Riverside	Baker	
Number of Approach Lanes	**2**	**1**	**YES**
Traffic Volume (VPH) *	**3,130**	**410**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Major Street	Riverside Dr
Minor Street	Baker Ave

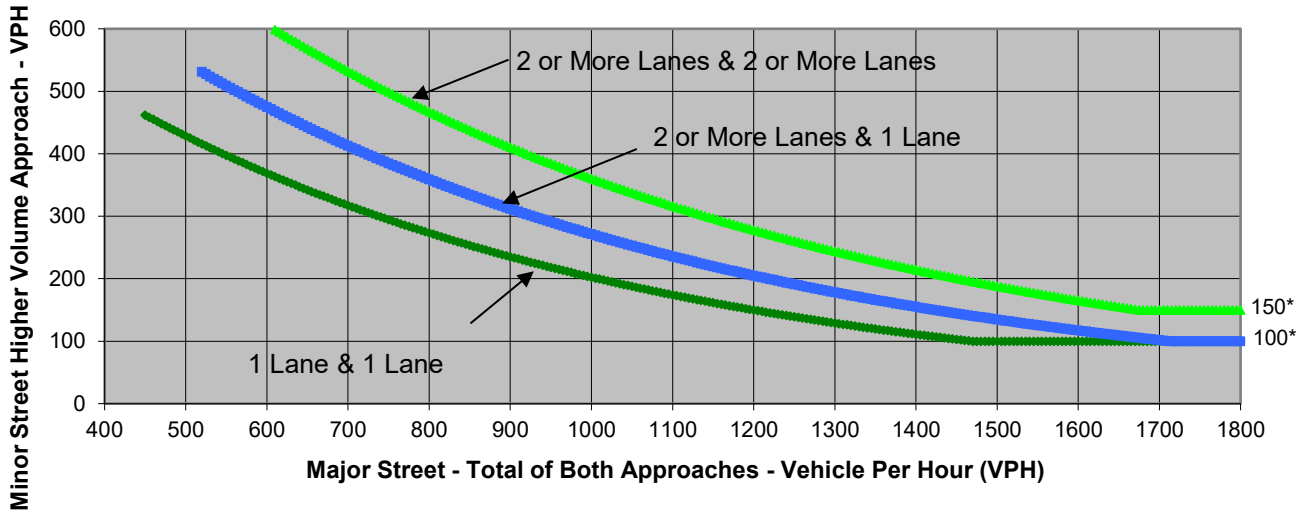
Project	Ontario Ranch Sports Complex
Scenario	CYPP
Peak Hour	PM

Turn Movement Volumes

	NB	SB	EB	WB
Left	70	47	30	36
Through	30	30	1659	1333
Right	57	30	50	56
Total	157	107	1,739	1,425

Major Street Direction

	North/South
x	East/West



* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Riverside Dr	Baker Ave	
Number of Approach Lanes	**2**	**1**	**YES**
Traffic Volume (VPH) *	**3,164**	**157**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

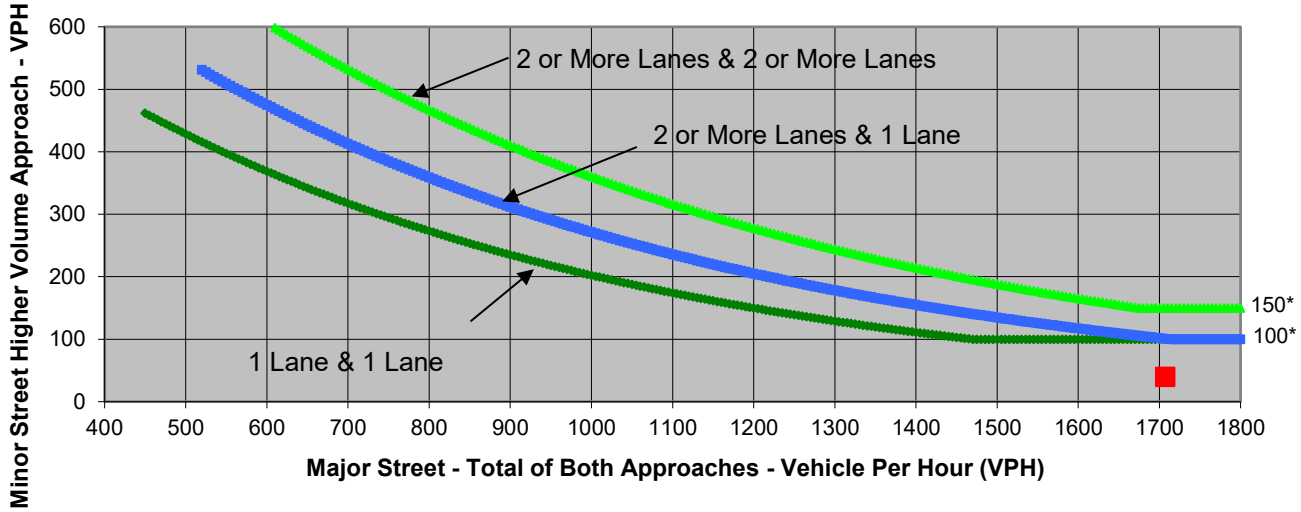
Project	Ontario Ranch Sports Complex
Scenario	OYNP
Peak Hour	PM
Major Street	Riverside Dr
Minor Street	Baker Ave

Turn Movement Volumes

	NB	SB	EB	WB
Left	15	8	18	15
Through	3	3	988	632
Right	22	18	16	38
Total	40	29	1,022	685

Major Street Direction

	North/South
x	East/West



* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Riverside Dr	Baker Ave	
Number of Approach Lanes	**2**	**1**	**NO**
Traffic Volume (VPH) *	**1,707**	**40**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

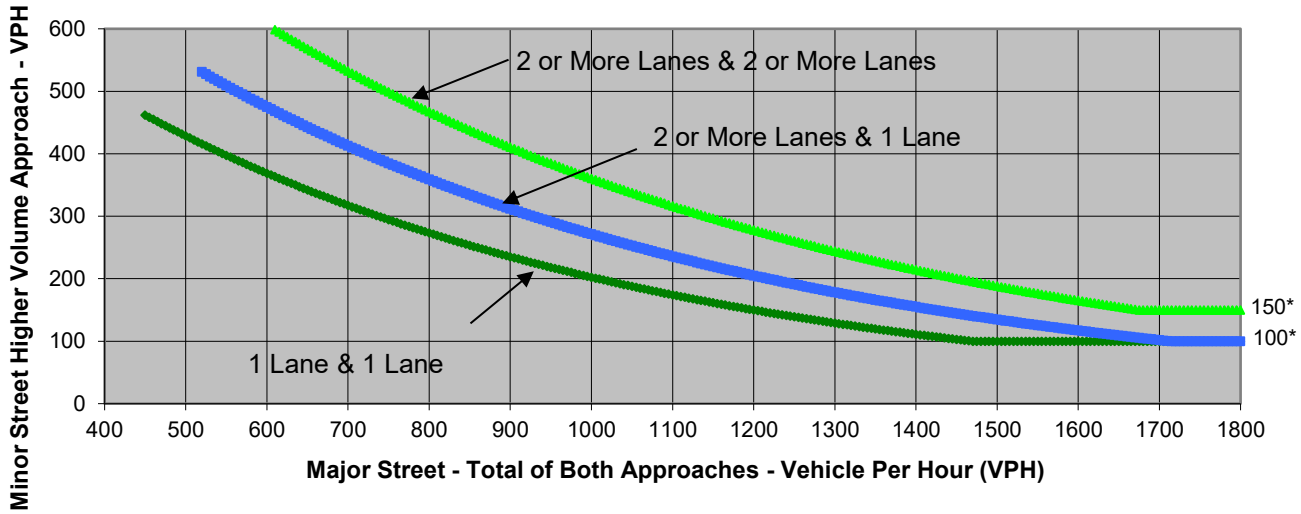
Project	Ontario Ranch Sports Complex
Scenario	OYPP
Peak Hour	PM
Major Street	Riverside Dr
Minor Street	Baker Ave

Turn Movement Volumes

	NB	SB	EB	WB
Left	15	10	18	17
Through	3	3	1105	725
Right	24	18	16	40
Total	42	31	1,139	782

Major Street Direction

	North/South
x	East/West



* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Riverside Dr	Baker Ave	
Number of Approach Lanes	**2**	**1**	**NO**
Traffic Volume (VPH) *	**1,921**	**42**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

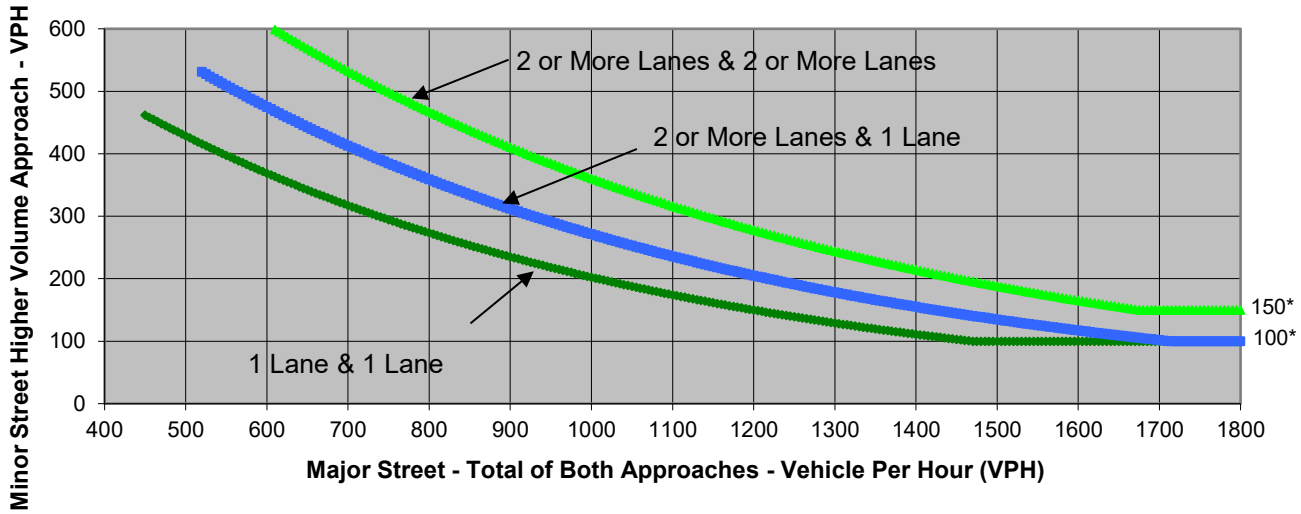
Project	Ontario Ranch Sports Complex
Scenario	CYNP
Peak Hour	AM
Major Street	Riverside
Minor Street	Whispering Lakes Lane

Turn Movement Volumes

	NB	SB	EB	WB
Left	0	30	40	0
Through	0	0	1109	1807
Right	0	30	0	20
Total	0	60	1,149	1,827

Major Street Direction

	North/South
x	East/West



* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Riverside	Whispering Lakes Lane	
Number of Approach Lanes	**2**	**1**	**NO**
Traffic Volume (VPH) *	**2,976**	**60**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

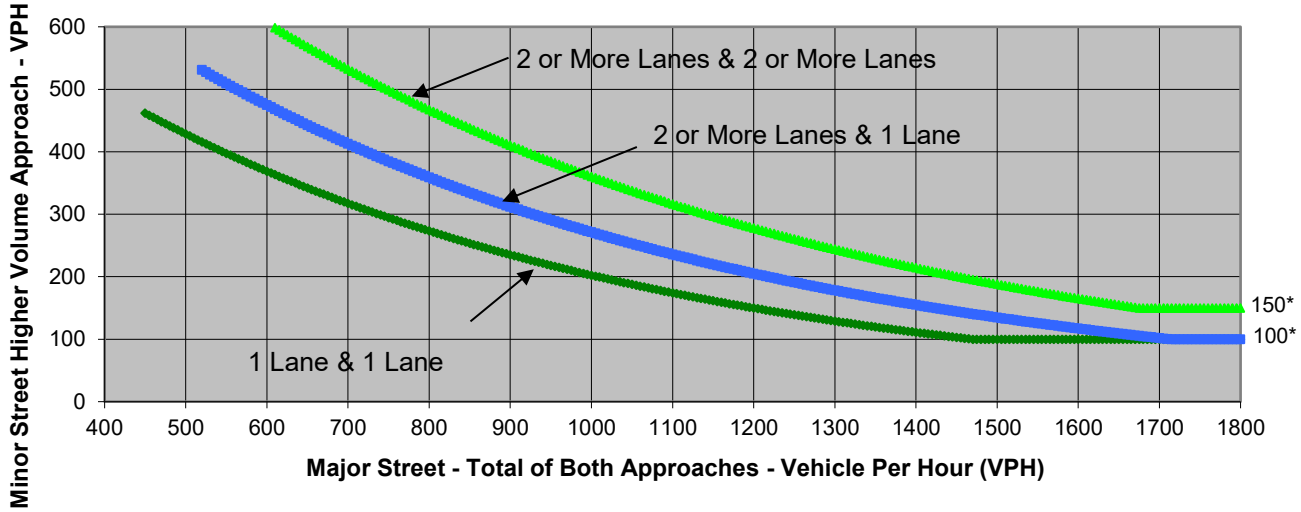
Major Street	Riverside Dr	Project	Ontario Ranch Sports Complex
Minor Street	Whispering Lakes Lane	Scenario	CYPP
		Peak Hour	AM

Turn Movement Volumes

	NB	SB	EB	WB
Left	0	33	30	0
Through	0	0	1168	1900
Right	0	30	0	32
Total	0	63	1,198	1,932

Major Street Direction

	North/South
x	East/West



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Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Riverside Dr	Whispering Lakes Lane	
Number of Approach Lanes	**2**	**1**	**NO**
Traffic Volume (VPH) *	**3,130**	**63**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Major Street	Riverside Dr
Minor Street	Whispering Lakes Lane

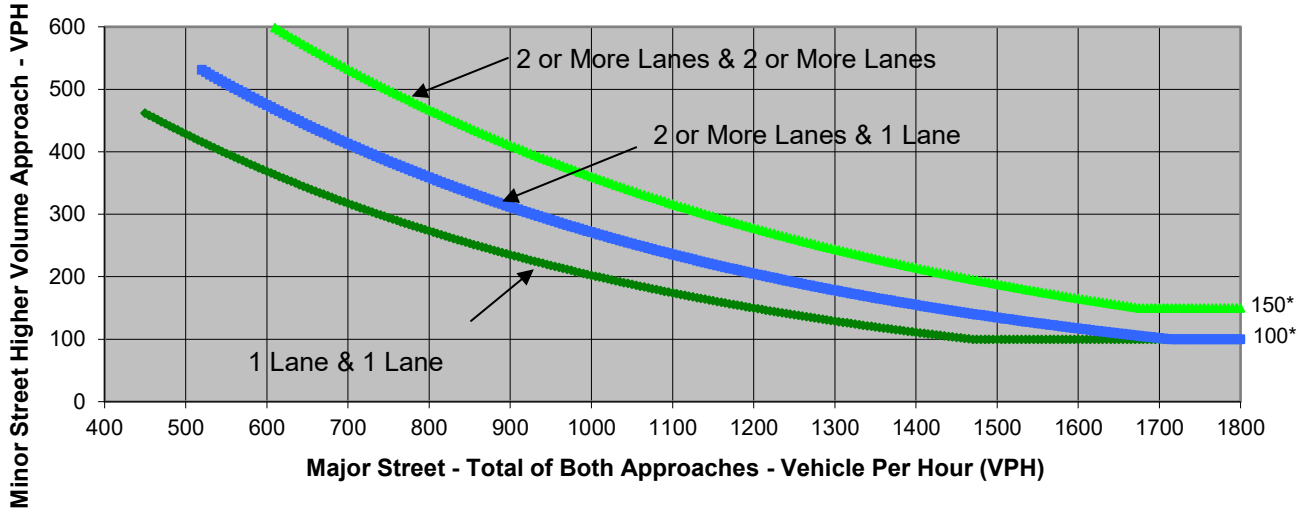
Project	Ontario Ranch Sports Complex
Scenario	OYNP
Peak Hour	AM

Turn Movement Volumes

	NB	SB	EB	WB
Left	0	17	14	0
Through	0	0	842	1188
Right	0	18	0	18
Total	0	35	856	1,206

Major Street Direction

	North/South
x	East/West



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Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Riverside Dr	Whispering Lakes Lane	
Number of Approach Lanes	**2**	**1**	**NO**
Traffic Volume (VPH) *	**2,062**	**35**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

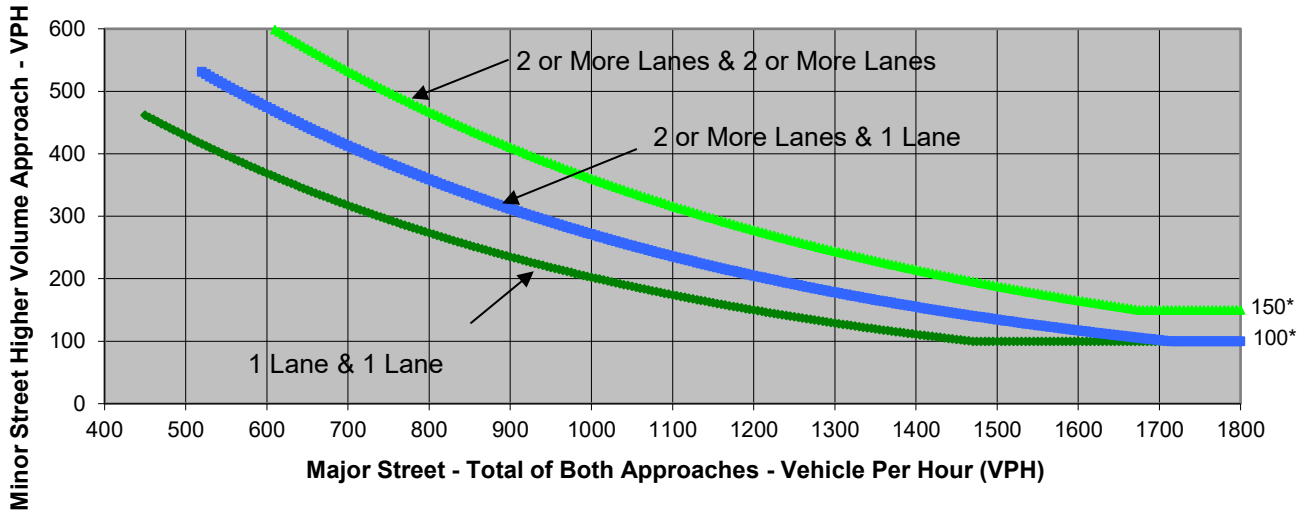
Project	Ontario Ranch Sports Complex
Scenario	OYPP
Peak Hour	AM
Major Street	Riverside Dr
Minor Street	Whispering Lakes Lane

Turn Movement Volumes

	NB	SB	EB	WB
Left	0	18	14	0
Through	0	0	923	1239
Right	0	18	0	19
Total	0	36	937	1,258

Major Street Direction

	North/South
x	East/West



* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Riverside Dr	Whispering Lakes Lane	
Number of Approach Lanes	**2**	**1**	**NO**
Traffic Volume (VPH) *	**2,195**	**36**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

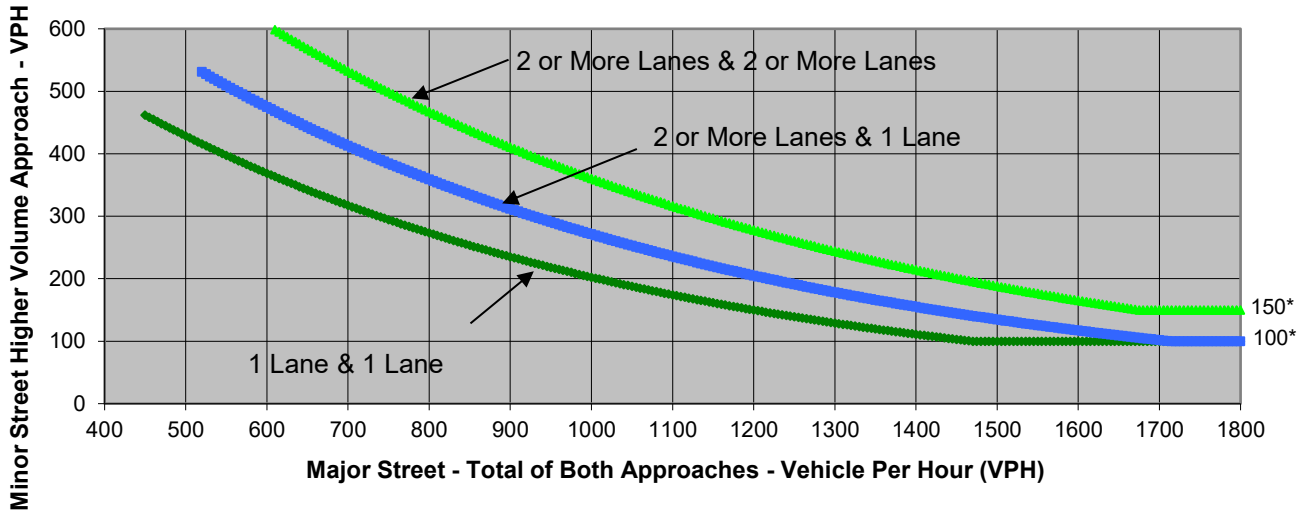
Project	Ontario Ranch Sports Complex
Scenario	CYNP
Peak Hour	PM
Major Street	Riverside
Minor Street	Whispering Lakes Lane

Turn Movement Volumes

	NB	SB	EB	WB
Left	0	50	30	0
Through	0	0	1401	1496
Right	0	40	0	30
Total	0	90	1,431	1,526

Major Street Direction

	North/South
x	East/West



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Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Riverside	Whispering Lakes Lane	
Number of Approach Lanes	**2**	**1**	**NO**
Traffic Volume (VPH) *	**2,957**	**90**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

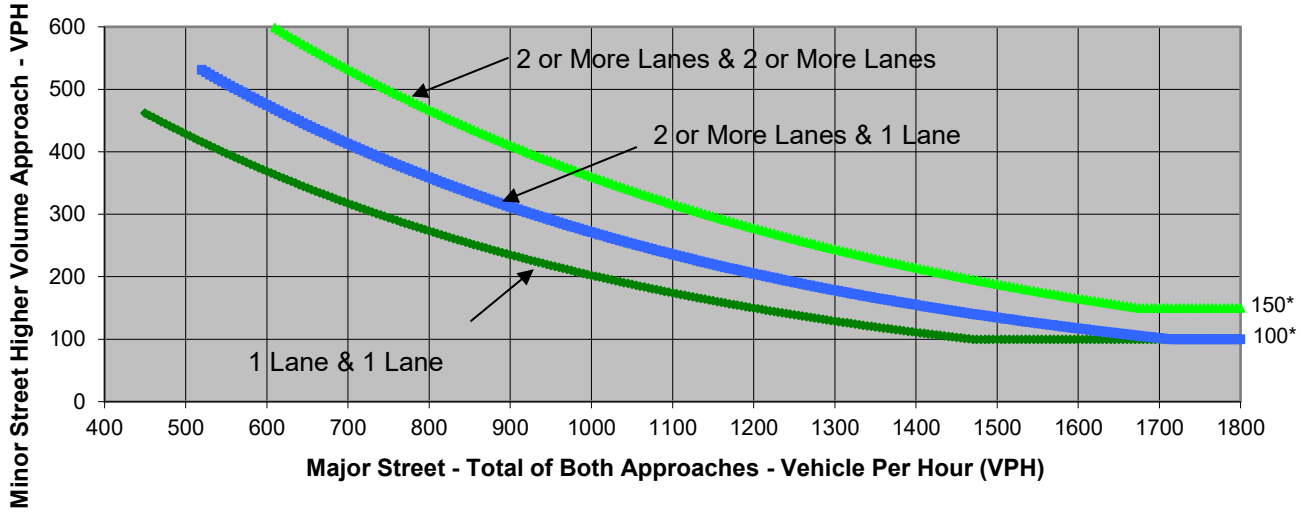
Project	Ontario Ranch Sports Complex
Scenario	CYPP
Peak Hour	PM
Major Street	Riverside Dr
Minor Street	Whispering Lakes Lane

Turn Movement Volumes

	NB	SB	EB	WB
Left	0	56	30	0
Through	0	0	1731	1631
Right	0	41	0	35
Total	0	97	1,761	1,666

Major Street Direction

	North/South
x	East/West



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Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Riverside Dr	Whispering Lakes Lane	
Number of Approach Lanes	**2**	**1**	**NO**
Traffic Volume (VPH) *	**3,427**	**97**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

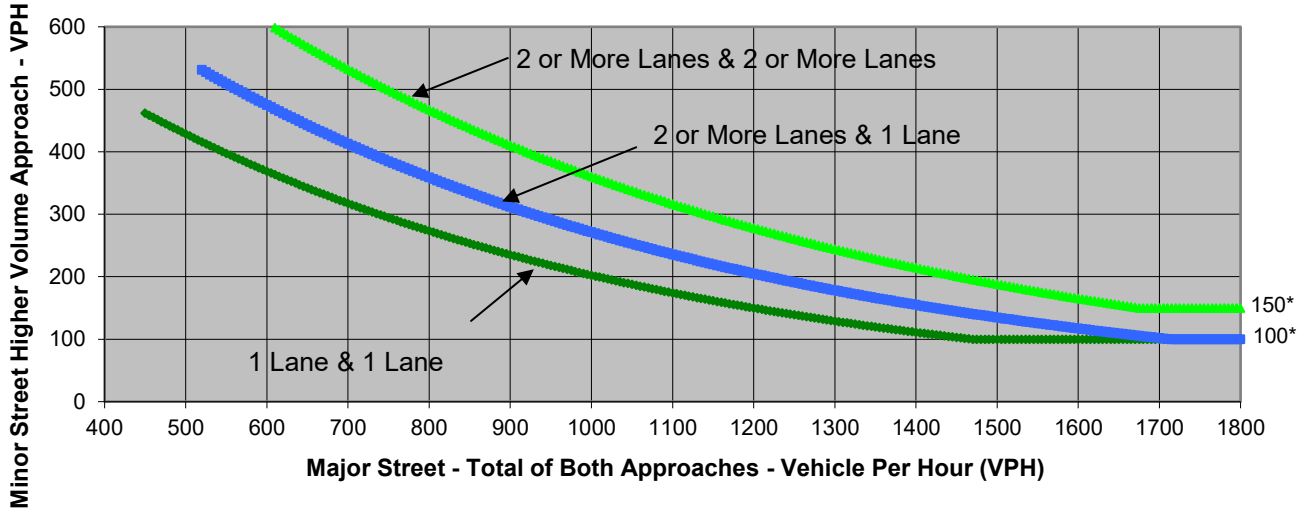
Major Street	Riverside Dr	Project	Ontario Ranch Sports Complex
Minor Street	Whispering Lakes Lane	Scenario	OYNP
		Peak Hour	PM

Turn Movement Volumes

	NB	SB	EB	WB
Left	0	32	14	0
Through	0	0	1366	793
Right	0	11	0	28
Total	0	43	1,380	821

Major Street Direction

	North/South
x	East/West



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Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Riverside Dr	Whispering Lakes Lane	
Number of Approach Lanes	**2**	**1**	**NO**
Traffic Volume (VPH) *	**2,201**	**43**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

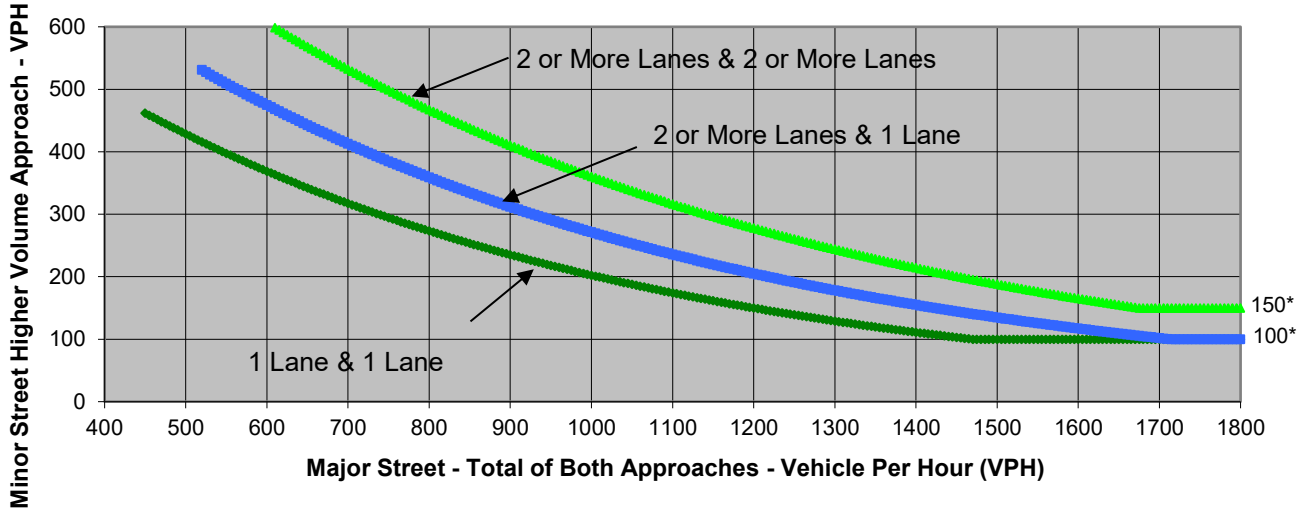
Project	Ontario Ranch Sports Complex
Major Street	Riverside Dr
Minor Street	Whispering Lakes Lane
Scenario	OYPP
Peak Hour	PM

Turn Movement Volumes

	NB	SB	EB	WB
Left	0	34	14	0
Through	0	0	1586	973
Right	0	11	0	30
Total	0	45	1,600	1,003

Major Street Direction

	North/South
x	East/West



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Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Riverside Dr	Whispering Lakes Lane	
Number of Approach Lanes	**2**	**1**	**NO**
Traffic Volume (VPH) *	**2,603**	**45**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

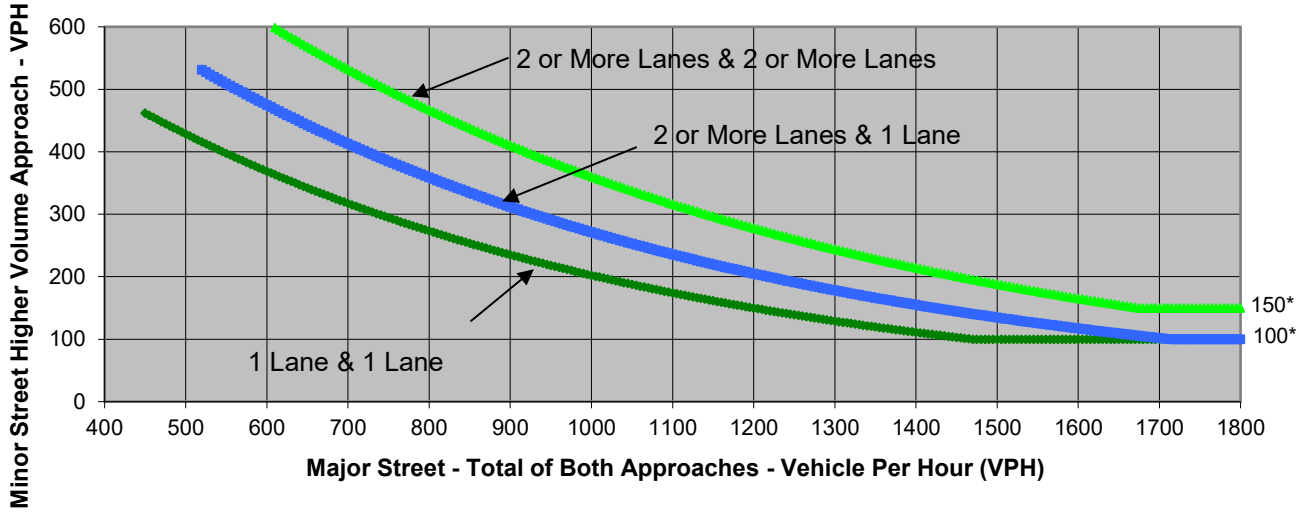
Major Street	Riverside Dr	Project	Ontario Ranch Sports Complex
Minor Street	Whispering Lakes Golf Course/Street A	Scenario	CYPP
		Peak Hour	AM

Turn Movement Volumes

	NB	SB	EB	WB
Left	27	30	30	23
Through	0	0	1128	1874
Right	18	30	43	30
Total	45	60	1,201	1,927

Major Street Direction

	North/South
x	East/West



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Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Riverside Dr	Whispering Lakes Golf Course/Street A	
Number of Approach Lanes	**2**	**1**	**NO**
Traffic Volume (VPH) *	**3,128**	**60**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

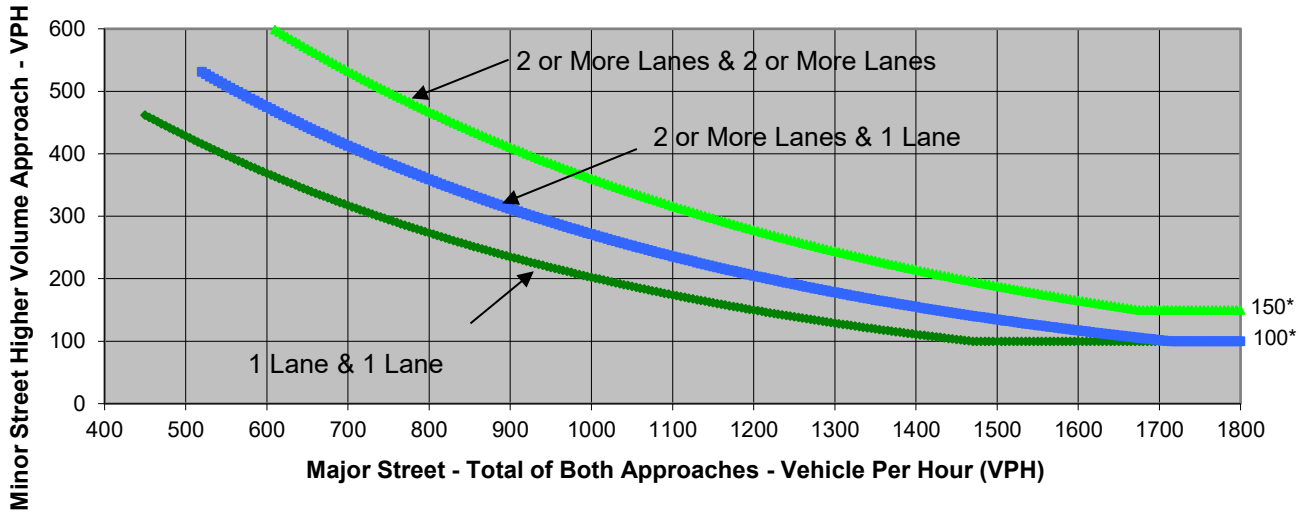
Major Street	Riverside Dr	Project	Ontario Ranch Sports Complex
Minor Street	Whispering Lakes Golf Course/Street A	Scenario	OYPP
		Peak Hour	AM

Turn Movement Volumes

	NB	SB	EB	WB
Left	25	2	29	22
Through	0	0	844	1241
Right	20	2	42	15
Total	45	4	915	1,278

Major Street Direction

	North/South
x	East/West



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Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Riverside Dr	Whispering Lakes Golf Course/Street A	
Number of Approach Lanes	**2**	**1**	**NO**
Traffic Volume (VPH) *	**2,193**	**45**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

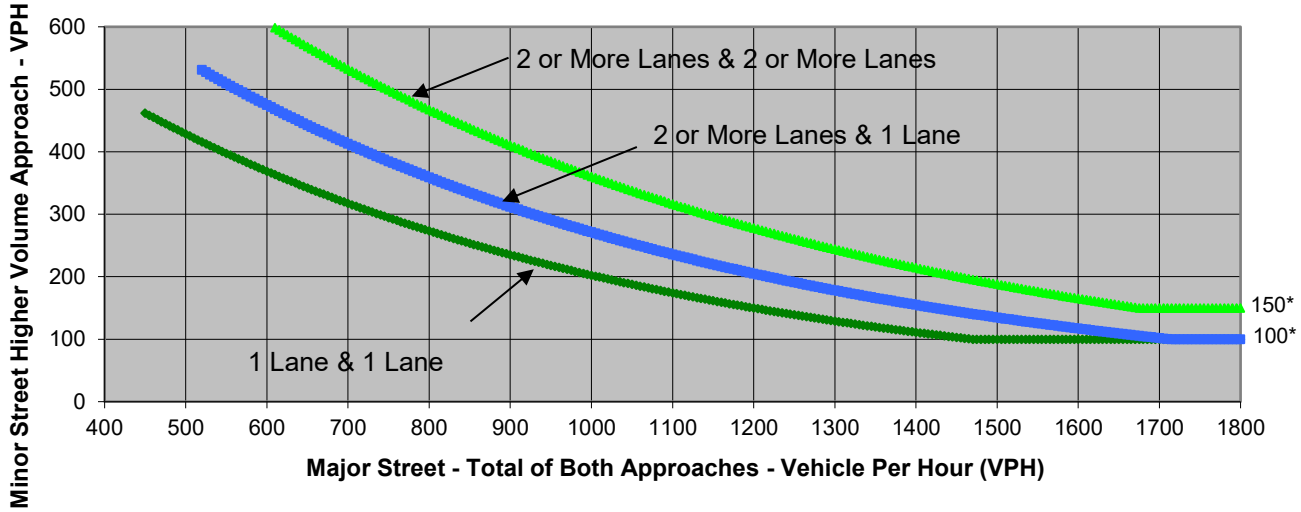
Major Street	Riverside Dr	Project	Ontario Ranch Sports Complex
Minor Street	Whispering Lakes Golf Course/Street A	Scenario	CYPP
		Peak Hour	PM

Turn Movement Volumes

	NB	SB	EB	WB
Left	97	30	30	92
Through	0	0	1616	1539
Right	71	30	151	30
Total	168	60	1,797	1,661

Major Street Direction

	North/South
x	East/West



* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Riverside Dr	Whispering Lakes Golf Course/Street A	
Number of Approach Lanes	**2**	**1**	**YES**
Traffic Volume (VPH) *	**3,458**	**168**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

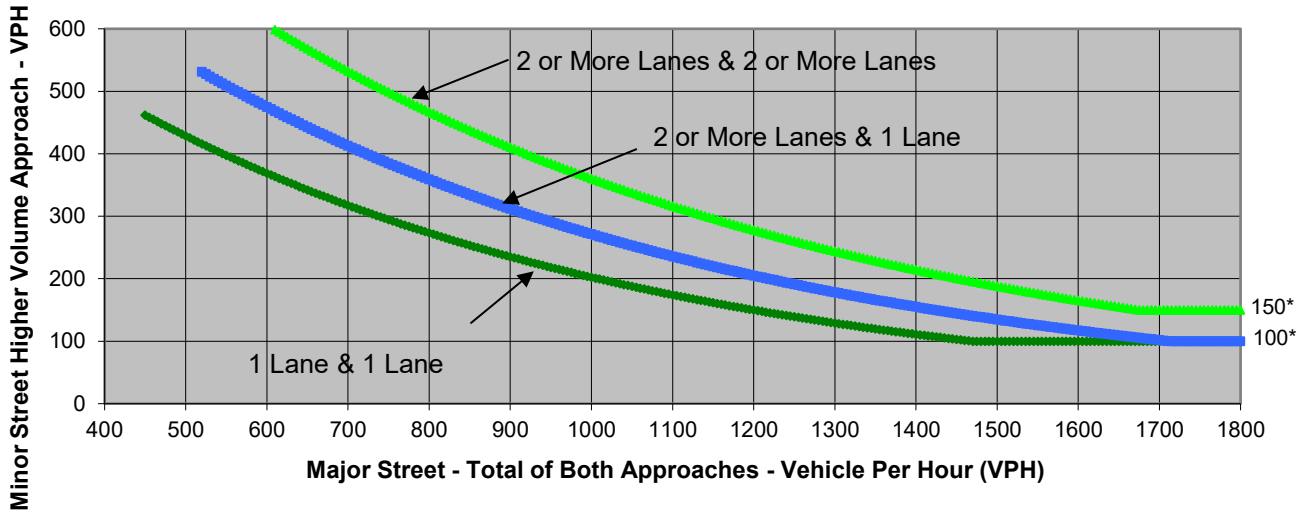
Major Street	Riverside Dr	Project	Ontario Ranch Sports Complex
Minor Street	Whispering Lakes Golf Course/Street A	Scenario	OYPP
		Peak Hour	PM

Turn Movement Volumes

	NB	SB	EB	WB
Left	92	12	6	89
Through	0	0	1483	892
Right	79	18	133	11
Total	171	30	1,622	992

Major Street Direction

	North/South
x	East/West



* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Riverside Dr	Whispering Lakes Golf Course/Street A	
Number of Approach Lanes	**2**	**1**	**YES**
Traffic Volume (VPH) *	**2,614**	**171**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

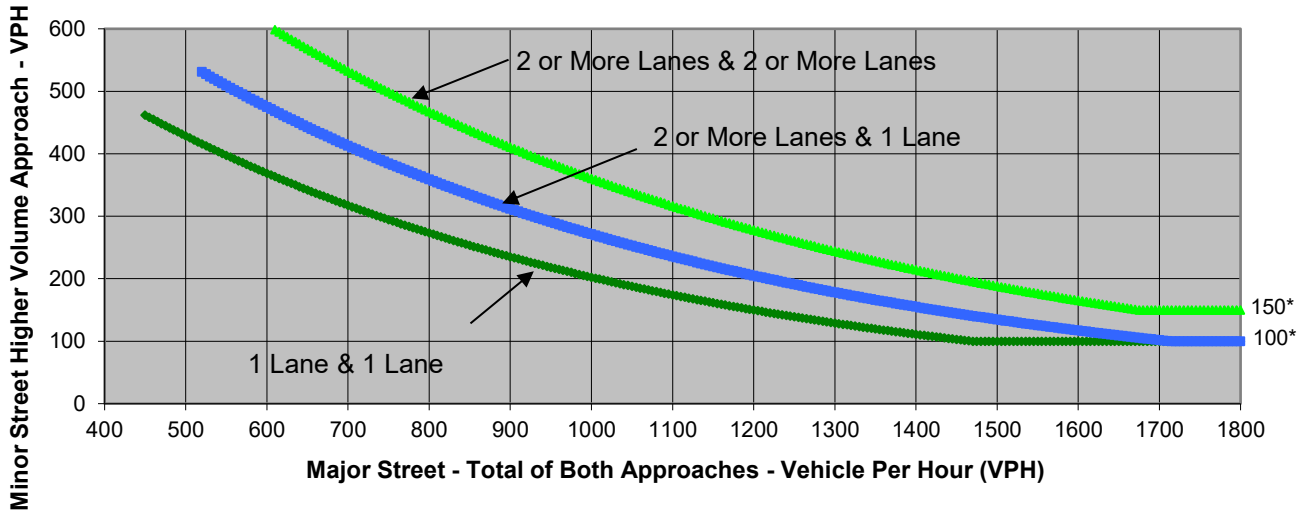
Major Street	Riverside Dr	Project	Ontario Ranch Sports Complex
Minor Street	Whispering Lakes Golf Course/Street A	Scenario	OYPP
		Peak Hour	Weekend MD

Turn Movement Volumes

	NB	SB	EB	WB
Left	213	10	10	146
Through	0	0	1383	833
Right	149	20	204	10
Total	362	30	1,597	989

Major Street Direction

	North/South
x	East/West



* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Riverside Dr	Whispering Lakes Golf Course/Street A	
Number of Approach Lanes	**2**	**1**	**YES**
Traffic Volume (VPH) *	**2,586**	**362**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

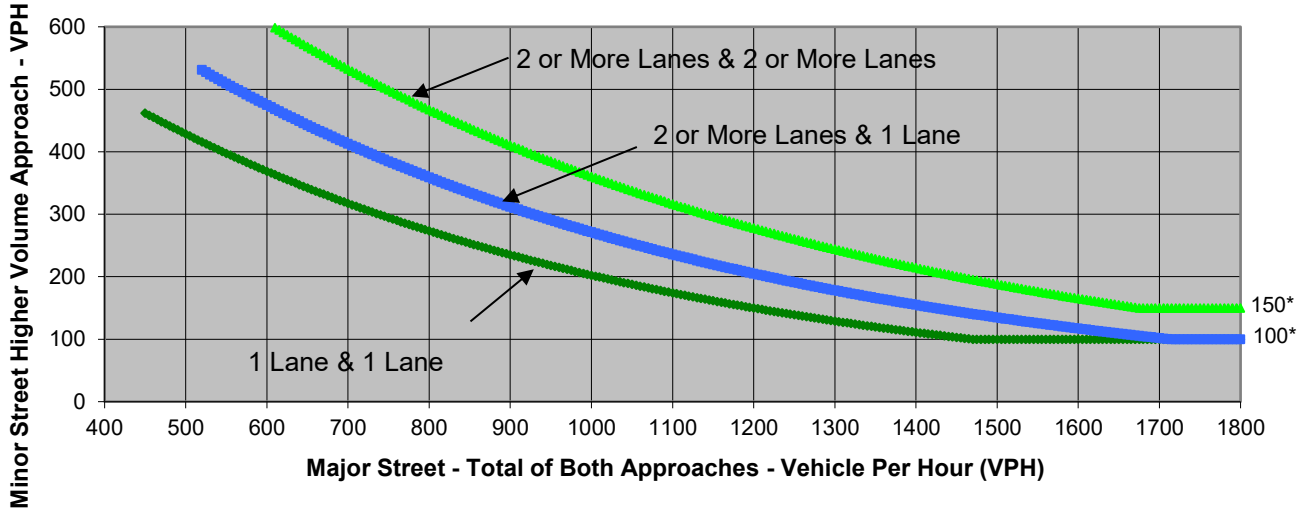
Major Street	Riverside Dr	Project	Ontario Ranch Sports Complex
Minor Street	Whispering Lakes Golf Course/Street A	Scenario	OYPP
		Peak Hour	PM

Turn Movement Volumes

	NB	SB	EB	WB
Left	211	10	0	158
Through	0	0	1255	760
Right	161	10	213	10
Total	372	20	1,468	928

Major Street Direction

	North/South
x	East/West



* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Riverside Dr	Whispering Lakes Golf Course/Street A	
Number of Approach Lanes	**2**	**1**	**YES**
Traffic Volume (VPH) *	**2,396**	**372**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

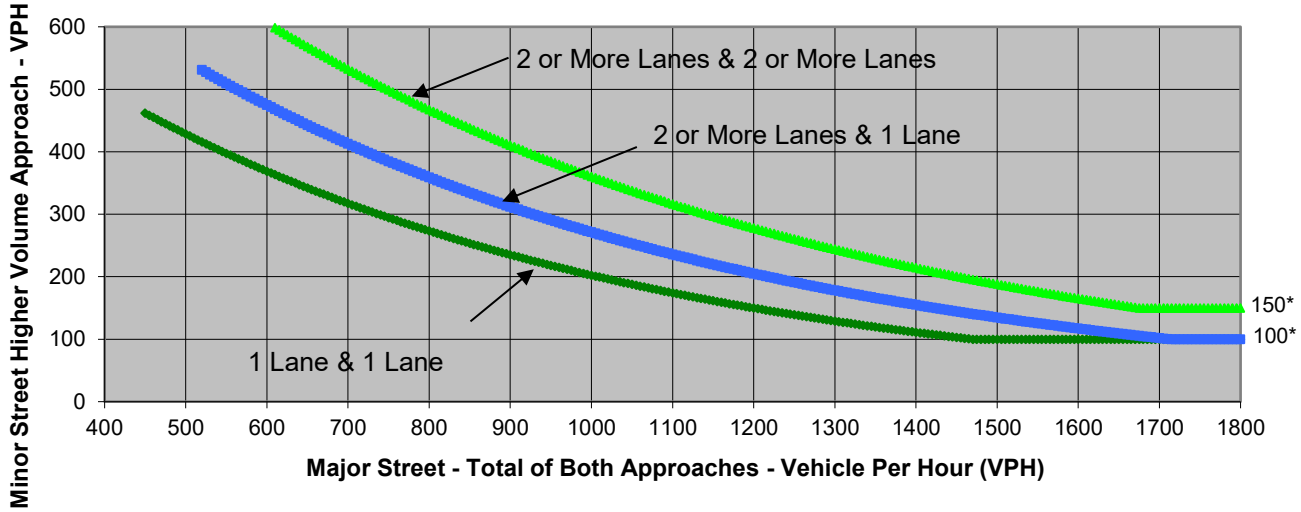
Project	Ontario Ranch Sports Complex
Scenario	CYNP
Peak Hour	AM
Major Street	Riverside
Minor Street	Ontario

Turn Movement Volumes

	NB	SB	EB	WB
Left	140	0	0	80
Through	0	0	1109	1687
Right	80	0	30	0
Total	220	0	1,139	1,767

Major Street Direction

	North/South
x	East/West



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Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Riverside	Ontario	
Number of Approach Lanes	**2**	**2**	**YES**
Traffic Volume (VPH) *	**2,906**	**220**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

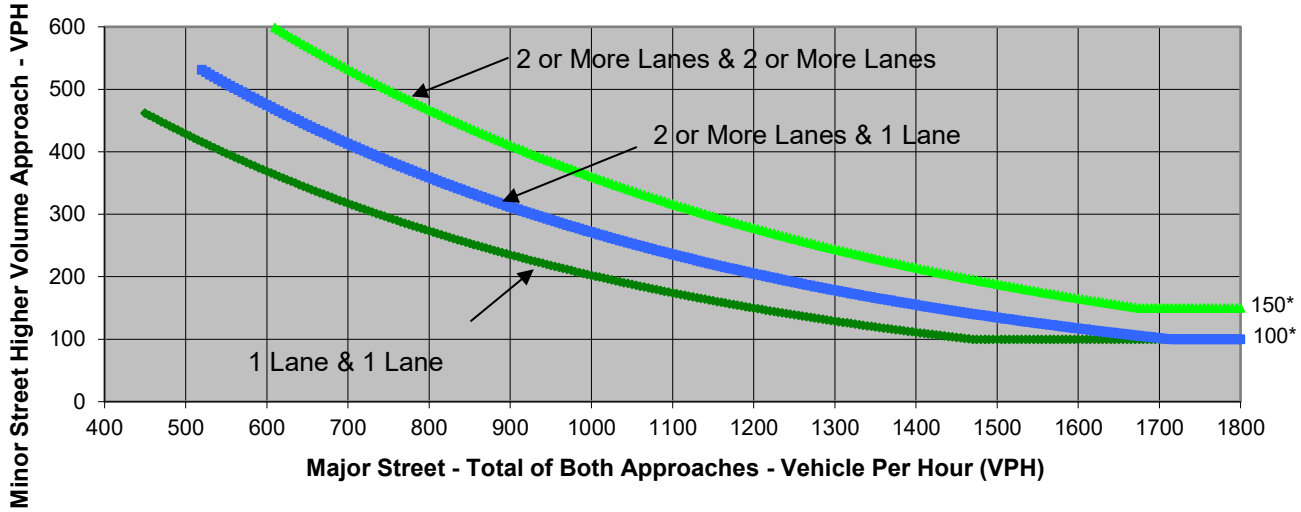
Project	Ontario Ranch Sports Complex
Scenario	CYPP
Peak Hour	AM
Major Street	Riverside Dr
Minor Street	Ontario Ave

Turn Movement Volumes

	NB	SB	EB	WB
Left	59	0	0	121
Through	0	0	1102	1868
Right	84	0	74	0
Total	143	0	1,176	1,989

Major Street Direction

	North/South
x	East/West



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Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Riverside Dr	Ontario Ave	
Number of Approach Lanes	**2**	**1**	**YES**
Traffic Volume (VPH) *	**3,165**	**143**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Major Street	Riverside Dr
Minor Street	Ontario Ave

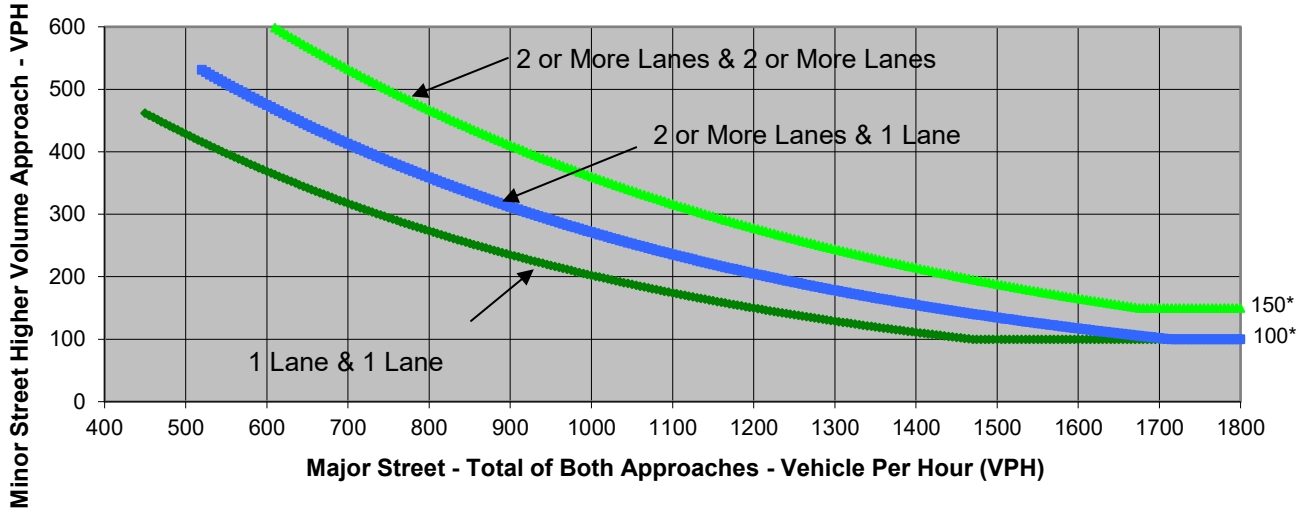
Project	Ontario Ranch Sports Complex
Scenario	OYNP
Peak Hour	AM

Turn Movement Volumes

	NB	SB	EB	WB
Left	35	0	0	17
Through	0	0	802	1178
Right	19	0	29	0
Total	54	0	831	1,195

Major Street Direction

	North/South
x	East/West



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Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Riverside Dr	Ontario Ave	
Number of Approach Lanes	**2**	**1**	**NO**
Traffic Volume (VPH) *	**2,026**	**54**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

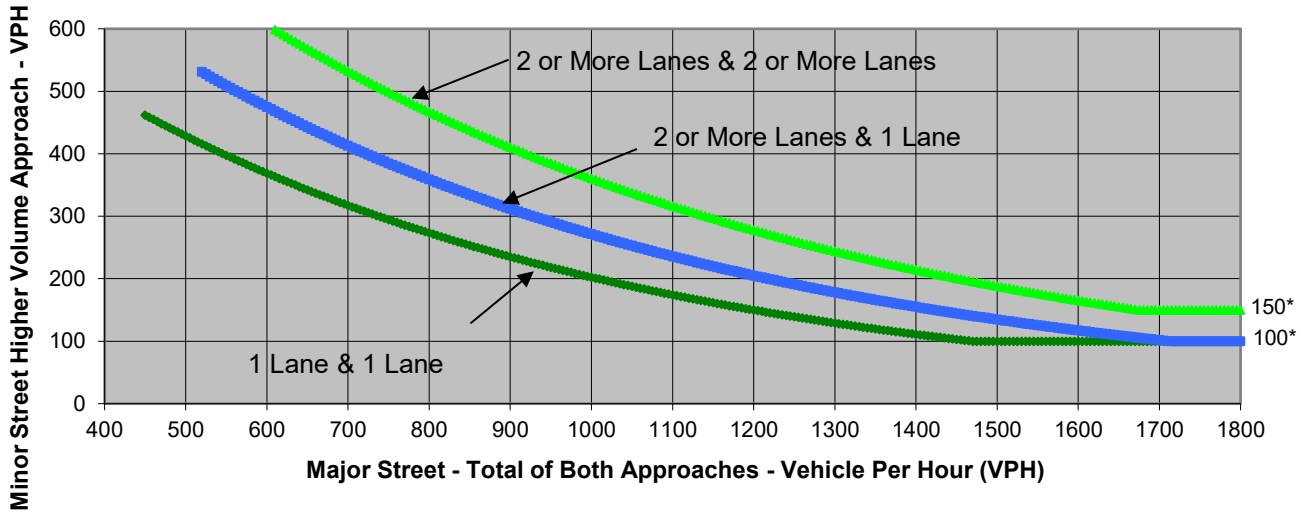
Project	Ontario Ranch Sports Complex
Scenario	OYPP
Peak Hour	AM
Major Street	Riverside Dr
Minor Street	Ontario Ave

Turn Movement Volumes

	NB	SB	EB	WB
Left	60	0	0	110
Through	0	0	824	1201
Right	71	0	67	0
Total	131	0	891	1,311

Major Street Direction

	North/South
x	East/West



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Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Riverside Dr	Ontario Ave	
Number of Approach Lanes	**2**	**1**	**YES**
Traffic Volume (VPH) *	**2,202**	**131**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

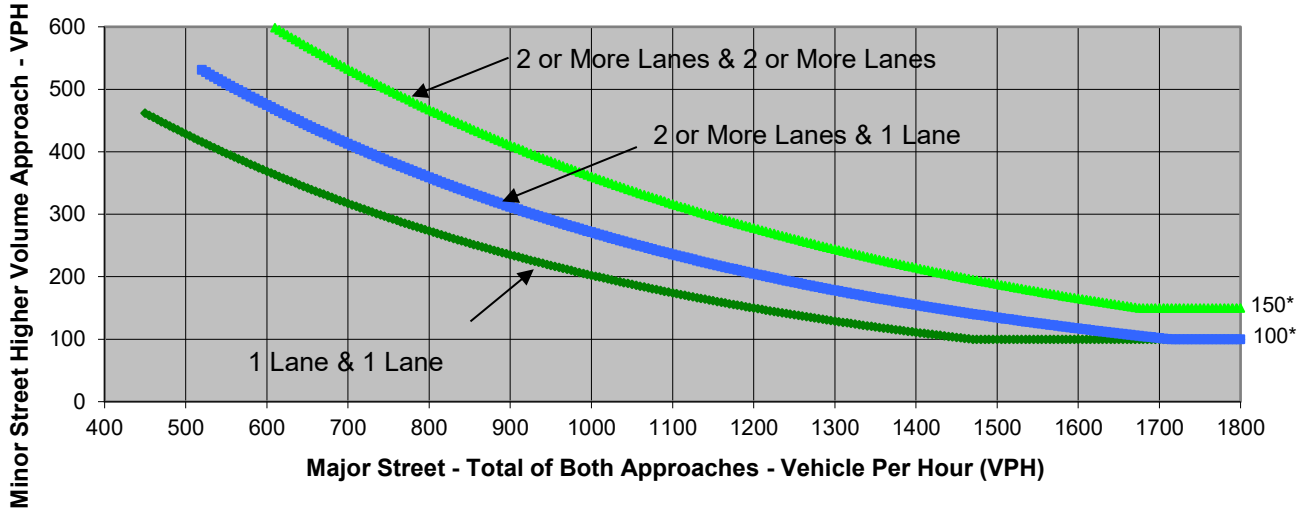
Project	Ontario Ranch Sports Complex
Scenario	CYNP
Peak Hour	PM
Major Street	Riverside
Minor Street	Ontario

Turn Movement Volumes

	NB	SB	EB	WB
Left	50	0	0	210
Through	0	0	1311	1476
Right	60	0	140	0
Total	110	0	1,451	1,686

Major Street Direction

	North/South
x	East/West



* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Riverside	Ontario	
Number of Approach Lanes	**2**	**2**	**NO**
Traffic Volume (VPH) *	**3,137**	**110**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

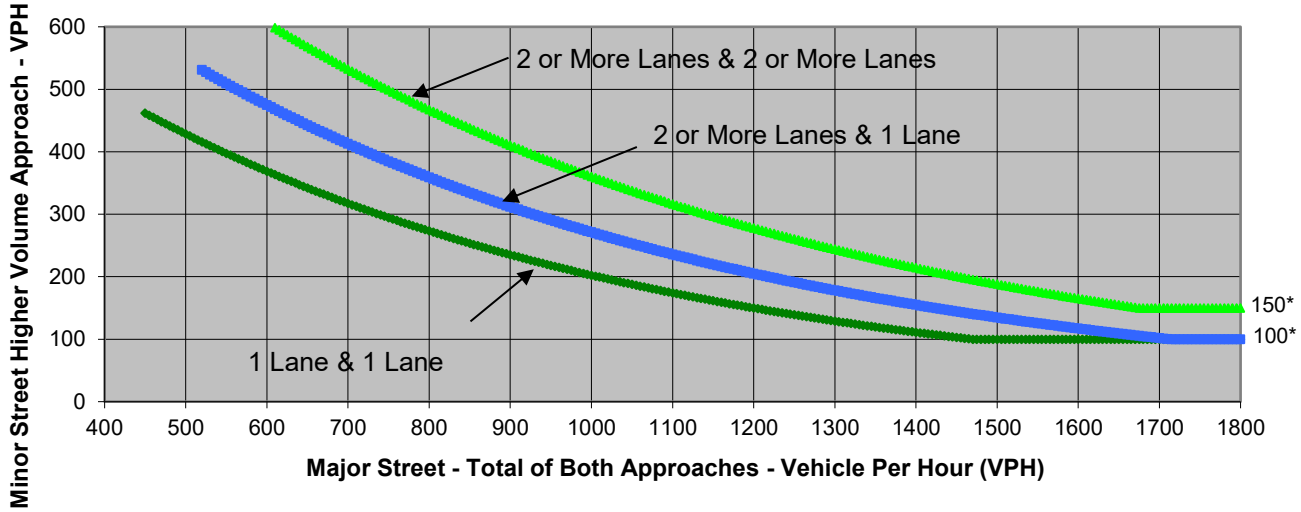
Project	Ontario Ranch Sports Complex
Scenario	CYPP
Peak Hour	PM
Major Street	Riverside Dr
Minor Street	Ontario Ave

Turn Movement Volumes

	NB	SB	EB	WB
Left	122	0	0	198
Through	0	0	1570	1538
Right	168	0	148	0
Total	290	0	1,718	1,736

Major Street Direction

	North/South
x	East/West



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Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Riverside Dr	Ontario Ave	
Number of Approach Lanes	**2**	**1**	**YES**
Traffic Volume (VPH) *	**3,454**	**290**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Major Street	Riverside Dr
Minor Street	Ontario Ave

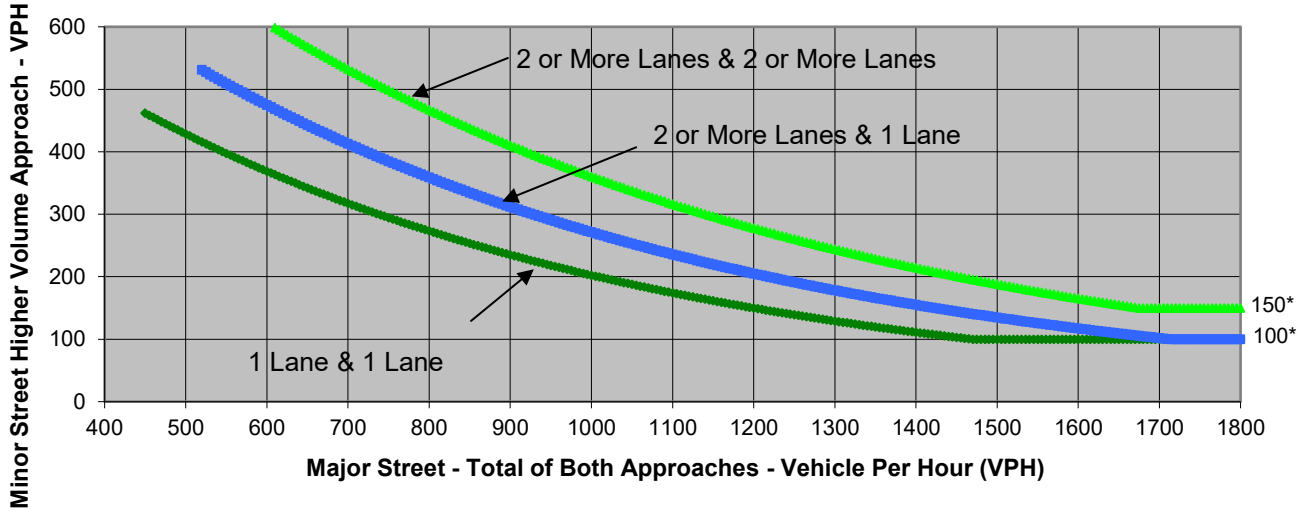
Project	Ontario Ranch Sports Complex
Scenario	OYNP
Peak Hour	PM

Turn Movement Volumes

	NB	SB	EB	WB
Left	27	0	0	12
Through	0	0	1358	786
Right	13	0	48	0
Total	40	0	1,406	798

Major Street Direction

	North/South
x	East/West



* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Riverside Dr	Ontario Ave	
Number of Approach Lanes	**2**	**1**	**NO**
Traffic Volume (VPH) *	**2,204**	**40**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Major Street	Riverside Dr
Minor Street	Ontario Ave

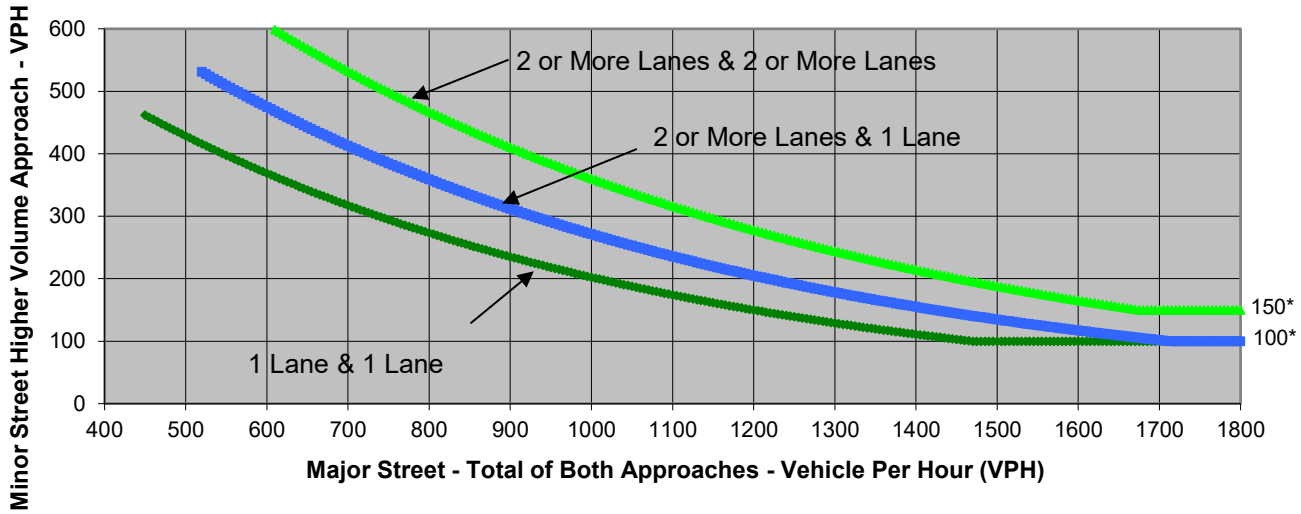
Project	Ontario Ranch Sports Complex
Scenario	OYPP
Peak Hour	PM

Turn Movement Volumes

	NB	SB	EB	WB
Left	110	0	0	181
Through	0	0	1440	882
Right	149	0	134	0
Total	259	0	1,574	1,063

Major Street Direction

	North/South
x	East/West



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Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Riverside Dr	Ontario Ave	
Number of Approach Lanes	**2**	**1**	**YES**
Traffic Volume (VPH) *	**2,637**	**259**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Major Street	Riverside Dr
Minor Street	Ontario Ave

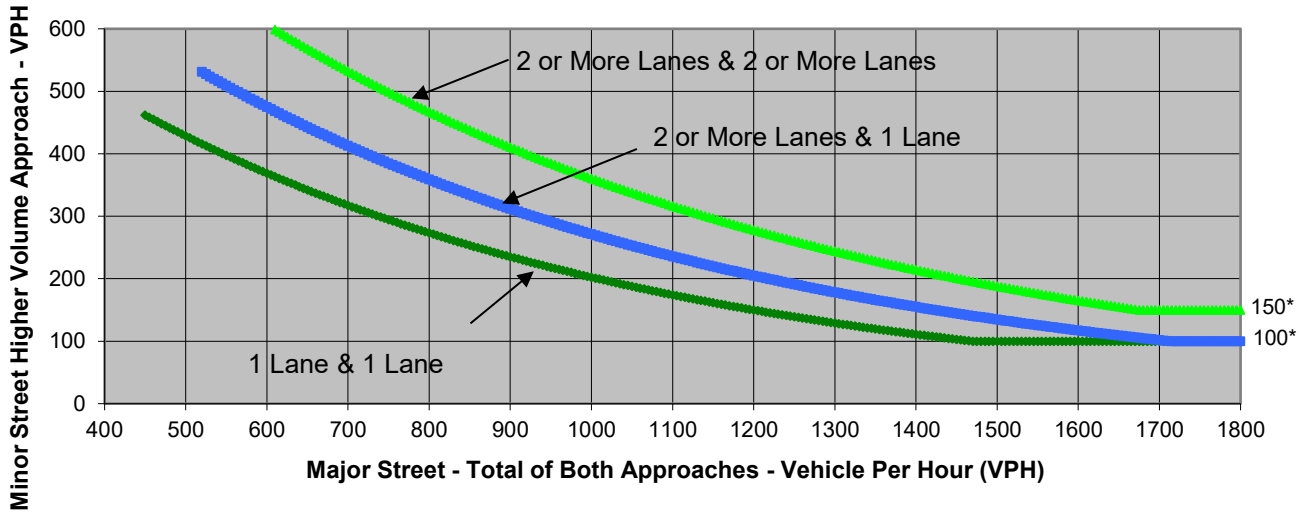
Project	Ontario Ranch Sports Complex
Scenario	OYNP
Peak Hour	Weekend MD

Turn Movement Volumes

	NB	SB	EB	WB
Left	20	0	0	10
Through	0	0	1220	710
Right	10	0	40	0
Total	30	0	1,260	720

Major Street Direction

	North/South
x	East/West



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Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Riverside Dr	Ontario Ave	
Number of Approach Lanes	**2**	**1**	**NO**
Traffic Volume (VPH) *	**1,980**	**30**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

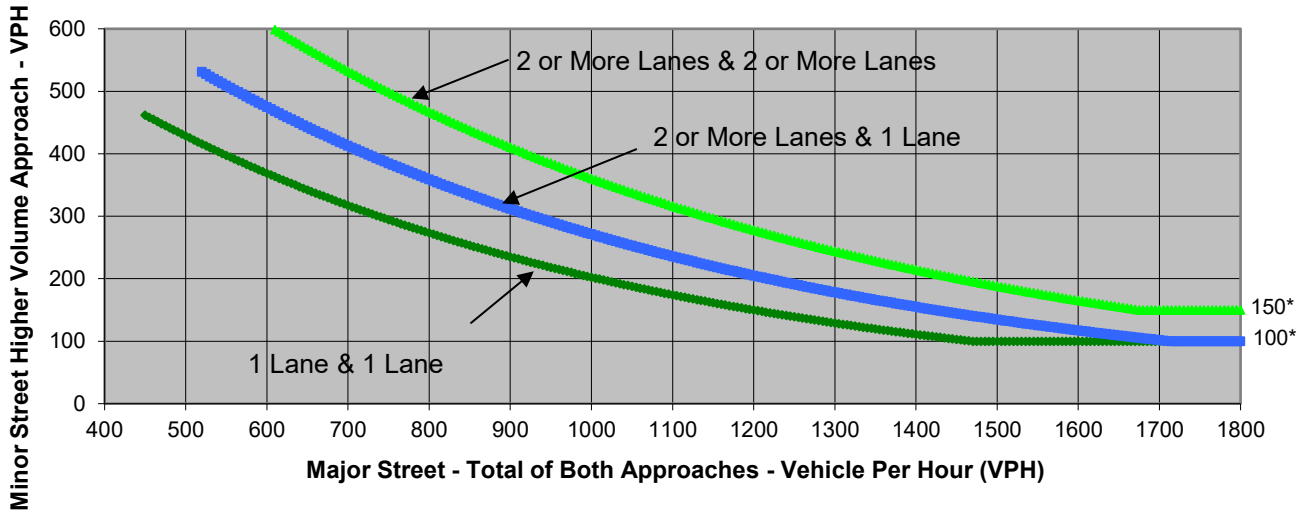
Major Street	Riverside Dr	Project	Ontario Ranch Sports Complex
Minor Street	Ontario Ave	Scenario	OYPP
		Peak Hour	Weekend MD

Turn Movement Volumes

	NB	SB	EB	WB
Left	120	0	0	217
Through	0	0	1384	868
Right	215	0	159	0
Total	335	0	1,543	1,085

Major Street Direction

	North/South
x	East/West



* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Riverside Dr	Ontario Ave	
Number of Approach Lanes	**2**	**1**	**YES**
Traffic Volume (VPH) *	**2,628**	**335**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Major Street	Riverside Dr
Minor Street	Ontario Ave

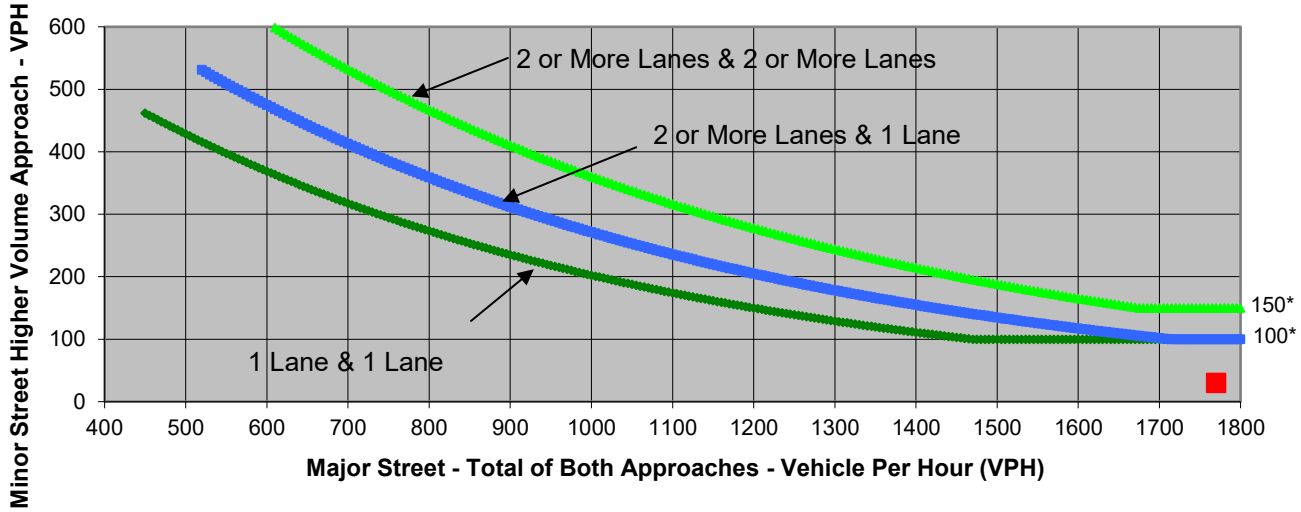
Project	Ontario Ranch Sports Complex
Scenario	OYNP
Peak Hour	Weekend PM

Turn Movement Volumes

	NB	SB	EB	WB
Left	20	0	0	10
Through	0	0	1090	630
Right	10	0	40	0
Total	30	0	1,130	640

Major Street Direction

	North/South
x	East/West



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Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Riverside Dr	Ontario Ave	
Number of Approach Lanes	**2**	**1**	**NO**
Traffic Volume (VPH) *	**1,770**	**30**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

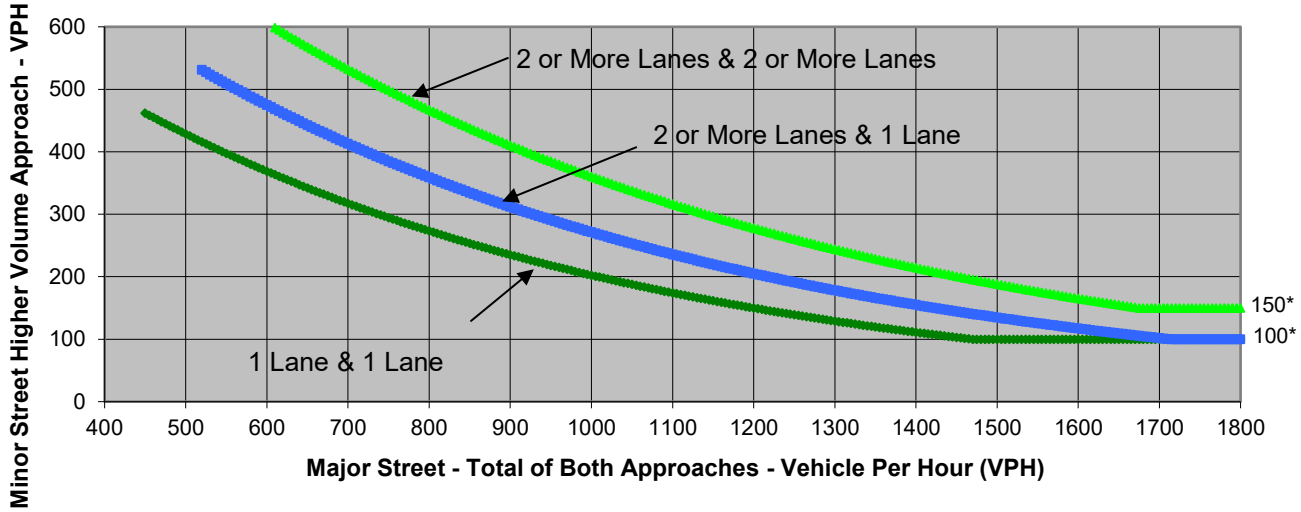
Major Street	Riverside Dr	Project	Ontario Ranch Sports Complex
Minor Street	Ontario Ave	Scenario	OYPP
		Peak Hour	Weekend PM

Turn Movement Volumes

	NB	SB	EB	WB
Left	130	0	0	209
Through	0	0	1261	797
Right	214	0	164	0
Total	344	0	1,425	1,006

Major Street Direction

	North/South
x	East/West



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Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Riverside Dr	Ontario Ave	
Number of Approach Lanes	**2**	**1**	**YES**
Traffic Volume (VPH) *	**2,431**	**344**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Major Street	Chino Ave
Minor Street	Grove Ave

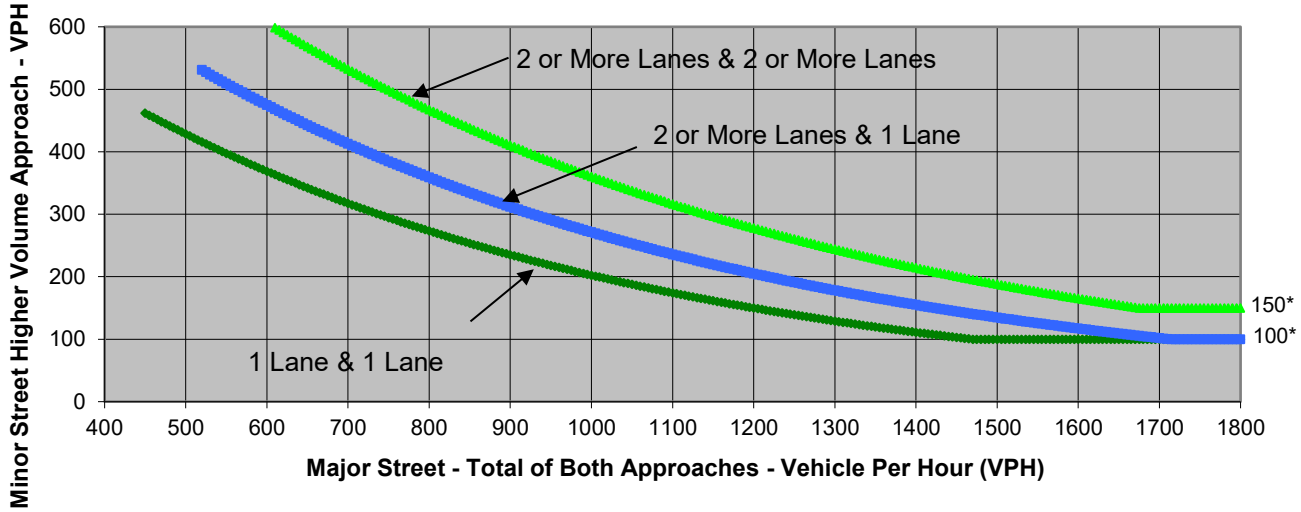
Project	Ontario Ranch Sports Complex
Scenario	CYNP
Peak Hour	AM

Turn Movement Volumes

	NB	SB	EB	WB
Left	70	70	170	140
Through	590	260	790	1170
Right	80	60	120	30
Total	740	390	1,080	1,340

Major Street Direction

	North/South
x	East/West



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Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Chino Ave	Grove Ave	
Number of Approach Lanes	**2**	**2**	**YES**
Traffic Volume (VPH) *	**2,420**	**740**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Major Street	Chino Ave
Minor Street	Grove Ave

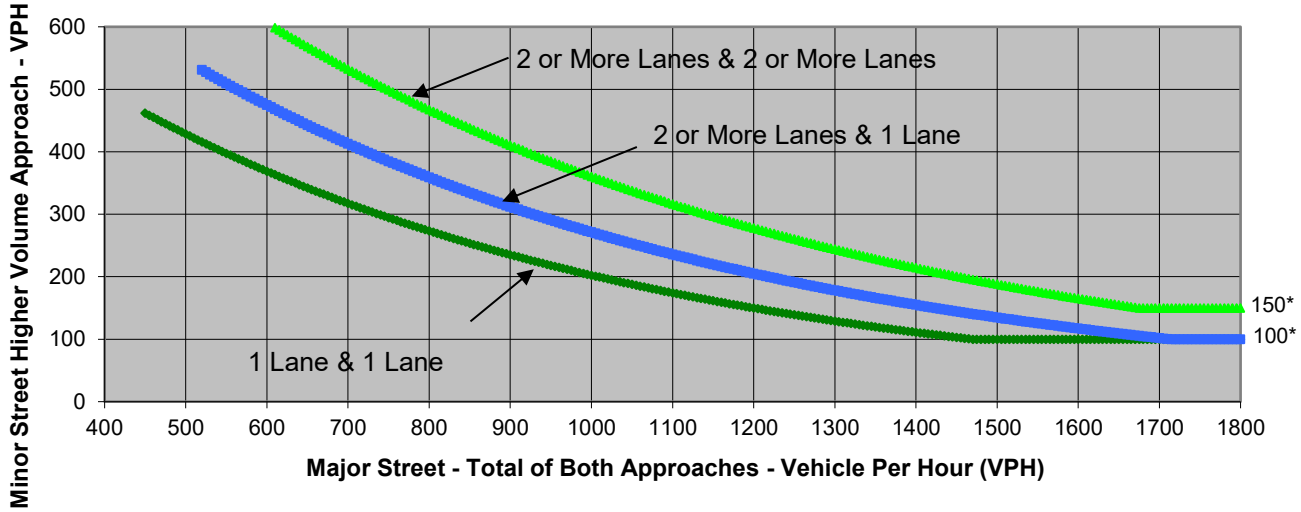
Project	Ontario Ranch Sports Complex
Scenario	CYPP
Peak Hour	AM

Turn Movement Volumes

	NB	SB	EB	WB
Left	70	75	170	92
Through	601	241	820	1201
Right	74	60	120	34
Total	745	376	1,110	1,327

Major Street Direction

	North/South
x	East/West



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Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Chino Ave	Grove Ave	
Number of Approach Lanes	**2**	**2**	**YES**
Traffic Volume (VPH) *	**2,437**	**745**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Major Street	Chino Ave
Minor Street	Grove Ave

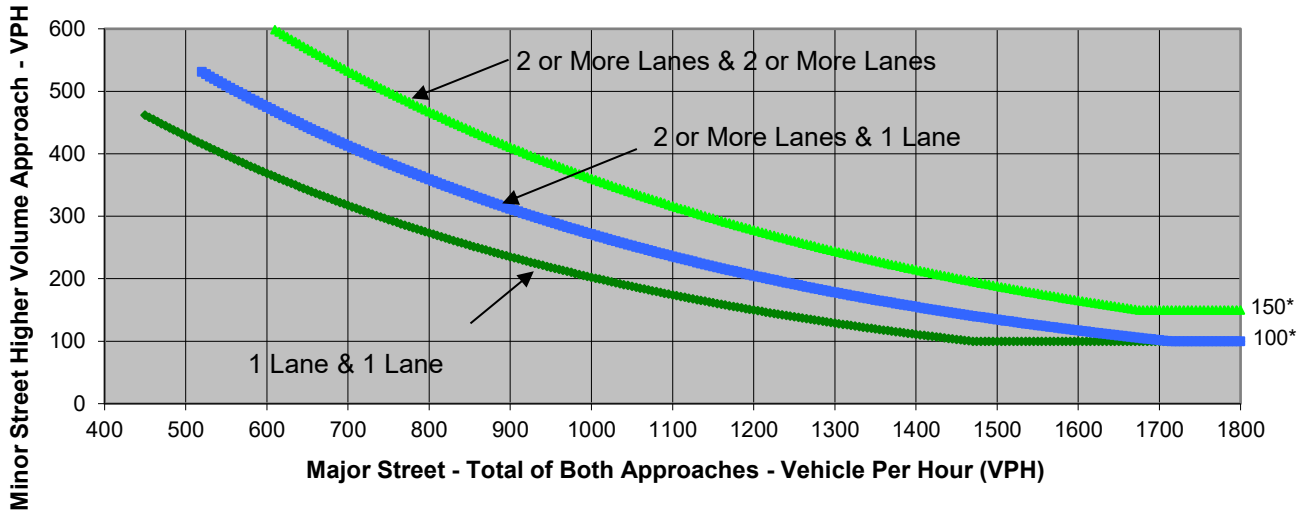
Project	Ontario Ranch Sports Complex
Scenario	OYNP
Peak Hour	AM

Turn Movement Volumes

	NB	SB	EB	WB
Left	0	0	0	0
Through	9	36	5	7
Right	0	0	0	0
Total	9	36	5	7

Major Street Direction

	North/South
x	East/West



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Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Chino Ave	Grove Ave	
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**12**	**36**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Major Street	Chino Ave
Minor Street	Grove Ave

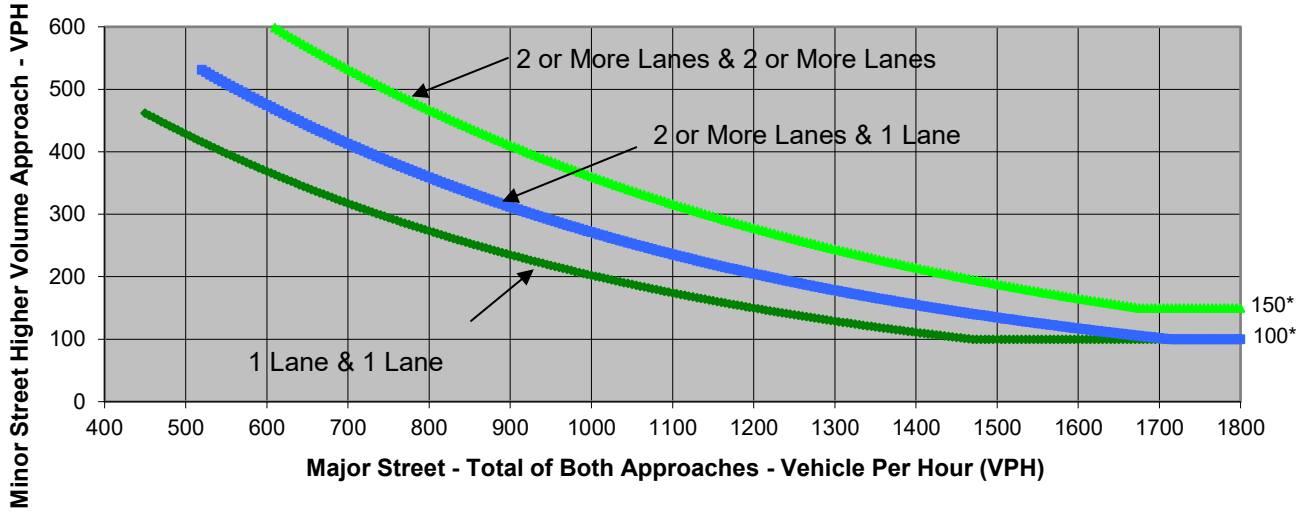
Project	Ontario Ranch Sports Complex
Scenario	OYPP
Peak Hour	AM

Turn Movement Volumes

	NB	SB	EB	WB
Left	0	3	0	4
Through	10	37	37	29
Right	6	0	0	2
Total	16	40	37	35

Major Street Direction

	North/South
x	East/West



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Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Chino Ave	Grove Ave	
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**72**	**40**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Major Street	Chino Ave
Minor Street	Grove Ave

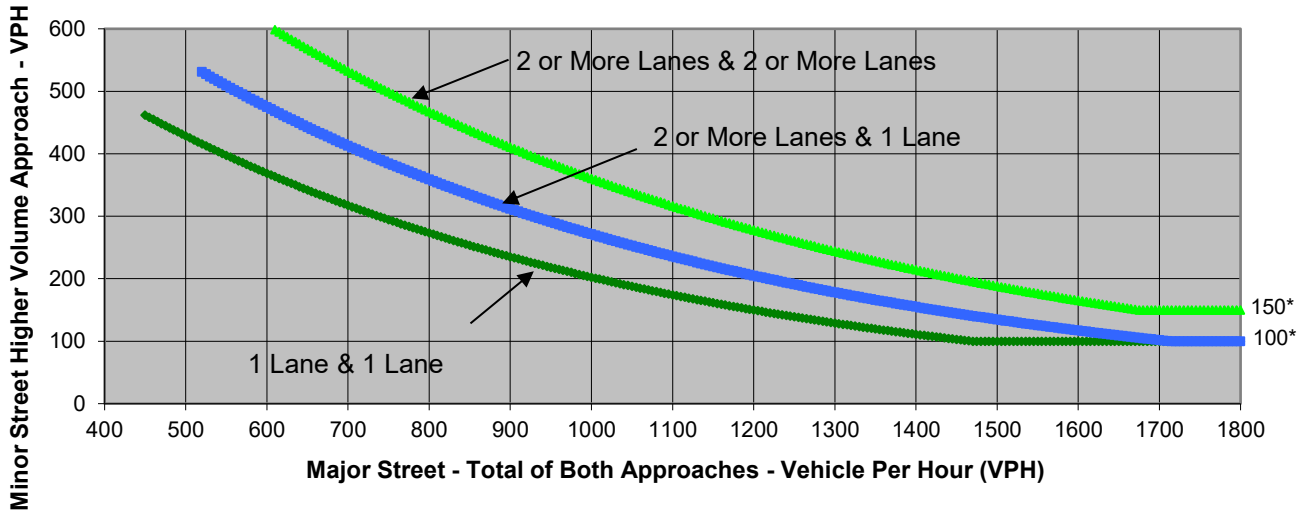
Project	Ontario Ranch Sports Complex
Scenario	CYNP
Peak Hour	PM

Turn Movement Volumes

	NB	SB	EB	WB
Left	100	120	70	230
Through	280	520	980	670
Right	170	180	90	90
Total	550	820	1,140	990

Major Street Direction

	North/South
x	East/West



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Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Chino Ave	Grove Ave	
Number of Approach Lanes	**2**	**2**	**YES**
Traffic Volume (VPH) *	**2,130**	**820**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Major Street	Chino Ave
Minor Street	Grove Ave

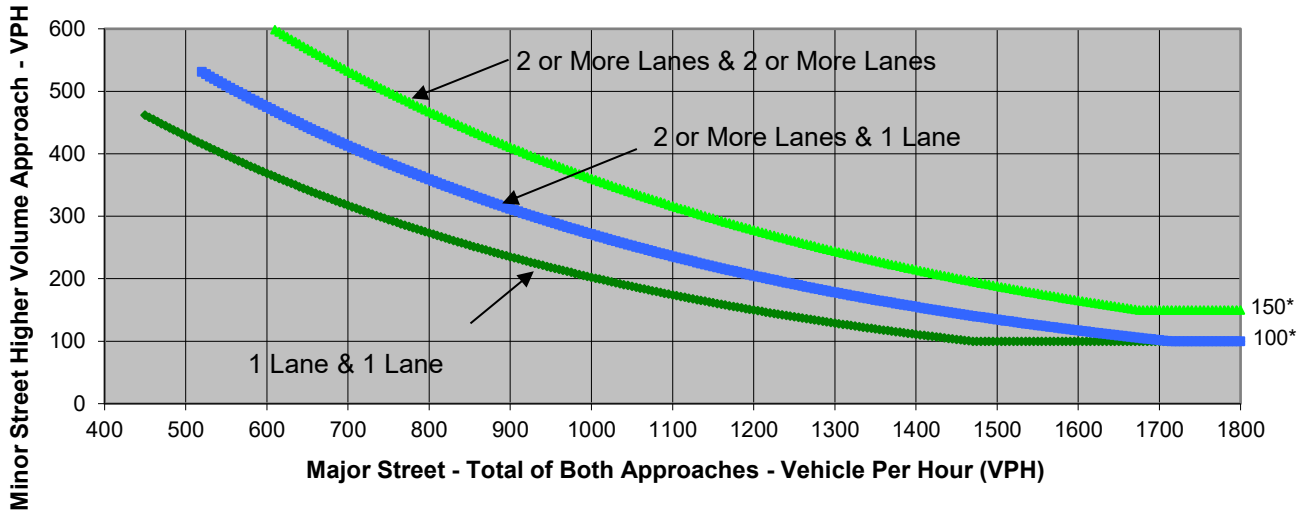
Project	Ontario Ranch Sports Complex
Scenario	CYPP
Peak Hour	PM

Turn Movement Volumes

	NB	SB	EB	WB
Left	100	136	70	246
Through	293	533	1037	709
Right	160	180	90	97
Total	553	849	1,197	1,052

Major Street Direction

	North/South
x	East/West



* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Chino Ave	Grove Ave	
Number of Approach Lanes	**2**	**2**	**YES**
Traffic Volume (VPH) *	**2,249**	**849**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Major Street	Chino Ave
Minor Street	Grove Ave

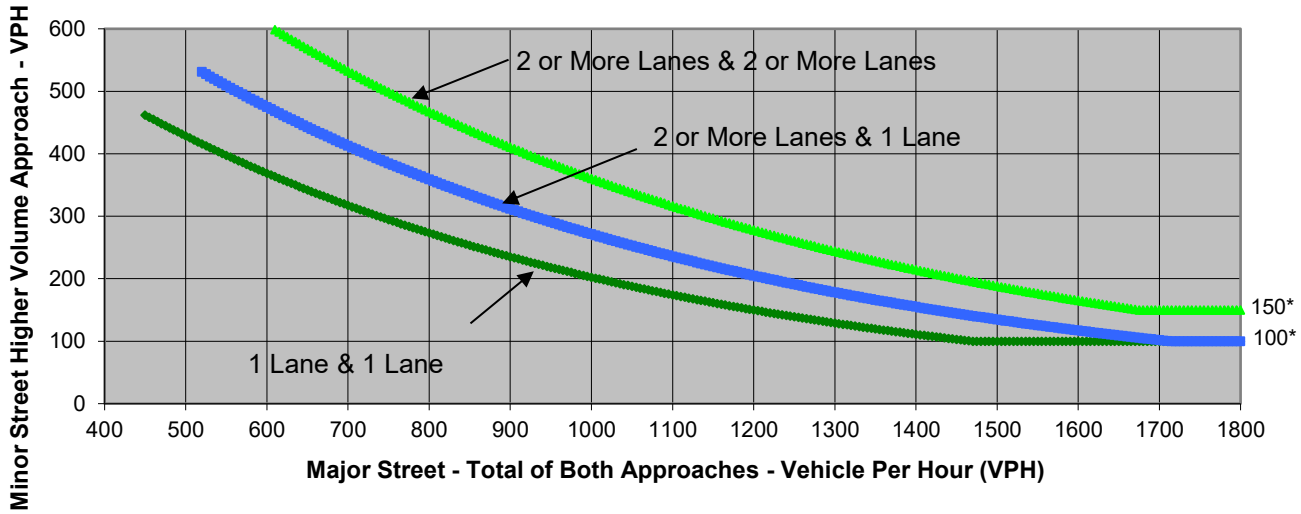
Project	Ontario Ranch Sports Complex
Scenario	OYNP
Peak Hour	PM

Turn Movement Volumes

	NB	SB	EB	WB
Left	0	0	0	0
Through	38	13	15	15
Right	0	0	0	0
Total	38	13	15	15

Major Street Direction

	North/South
x	East/West



* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Chino Ave	Grove Ave	
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**30**	**38**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Major Street	Chino Ave
Minor Street	Grove Ave

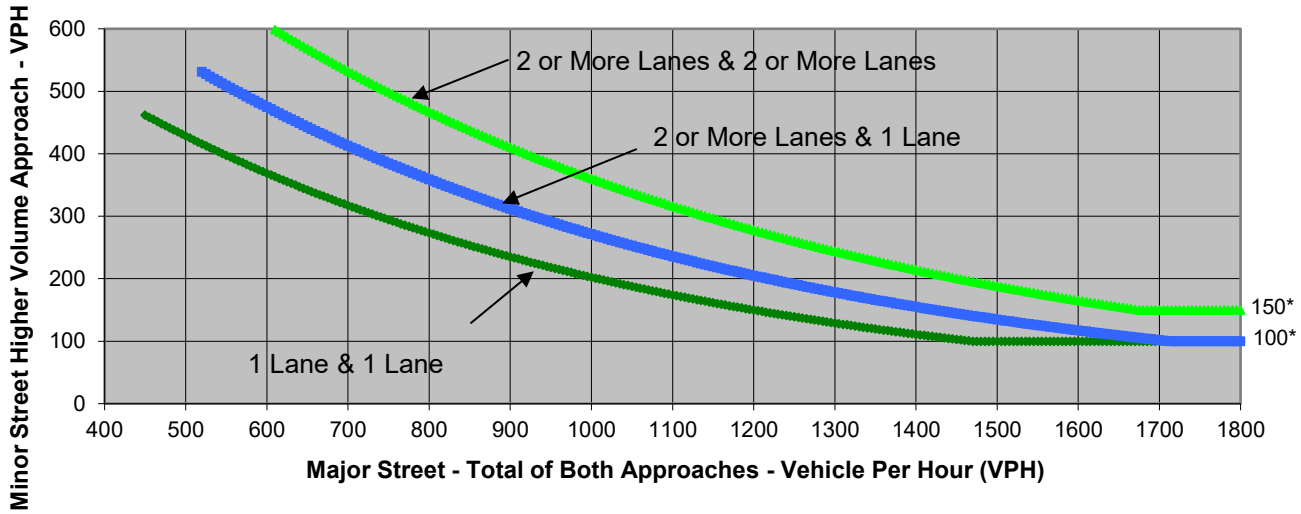
Project	Ontario Ranch Sports Complex
Scenario	OYPP
Peak Hour	PM

Turn Movement Volumes

	NB	SB	EB	WB
Left	0	4	0	7
Through	41	17	77	59
Right	12	0	0	3
Total	53	21	77	69

Major Street Direction

	North/South
x	East/West



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Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Chino Ave	Grove Ave	
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**146**	**53**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Major Street	Chino Ave
Minor Street	Walker Ave

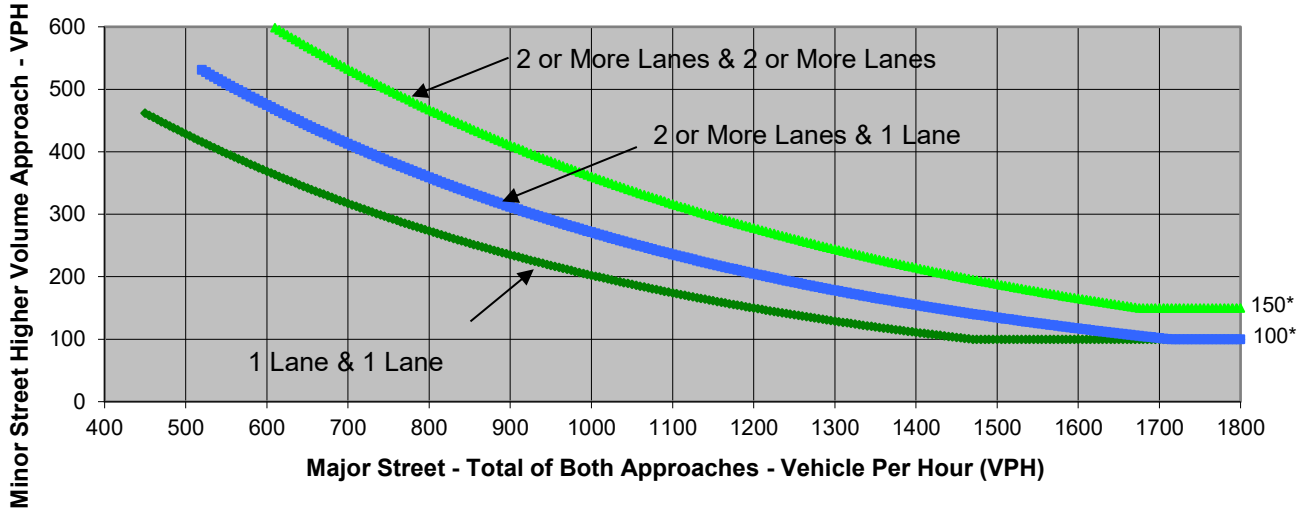
Project	Ontario Ranch Sports Complex
Scenario	CYNP
Peak Hour	AM

Turn Movement Volumes

	NB	SB	EB	WB
Left	30	50	100	90
Through	310	260	820	1150
Right	80	60	80	50
Total	420	370	1,000	1,290

Major Street Direction

	North/South
x	East/West



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Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Chino Ave	Walker Ave	
Number of Approach Lanes	**2**	**2**	**YES**
Traffic Volume (VPH) *	**2,290**	**420**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Major Street	Chino Ave
Minor Street	Walker Ave

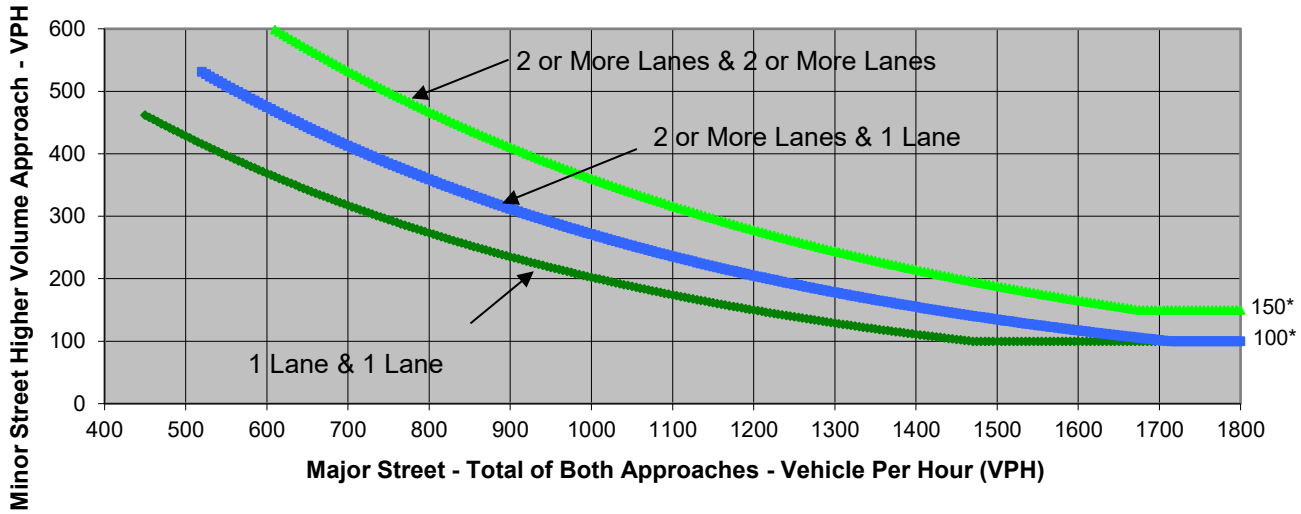
Project	Ontario Ranch Sports Complex
Scenario	CYPP
Peak Hour	AM

Turn Movement Volumes

	NB	SB	EB	WB
Left	30	50	100	92
Through	340	300	859	1167
Right	84	30	70	50
Total	454	380	1,029	1,309

Major Street Direction

	North/South
x	East/West



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Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Chino Ave	Walker Ave	
Number of Approach Lanes	**2**	**2**	**YES**
Traffic Volume (VPH) *	**2,338**	**454**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Major Street	Chino Ave
Minor Street	Walker Ave

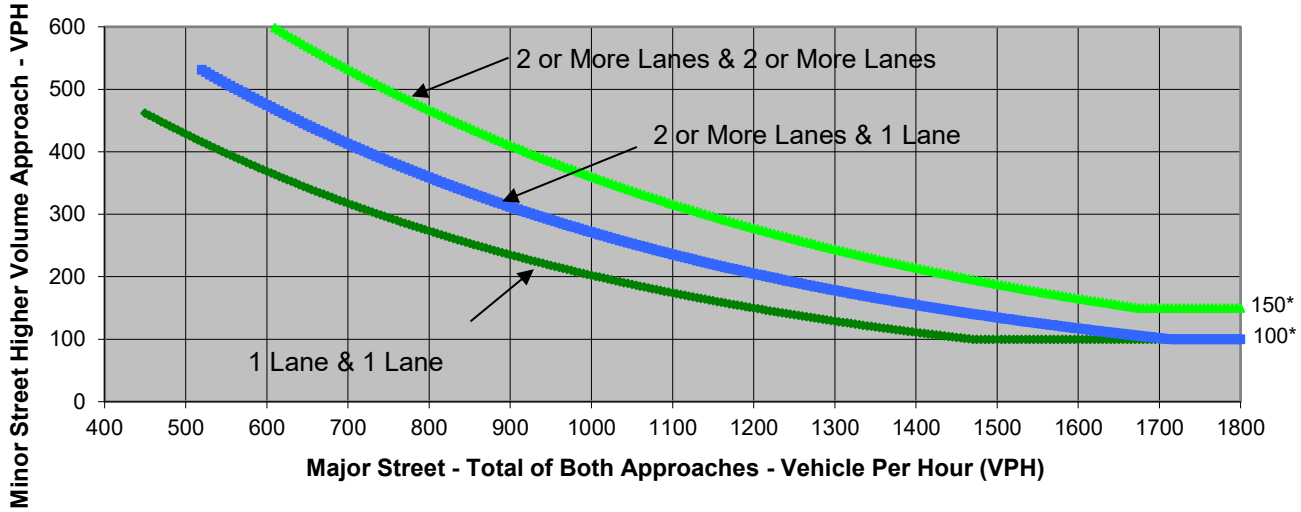
Project	Ontario Ranch Sports Complex
Scenario	OYNP
Peak Hour	AM

Turn Movement Volumes

	NB	SB	EB	WB
Left	11	23	33	168
Through	134	142	16	63
Right	75	29	23	38
Total	220	194	72	269

Major Street Direction

	North/South
x	East/West



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Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Chino Ave	Walker Ave	
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**341**	**220**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Major Street	Chino Ave
Minor Street	Walker Ave

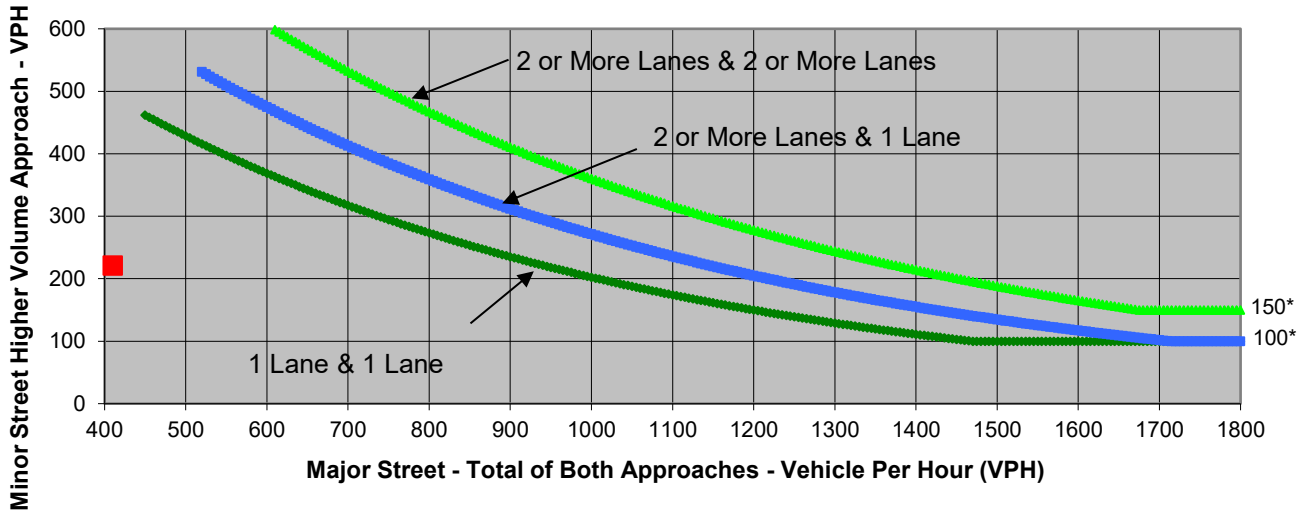
Project	Ontario Ranch Sports Complex
Scenario	OYPP
Peak Hour	AM

Turn Movement Volumes

	NB	SB	EB	WB
Left	11	23	33	169
Through	134	142	57	90
Right	76	29	23	38
Total	221	194	113	297

Major Street Direction

	North/South
x	East/West



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Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Chino Ave	Walker Ave	
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**410**	**221**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Major Street	Chino Ave
Minor Street	Walker Ave

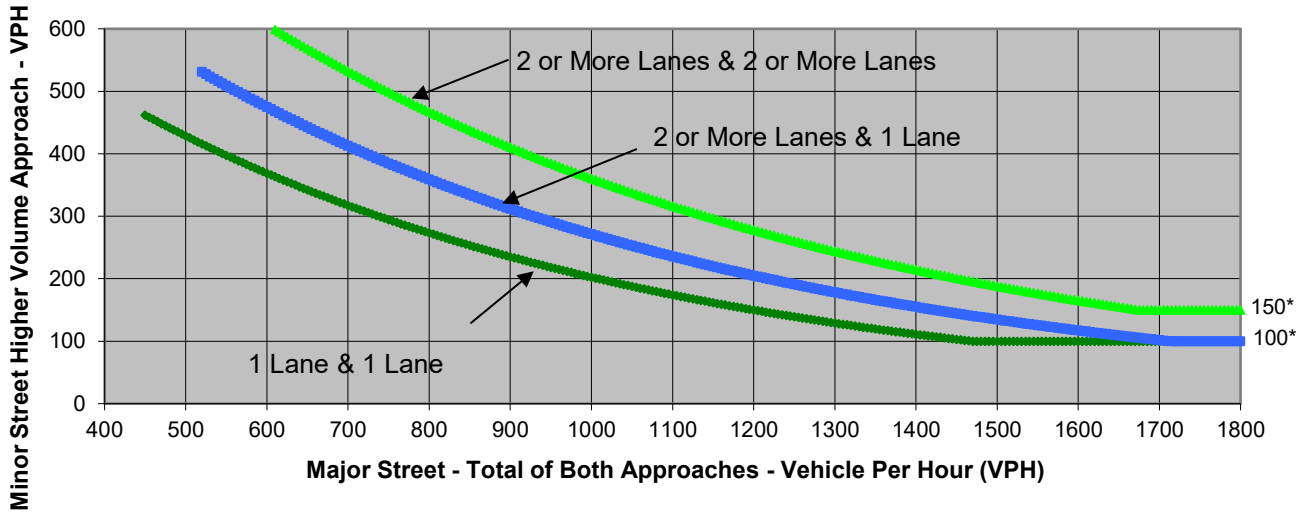
Project	Ontario Ranch Sports Complex
Scenario	CYNP
Peak Hour	PM

Turn Movement Volumes

	NB	SB	EB	WB
Left	30	50	70	110
Through	240	150	1050	860
Right	150	100	150	20
Total	420	300	1,270	990

Major Street Direction

	North/South
x	East/West



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Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Chino Ave	Walker Ave	
Number of Approach Lanes	**2**	**2**	**YES**
Traffic Volume (VPH) *	**2,260**	**420**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Major Street	Chino Ave
Minor Street	Walker Ave

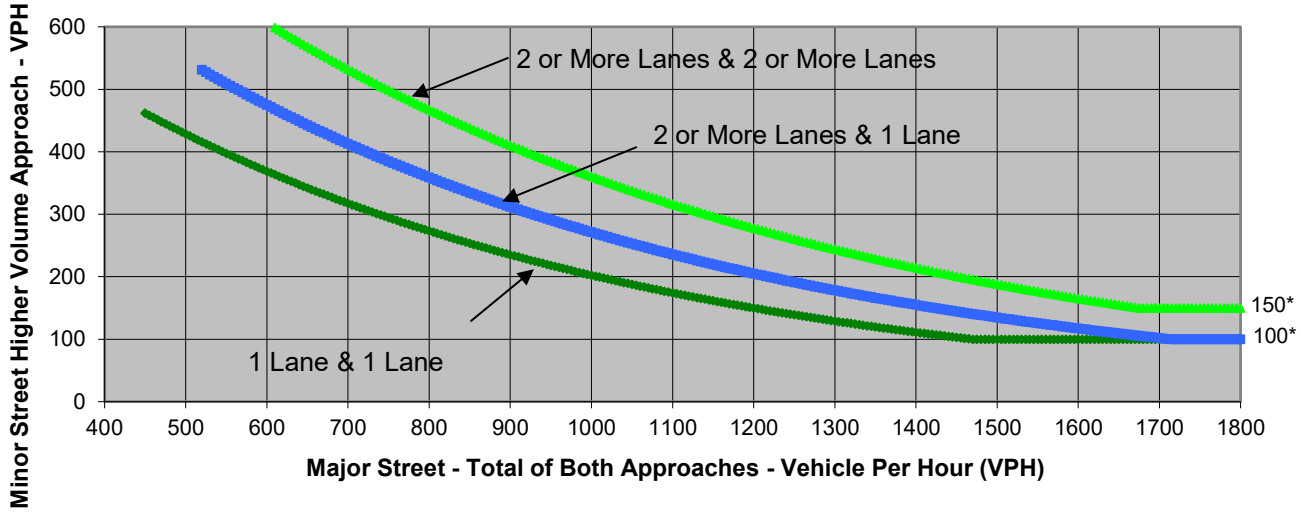
Project	Ontario Ranch Sports Complex
Scenario	CYPP
Peak Hour	PM

Turn Movement Volumes

	NB	SB	EB	WB
Left	30	50	60	108
Through	230	160	1104	901
Right	160	120	170	30
Total	420	330	1,334	1,039

Major Street Direction

	North/South
x	East/West



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Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Chino Ave	Walker Ave	
Number of Approach Lanes	**2**	**2**	**YES**
Traffic Volume (VPH) *	**2,373**	**420**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Major Street	Chino Ave
Minor Street	Walker Ave

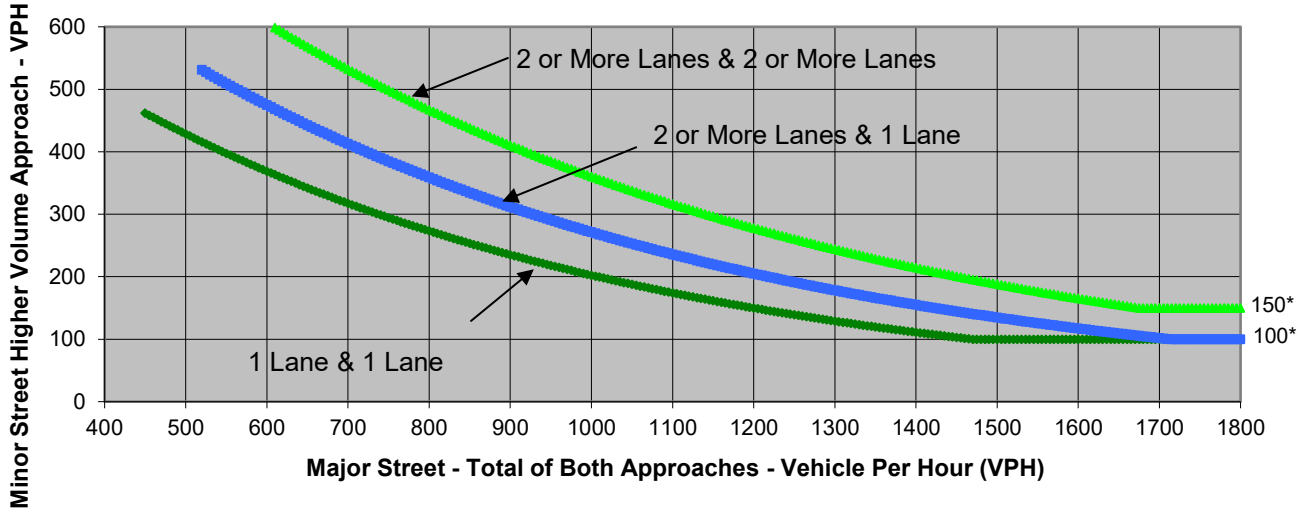
Project	Ontario Ranch Sports Complex
Scenario	OYNP
Peak Hour	PM

Turn Movement Volumes

	NB	SB	EB	WB
Left	7	49	35	32
Through	146	129	23	49
Right	159	24	22	21
Total	312	202	80	102

Major Street Direction

	North/South
x	East/West



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Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Chino Ave	Walker Ave	
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**182**	**312**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

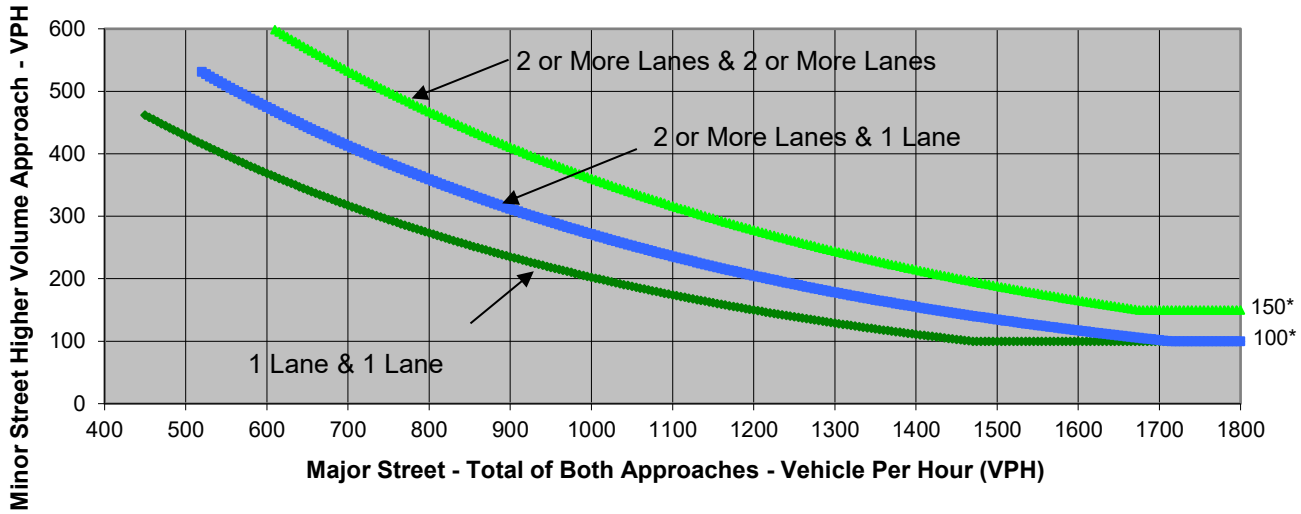
Major Street	Chino Ave	Project	Ontario Ranch Sports Complex
Minor Street	Walker Ave	Scenario	OYPP
		Peak Hour	PM

Turn Movement Volumes

	NB	SB	EB	WB
Left	7	49	35	35
Through	146	129	100	102
Right	162	24	22	21
Total	315	202	157	158

Major Street Direction

	North/South
X	East/West



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Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Chino Ave	Walker Ave	
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**315**	**315**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Major Street	Vineyard Ave
Minor Street	Chino Ave

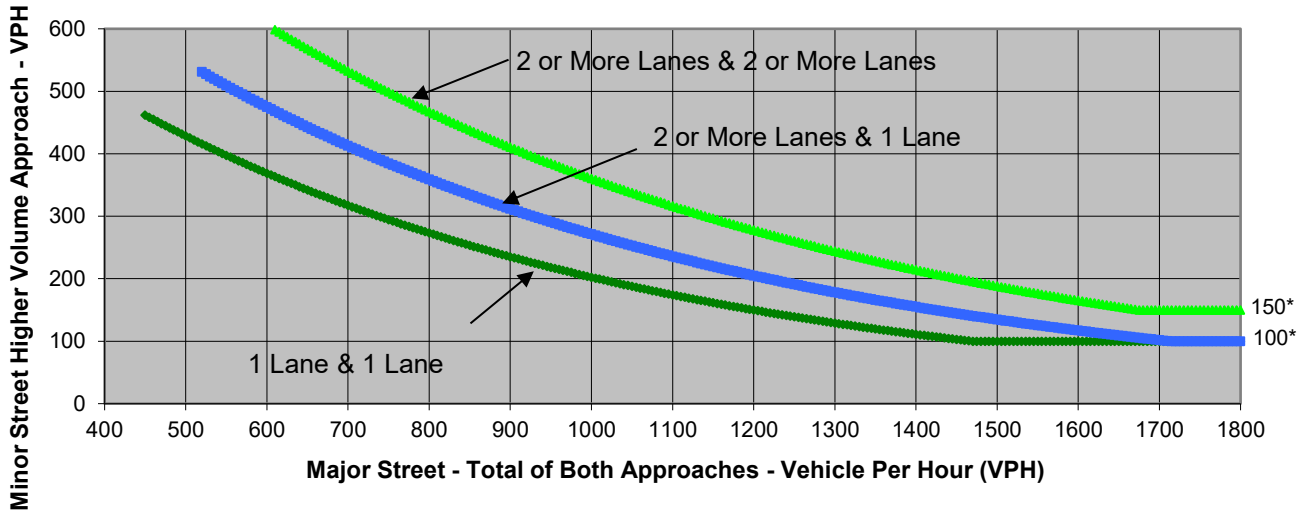
Project	Ontario Ranch Sports Complex
Scenario	CYNP
Peak Hour	AM

Turn Movement Volumes

	NB	SB	EB	WB
Left	30	90	160	50
Through	557	474	774	1090
Right	20	72	30	20
Total	607	636	964	1,160

Major Street Direction

	North/South
x	East/West



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Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Vineyard Ave	Chino Ave	
Number of Approach Lanes	**3**	**2**	**YES**
Traffic Volume (VPH) *	**2,124**	**636**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Major Street	Vineyard Ave
Minor Street	Chino Ave

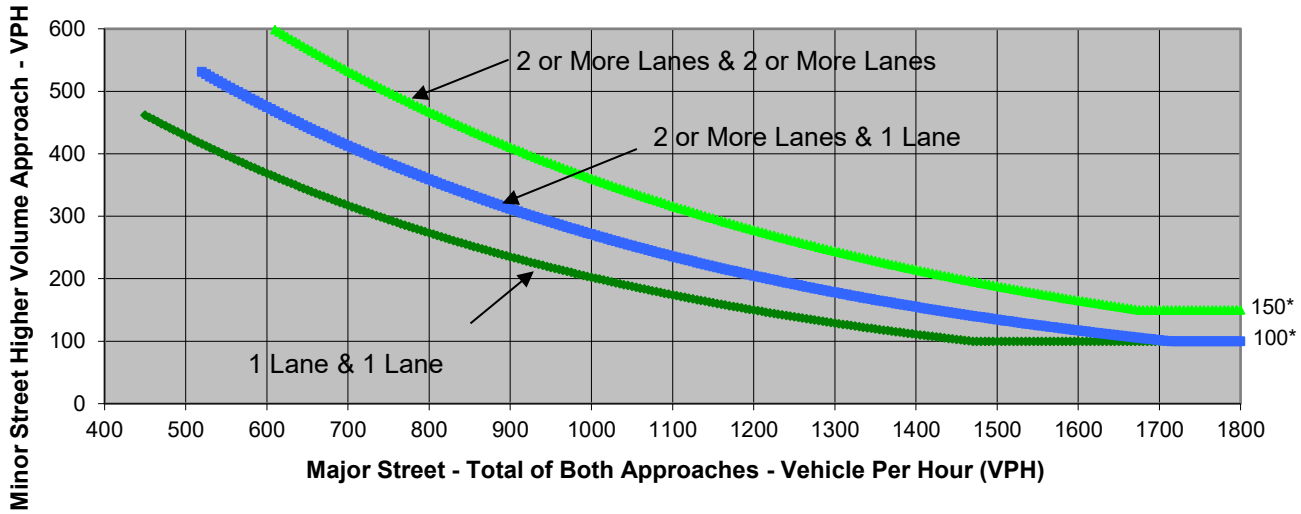
Project	Ontario Ranch Sports Complex
Scenario	CYPP
Peak Hour	AM

Turn Movement Volumes

	NB	SB	EB	WB
Left	30	112	232	53
Through	783	472	755	1106
Right	6	60	30	18
Total	819	644	1,017	1,177

Major Street Direction

x	North/South
	East/West



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Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Vineyard Ave	Chino Ave	
Number of Approach Lanes	**3**	**2**	**YES**
Traffic Volume (VPH) *	**1,463**	**1,177**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Major Street	Vineyard Ave
Minor Street	Chino Ave

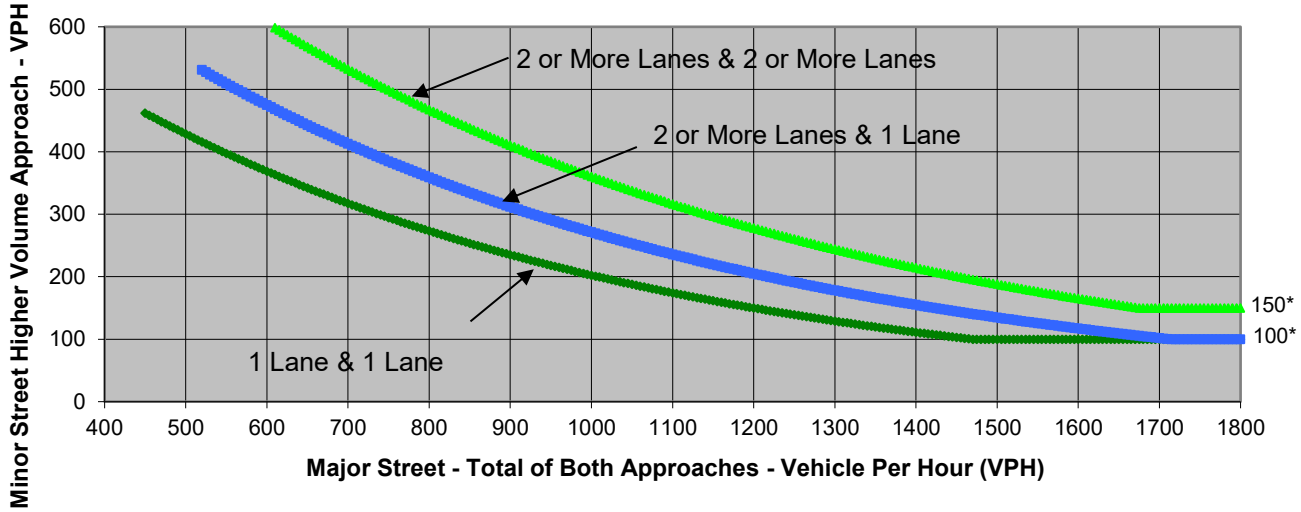
Project	Ontario Ranch Sports Complex
Scenario	OYNP
Peak Hour	AM

Turn Movement Volumes

	NB	SB	EB	WB
Left	1	0	3	3
Through	165	226	109	276
Right	3	4	3	0
Total	169	230	115	279

Major Street Direction

	North/South
x	East/West



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Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Vineyard Ave	Chino Ave	
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**394**	**230**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Major Street	Vineyard Ave
Minor Street	Chino Ave

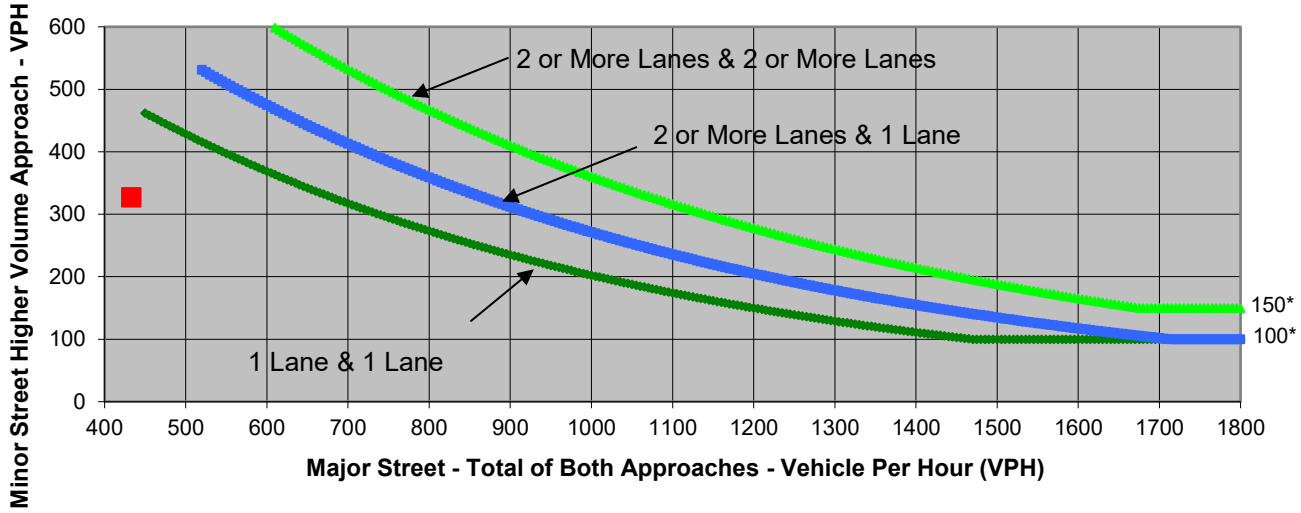
Project	Ontario Ranch Sports Complex
Scenario	OYPP
Peak Hour	AM

Turn Movement Volumes

	NB	SB	EB	WB
Left	1	29	3	3
Through	166	227	150	302
Right	3	7	3	22
Total	170	263	156	327

Major Street Direction

X	North/South
	East/West



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Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Vineyard Ave	Chino Ave	
Number of Approach Lanes	**3**	**1**	**NO**
Traffic Volume (VPH) *	**433**	**327**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Major Street	Vineyard Ave
Minor Street	Chino Ave

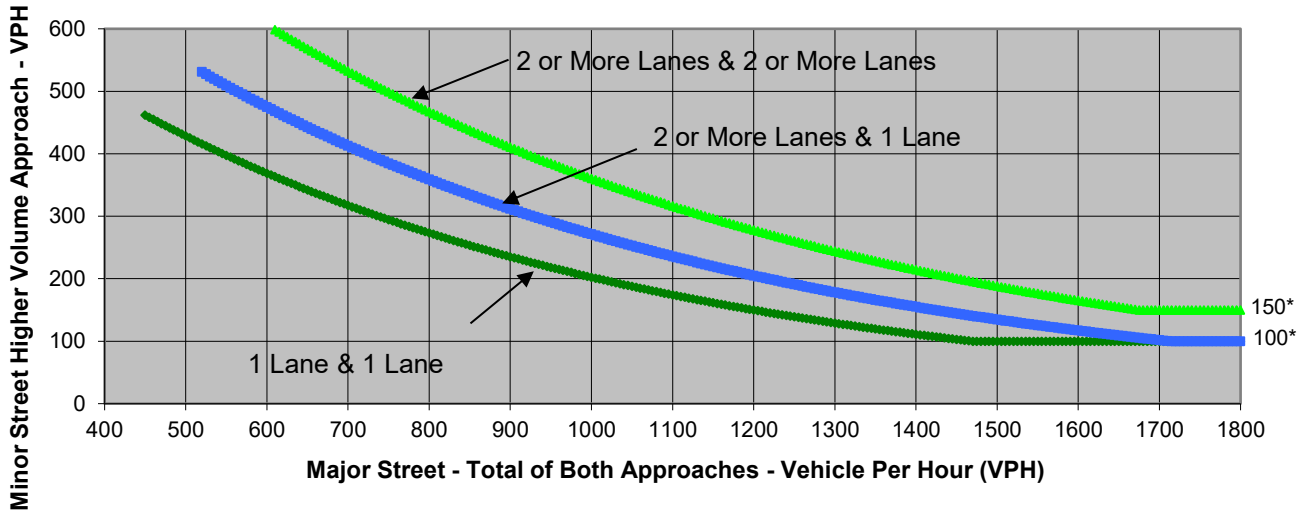
Project	Ontario Ranch Sports Complex
Scenario	CYNP
Peak Hour	PM

Turn Movement Volumes

	NB	SB	EB	WB
Left	30	152	160	80
Through	232	776	960	680
Right	29	275	80	120
Total	291	1,203	1,200	880

Major Street Direction

	North/South
x	East/West



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Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Vineyard Ave	Chino Ave	
Number of Approach Lanes	**3**	**2**	**YES**
Traffic Volume (VPH) *	**2,080**	**1,203**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Major Street	Vineyard Ave
Minor Street	Chino Ave

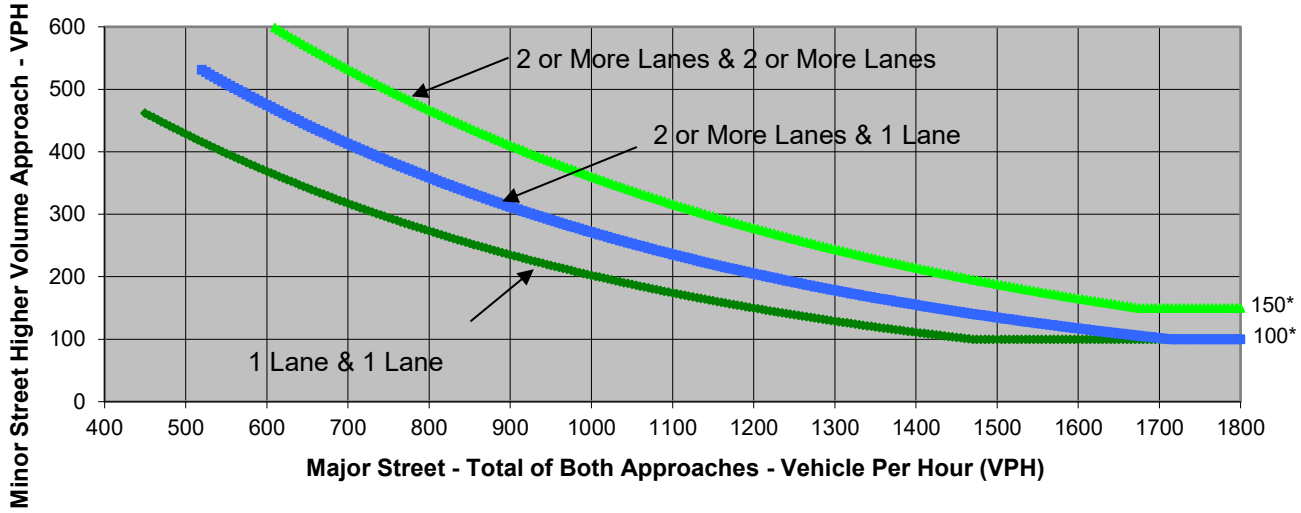
Project	Ontario Ranch Sports Complex
Scenario	CYPP
Peak Hour	PM

Turn Movement Volumes

	NB	SB	EB	WB
Left	30	215	162	98
Through	296	885	1032	695
Right	40	254	80	158
Total	366	1,354	1,274	951

Major Street Direction

x	North/South
	East/West



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Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Vineyard Ave	Chino Ave	
Number of Approach Lanes	**3**	**2**	**YES**
Traffic Volume (VPH) *	**1,720**	**1,274**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Major Street	Vineyard Ave
Minor Street	Chino Ave

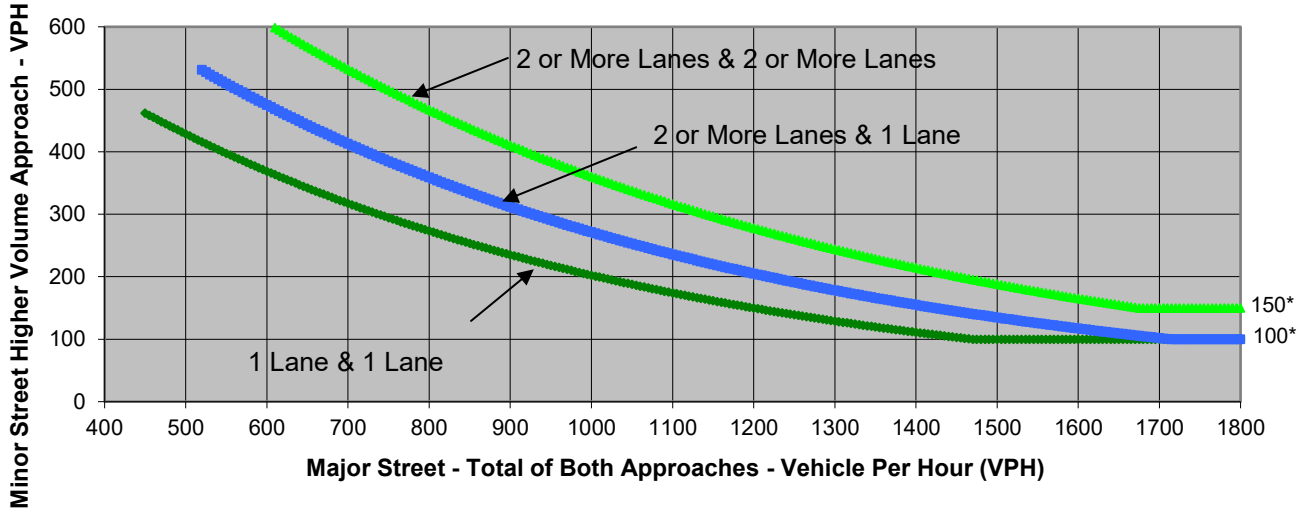
Project	Ontario Ranch Sports Complex
Scenario	OYNP
Peak Hour	PM

Turn Movement Volumes

	NB	SB	EB	WB
Left	1	0	9	2
Through	294	205	246	95
Right	19	9	0	0
Total	314	214	255	97

Major Street Direction

	North/South
x	East/West



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Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Vineyard Ave	Chino Ave	
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**352**	**314**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

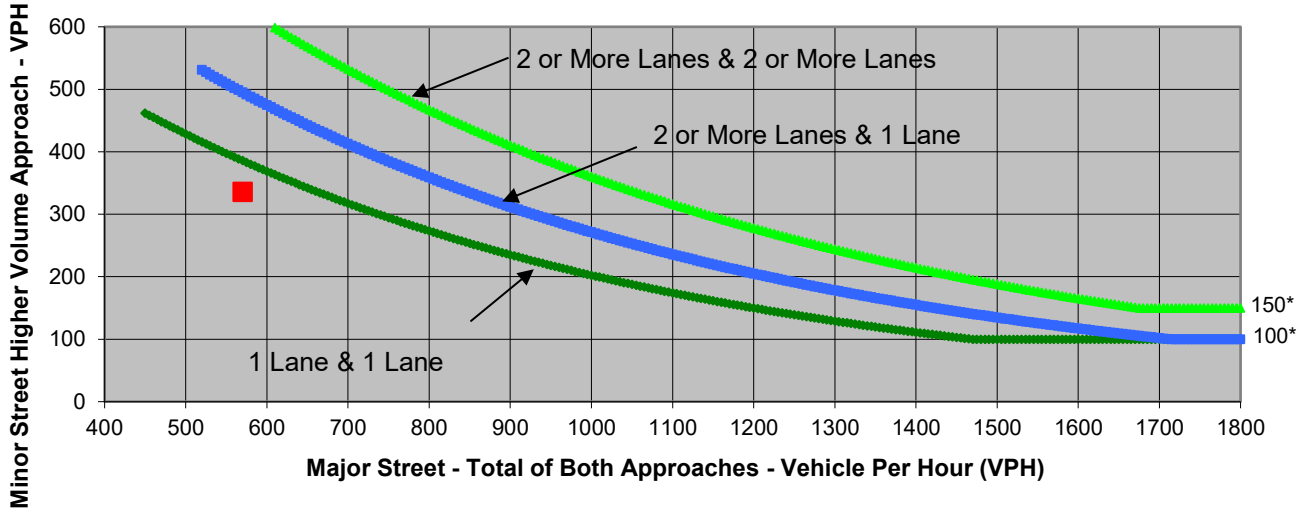
Project	Ontario Ranch Sports Complex
Scenario	OYNP
Peak Hour	PM
Major Street	Vineyard Ave
Minor Street	Chino Ave

Turn Movement Volumes

	NB	SB	EB	WB
Left	1	33	17	2
Through	298	206	319	147
Right	19	13	0	44
Total	318	252	336	193

Major Street Direction

X	North/South
	East/West



* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Vineyard Ave	Chino Ave	
Number of Approach Lanes	**3**	**1**	**NO**
Traffic Volume (VPH) *	**570**	**336**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

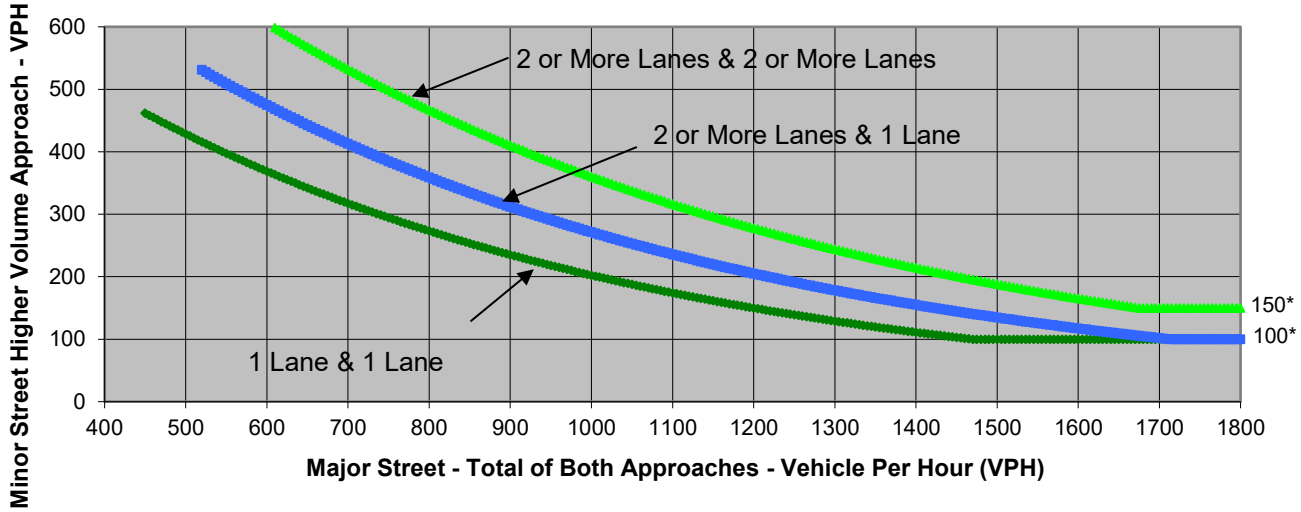
Major Street	Chino	Project	Ontario Ranch Sports Complex
Minor Street	Whispering Lakes Lane	Scenario	CYNP
		Peak Hour	AM

Turn Movement Volumes

	NB	SB	EB	WB
Left	90	0	0	30
Through	0	0	854	1070
Right	90	0	30	0
Total	180	0	884	1,100

Major Street Direction

	North/South
x	East/West



* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Chino	Whispering Lakes Lane	
Number of Approach Lanes	**2**	**1**	**YES**
Traffic Volume (VPH) *	**1,984**	**180**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

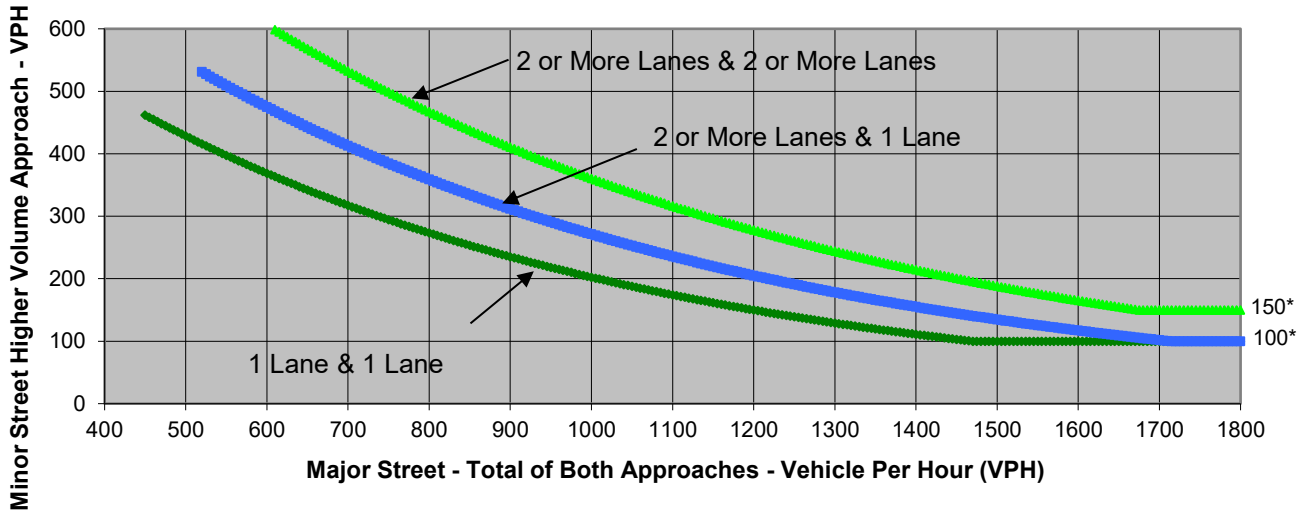
Major Street	Chino Ave	Project	Ontario Ranch Sports Complex
Minor Street	Whispering Lakes Lane	Scenario	CYPP
		Peak Hour	AM

Turn Movement Volumes

	NB	SB	EB	WB
Left	150	0	0	42
Through	0	0	833	1026
Right	163	0	40	0
Total	313	0	873	1,068

Major Street Direction

	North/South
x	East/West



* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Chino Ave	Whispering Lakes Lane	
Number of Approach Lanes	**2**	**1**	**YES**
Traffic Volume (VPH) *	**1,941**	**313**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

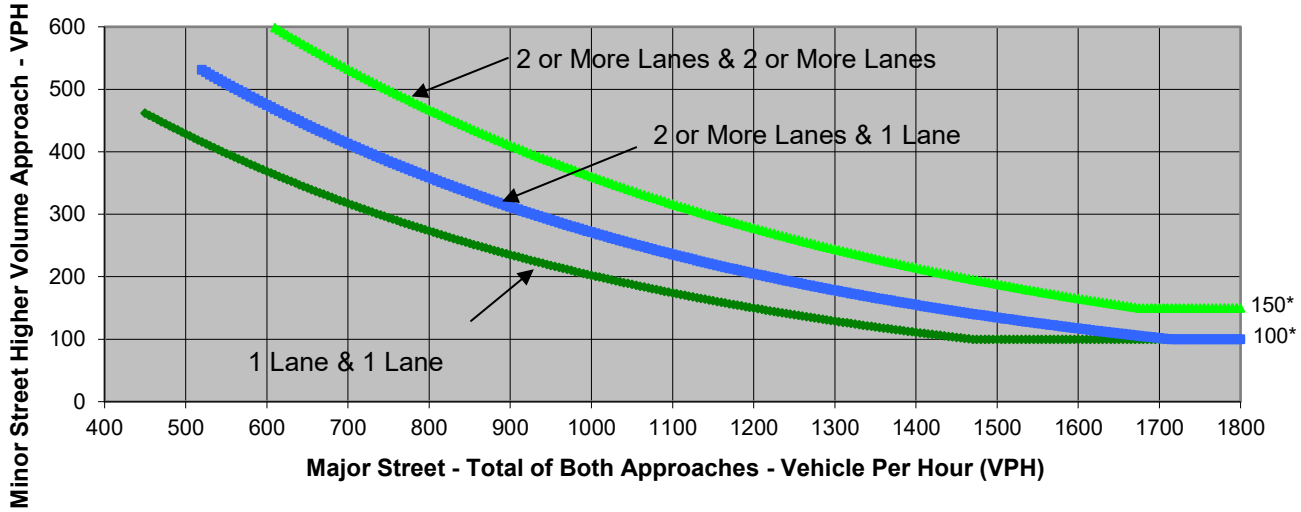
Major Street	Chino Ave	Project	Ontario Ranch Sports Complex
Minor Street	Whispering Lakes Lane	Scenario	OYNP
		Peak Hour	AM

Turn Movement Volumes

	NB	SB	EB	WB
Left	2	0	0	0
Through	0	0	112	273
Right	0	0	2	0
Total	2	0	114	273

Major Street Direction

	North/South
x	East/West



* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Chino Ave	Whispering Lakes Lane	
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**387**	**2**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Major Street	Chino Ave
Minor Street	Whispering Lakes Lane

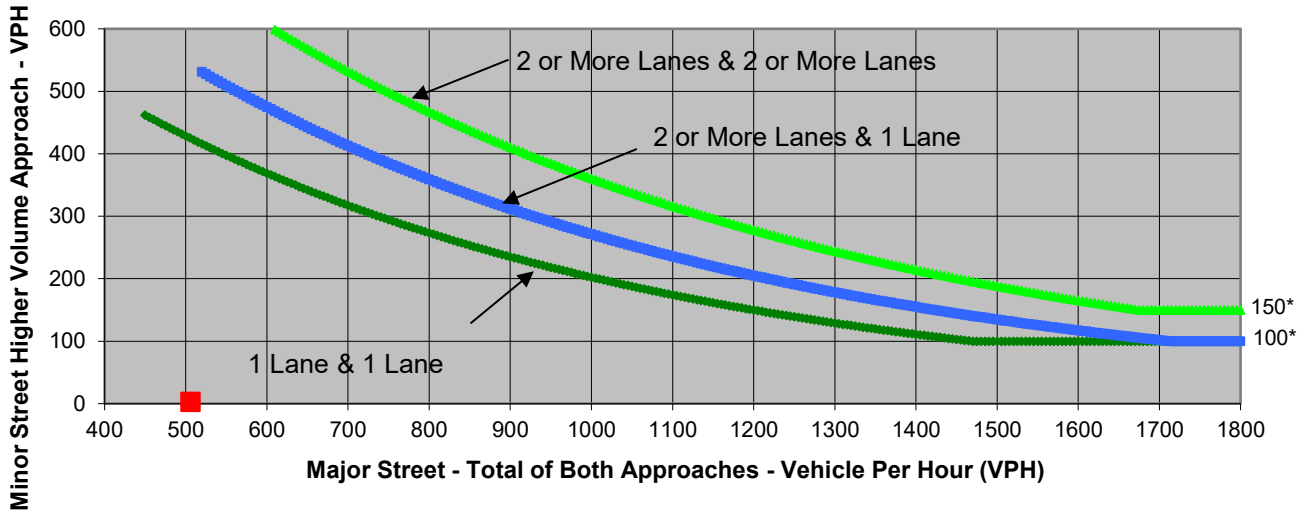
Project	Ontario Ranch Sports Complex
Scenario	OYPP
Peak Hour	AM

Turn Movement Volumes

	NB	SB	EB	WB
Left	2	0	0	1
Through	0	0	183	320
Right	1	0	2	0
Total	3	0	185	321

Major Street Direction

	North/South
x	East/West



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Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Chino Ave	Whispering Lakes Lane	
Number of Approach Lanes	**2**	**1**	**NO**
Traffic Volume (VPH) *	**506**	**3**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

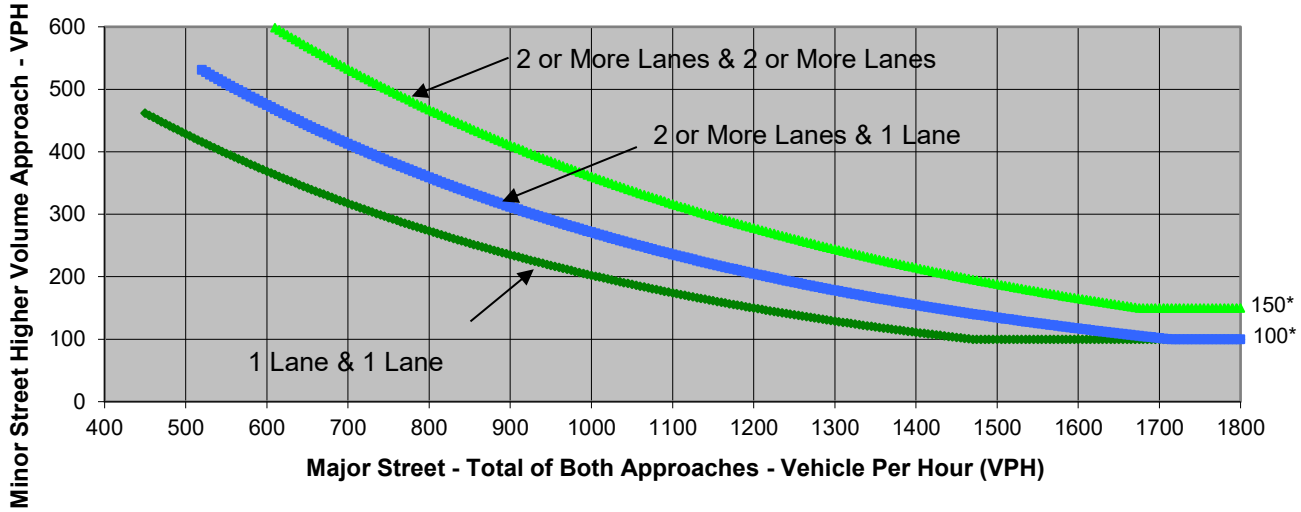
Major Street	Chino	Project	Ontario Ranch Sports Complex
Minor Street	Whispering Lakes Lane	Scenario	CYNP
		Peak Hour	PM

Turn Movement Volumes

	NB	SB	EB	WB
Left	40	0	0	90
Through	0	0	1061	840
Right	40	0	80	0
Total	80	0	1,141	930

Major Street Direction

	North/South
x	East/West



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Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Chino	Whispering Lakes Lane	
Number of Approach Lanes	**2**	**1**	**NO**
Traffic Volume (VPH) *	**2,071**	**80**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

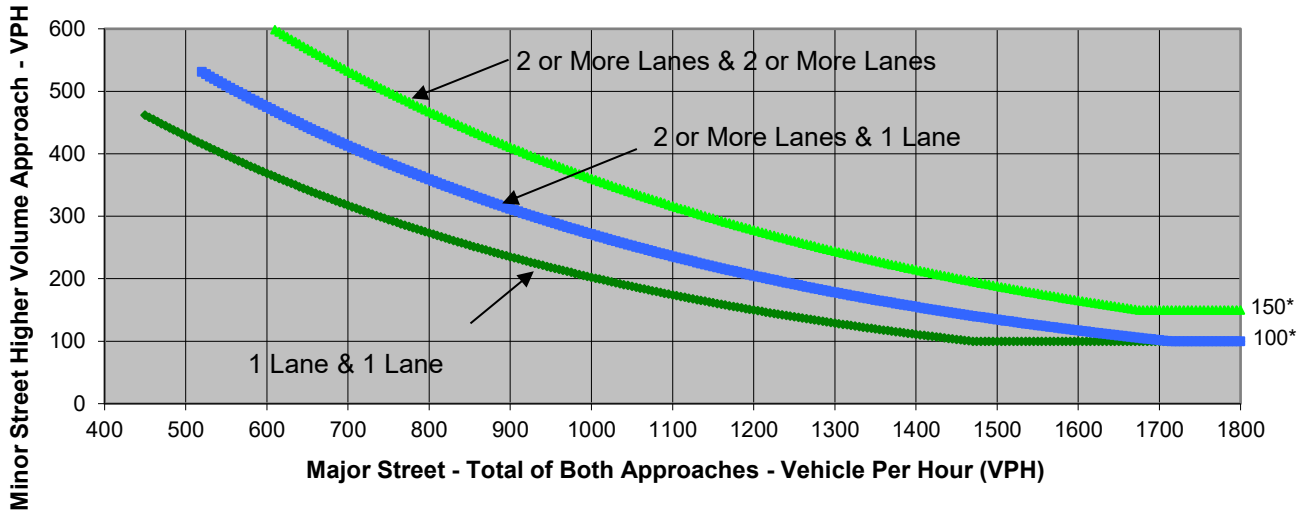
Project	Ontario Ranch Sports Complex
Scenario	CYPP
Peak Hour	PM
Major Street	Chino Ave
Minor Street	Whispering Lakes Lane

Turn Movement Volumes

	NB	SB	EB	WB
Left	62	0	0	155
Through	0	0	1156	887
Right	66	0	131	0
Total	128	0	1,287	1,042

Major Street Direction

	North/South
x	East/West



* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Chino Ave	Whispering Lakes Lane	
Number of Approach Lanes	**2**	**1**	**YES**
Traffic Volume (VPH) *	**2,329**	**128**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

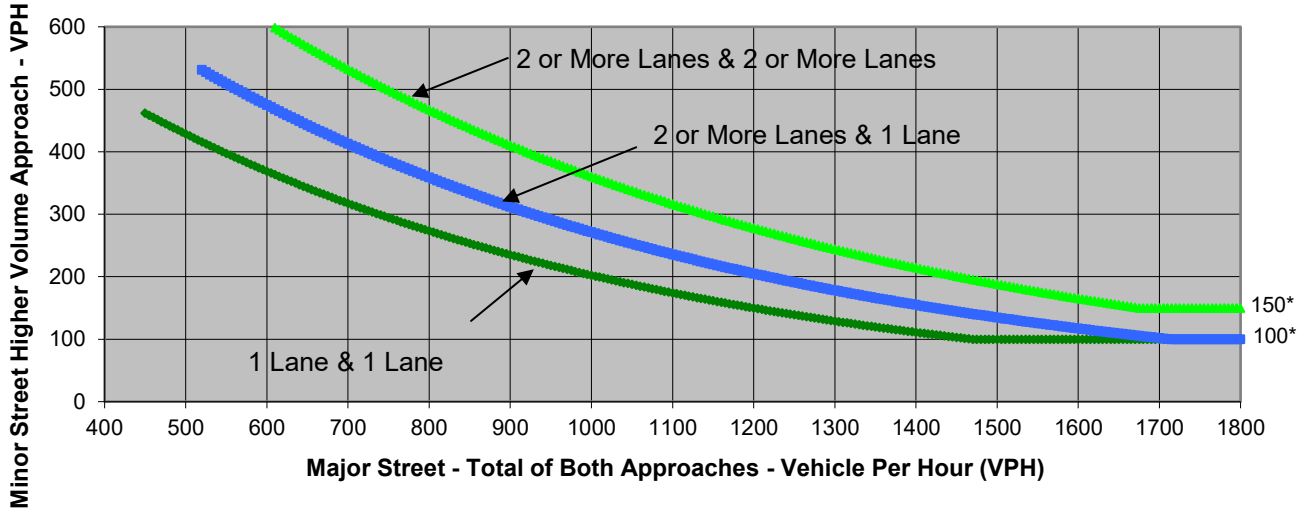
Major Street	Chino Ave	Project	Ontario Ranch Sports Complex
Minor Street	Whispering Lakes Lane	Scenario	OYNP
		Peak Hour	PM

Turn Movement Volumes

	NB	SB	EB	WB
Left	2	0	0	2
Through	0	0	265	92
Right	2	0	0	0
Total	4	0	265	94

Major Street Direction

	North/South
x	East/West



* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Chino Ave	Whispering Lakes Lane	
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**359**	**4**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

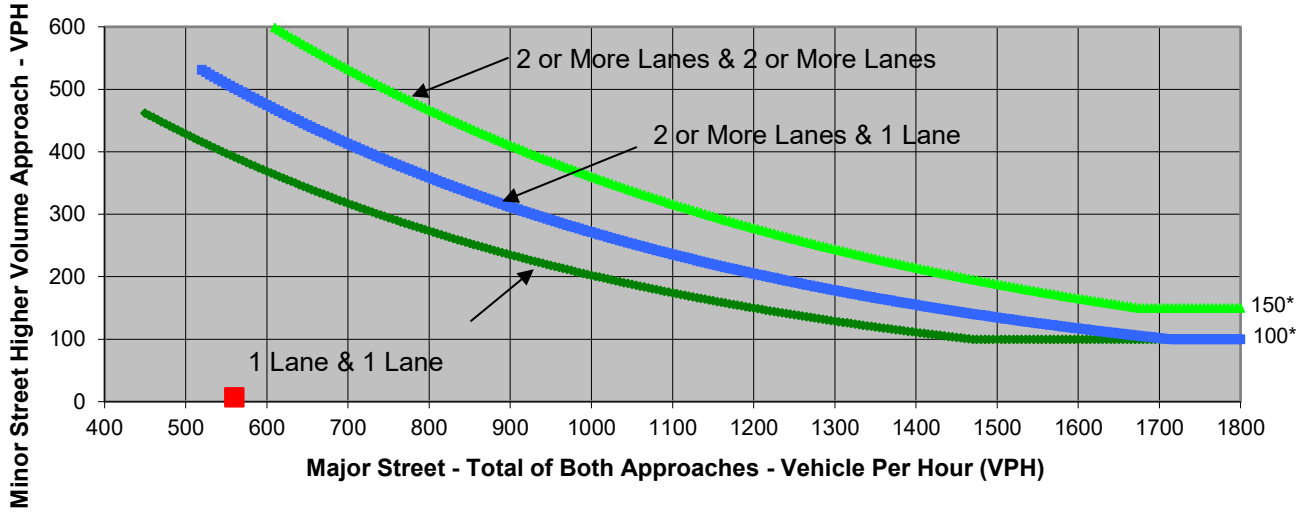
Project	Ontario Ranch Sports Complex
Scenario	OYPP
Peak Hour	PM
Major Street	Chino Ave
Minor Street	Whispering Lakes Lane

Turn Movement Volumes

	NB	SB	EB	WB
Left	3	0	0	4
Through	0	0	368	187
Right	4	0	1	0
Total	7	0	369	191

Major Street Direction

	North/South
x	East/West



* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Chino Ave	Whispering Lakes Lane	
Number of Approach Lanes	**2**	**1**	**NO**
Traffic Volume (VPH) *	**560**	**7**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Major Street	Chino Ave
Minor Street	Ontario Ave

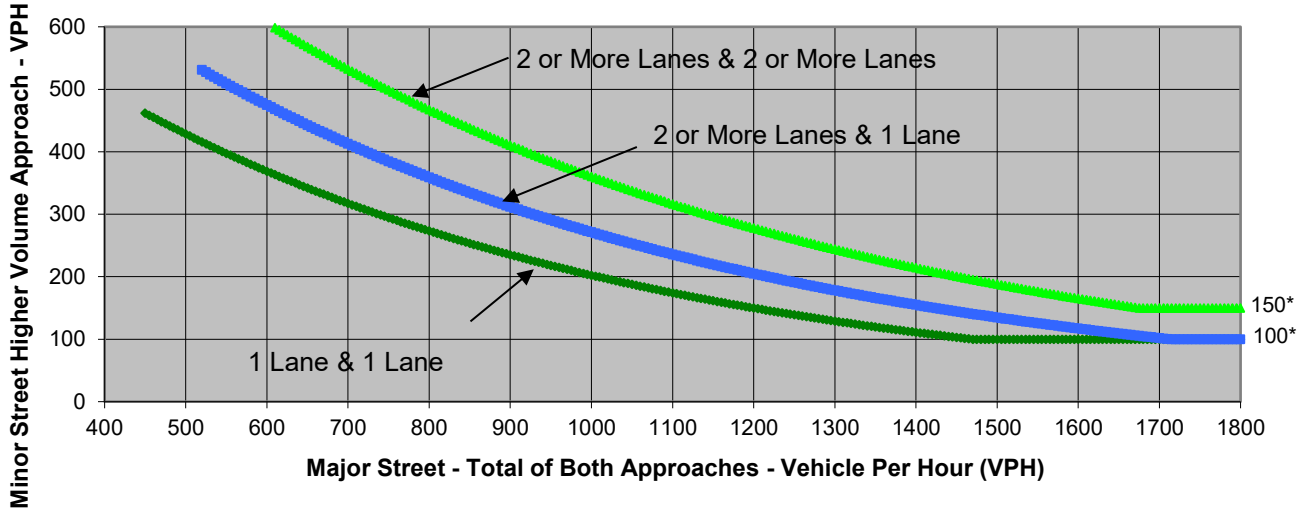
Project	Ontario Ranch Sports Complex
Scenario	CYNP
Peak Hour	AM

Turn Movement Volumes

	NB	SB	EB	WB
Left	70	80	50	50
Through	150	50	884	980
Right	110	60	10	90
Total	330	190	944	1,120

Major Street Direction

	North/South
x	East/West



* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Chino Ave	Ontario Ave	
Number of Approach Lanes	**2**	**2**	**YES**
Traffic Volume (VPH) *	**2,064**	**330**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Major Street	Chino Ave
Minor Street	Ontario Ave

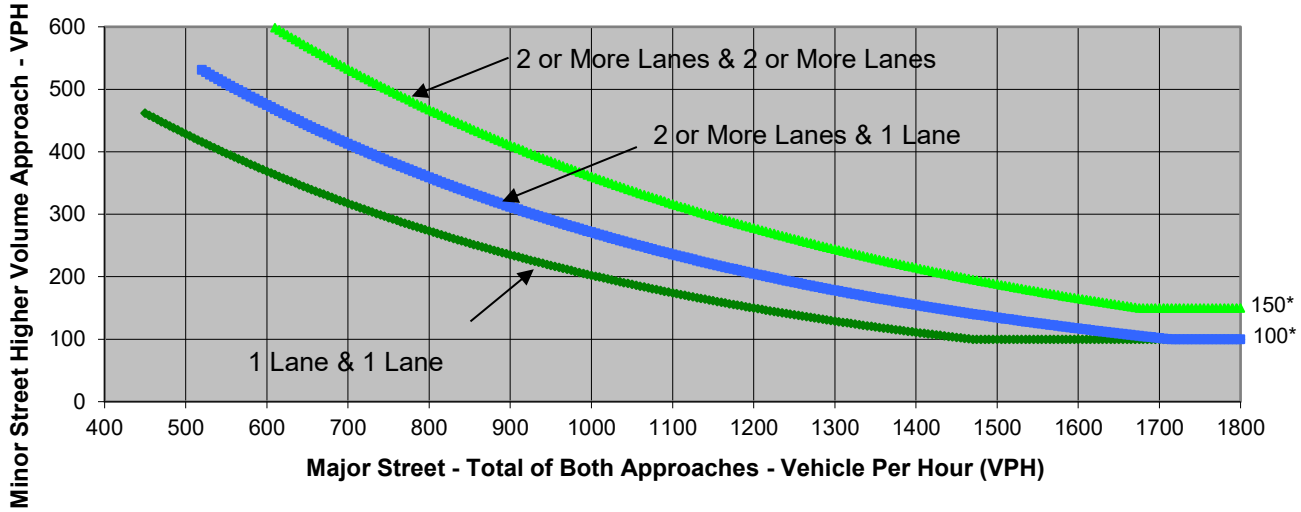
Project	Ontario Ranch Sports Complex
Scenario	CYPP
Peak Hour	AM

Turn Movement Volumes

	NB	SB	EB	WB
Left	70	88	82	70
Through	33	32	963	968
Right	220	76	30	97
Total	323	196	1,075	1,135

Major Street Direction

	North/South
x	East/West



* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Chino Ave	Ontario Ave	
Number of Approach Lanes	**2**	**2**	**YES**
Traffic Volume (VPH) *	**2,210**	**323**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Major Street	Chino Ave
Minor Street	Ontario Ave

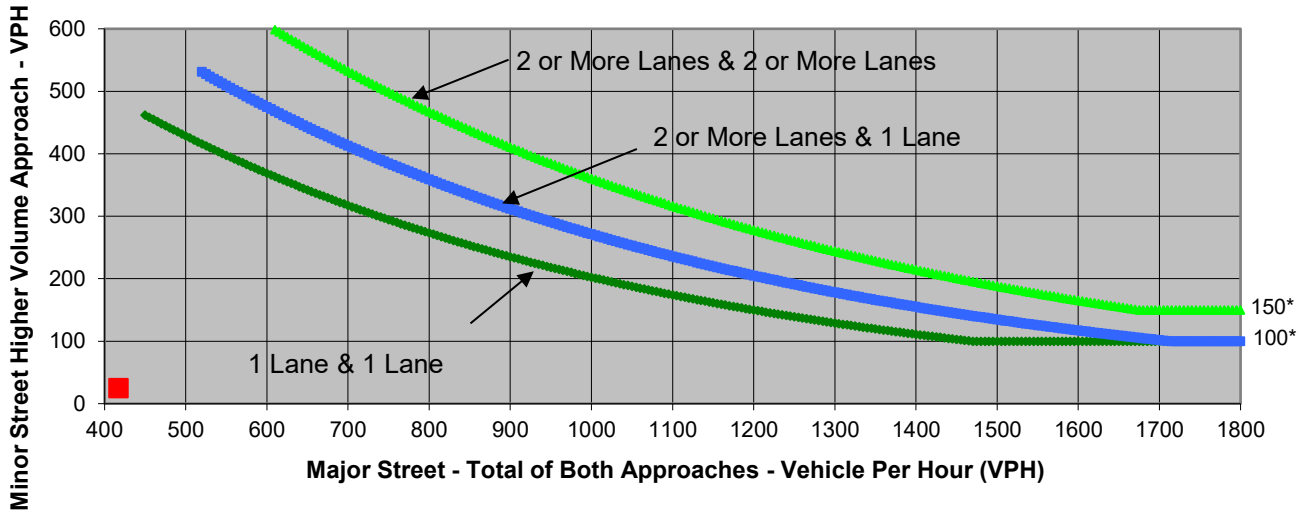
Project	Ontario Ranch Sports Complex
Scenario	OYNP
Peak Hour	AM

Turn Movement Volumes

	NB	SB	EB	WB
Left	4	12	8	6
Through	5	5	103	260
Right	8	8	4	36
Total	17	25	115	302

Major Street Direction

	North/South
x	East/West



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Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Chino Ave	Ontario Ave	
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**417**	**25**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

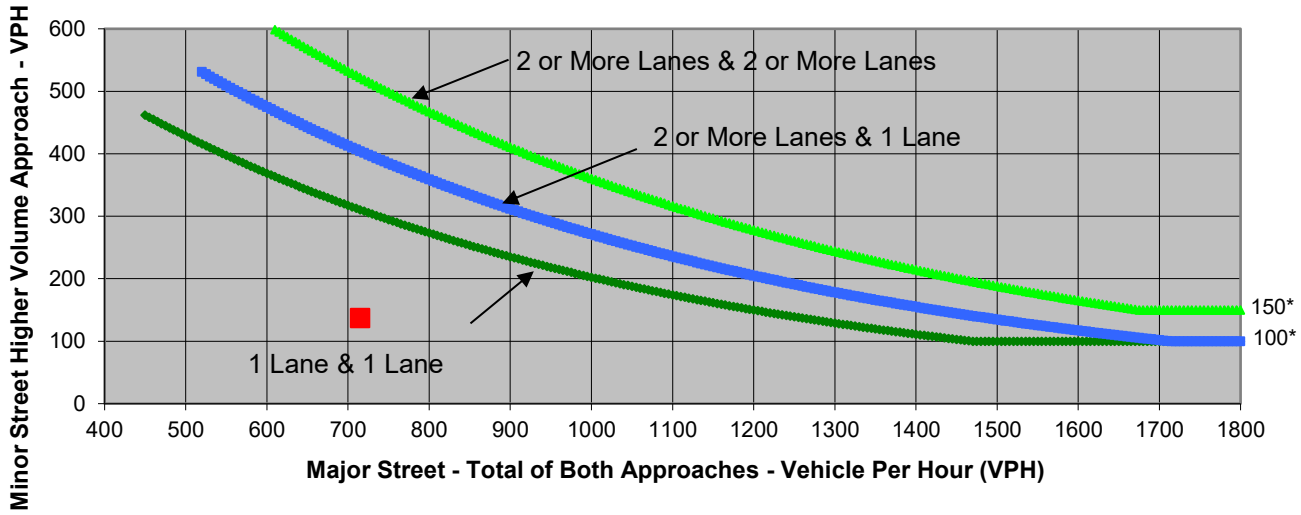
Major Street	Chino Ave	Project	Ontario Ranch Sports Complex
Minor Street	Ontario Ave	Scenario	OYPP
		Peak Hour	AM

Turn Movement Volumes

	NB	SB	EB	WB
Left	4	79	74	6
Through	6	6	184	309
Right	8	52	4	138
Total	18	137	262	453

Major Street Direction

	North/South
x	East/West



* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Chino Ave	Ontario Ave	
Number of Approach Lanes	**2**	**1**	**NO**
Traffic Volume (VPH) *	**715**	**137**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Major Street	Chino Ave
Minor Street	Ontario Ave

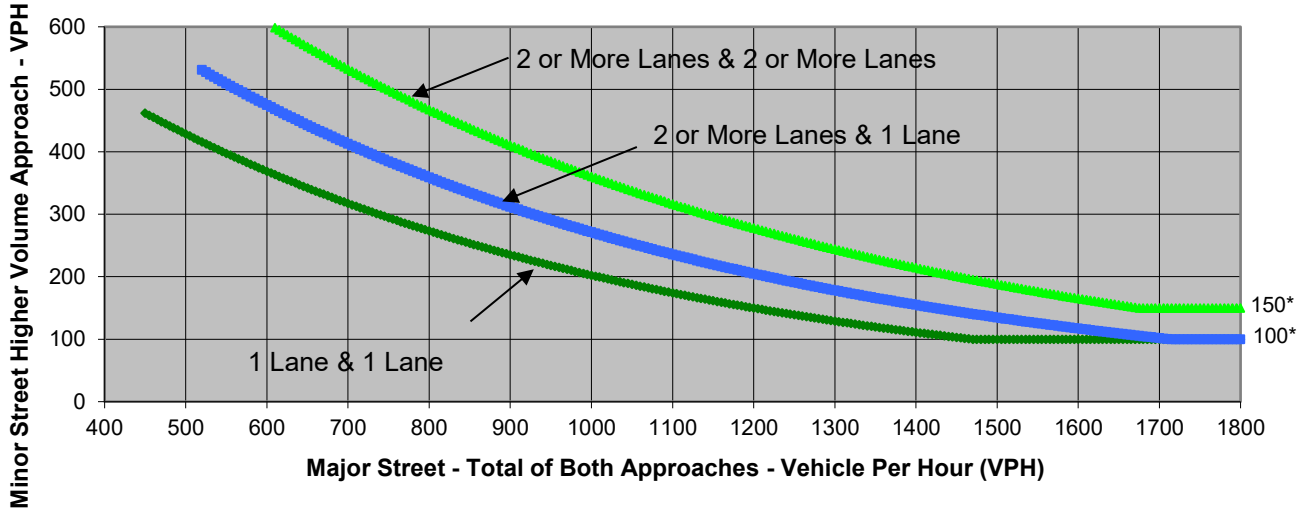
Project	Ontario Ranch Sports Complex
Scenario	CYPP
Peak Hour	Weekend MD

Turn Movement Volumes

	NB	SB	EB	WB
Left	51	275	139	130
Through	38	37	1167	945
Right	110	158	32	259
Total	199	470	1,338	1,334

Major Street Direction

	North/South
x	East/West



* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Chino Ave	Ontario Ave	
Number of Approach Lanes	**2**	**2**	**YES**
Traffic Volume (VPH) *	**2,672**	**470**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Major Street	Chino Ave
Minor Street	Ontario Ave

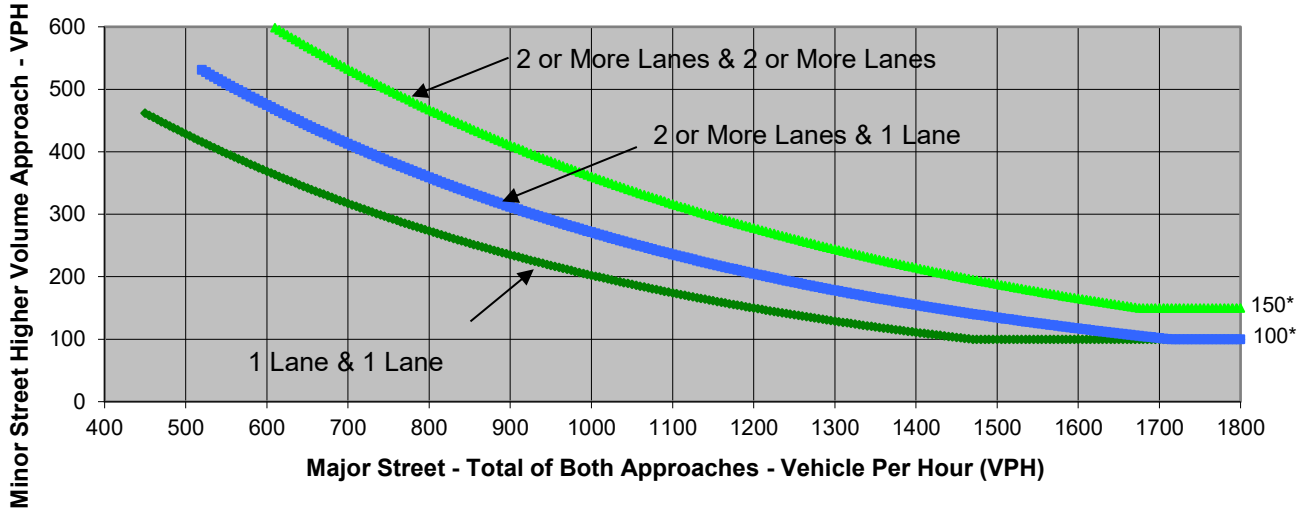
Project	Ontario Ranch Sports Complex
Scenario	CYNP
Peak Hour	PM

Turn Movement Volumes

	NB	SB	EB	WB
Left	50	70	50	120
Through	60	70	1065	870
Right	80	50	70	70
Total	190	190	1,185	1,060

Major Street Direction

	North/South
x	East/West



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Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Chino Ave	Ontario Ave	
Number of Approach Lanes	**2**	**2**	**YES**
Traffic Volume (VPH) *	**2,245**	**190**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Major Street	Chino Ave
Minor Street	Ontario Ave

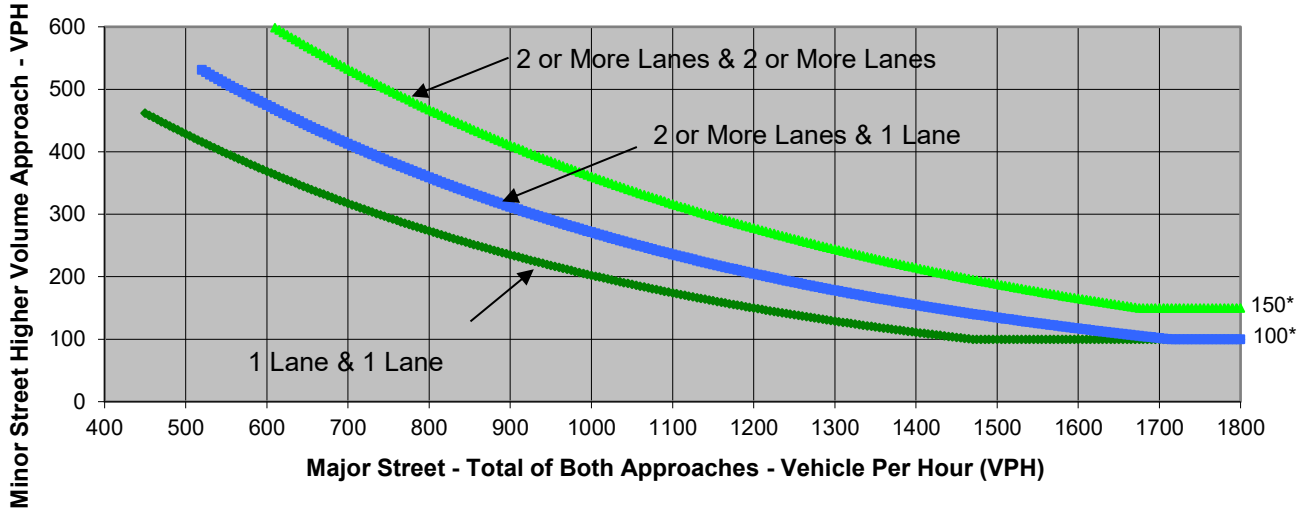
Project	Ontario Ranch Sports Complex
Scenario	CYPP
Peak Hour	PM

Turn Movement Volumes

	NB	SB	EB	WB
Left	51	169	124	140
Through	36	35	1181	988
Right	120	122	30	196
Total	207	326	1,335	1,324

Major Street Direction

	North/South
x	East/West



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Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Chino Ave	Ontario Ave	
Number of Approach Lanes	**2**	**2**	**YES**
Traffic Volume (VPH) *	**2,659**	**326**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Major Street	Chino Ave
Minor Street	Ontario Ave

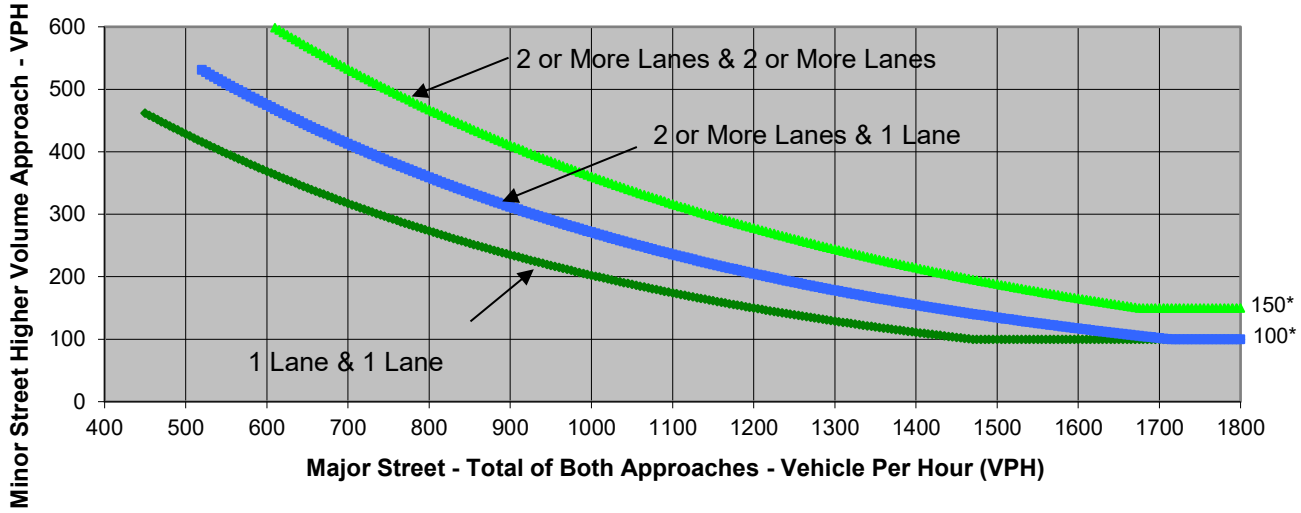
Project	Ontario Ranch Sports Complex
Scenario	OYNP
Peak Hour	PM

Turn Movement Volumes

	NB	SB	EB	WB
Left	2	21	4	2
Through	13	7	253	86
Right	10	7	4	12
Total	25	35	261	100

Major Street Direction

	North/South
x	East/West



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Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Chino Ave	Ontario Ave	
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**361**	**35**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Major Street	Chino Ave
Minor Street	Ontario Ave

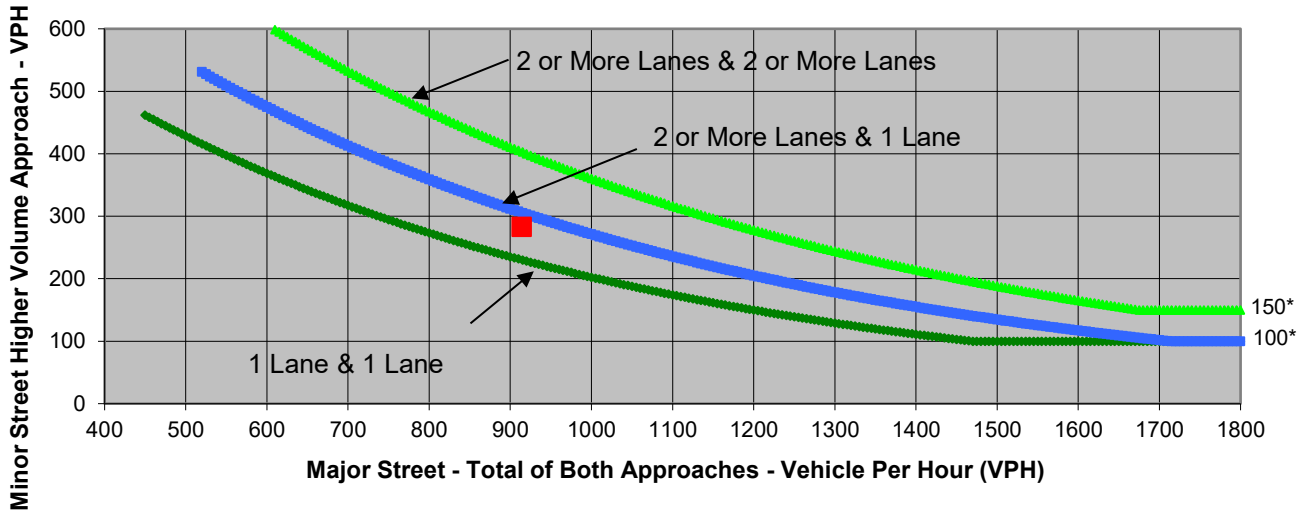
Project	Ontario Ranch Sports Complex
Scenario	OYPP
Peak Hour	PM

Turn Movement Volumes

	NB	SB	EB	WB
Left	2	187	104	2
Through	15	9	363	214
Right	10	87	4	227
Total	27	283	471	443

Major Street Direction

	North/South
x	East/West



* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Chino Ave	Ontario Ave	
Number of Approach Lanes	**2**	**1**	**NO**
Traffic Volume (VPH) *	**914**	**283**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Major Street	Chino Ave
Minor Street	Ontario Ave

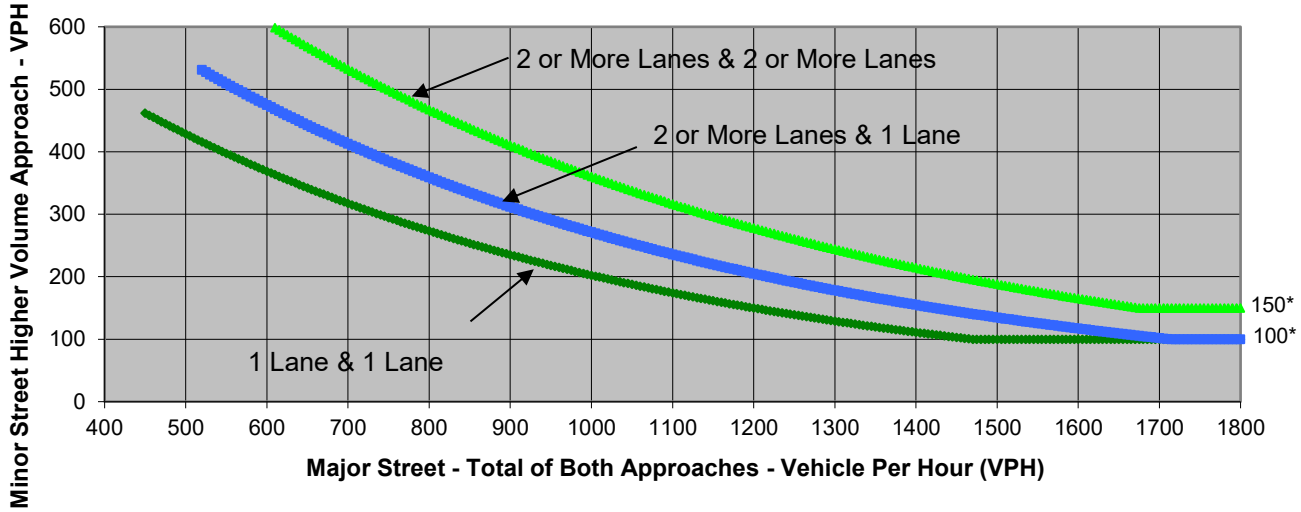
Project	Ontario Ranch Sports Complex
Scenario	OYNP
Peak Hour	Weekend MD

Turn Movement Volumes

	NB	SB	EB	WB
Left	0	20	0	0
Through	10	10	230	80
Right	10	10	0	10
Total	20	40	230	90

Major Street Direction

	North/South
x	East/West



* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Chino Ave	Ontario Ave	
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**320**	**40**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Major Street	Chino Ave
Minor Street	Ontario Ave

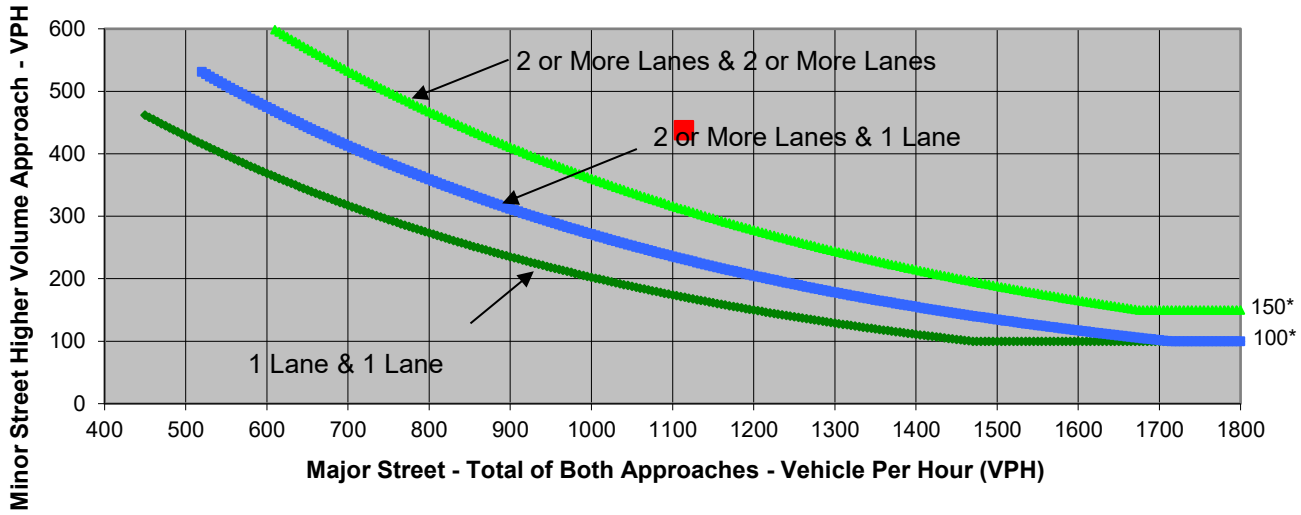
Project	Ontario Ranch Sports Complex
Scenario	OYPP
Peak Hour	Weekend MD

Turn Movement Volumes

	NB	SB	EB	WB
Left	0	295	110	0
Through	12	12	439	266
Right	10	131	0	299
Total	22	438	549	565

Major Street Direction

	North/South
x	East/West



* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Chino Ave	Ontario Ave	
Number of Approach Lanes	**2**	**1**	**YES**
Traffic Volume (VPH) *	**1,114**	**438**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Major Street	Chino Ave
Minor Street	Ontario Ave

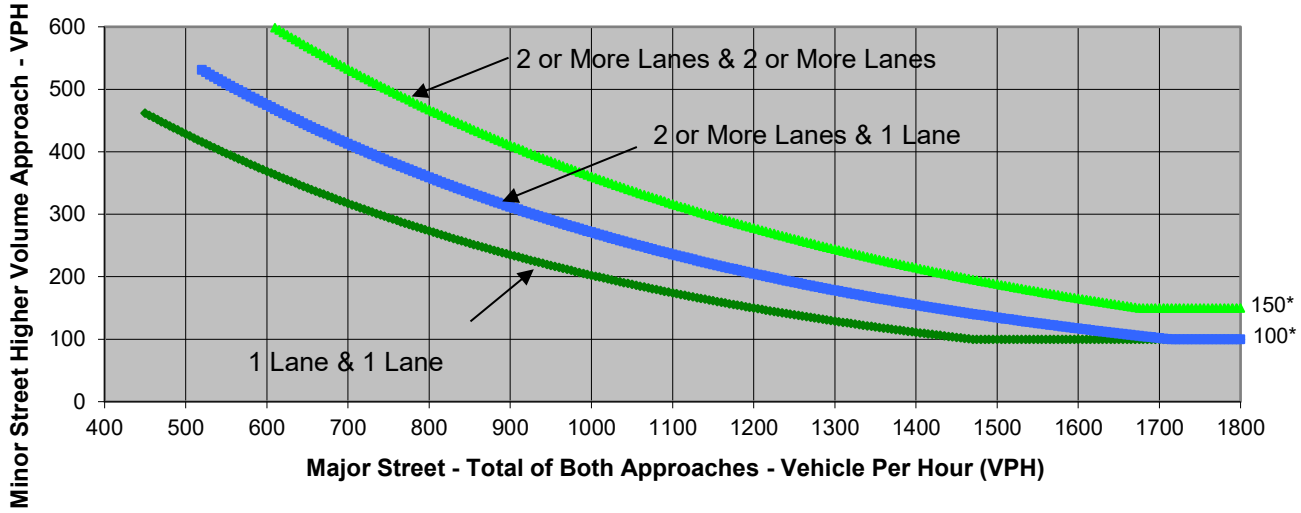
Project	Ontario Ranch Sports Complex
Scenario	OYNP
Peak Hour	Weekend PM

Turn Movement Volumes

	NB	SB	EB	WB
Left	0	20	0	0
Through	10	10	200	70
Right	10	10	0	10
Total	20	40	200	80

Major Street Direction

	North/South
x	East/West



* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Chino Ave	Ontario Ave	
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**280**	**40**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Major Street	Chino Ave
Minor Street	Ontario Ave

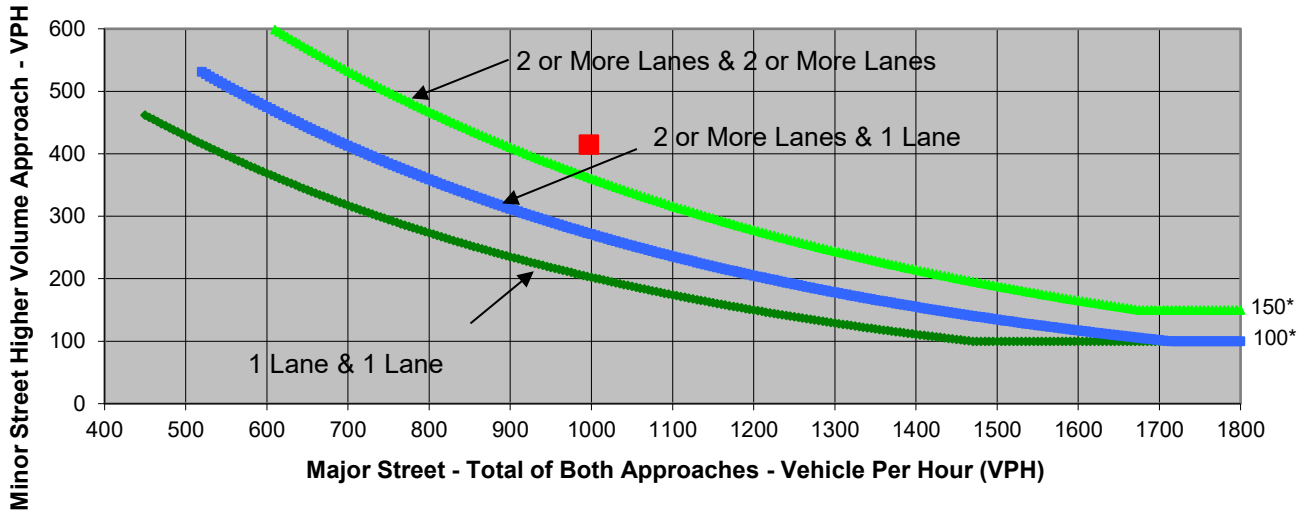
Project	Ontario Ranch Sports Complex
Scenario	OYPP
Peak Hour	Weekend PM

Turn Movement Volumes

	NB	SB	EB	WB
Left	0	284	103	0
Through	13	12	380	224
Right	10	119	0	290
Total	23	415	483	514

Major Street Direction

	North/South
x	East/West



* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Chino Ave	Ontario Ave	
Number of Approach Lanes	**2**	**1**	**YES**
Traffic Volume (VPH) *	**997**	**415**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Major Street	Chino Ave
Minor Street	Ontario Ave

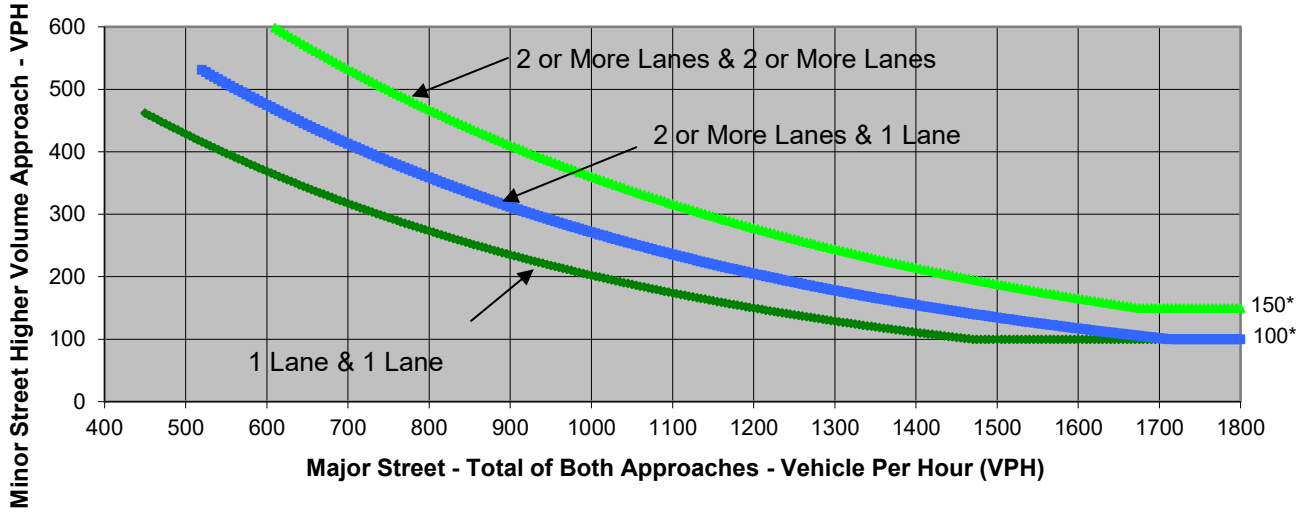
Project	Ontario Ranch Sports Complex
Scenario	CYPP
Peak Hour	Weekend PM

Turn Movement Volumes

	NB	SB	EB	WB
Left	41	250	129	110
Through	28	27	1027	841
Right	100	141	21	252
Total	169	418	1,177	1,203

Major Street Direction

	North/South
x	East/West



* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Chino Ave	Ontario Ave	
Number of Approach Lanes	**2**	**2**	**YES**
Traffic Volume (VPH) *	**2,380**	**418**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Major Street	Edison Ave
Minor Street	Grove Ave

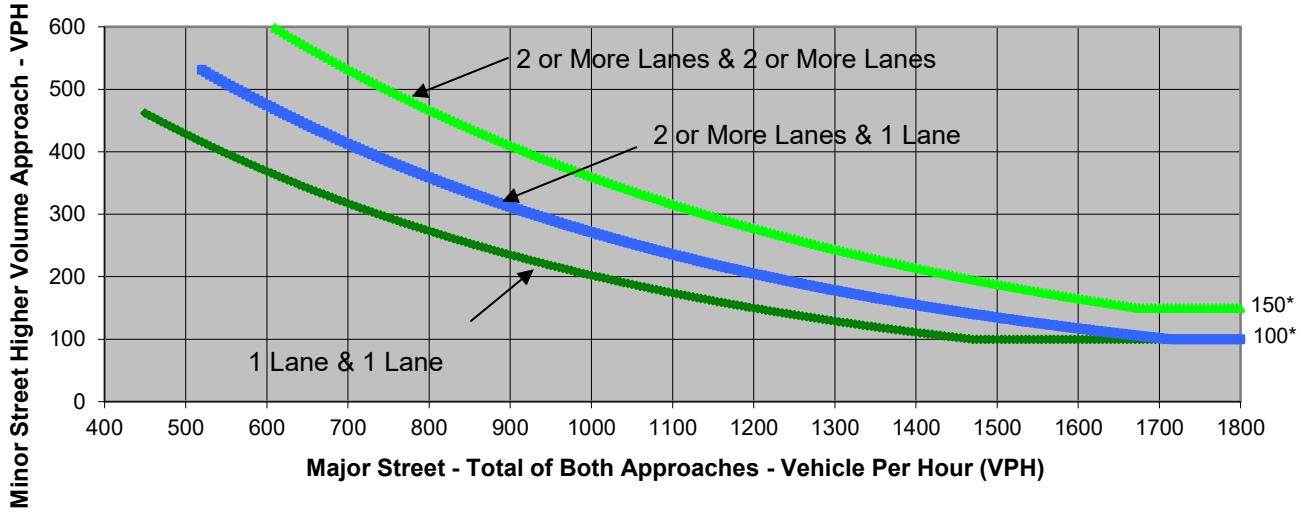
Project	Ontario Ranch Sports Complex
Scenario	CYNP
Peak Hour	AM

Turn Movement Volumes

	NB	SB	EB	WB
Left	50	70	240	190
Through	300	290	1500	2200
Right	30	140	140	100
Total	380	500	1,880	2,490

Major Street Direction

	North/South
x	East/West



* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Edison Ave	Grove Ave	
Number of Approach Lanes	**4**	**2**	**YES**
Traffic Volume (VPH) *	**4,370**	**500**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Major Street	Edison Ave
Minor Street	Grove Ave

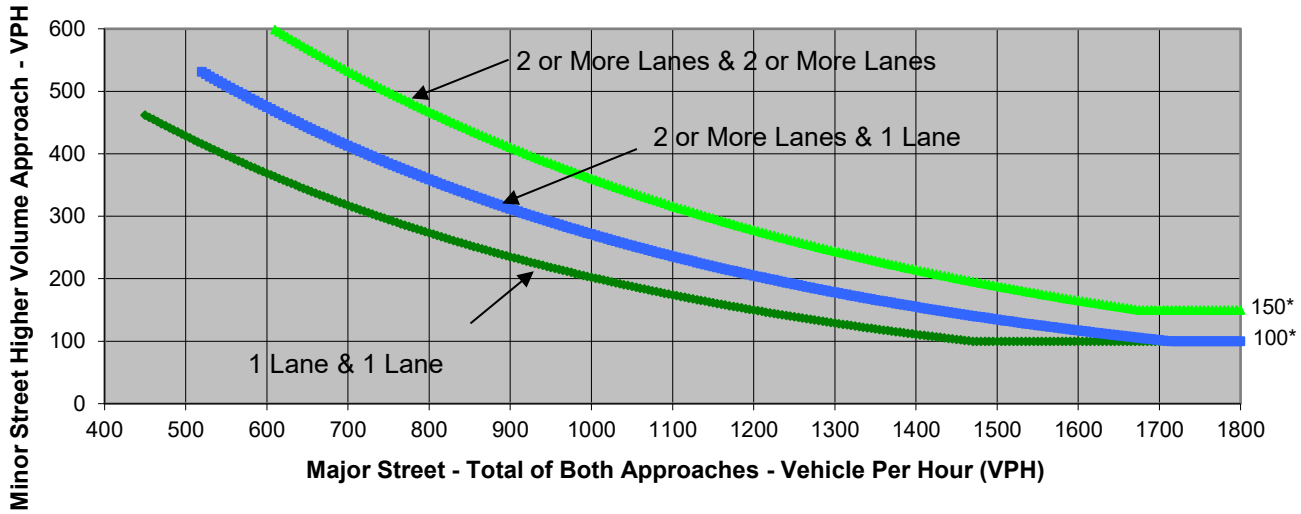
Project	Ontario Ranch Sports Complex
Scenario	CYPP
Peak Hour	AM

Turn Movement Volumes

	NB	SB	EB	WB
Left	50	50	245	190
Through	300	270	1460	2230
Right	30	133	150	100
Total	380	453	1,855	2,520

Major Street Direction

	North/South
x	East/West



* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Edison Ave	Grove Ave	
Number of Approach Lanes	**4**	**2**	**YES**
Traffic Volume (VPH) *	**4,375**	**453**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Major Street	Edison Ave
Minor Street	Grove Ave

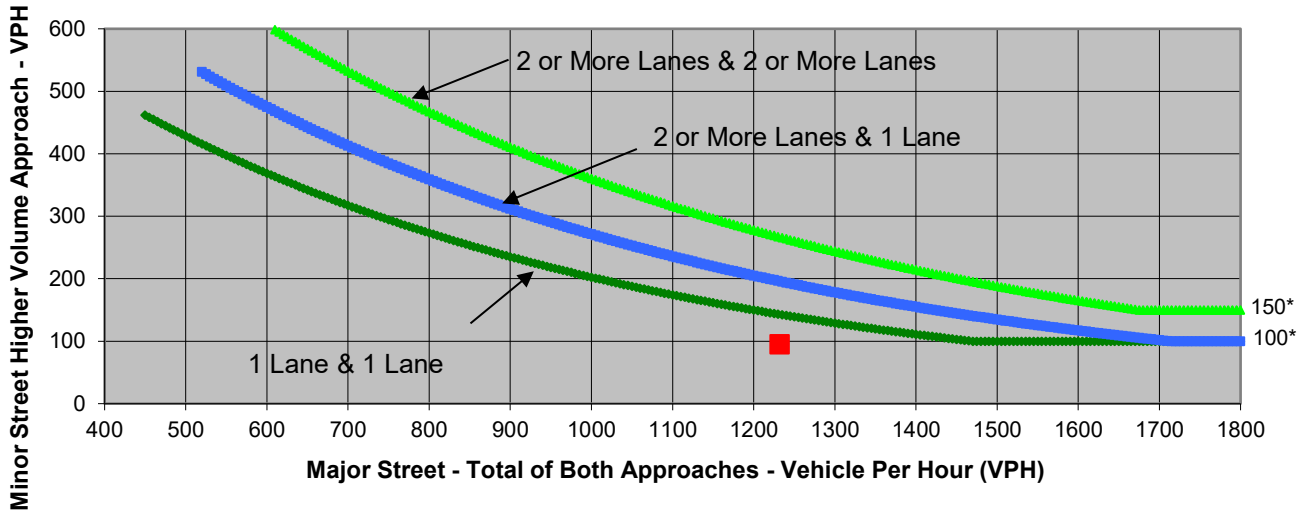
Project	Ontario Ranch Sports Complex
Scenario	OYNP
Peak Hour	AM

Turn Movement Volumes

	NB	SB	EB	WB
Left	34	6	15	152
Through	35	28	359	597
Right	26	24	84	25
Total	95	58	458	774

Major Street Direction

	North/South
x	East/West



* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Edison Ave	Grove Ave	
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**1,232**	**95**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Major Street	Edison Ave
Minor Street	Grove Ave

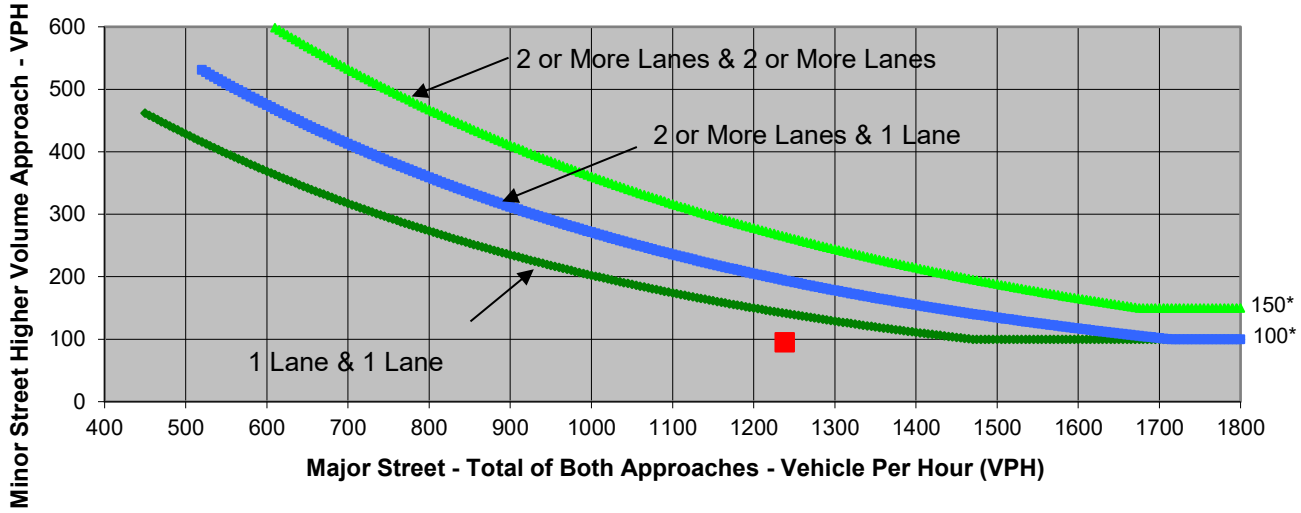
Project	Ontario Ranch Sports Complex
Scenario	OYPP
Peak Hour	AM

Turn Movement Volumes

	NB	SB	EB	WB
Left	34	6	21	152
Through	35	28	359	597
Right	26	29	84	25
Total	95	63	464	774

Major Street Direction

	North/South
x	East/West



* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Edison Ave	Grove Ave	
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**1,238**	**95**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Major Street	Edison Ave
Minor Street	Grove Ave

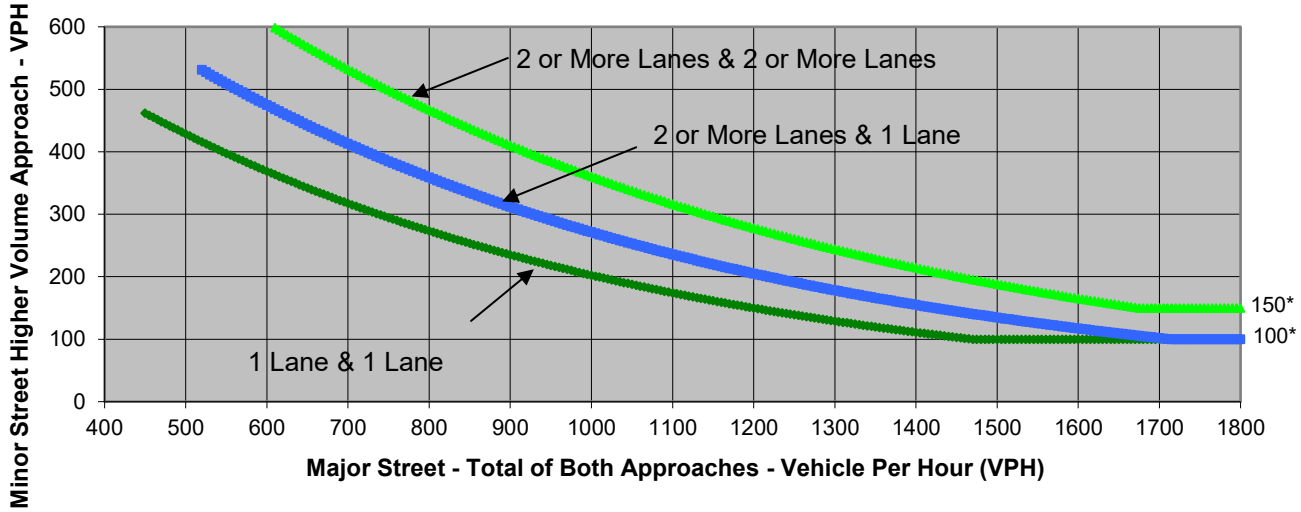
Project	Ontario Ranch Sports Complex
Scenario	CYNP
Peak Hour	PM

Turn Movement Volumes

	NB	SB	EB	WB
Left	70	90	180	120
Through	250	300	2280	1750
Right	170	250	70	110
Total	490	640	2,530	1,980

Major Street Direction

	North/South
x	East/West



* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Edison Ave	Grove Ave	
Number of Approach Lanes	**4**	**2**	**YES**
Traffic Volume (VPH) *	**4,510**	**640**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

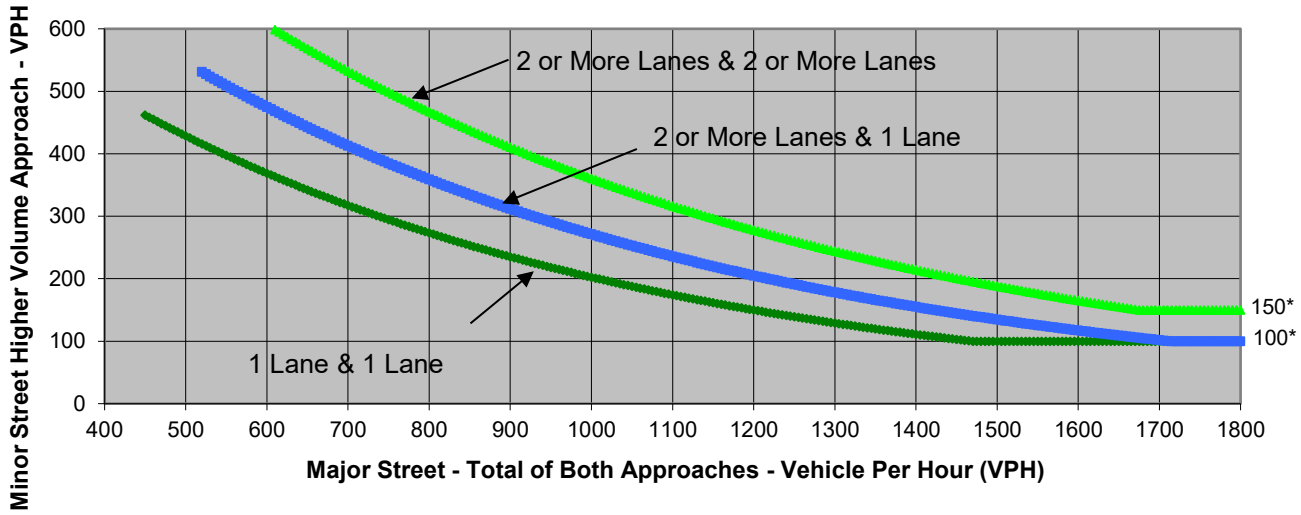
Project	Ontario Ranch Sports Complex
Major Street	Edison Ave
Minor Street	Grove Ave
Scenario	CYPP
Peak Hour	PM

Turn Movement Volumes

	NB	SB	EB	WB
Left	70	110	203	120
Through	260	300	2300	1760
Right	170	259	70	110
Total	500	669	2,573	1,990

Major Street Direction

	North/South
x	East/West



* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Edison Ave	Grove Ave	
Number of Approach Lanes	**4**	**2**	**YES**
Traffic Volume (VPH) *	**4,563**	**669**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Major Street	Edison Ave
Minor Street	Grove Ave

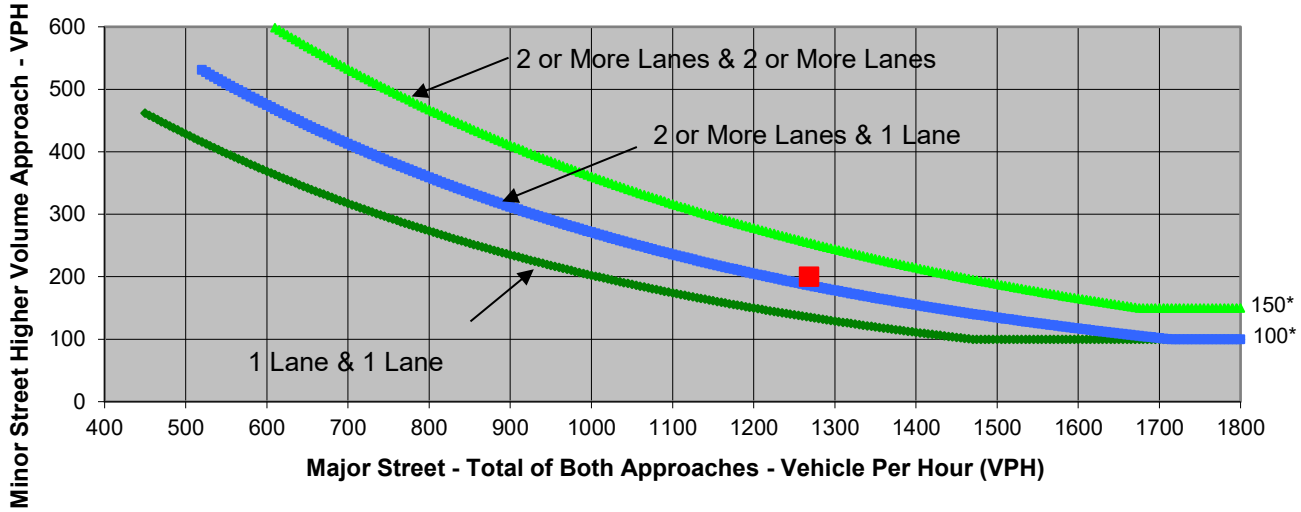
Project	Ontario Ranch Sports Complex
Scenario	OYNP
Peak Hour	PM

Turn Movement Volumes

	NB	SB	EB	WB
Left	85	20	38	57
Through	32	14	716	407
Right	83	13	33	17
Total	200	47	787	481

Major Street Direction

	North/South
x	East/West



* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Edison Ave	Grove Ave	
Number of Approach Lanes	**1**	**1**	**YES**
Traffic Volume (VPH) *	**1,268**	**200**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Major Street	Edison Ave
Minor Street	Grove Ave

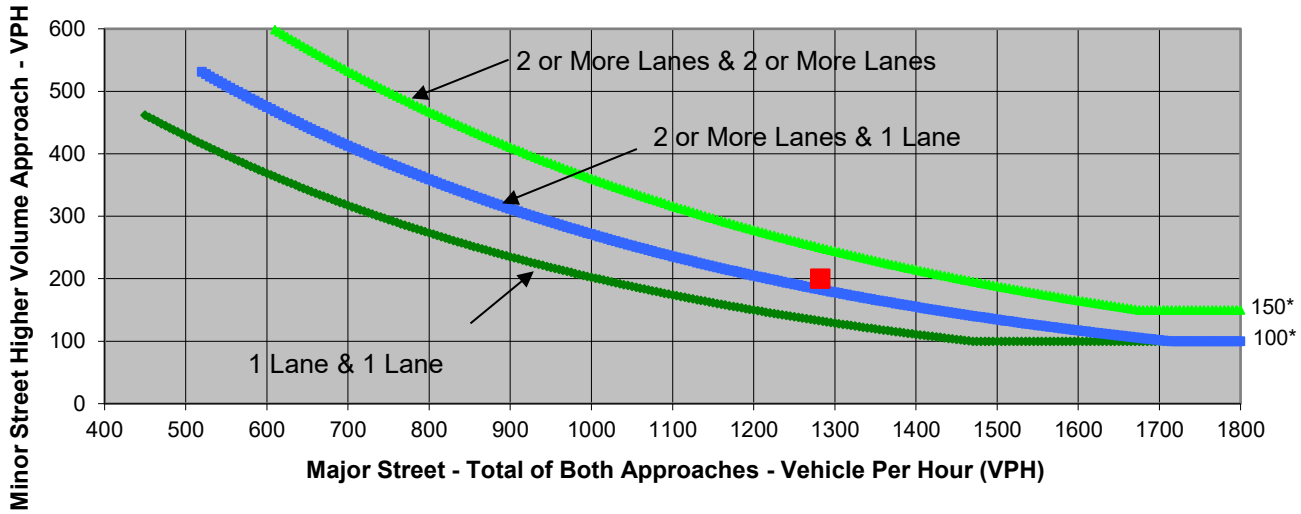
Project	Ontario Ranch Sports Complex
Scenario	OYPP
Peak Hour	PM

Turn Movement Volumes

	NB	SB	EB	WB
Left	85	20	52	57
Through	32	14	716	407
Right	83	24	33	17
Total	200	58	801	481

Major Street Direction

	North/South
x	East/West



* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Edison Ave	Grove Ave	
Number of Approach Lanes	**1**	**1**	**YES**
Traffic Volume (VPH) *	**1,282**	**200**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

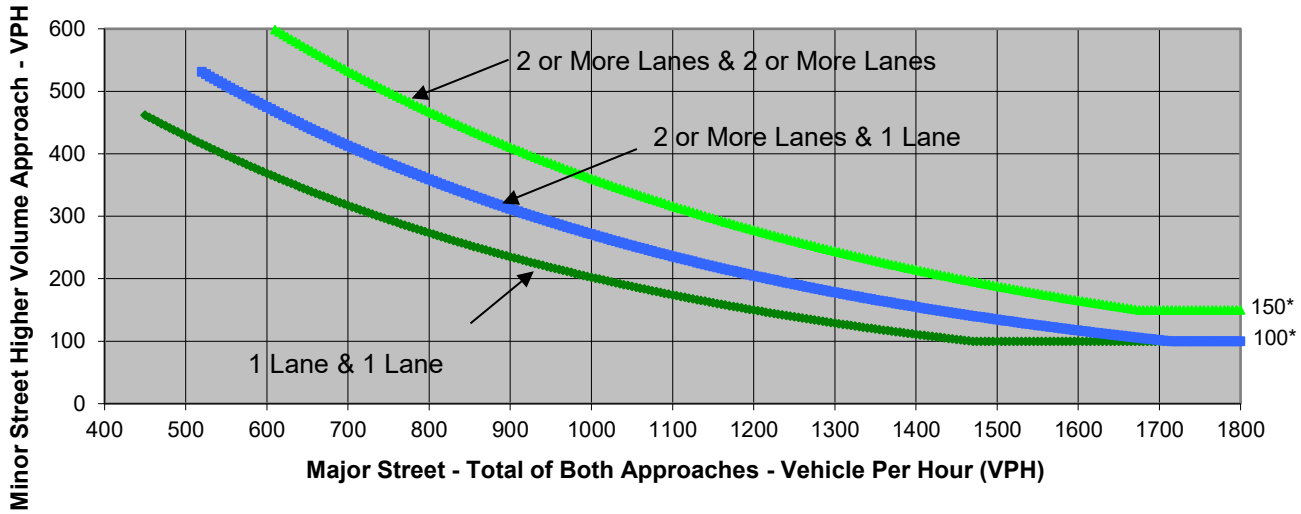
Major Street	Vineyard Avenue	Project	Ontario Ranch Sports Complex
Minor Street	Western Project Driveway	Scenario	Cumulative Year
		Peak Hour	PM Stadium Peak Hour

Turn Movement Volumes

	NB	SB	EB	WB
Left		48		7
Through	592	1346		
Right	24			17
Total	616	1,394	0	24

Major Street Direction

x	North/South
	East/West



* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Vineyard Avenue	Western Project Driveway	
Number of Approach Lanes	**3**	**1**	**NO**
Traffic Volume (VPH) *	**2,010**	**24**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Major Street	Vineyard Avenue
Minor Street	Western Project Driveway

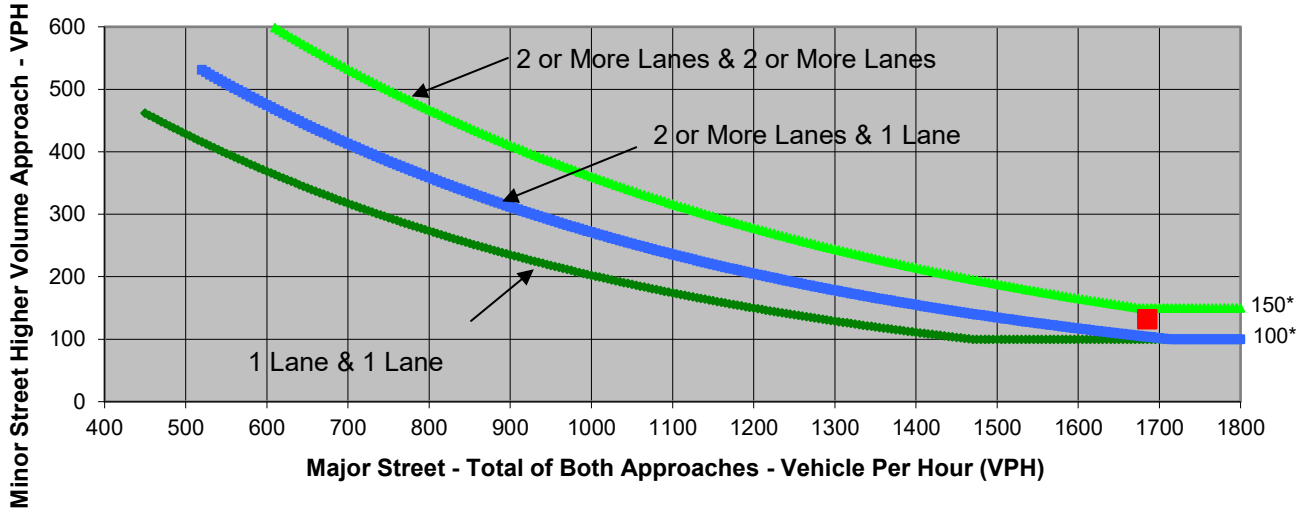
Project	Ontario Ranch Sports Complex
Scenario	Cumulative Year
Peak Hour	Weekend PM Stadium

Turn Movement Volumes

	NB	SB	EB	WB
Left		62		44
Through	500	1094		
Right	29			88
Total	529	1,156	0	132

Major Street Direction

x	North/South
	East/West



* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Vineyard Avenue	Western Project Driveway	
Number of Approach Lanes	**3**	**1**	**YES**
Traffic Volume (VPH) *	**1,685**	**132**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Major Street	Vineyard Avenue
Minor Street	Western Project Driveway

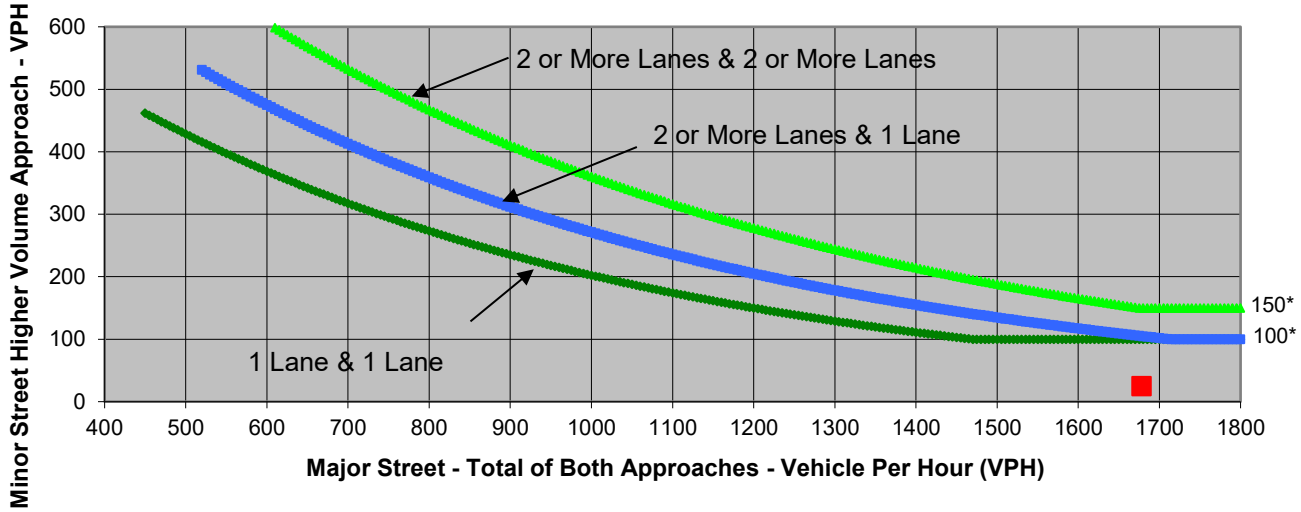
Project	Ontario Ranch Sports Complex
Scenario	Cumulative Year
Peak Hour	AM Peak Hour

Turn Movement Volumes

	NB	SB	EB	WB
Left		8		9
Through	1029	637		
Right	4			16
Total	1,033	645	0	25

Major Street Direction

x	North/South
	East/West



* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Vineyard Avenue	Western Project Driveway	
Number of Approach Lanes	**3**	**1**	**NO**
Traffic Volume (VPH) *	**1,678**	**25**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Major Street	Vineyard Avenue
Minor Street	Western Project Driveway

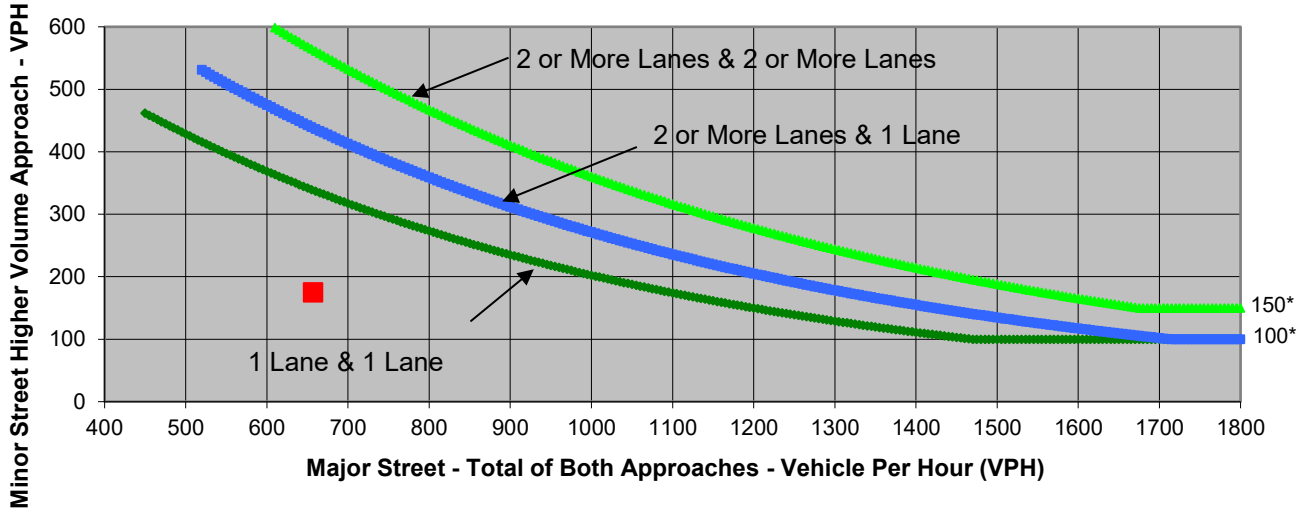
Project	Ontario Ranch Sports Complex
Scenario	Opening Year
Peak Hour	Weekend MD Tournament

Turn Movement Volumes

	NB	SB	EB	WB
Left		77		62
Through	313	220		
Right	47			113
Total	360	297	0	175

Major Street Direction

x	North/South
	East/West



* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Vineyard Avenue	Western Project Driveway	
Number of Approach Lanes	**3**	**1**	**NO**
Traffic Volume (VPH) *	**657**	**175**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Major Street	Vineyard Avenue
Minor Street	Western Project Driveway

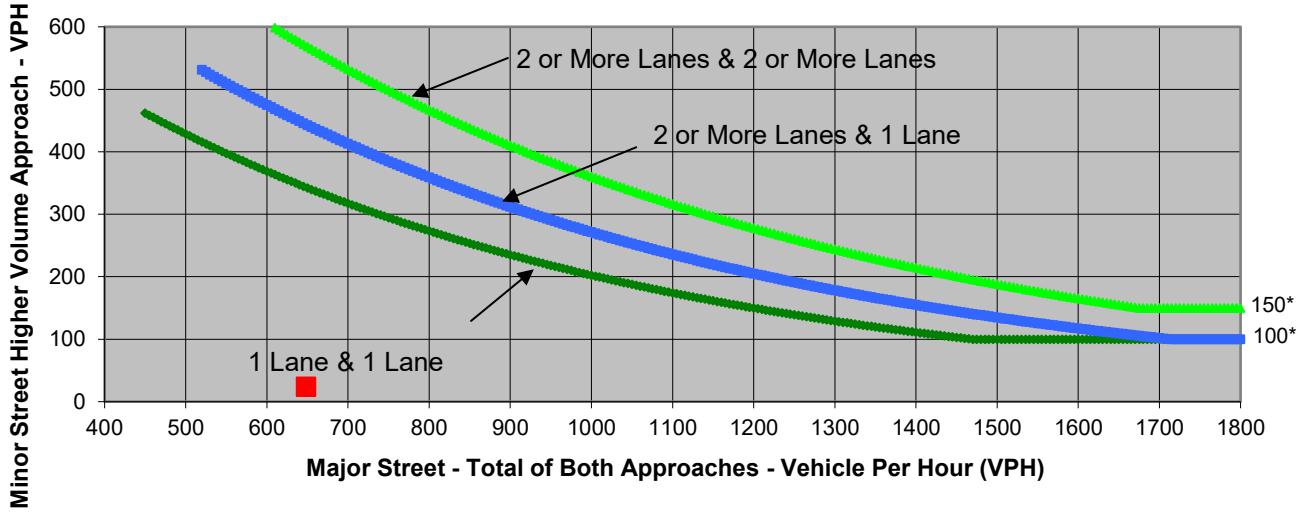
Project	Ontario Ranch Sports Complex
Scenario	Opening Year
Peak Hour	PM Peak Period

Turn Movement Volumes

	NB	SB	EB	WB
Left		45		8
Through	333	243		
Right	27			16
Total	360	288	0	24

Major Street Direction

x	North/South
	East/West



* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Vineyard Avenue	Western Project Driveway	
Number of Approach Lanes	**3**	**1**	**NO**
Traffic Volume (VPH) *	**648**	**24**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Major Street	Vineyard Avenue
Minor Street	Western Project Driveway

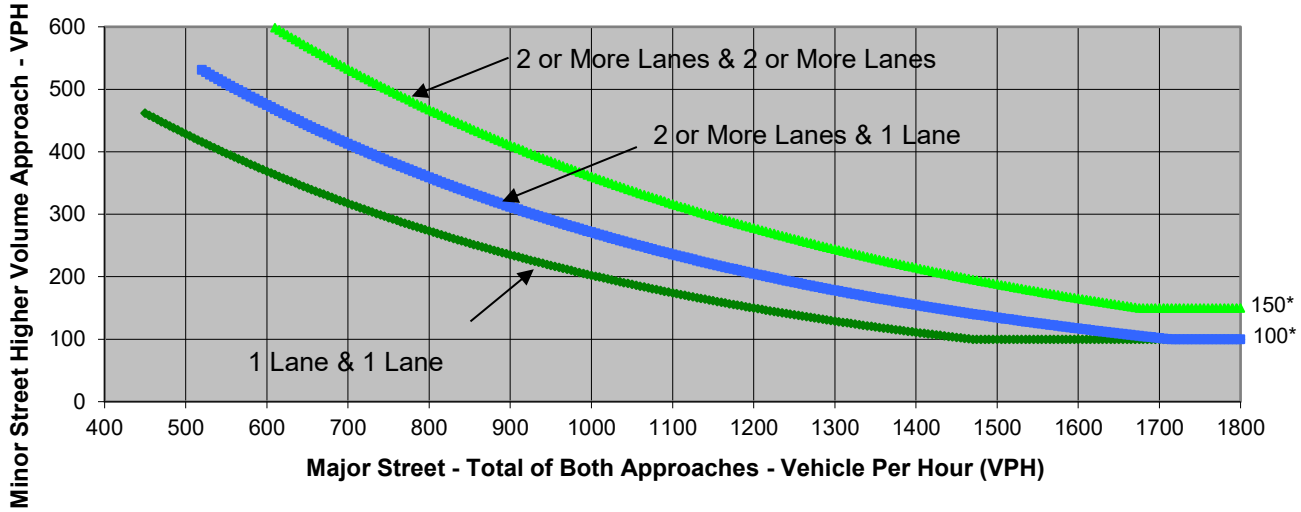
Project	Ontario Ranch Sports Complex
Scenario	Cumulative Year
Peak Hour	Weekend MD Tournament

Turn Movement Volumes

	NB	SB	EB	WB
Left		83		58
Through	553	1227		
Right	41			117
Total	594	1,310	0	175

Major Street Direction

x	North/South
	East/West



* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Vineyard Avenue	Western Project Driveway	
Number of Approach Lanes	**3**	**1**	**YES**
Traffic Volume (VPH) *	**1,904**	**175**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Major Street	Vineyard Avenue
Minor Street	Western Project Driveway

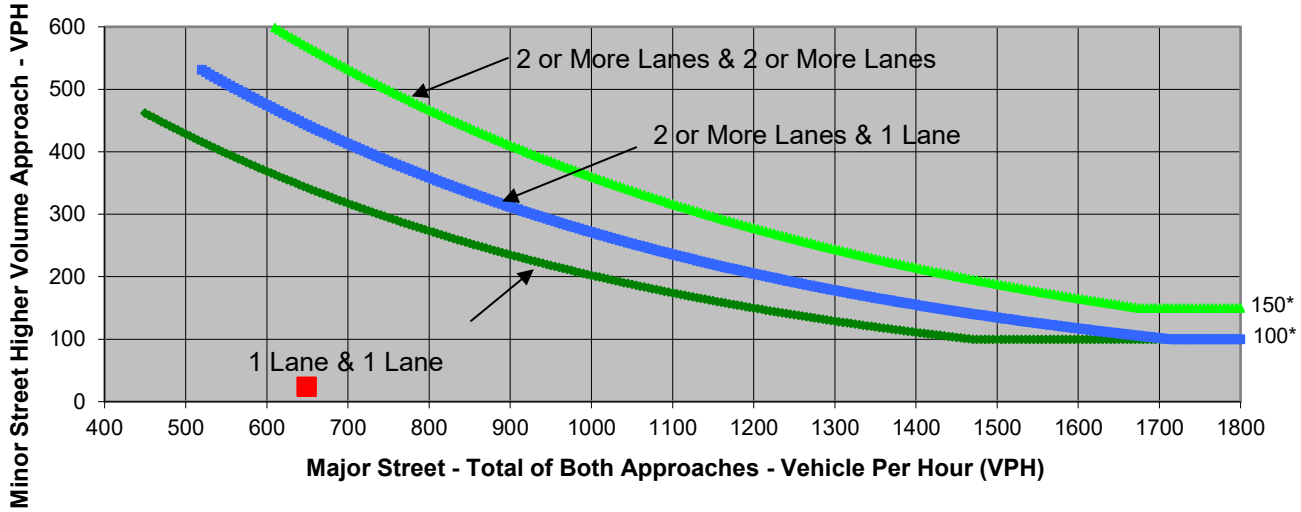
Project	Ontario Ranch Sports Complex
Scenario	Opening Year
Peak Hour	PM Stadium Peak Period

Turn Movement Volumes

	NB	SB	EB	WB
Left		46		8
Through	333	244		
Right	26			16
Total	359	290	0	24

Major Street Direction

x	North/South
	East/West



* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Vineyard Avenue	Western Project Driveway	
Number of Approach Lanes	**3**	**1**	**NO**
Traffic Volume (VPH) *	**649**	**24**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Major Street	Vineyard Avenue
Minor Street	Western Project Driveway

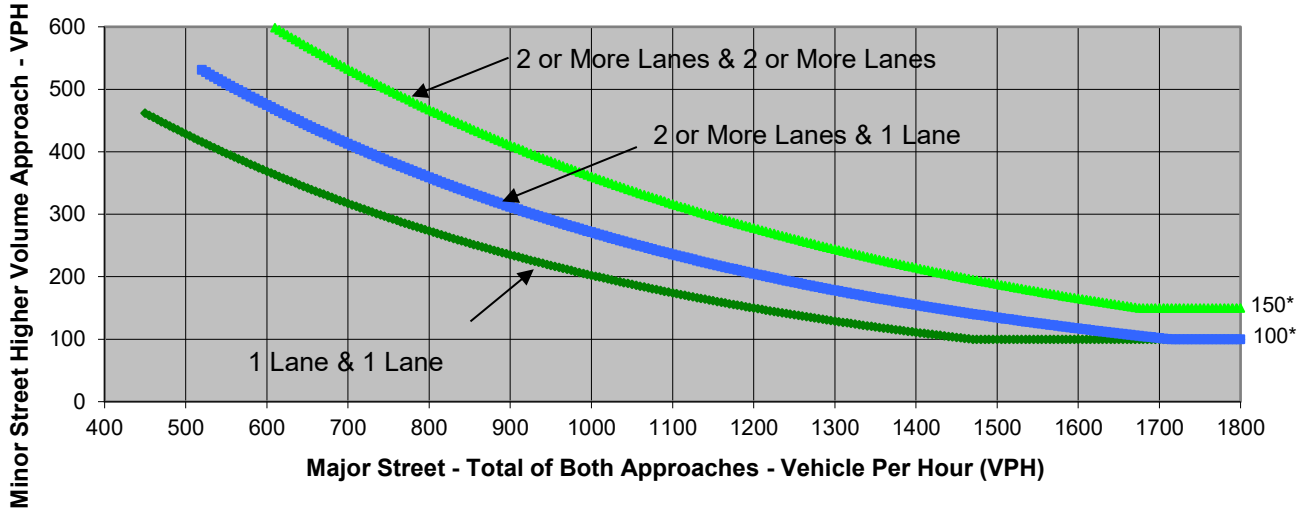
Project	Ontario Ranch Sports Complex
Scenario	Cumulative Year
Peak Hour	PM Peak Hour

Turn Movement Volumes

	NB	SB	EB	WB
Left		48		9
Through	590	1348		
Right	24			15
Total	614	1,396	0	24

Major Street Direction

x	North/South
	East/West



* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Vineyard Avenue	Western Project Driveway	
Number of Approach Lanes	**3**	**1**	**NO**
Traffic Volume (VPH) *	**2,010**	**24**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Major Street	Vineyard Avenue
Minor Street	Western Project Driveway

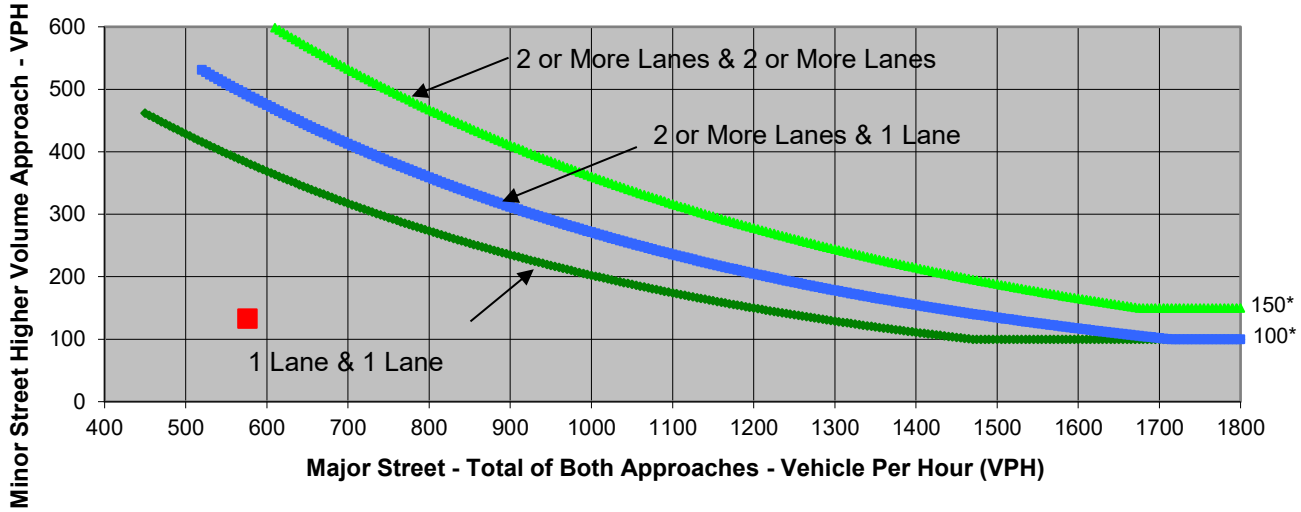
Project	Ontario Ranch Sports Complex
Scenario	Opening Year
Peak Hour	Weekend PM Stadium

Turn Movement Volumes

	NB	SB	EB	WB
Left		57		48
Through	287	198		
Right	34			85
Total	321	255	0	133

Major Street Direction

x	North/South
	East/West



* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Vineyard Avenue	Western Project Driveway	
Number of Approach Lanes	**3**	**1**	**NO**
Traffic Volume (VPH) *	**576**	**133**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Major Street	Vineyard Avenue
Minor Street	Western Project Driveway

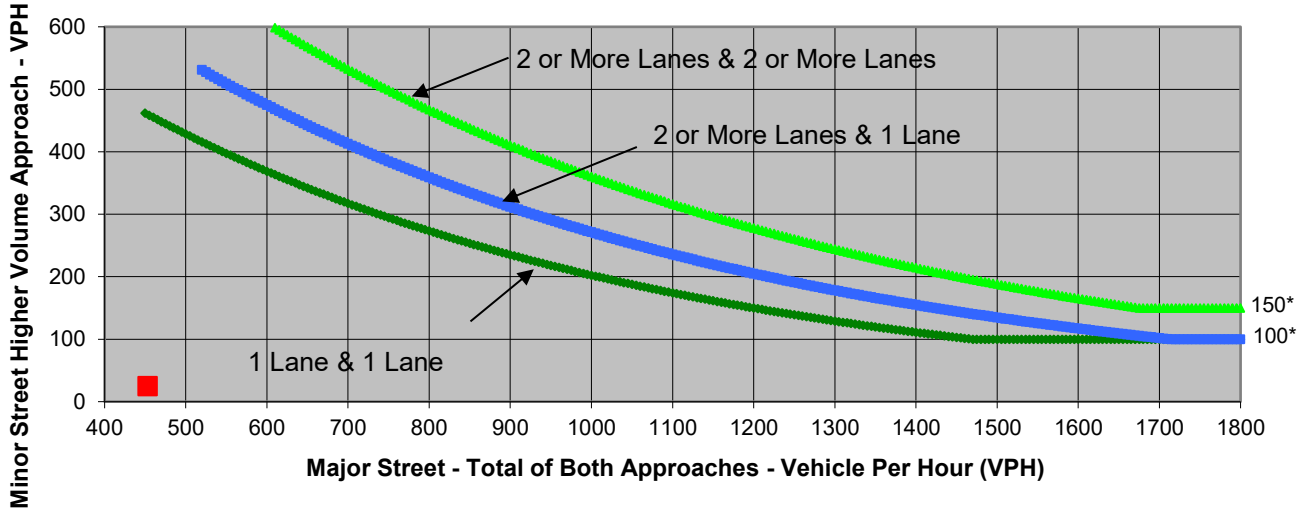
Project	Ontario Ranch Sports Complex
Scenario	Opening Year
Peak Hour	AM Peak Period

Turn Movement Volumes

	NB	SB	EB	WB
Left		8		16
Through	187	254		
Right	4			9
Total	191	262	0	25

Major Street Direction

x	North/South
	East/West



* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Vineyard Avenue	Western Project Driveway	
Number of Approach Lanes	**3**	**1**	**NO**
Traffic Volume (VPH) *	**453**	**25**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

Appendix H
Off-Ramp Queueing Worksheets

Lane Group	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	194	185	179	207	818	824	393
v/c Ratio	0.83	0.66	0.49	0.67	0.33	0.50	0.43
Control Delay	66.6	32.1	10.7	36.2	1.6	18.3	3.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	66.6	32.1	10.7	36.2	1.6	18.3	3.4
Queue Length 50th (ft)	113	59	0	63	3	162	0
Queue Length 95th (ft)	#233	#149	60	m93	4	246	53
Internal Link Dist (ft)		1448			399	863	
Turn Bay Length (ft)	345		345	284			295
Base Capacity (vph)	238	285	366	520	2476	1657	924
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.82	0.65	0.49	0.40	0.33	0.50	0.43

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	EBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	331	2	313	637	368	299	840
v/c Ratio	0.78	no cap	0.62	0.54	0.49	0.81	0.40
Control Delay	44.3		19.5	27.4	5.4	45.1	16.6
Queue Delay	0.0		0.0	0.0	0.0	0.0	0.0
Total Delay	44.3	Error	19.5	27.4	5.4	45.1	16.6
Queue Length 50th (ft)	168	0	70	163	0	172	204
Queue Length 95th (ft)	262	0	155	226	65	m250	257
Internal Link Dist (ft)		1360		1017			399
Turn Bay Length (ft)					289	364	
Base Capacity (vph)	482	1	547	1190	758	424	2115
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.69	2.00	0.57	0.54	0.49	0.71	0.40

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	WBT	WBR	NBL	NBT	SBT
Lane Group Flow (vph)	155	248	227	918	469
v/c Ratio	0.55	0.66	0.75	0.38	0.30
Control Delay	37.8	22.1	39.7	8.0	12.8
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	37.8	22.1	39.7	8.0	12.8
Queue Length 50th (ft)	73	47	120	137	60
Queue Length 95th (ft)	118	111	m132	m174	111
Internal Link Dist (ft)	1348			410	289
Turn Bay Length (ft)		288	190		
Base Capacity (vph)	443	504	347	2406	1545
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.35	0.49	0.65	0.38	0.30

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBT	EBR	NBT	SBL	SBT
Lane Group Flow (vph)	502	254	933	137	371
v/c Ratio	0.94	0.39	0.78	0.58	0.20
Control Delay	54.7	4.8	27.7	38.7	5.0
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	54.7	4.8	27.7	38.7	5.0
Queue Length 50th (ft)	238	0	201	69	46
Queue Length 95th (ft)	#420	49	#294	102	11
Internal Link Dist (ft)	1337		967		410
Turn Bay Length (ft)		328		131	
Base Capacity (vph)	552	666	1196	260	1897
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.91	0.38	0.78	0.53	0.20

Intersection Summary

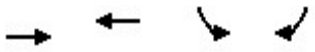
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	258	246	238	514	776	506	85
v/c Ratio	0.63	0.50	0.46	0.48	0.26	0.38	0.21
Control Delay	37.2	13.4	9.0	10.2	5.9	30.7	6.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	37.2	13.4	9.0	10.2	5.9	30.7	6.9
Queue Length 50th (ft)	136	36	13	146	98	71	0
Queue Length 95th (ft)	223	113	77	204	100	96	32
Internal Link Dist (ft)		1418			370	727	
Turn Bay Length (ft)	361		361				126
Base Capacity (vph)	412	491	522	1080	2935	1344	400
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.63	0.50	0.46	0.48	0.26	0.38	0.21

Intersection Summary

Lane Group	EBL	EBT	EBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	251	247	241	1311	448	147	661
v/c Ratio	0.47	0.41	0.39	0.67	0.58	0.29	0.26
Control Delay	27.0	7.0	6.4	28.5	5.7	9.2	5.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	27.0	7.0	6.4	28.5	5.7	9.2	5.7
Queue Length 50th (ft)	116	14	10	186	0	40	76
Queue Length 95th (ft)	191	73	65	225	68	68	97
Internal Link Dist (ft)		1368		527			370
Turn Bay Length (ft)	355		355		260		
Base Capacity (vph)	536	609	623	1950	776	504	2561
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.47	0.41	0.39	0.67	0.58	0.29	0.26

Intersection Summary



Lane Group	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	715	671	827	579
v/c Ratio	0.47	0.64	0.55	0.80
Control Delay	17.1	20.1	10.6	20.8
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	17.1	20.1	10.6	20.8
Queue Length 50th (ft)	76	110	76	127
Queue Length 95th (ft)	106	158	145	#369
Internal Link Dist (ft)	407	165	1128	
Turn Bay Length (ft)			560	560
Base Capacity (vph)	2839	1976	1834	860
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.25	0.34	0.45	0.67

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	313	591	176	287	541	246
v/c Ratio	0.28	0.57	0.35	0.12	0.56	0.43
Control Delay	20.0	3.3	31.6	8.8	24.0	6.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	20.0	3.3	31.6	8.8	24.0	6.6
Queue Length 50th (ft)	32	12	25	18	69	0
Queue Length 95th (ft)	68	44	100	41	242	71
Internal Link Dist (ft)	600			895	997	
Turn Bay Length (ft)			280		570	470
Base Capacity (vph)	2815	1301	1764	4622	1749	857
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.11	0.45	0.10	0.06	0.31	0.29

Intersection Summary

Lane Group	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	314	304	286	251	774	800	592
v/c Ratio	0.68	0.66	0.55	0.77	0.39	0.70	0.66
Control Delay	36.1	29.6	15.4	39.6	14.5	33.3	6.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	36.1	29.6	15.4	39.6	14.5	33.3	6.9
Queue Length 50th (ft)	162	131	60	145	189	217	0
Queue Length 95th (ft)	243	217	133	212	236	#355	98
Internal Link Dist (ft)		1448			399	863	
Turn Bay Length (ft)	345		345	284			295
Base Capacity (vph)	549	538	595	385	1998	1139	892
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.57	0.57	0.48	0.65	0.39	0.70	0.66

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	262	213	777	324	258	948
v/c Ratio	0.70	0.49	0.58	0.42	0.74	0.43
Control Delay	42.1	16.3	26.4	4.9	34.9	2.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.2
Total Delay	42.1	16.3	26.4	4.9	34.9	2.7
Queue Length 50th (ft)	138	42	182	0	81	2
Queue Length 95th (ft)	204	100	#308	62	m148	6
Internal Link Dist (ft)			1017			399
Turn Bay Length (ft)				289	364	
Base Capacity (vph)	482	521	1339	780	443	2217
Starvation Cap Reductn	0	0	0	0	0	472
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.54	0.41	0.58	0.42	0.58	0.54

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	WBT	WBR	NBL	NBT	SBT
Lane Group Flow (vph)	223	145	195	444	1242
v/c Ratio	0.68	0.35	0.67	0.19	0.81
Control Delay	40.4	7.3	38.1	8.1	22.4
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	40.4	7.3	38.1	8.1	22.4
Queue Length 50th (ft)	105	0	96	70	222
Queue Length 95th (ft)	162	42	167	92	#421
Internal Link Dist (ft)	1348			410	289
Turn Bay Length (ft)		288	190		
Base Capacity (vph)	443	504	347	2313	1542
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.50	0.29	0.56	0.19	0.81

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBT	EBR	NBT	SBL	SBT
Lane Group Flow (vph)	139	248	770	262	641
v/c Ratio	0.53	0.56	0.52	0.73	0.26
Control Delay	38.2	9.3	15.9	32.5	1.5
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	38.2	9.3	15.9	32.5	1.5
Queue Length 50th (ft)	66	0	108	92	6
Queue Length 95th (ft)	112	58	206	m92	m10
Internal Link Dist (ft)	1337		967		410
Turn Bay Length (ft)		328		131	
Base Capacity (vph)	378	531	1491	585	2439
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.37	0.47	0.52	0.45	0.26

Intersection Summary

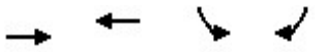
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	237	232	210	497	411	1090	261
v/c Ratio	0.60	0.61	0.41	0.53	0.14	0.65	0.44
Control Delay	37.2	35.9	6.8	10.9	4.6	30.8	6.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	37.2	35.9	6.8	10.9	4.6	30.8	6.0
Queue Length 50th (ft)	125	120	0	146	38	158	0
Queue Length 95th (ft)	207	206	56	204	42	195	56
Internal Link Dist (ft)		1418			370	727	
Turn Bay Length (ft)	361		361				126
Base Capacity (vph)	395	381	511	936	2988	1681	596
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.60	0.61	0.41	0.53	0.14	0.65	0.44

Intersection Summary

Lane Group	EBL	EBT	EBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	76	233	227	872	504	453	1017
v/c Ratio	0.16	0.49	0.46	0.56	0.67	0.52	0.37
Control Delay	24.8	17.9	17.0	30.8	7.8	6.9	3.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	24.8	17.9	17.0	30.8	7.8	6.9	3.2
Queue Length 50th (ft)	33	61	55	125	0	51	42
Queue Length 95th (ft)	69	139	127	158	86	70	35
Internal Link Dist (ft)		1368		527			370
Turn Bay Length (ft)	355		355		260		
Base Capacity (vph)	465	477	491	1546	750	864	2775
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.16	0.49	0.46	0.56	0.67	0.52	0.37

Intersection Summary



Lane Group	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	1156	681	1029	697
v/c Ratio	0.67	0.56	0.89dr	0.97
Control Delay	19.9	19.0	15.5	44.9
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	19.9	19.0	15.5	44.9
Queue Length 50th (ft)	138	112	137	240
Queue Length 95th (ft)	165	146	219	#510
Internal Link Dist (ft)	407	165	1128	
Turn Bay Length (ft)			560	560
Base Capacity (vph)	2305	1604	1514	720
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.50	0.42	0.68	0.97

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
dr Defacto Right Lane. Recode with 1 though lane as a right lane.

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	656	813	292	394	427	118
v/c Ratio	0.48	0.83	0.49	0.15	0.47	0.25
Control Delay	23.7	13.8	35.0	9.0	27.1	7.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	23.7	13.8	35.0	9.0	27.1	7.7
Queue Length 50th (ft)	86	120	56	28	72	0
Queue Length 95th (ft)	149	280	154	53	199	49
Internal Link Dist (ft)	600			895	997	
Turn Bay Length (ft)			280		570	470
Base Capacity (vph)	2373	1202	1471	4451	1471	683
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.28	0.68	0.20	0.09	0.29	0.17

Intersection Summary

Lane Group	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	236	223	216	366	827	816	521
v/c Ratio	0.69	0.56	0.47	0.90	0.38	0.70	0.61
Control Delay	42.4	19.8	9.9	59.7	8.2	28.1	5.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	42.4	19.8	9.9	59.7	8.2	28.1	5.6
Queue Length 50th (ft)	125	50	10	200	107	203	0
Queue Length 95th (ft)	207	128	71	#366	142	269	70
Internal Link Dist (ft)		1448			399	863	
Turn Bay Length (ft)	345		345	284			295
Base Capacity (vph)	401	450	505	422	2332	1267	881
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.59	0.50	0.43	0.87	0.35	0.64	0.59

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	345	2	341	838	388	321	782
v/c Ratio	0.87	no cap	0.66	0.72	0.51	0.84	0.37
Control Delay	55.5		18.6	28.5	5.0	53.1	8.6
Queue Delay	0.0		0.0	0.0	0.0	0.0	0.0
Total Delay	55.5	Error	18.6	28.5	5.0	53.1	8.6
Queue Length 50th (ft)	184	0	60	208	0	169	99
Queue Length 95th (ft)	#336	0	155	276	59	#304	132
Internal Link Dist (ft)		1360		1017			399
Turn Bay Length (ft)					289	364	
Base Capacity (vph)	418	1	535	1255	792	418	2288
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.83	2.00	0.64	0.67	0.49	0.77	0.34

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	WBT	WBR	NBL	NBT	SBT
Lane Group Flow (vph)	252	135	239	368	503
v/c Ratio	0.75	0.33	0.74	0.16	0.36
Control Delay	44.8	7.4	43.2	5.9	14.8
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	44.8	7.4	43.2	5.9	14.8
Queue Length 50th (ft)	118	0	119	46	70
Queue Length 95th (ft)	190	42	191	52	121
Internal Link Dist (ft)	1348			410	289
Turn Bay Length (ft)		288	190		
Base Capacity (vph)	400	461	390	2300	1411
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.63	0.29	0.61	0.16	0.36

Intersection Summary

Lane Group	EBT	EBR	NBT	SBL	SBT
Lane Group Flow (vph)	175	340	731	128	457
v/c Ratio	0.59	0.62	0.41	0.52	0.19
Control Delay	37.9	8.7	10.5	38.0	3.5
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	37.9	8.7	10.5	38.0	3.5
Queue Length 50th (ft)	83	0	73	65	38
Queue Length 95th (ft)	131	63	153	m111	65
Internal Link Dist (ft)	1337		967		410
Turn Bay Length (ft)		328		131	
Base Capacity (vph)	444	649	1770	368	2370
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.39	0.52	0.41	0.35	0.19

Intersection Summary

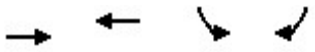
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	211	208	191	543	313	460	135
v/c Ratio	0.49	0.50	0.36	0.56	0.11	0.31	0.29
Control Delay	32.2	31.3	6.2	14.4	7.2	28.5	7.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	32.2	31.3	6.2	14.4	7.2	28.5	7.0
Queue Length 50th (ft)	106	104	0	154	49	62	0
Queue Length 95th (ft)	178	180	52	214	67	85	44
Internal Link Dist (ft)		1418			370	727	
Turn Bay Length (ft)	361		361				126
Base Capacity (vph)	430	414	524	972	2881	1479	461
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.49	0.50	0.36	0.56	0.11	0.31	0.29

Intersection Summary

Lane Group	EBL	EBT	EBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	46	138	135	909	277	140	663
v/c Ratio	0.10	0.28	0.26	0.44	0.40	0.24	0.24
Control Delay	24.0	6.9	6.0	23.6	4.7	8.8	4.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	24.0	6.9	6.0	23.6	4.7	8.8	4.2
Queue Length 50th (ft)	20	3	0	114	0	37	60
Queue Length 95th (ft)	47	49	43	144	52	64	76
Internal Link Dist (ft)		1368		527			370
Turn Bay Length (ft)	355		355		260		
Base Capacity (vph)	465	494	512	2084	687	576	2775
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.10	0.28	0.26	0.44	0.40	0.24	0.24

Intersection Summary



Lane Group	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	820	462	581	337
v/c Ratio	0.47	0.38	0.51	0.56
Control Delay	10.7	10.5	7.6	7.4
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	10.7	10.5	7.6	7.4
Queue Length 50th (ft)	41	32	24	12
Queue Length 95th (ft)	87	76	61	65
Internal Link Dist (ft)	407	165	1128	
Turn Bay Length (ft)			560	560
Base Capacity (vph)	4155	2891	2684	1220
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.20	0.16	0.22	0.28

Intersection Summary

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	454	587	198	276	294	64
v/c Ratio	0.34	0.60	0.36	0.10	0.42	0.19
Control Delay	17.3	4.3	28.6	6.3	25.5	10.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	17.3	4.3	28.6	6.3	25.5	10.0
Queue Length 50th (ft)	41	18	26	13	37	0
Queue Length 95th (ft)	83	55	103	30	136	40
Internal Link Dist (ft)	600			895	997	
Turn Bay Length (ft)			280		570	470
Base Capacity (vph)	3021	1354	1891	4674	1890	821
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.15	0.43	0.10	0.06	0.16	0.08

Intersection Summary

Lane Group	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	190	186	176	243	722	665	462
v/c Ratio	0.55	0.48	0.39	0.67	0.34	0.58	0.57
Control Delay	34.7	19.7	7.7	39.1	7.8	24.0	5.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	34.7	19.7	7.7	39.1	7.8	24.0	5.4
Queue Length 50th (ft)	86	41	0	109	80	136	0
Queue Length 95th (ft)	168	115	52	200	121	212	64
Internal Link Dist (ft)		1448			399	863	
Turn Bay Length (ft)	345		345	284			295
Base Capacity (vph)	457	477	536	482	2642	1446	897
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.42	0.39	0.33	0.50	0.27	0.46	0.52

Intersection Summary

Lane Group	EBL	EBT	EBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	297	3	260	695	319	264	648
v/c Ratio	0.75	no cap	0.47	0.61	0.45	0.73	0.31
Control Delay	43.1		7.0	25.1	4.9	42.7	8.1
Queue Delay	0.0		0.0	0.0	0.0	0.0	0.0
Total Delay	43.1	Error	7.0	25.1	4.9	42.7	8.1
Queue Length 50th (ft)	145	0	0	157	0	130	78
Queue Length 95th (ft)	#271	0	59	221	54	217	106
Internal Link Dist (ft)		1360		1017			399
Turn Bay Length (ft)					289	364	
Base Capacity (vph)	461	1	603	1385	793	461	2525
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.64	3.00	0.43	0.50	0.40	0.57	0.26

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	WBT	WBR	NBL	NBT	SBT
Lane Group Flow (vph)	216	138	229	240	388
v/c Ratio	0.53	0.30	0.56	0.12	0.48
Control Delay	26.3	6.6	26.8	6.4	18.4
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	26.3	6.6	26.8	6.4	18.4
Queue Length 50th (ft)	57	0	61	16	44
Queue Length 95th (ft)	163	42	173	40	107
Internal Link Dist (ft)	1348			410	289
Turn Bay Length (ft)		288	190		
Base Capacity (vph)	796	785	793	3315	2127
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.27	0.18	0.29	0.07	0.18

Intersection Summary

Lane Group	EBT	EBR	NBT	SBL	SBT
Lane Group Flow (vph)	96	297	631	84	381
v/c Ratio	0.22	0.49	0.57	0.20	0.23
Control Delay	19.7	6.4	11.7	20.4	6.3
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	19.7	6.4	11.7	20.4	6.3
Queue Length 50th (ft)	23	0	55	20	24
Queue Length 95th (ft)	69	57	100	65	44
Internal Link Dist (ft)	1337		967		410
Turn Bay Length (ft)		328		131	
Base Capacity (vph)	1057	1058	2577	1052	3471
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.09	0.28	0.24	0.08	0.11

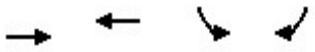
Intersection Summary

Lane Group	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	173	170	154	529	272	380	178
v/c Ratio	0.40	0.41	0.31	0.54	0.09	0.26	0.36
Control Delay	30.3	29.1	6.3	14.6	7.3	28.0	6.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	30.3	29.1	6.3	14.6	7.3	28.0	6.8
Queue Length 50th (ft)	84	82	0	149	42	50	0
Queue Length 95th (ft)	147	147	47	207	63	71	50
Internal Link Dist (ft)		1418			370	727	
Turn Bay Length (ft)	361		361				126
Base Capacity (vph)	430	414	497	972	2881	1479	493
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.40	0.41	0.31	0.54	0.09	0.26	0.36

Intersection Summary

Lane Group	EBL	EBT	EBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	40	123	119	806	269	114	577
v/c Ratio	0.09	0.25	0.24	0.39	0.40	0.20	0.21
Control Delay	23.8	7.1	6.1	23.0	4.7	8.6	4.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	23.8	7.1	6.1	23.0	4.7	8.6	4.3
Queue Length 50th (ft)	16	3	0	99	0	29	52
Queue Length 95th (ft)	42	47	41	126	51	53	69
Internal Link Dist (ft)		1368		527			370
Turn Bay Length (ft)	355		355		260		
Base Capacity (vph)	465	484	500	2084	681	576	2775
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.09	0.25	0.24	0.39	0.40	0.20	0.21

Intersection Summary



Lane Group	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	746	411	592	388
v/c Ratio	0.45	0.36	0.51	0.61
Control Delay	10.7	10.6	6.5	7.5
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	10.7	10.6	6.5	7.5
Queue Length 50th (ft)	35	27	20	12
Queue Length 95th (ft)	82	71	54	68
Internal Link Dist (ft)	407	165	1128	
Turn Bay Length (ft)			560	560
Base Capacity (vph)	4266	2969	2732	1252
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.17	0.14	0.22	0.31

Intersection Summary

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	353	603	172	192	239	51
v/c Ratio	0.28	0.61	0.31	0.07	0.36	0.16
Control Delay	16.0	3.9	27.5	5.8	24.6	10.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	16.0	3.9	27.5	5.8	24.6	10.7
Queue Length 50th (ft)	30	12	20	8	27	0
Queue Length 95th (ft)	61	44	89	20	111	36
Internal Link Dist (ft)	600			895	997	
Turn Bay Length (ft)			280		570	470
Base Capacity (vph)	3190	1379	2000	4686	2001	860
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.11	0.44	0.09	0.04	0.12	0.06

Intersection Summary

Queues
5: Euclid Ave & SR-60 WB Ramps

03/19/2024

Lane Group	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	237	226	214	347	930	978	405
v/c Ratio	1.00	0.92	0.56	0.81	0.38	0.70	0.48
Control Delay	98.4	74.6	13.2	30.6	0.7	26.4	4.3
Queue Delay	33.7	22.1	0.0	0.0	0.4	0.0	0.0
Total Delay	132.0	96.7	13.2	30.6	1.0	26.4	4.3
Queue Length 50th (ft)	144	121	8	84	3	240	0
Queue Length 95th (ft)	#298	#274	76	m102	4	337	60
Internal Link Dist (ft)		1448			399	863	
Turn Bay Length (ft)	345		345	284			295
Base Capacity (vph)	238	246	381	520	2468	1406	851
Starvation Cap Reductn	0	0	0	0	913	0	0
Spillback Cap Reductn	27	25	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	1.12	1.02	0.56	0.67	0.60	0.70	0.48

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	EBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	344	2	479	871	406	308	1096
v/c Ratio	0.71	no cap	0.96	0.82	0.54	0.82	0.55
Control Delay	38.9		59.6	37.1	5.9	41.0	15.1
Queue Delay	0.0		0.0	0.0	0.0	0.0	2.9
Total Delay	38.9	Error	59.6	37.1	5.9	41.0	18.0
Queue Length 50th (ft)	176	0	223	246	0	176	262
Queue Length 95th (ft)	#275	0	#424	#360	69	m241	m301
Internal Link Dist (ft)		1360		1017			399
Turn Bay Length (ft)					289	364	
Base Capacity (vph)	482	1	498	1068	745	424	2005
Starvation Cap Reductn	0	0	0	0	0	0	770
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.71	2.00	0.96	0.82	0.54	0.73	0.89

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	WBT	WBR	NBL	NBT	SBT
Lane Group Flow (vph)	226	256	270	1062	564
v/c Ratio	0.68	0.67	0.83	0.46	0.40
Control Delay	40.0	25.6	38.0	10.8	16.7
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	40.0	25.6	38.0	10.8	16.7
Queue Length 50th (ft)	106	68	140	187	90
Queue Length 95th (ft)	165	135	m136	m216	148
Internal Link Dist (ft)	1348			410	289
Turn Bay Length (ft)		288	190		
Base Capacity (vph)	443	474	347	2302	1409
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.51	0.54	0.78	0.46	0.40

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBT	EBR	NBT	SBL	SBT
Lane Group Flow (vph)	517	347	1135	141	533
v/c Ratio	0.95	0.50	0.96	0.59	0.28
Control Delay	57.5	7.1	45.4	36.8	4.6
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	57.5	7.1	45.4	36.8	4.6
Queue Length 50th (ft)	248	16	277	67	51
Queue Length 95th (ft)	#438	79	#434	84	22
Internal Link Dist (ft)	1337		967		410
Turn Bay Length (ft)		328		131	
Base Capacity (vph)	552	698	1177	260	1883
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.94	0.50	0.96	0.54	0.28

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

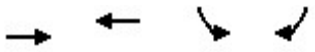
Lane Group	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	337	323	307	586	836	561	87
v/c Ratio	0.82	0.80	0.61	0.54	0.28	0.42	0.22
Control Delay	49.1	43.7	17.8	10.6	5.6	31.1	7.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	49.1	43.7	17.8	10.6	5.6	31.1	7.2
Queue Length 50th (ft)	189	168	61	172	93	79	0
Queue Length 95th (ft)	#337	#318	154	236	95	106	33
Internal Link Dist (ft)		1418			370	727	
Turn Bay Length (ft)	361		361				126
Base Capacity (vph)	412	406	503	1080	2935	1344	400
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.82	0.80	0.61	0.54	0.28	0.42	0.22

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	258	285	284	1445	747	151	926
v/c Ratio	0.48	0.53	0.51	0.74	0.76	0.30	0.36
Control Delay	27.3	18.6	18.1	30.0	8.0	8.9	4.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	27.3	18.6	18.1	30.0	8.0	8.9	4.6
Queue Length 50th (ft)	121	84	80	211	0	41	86
Queue Length 95th (ft)	197	172	161	253	105	70	106
Internal Link Dist (ft)		1368		527			370
Turn Bay Length (ft)	355		355		260		
Base Capacity (vph)	536	539	552	1950	979	504	2561
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.48	0.53	0.51	0.74	0.76	0.30	0.36

Intersection Summary



Lane Group	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	1009	1001	1047	792
v/c Ratio	0.54	0.77	1.11dr	1.22
Control Delay	17.7	23.2	20.0	132.9
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	17.7	23.2	20.0	132.9
Queue Length 50th (ft)	116	186	177	~460
Queue Length 95th (ft)	152	253	272	#730
Internal Link Dist (ft)	407	165	1128	
Turn Bay Length (ft)			560	560
Base Capacity (vph)	2219	1544	1405	651
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.45	0.65	0.75	1.22

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

dr Defacto Right Lane. Recode with 1 though lane as a right lane.

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	334	853	181	306	792	301
v/c Ratio	0.31	0.77	0.40	0.14	0.65	0.43
Control Delay	23.7	8.1	35.6	11.7	25.3	5.6
Queue Delay	0.0	0.6	0.0	0.0	0.0	0.0
Total Delay	23.7	8.8	35.6	11.7	25.3	5.6
Queue Length 50th (ft)	44	54	34	28	119	0
Queue Length 95th (ft)	73	169	103	43	#421	79
Internal Link Dist (ft)	600			895	997	
Turn Bay Length (ft)			280		570	470
Base Capacity (vph)	2431	1199	1504	4564	1504	797
Starvation Cap Reductn	0	106	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.14	0.78	0.12	0.07	0.53	0.38

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	337	330	308	453	949	931	614
v/c Ratio	0.70	0.69	0.61	1.18	0.49	0.95	0.71
Control Delay	35.8	31.9	23.1	118.6	15.7	54.0	7.8
Queue Delay	0.0	0.0	0.0	0.0	0.5	0.0	0.0
Total Delay	35.8	31.9	23.1	118.6	16.2	54.0	7.8
Queue Length 50th (ft)	168	149	100	~310	259	~316	0
Queue Length 95th (ft)	263	249	187	m#388	m293	#442	101
Internal Link Dist (ft)		1448			399	863	
Turn Bay Length (ft)	345		345	284			295
Base Capacity (vph)	549	534	557	385	1949	977	865
Starvation Cap Reductn	0	0	0	0	543	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.61	0.62	0.55	1.18	0.67	0.95	0.71

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	271	381	1138	428	266	1123
v/c Ratio	0.64	0.85	0.93	0.53	0.75	0.53
Control Delay	37.2	42.1	44.6	5.5	31.2	2.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.3
Total Delay	37.2	42.1	44.6	5.5	31.2	2.9
Queue Length 50th (ft)	132	151	~370	0	77	6
Queue Length 95th (ft)	212	#290	#547	73	m104	m6
Internal Link Dist (ft)			1017			399
Turn Bay Length (ft)				289	364	
Base Capacity (vph)	482	498	1230	810	443	2120
Starvation Cap Reductn	0	0	0	0	0	377
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.56	0.77	0.93	0.53	0.60	0.64

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	WBT	WBR	NBL	NBT	SBT
Lane Group Flow (vph)	265	149	312	585	1419
v/c Ratio	0.75	0.34	0.91	0.26	1.03
Control Delay	42.8	6.9	52.1	9.4	55.1
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	42.8	6.9	52.1	9.4	55.1
Queue Length 50th (ft)	124	0	163	116	~379
Queue Length 95th (ft)	194	43	m#264	m143	#548
Internal Link Dist (ft)	1348			410	289
Turn Bay Length (ft)		288	190		
Base Capacity (vph)	443	507	347	2259	1383
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.60	0.29	0.90	0.26	1.03

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBT	EBR	NBT	SBL	SBT
Lane Group Flow (vph)	143	307	1107	270	830
v/c Ratio	0.51	0.74	0.77	0.74	0.34
Control Delay	36.6	22.8	25.1	29.6	0.9
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	36.6	22.8	25.1	29.6	0.9
Queue Length 50th (ft)	68	51	210	100	5
Queue Length 95th (ft)	114	128	#438	m64	m8
Internal Link Dist (ft)	1337		967		410
Turn Bay Length (ft)		328		131	
Base Capacity (vph)	378	492	1435	585	2408
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.38	0.62	0.77	0.46	0.34

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	393	394	239	573	465	1165	268
v/c Ratio	0.99	1.04	0.45	0.61	0.16	0.69	0.45
Control Delay	80.0	91.0	6.8	11.7	4.4	31.7	6.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	80.0	91.0	6.8	11.7	4.4	31.7	6.3
Queue Length 50th (ft)	234	~265	0	174	37	171	2
Queue Length 95th (ft)	#429	#463	60	236	42	210	58
Internal Link Dist (ft)		1418			370	727	
Turn Bay Length (ft)	361		361				126
Base Capacity (vph)	395	380	533	936	2988	1681	598
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.99	1.04	0.45	0.61	0.16	0.69	0.45

Intersection Summary

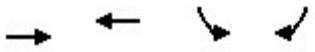
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	79	266	263	999	800	467	1409
v/c Ratio	0.17	0.62	0.54	0.65	0.97	0.54	0.51
Control Delay	24.9	30.3	21.6	32.2	33.7	6.6	2.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.3
Total Delay	24.9	30.3	21.6	32.2	33.7	6.6	2.9
Queue Length 50th (ft)	34	120	82	147	121	43	45
Queue Length 95th (ft)	71	213	165	183	#402	61	m27
Internal Link Dist (ft)		1368		527			370
Turn Bay Length (ft)	355		355		260		
Base Capacity (vph)	465	431	483	1546	829	864	2775
Starvation Cap Reductn	0	0	0	0	0	0	650
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.17	0.62	0.54	0.65	0.97	0.54	0.66

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	1619	904	1310	968
v/c Ratio	0.80	0.64	1.41dr	1.54
Control Delay	22.3	19.5	40.6	271.5
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	22.3	19.5	40.6	271.5
Queue Length 50th (ft)	221	162	278	~676
Queue Length 95th (ft)	254	204	#388	#851
Internal Link Dist (ft)	407	165	1128	
Turn Bay Length (ft)			560	560
Base Capacity (vph)	2103	1464	1345	629
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.77	0.62	0.97	1.54

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

dr Defacto Right Lane. Recode with 1 though lane as a right lane.

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	681	1244	301	414	627	121
v/c Ratio	0.55	1.17	0.58	0.17	0.51	0.21
Control Delay	28.6	100.5	40.4	12.0	26.8	6.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	28.6	100.5	40.4	12.0	26.8	6.9
Queue Length 50th (ft)	111	~707	71	42	116	0
Queue Length 95th (ft)	156	#1332	158	55	302	50
Internal Link Dist (ft)	600			895	997	
Turn Bay Length (ft)			280		570	470
Base Capacity (vph)	2001	1066	1220	4099	1222	589
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.34	1.17	0.25	0.10	0.51	0.21

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	305	294	276	406	854	833	552
v/c Ratio	0.83	0.71	0.59	1.00	0.39	0.72	0.64
Control Delay	53.3	30.9	16.7	82.0	8.7	29.5	5.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	53.3	30.9	16.7	82.0	8.7	29.5	5.8
Queue Length 50th (ft)	170	107	45	~245	112	208	0
Queue Length 95th (ft)	#311	#215	129	#420	147	276	72
Internal Link Dist (ft)		1448			399	863	
Turn Bay Length (ft)	345		345	284			295
Base Capacity (vph)	384	429	483	404	2233	1213	885
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.79	0.69	0.57	1.00	0.38	0.69	0.62

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	242	343	1010	384	232	1000
v/c Ratio	0.66	0.80	0.79	0.48	0.69	0.46
Control Delay	38.9	33.6	29.3	4.7	41.8	9.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.2
Total Delay	38.9	33.6	29.3	4.7	41.8	9.3
Queue Length 50th (ft)	113	103	248	0	115	137
Queue Length 95th (ft)	198	#237	#362	59	191	181
Internal Link Dist (ft)			1017			399
Turn Bay Length (ft)				289	364	
Base Capacity (vph)	443	494	1329	814	443	2424
Starvation Cap Reductn	0	0	0	0	0	589
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.55	0.69	0.76	0.47	0.52	0.54

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	WBT	WBR	NBL	NBT	SBT
Lane Group Flow (vph)	229	135	271	521	1250
v/c Ratio	0.71	0.34	0.79	0.22	0.87
Control Delay	42.8	7.6	36.3	6.4	28.5
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	42.8	7.6	36.3	6.4	28.5
Queue Length 50th (ft)	108	0	131	88	264
Queue Length 95th (ft)	173	42	#191	61	#446
Internal Link Dist (ft)	1348			410	289
Turn Bay Length (ft)		288	190		
Base Capacity (vph)	399	461	390	2323	1437
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.57	0.29	0.69	0.22	0.87

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBT	EBR	NBT	SBL	SBT
Lane Group Flow (vph)	124	278	1000	247	742
v/c Ratio	0.47	0.66	0.64	0.78	0.30
Control Delay	36.5	16.4	17.7	35.5	2.8
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	36.5	16.4	17.7	35.5	2.8
Queue Length 50th (ft)	59	28	164	88	5
Queue Length 95th (ft)	100	94	281	m110	m55
Internal Link Dist (ft)	1337		967		410
Turn Bay Length (ft)		328		131	
Base Capacity (vph)	442	557	1563	368	2442
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.28	0.50	0.64	0.67	0.30

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

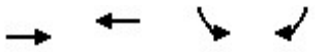
Lane Group	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	340	337	211	500	398	1010	235
v/c Ratio	0.79	0.70	0.39	0.51	0.14	0.68	0.44
Control Delay	45.6	30.1	6.2	13.6	7.0	33.6	6.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	45.6	30.1	6.2	13.6	7.0	33.6	6.8
Queue Length 50th (ft)	188	136	0	139	60	151	0
Queue Length 95th (ft)	#331	245	54	194	84	188	56
Internal Link Dist (ft)		1418			370	727	
Turn Bay Length (ft)	361		361				126
Base Capacity (vph)	430	479	539	972	2881	1479	536
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.79	0.70	0.39	0.51	0.14	0.68	0.44

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	74	230	232	887	711	412	1258
v/c Ratio	0.16	0.49	0.48	0.43	0.74	0.72	0.45
Control Delay	24.8	19.2	18.9	23.4	7.5	13.9	5.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	24.8	19.2	18.9	23.4	7.5	13.9	5.2
Queue Length 50th (ft)	32	65	64	111	5	120	137
Queue Length 95th (ft)	68	143	137	140	106	170	142
Internal Link Dist (ft)		1368		527			370
Turn Bay Length (ft)	355		355		260		
Base Capacity (vph)	465	467	483	2084	963	576	2775
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.16	0.49	0.48	0.43	0.74	0.72	0.45

Intersection Summary



Lane Group	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	1333	742	1076	795
v/c Ratio	0.71	0.56	1.07dr	1.17
Control Delay	20.2	18.5	19.3	112.9
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	20.2	18.5	19.3	112.9
Queue Length 50th (ft)	168	125	173	~429
Queue Length 95th (ft)	213	174	268	#694
Internal Link Dist (ft)	407	165	1128	
Turn Bay Length (ft)			560	560
Base Capacity (vph)	2197	1529	1427	679
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.61	0.49	0.75	1.17

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

dr Defacto Right Lane. Recode with 1 though lane as a right lane.

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	568	1042	253	347	528	104
v/c Ratio	0.49	0.95	0.52	0.15	0.41	0.17
Control Delay	27.5	27.5	39.1	12.3	23.7	7.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	27.5	27.5	39.1	12.3	23.7	7.0
Queue Length 50th (ft)	88	215	55	35	85	0
Queue Length 95th (ft)	128	#672	138	48	251	49
Internal Link Dist (ft)	600			895	997	
Turn Bay Length (ft)			280		570	470
Base Capacity (vph)	2090	1093	1278	4267	1279	600
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.27	0.95	0.20	0.08	0.41	0.17

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Queues
5: Euclid Ave & SR-60 WB Ramps

03/19/2024

Lane Group	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	264	257	242	361	753	742	485
v/c Ratio	0.74	0.63	0.49	0.89	0.35	0.66	0.59
Control Delay	44.6	25.7	8.8	58.0	8.2	27.4	5.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	44.6	25.7	8.8	58.0	8.2	27.4	5.6
Queue Length 50th (ft)	143	83	7	197	95	180	0
Queue Length 95th (ft)	#252	173	70	#361	126	241	66
Internal Link Dist (ft)		1448			399	863	
Turn Bay Length (ft)	345		345	284			295
Base Capacity (vph)	405	448	533	426	2355	1279	861
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.65	0.57	0.45	0.85	0.32	0.58	0.56

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	219	313	927	354	219	917
v/c Ratio	0.62	0.71	0.72	0.45	0.65	0.42
Control Delay	37.7	24.6	25.9	4.6	39.6	8.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.1
Total Delay	37.7	24.6	25.9	4.6	39.6	8.5
Queue Length 50th (ft)	99	68	197	0	100	104
Queue Length 95th (ft)	180	166	313	57	180	161
Internal Link Dist (ft)			1017			399
Turn Bay Length (ft)				289	364	
Base Capacity (vph)	459	527	1378	811	459	2512
Starvation Cap Reductn	0	0	0	0	0	611
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.48	0.59	0.67	0.44	0.48	0.48

Intersection Summary

Lane Group	WBT	WBR	NBL	NBT	SBT
Lane Group Flow (vph)	217	120	250	478	1164
v/c Ratio	0.65	0.30	0.71	0.21	0.84
Control Delay	42.2	8.4	43.5	6.0	27.9
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	42.2	8.4	43.5	6.0	27.9
Queue Length 50th (ft)	108	0	124	42	240
Queue Length 95th (ft)	197	44	225	83	#487
Internal Link Dist (ft)	1348			410	289
Turn Bay Length (ft)		288	190		
Base Capacity (vph)	541	567	541	2775	1498
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.40	0.21	0.46	0.17	0.78

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBT	EBR	NBT	SBL	SBT
Lane Group Flow (vph)	116	253	905	221	674
v/c Ratio	0.38	0.53	0.75	0.60	0.30
Control Delay	31.5	8.9	21.2	32.5	5.5
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	31.5	8.9	21.2	32.5	5.5
Queue Length 50th (ft)	40	0	133	76	47
Queue Length 95th (ft)	108	63	257	180	88
Internal Link Dist (ft)	1337		967		410
Turn Bay Length (ft)		328		131	
Base Capacity (vph)	684	765	1843	684	3220
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.17	0.33	0.49	0.32	0.21

Intersection Summary

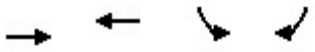
Lane Group	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	315	312	192	457	372	936	213
v/c Ratio	0.73	0.65	0.37	0.47	0.13	0.63	0.41
Control Delay	41.5	27.2	6.2	13.0	7.4	32.7	6.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	41.5	27.2	6.2	13.0	7.4	32.7	6.7
Queue Length 50th (ft)	171	118	0	125	56	138	0
Queue Length 95th (ft)	#295	219	51	176	80	173	54
Internal Link Dist (ft)		1418			370	727	
Turn Bay Length (ft)	361		361				126
Base Capacity (vph)	430	479	525	972	2881	1479	520
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.73	0.65	0.37	0.47	0.13	0.63	0.41

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	67	219	219	828	656	387	1161
v/c Ratio	0.14	0.47	0.45	0.40	0.70	0.67	0.42
Control Delay	24.6	18.2	17.8	23.1	6.6	13.4	5.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	24.6	18.2	17.8	23.1	6.6	13.4	5.2
Queue Length 50th (ft)	29	60	56	102	0	111	125
Queue Length 95th (ft)	63	135	127	130	85	159	139
Internal Link Dist (ft)		1368		527			370
Turn Bay Length (ft)	355		355		260		
Base Capacity (vph)	465	467	483	2084	935	576	2775
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.14	0.47	0.45	0.40	0.70	0.67	0.42

Intersection Summary



Lane Group	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	1170	649	947	702
v/c Ratio	0.67	0.53	0.89dr	0.97
Control Delay	19.8	18.4	14.4	45.0
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	19.8	18.4	14.4	45.0
Queue Length 50th (ft)	141	105	118	240
Queue Length 95th (ft)	181	150	211	#562
Internal Link Dist (ft)	407	165	1128	
Turn Bay Length (ft)			560	560
Base Capacity (vph)	2292	1595	1504	724
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.51	0.41	0.63	0.97

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
dr Defacto Right Lane. Recode with 1 though lane as a right lane.

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	490	898	214	296	448	83
v/c Ratio	0.40	0.85	0.42	0.12	0.42	0.17
Control Delay	23.6	13.0	35.4	10.5	23.5	7.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	23.6	13.0	35.4	10.5	23.5	7.6
Queue Length 50th (ft)	67	92	41	26	65	0
Queue Length 95th (ft)	108	266	119	42	207	43
Internal Link Dist (ft)	600			895	997	
Turn Bay Length (ft)			280		570	470
Base Capacity (vph)	2453	1217	1521	4509	1522	683
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.20	0.74	0.14	0.07	0.29	0.12

Intersection Summary

Queues
5: Euclid Ave & SR-60 WB Ramps

03/19/2024

Lane Group	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	237	226	214	355	939	989	405
v/c Ratio	1.00	0.92	0.57	0.81	0.38	0.71	0.48
Control Delay	98.4	74.6	13.8	30.4	0.7	27.0	4.4
Queue Delay	33.8	24.8	0.0	0.0	0.4	0.0	0.0
Total Delay	132.2	99.4	13.8	30.4	1.1	27.0	4.4
Queue Length 50th (ft)	144	121	11	85	3	245	0
Queue Length 95th (ft)	#298	#274	80	m102	m4	343	60
Internal Link Dist (ft)		1448			399	863	
Turn Bay Length (ft)	345		345	284			295
Base Capacity (vph)	238	246	378	520	2468	1394	847
Starvation Cap Reductn	0	0	0	0	914	0	0
Spillback Cap Reductn	29	27	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	1.13	1.03	0.57	0.68	0.60	0.71	0.48

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	EBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	344	2	489	888	406	308	1107
v/c Ratio	0.71	no cap	0.98	0.83	0.54	0.82	0.55
Control Delay	38.9		64.2	38.1	5.9	40.5	15.0
Queue Delay	0.0		0.0	0.0	0.0	0.0	3.2
Total Delay	38.9	Error	64.2	38.1	5.9	40.5	18.2
Queue Length 50th (ft)	176	0	231	253	0	176	265
Queue Length 95th (ft)	#275	0	#437	#371	69	m239	m304
Internal Link Dist (ft)		1360		1017			399
Turn Bay Length (ft)					289	364	
Base Capacity (vph)	482	1	498	1068	745	424	2005
Starvation Cap Reductn	0	0	0	0	0	0	769
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.71	2.00	0.98	0.83	0.54	0.73	0.90

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	WBT	WBR	NBL	NBT	SBT
Lane Group Flow (vph)	229	256	304	1072	581
v/c Ratio	0.69	0.67	0.90	0.47	0.42
Control Delay	40.2	25.5	40.8	11.0	17.3
Queue Delay	0.0	0.0	0.0	0.5	0.0
Total Delay	40.2	25.5	40.8	11.6	17.3
Queue Length 50th (ft)	107	68	159	193	95
Queue Length 95th (ft)	167	135	m149	m214	154
Internal Link Dist (ft)	1348			410	289
Turn Bay Length (ft)		288	190		
Base Capacity (vph)	443	474	347	2299	1380
Starvation Cap Reductn	0	0	0	732	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.52	0.54	0.88	0.68	0.42

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBT	EBR	NBT	SBL	SBT
Lane Group Flow (vph)	517	390	1187	141	554
v/c Ratio	0.95	0.57	1.01	0.59	0.30
Control Delay	56.2	10.1	56.9	36.7	4.5
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	56.2	10.1	56.9	36.7	4.5
Queue Length 50th (ft)	248	38	~307	65	48
Queue Length 95th (ft)	#438	118	#465	86	23
Internal Link Dist (ft)	1337		967		410
Turn Bay Length (ft)		328		131	
Base Capacity (vph)	552	688	1171	260	1876
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.94	0.57	1.01	0.54	0.30

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	368	358	328	586	841	571	87
v/c Ratio	0.89	0.89	0.65	0.54	0.29	0.42	0.22
Control Delay	58.2	56.5	20.0	10.6	5.6	31.2	7.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	58.2	56.5	20.0	10.6	5.6	31.2	7.2
Queue Length 50th (ft)	212	202	74	172	94	81	0
Queue Length 95th (ft)	#383	#383	174	236	96	108	33
Internal Link Dist (ft)		1418			370	727	
Turn Bay Length (ft)	361		361				126
Base Capacity (vph)	412	401	502	1080	2935	1344	400
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.89	0.89	0.65	0.54	0.29	0.42	0.22

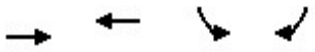
Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	258	285	284	1450	805	151	1022
v/c Ratio	0.48	0.54	0.52	0.74	0.79	0.30	0.40
Control Delay	27.3	21.2	19.6	30.0	8.7	8.9	4.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	27.3	21.2	19.6	30.0	8.7	8.9	4.3
Queue Length 50th (ft)	121	97	87	211	0	42	88
Queue Length 95th (ft)	197	187	170	254	115	72	m102
Internal Link Dist (ft)		1368		527			370
Turn Bay Length (ft)	355		355		260		
Base Capacity (vph)	536	523	542	1950	1018	504	2561
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.48	0.54	0.52	0.74	0.79	0.30	0.40

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	1023	1057	1053	797
v/c Ratio	0.54	0.80	1.14dr	1.25
Control Delay	17.5	24.1	21.0	145.5
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	17.5	24.1	21.0	145.5
Queue Length 50th (ft)	119	202	188	~486
Queue Length 95th (ft)	154	273	276	#740
Internal Link Dist (ft)	407	165	1128	
Turn Bay Length (ft)			560	560
Base Capacity (vph)	2191	1525	1383	640
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.47	0.69	0.76	1.25

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

dr Defacto Right Lane. Recode with 1 though lane as a right lane.

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	341	859	181	314	836	301
v/c Ratio	0.32	0.77	0.41	0.15	0.66	0.42
Control Delay	24.4	8.0	36.3	12.2	25.3	5.5
Queue Delay	0.0	1.3	0.0	0.0	0.0	0.0
Total Delay	24.4	9.4	36.3	12.2	25.3	5.5
Queue Length 50th (ft)	48	55	36	31	127	0
Queue Length 95th (ft)	74	174	103	44	#459	79
Internal Link Dist (ft)	600			895	997	
Turn Bay Length (ft)			280		570	470
Base Capacity (vph)	2364	1181	1459	4536	1459	783
Starvation Cap Reductn	0	150	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.14	0.83	0.12	0.07	0.57	0.38

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	337	330	308	473	968	957	614
v/c Ratio	0.70	0.69	0.61	1.23	0.50	0.98	0.71
Control Delay	35.8	31.9	23.1	137.6	15.4	59.3	7.8
Queue Delay	0.0	0.0	0.0	0.0	0.6	0.0	0.0
Total Delay	35.8	31.9	23.1	137.6	16.0	59.3	7.8
Queue Length 50th (ft)	168	149	100	~335	269	~332	0
Queue Length 95th (ft)	263	249	187	m#385	m285	#459	101
Internal Link Dist (ft)		1448			399	863	
Turn Bay Length (ft)	345		345	284			295
Base Capacity (vph)	549	534	557	385	1949	977	865
Starvation Cap Reductn	0	0	0	0	543	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.61	0.62	0.55	1.23	0.69	0.98	0.71

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	271	405	1176	428	266	1149
v/c Ratio	0.61	0.87	0.98	0.54	0.75	0.55
Control Delay	35.8	45.1	54.7	5.6	30.5	3.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.3
Total Delay	35.8	45.1	54.7	5.6	30.5	3.6
Queue Length 50th (ft)	132	168	~395	0	76	6
Queue Length 95th (ft)	212	#323	#573	73	m99	m6
Internal Link Dist (ft)			1017			399
Turn Bay Length (ft)				289	364	
Base Capacity (vph)	482	498	1198	800	443	2088
Starvation Cap Reductn	0	0	0	0	0	375
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.56	0.81	0.98	0.54	0.60	0.67

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	WBT	WBR	NBL	NBT	SBT
Lane Group Flow (vph)	282	149	394	618	1467
v/c Ratio	0.77	0.33	1.14	0.28	1.10
Control Delay	43.5	6.7	104.5	8.5	79.5
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	43.5	6.7	104.5	8.5	79.5
Queue Length 50th (ft)	132	0	~243	96	~421
Queue Length 95th (ft)	206	43	m#299	m122	#584
Internal Link Dist (ft)	1348			410	289
Turn Bay Length (ft)		288	190		
Base Capacity (vph)	443	507	347	2233	1339
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.64	0.29	1.14	0.28	1.10

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBT	EBR	NBT	SBL	SBT
Lane Group Flow (vph)	143	405	1224	270	893
v/c Ratio	0.42	0.91	0.93	0.74	0.39
Control Delay	31.5	44.5	38.5	26.3	1.3
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	31.5	44.5	38.5	26.3	1.3
Queue Length 50th (ft)	61	113	294	97	8
Queue Length 95th (ft)	114	#272	#516	m59	m8
Internal Link Dist (ft)	1337		967		410
Turn Bay Length (ft)		328		131	
Base Capacity (vph)	378	473	1316	585	2285
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.38	0.86	0.93	0.46	0.39

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	496	489	239	573	484	1187	268
v/c Ratio	1.26	1.29	0.45	0.61	0.16	0.71	0.45
Control Delay	165.8	180.1	6.8	11.6	4.4	31.9	6.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	165.8	180.1	6.8	11.6	4.4	31.9	6.5
Queue Length 50th (ft)	~375	~394	0	174	40	175	3
Queue Length 95th (ft)	#575	#606	60	236	44	214	60
Internal Link Dist (ft)		1418			370	727	
Turn Bay Length (ft)	361		361				126
Base Capacity (vph)	395	379	533	936	2988	1681	595
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	1.26	1.29	0.45	0.61	0.16	0.71	0.45

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

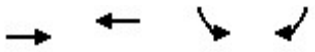
Lane Group	EBL	EBT	EBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	79	266	263	1018	957	467	1625
v/c Ratio	0.17	0.63	0.54	0.66	1.15	0.54	0.59
Control Delay	24.9	33.0	21.6	32.4	97.1	6.4	2.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.5
Total Delay	24.9	33.0	21.6	32.4	97.1	6.4	2.6
Queue Length 50th (ft)	34	130	82	150	~368	39	46
Queue Length 95th (ft)	71	225	165	187	#605	54	m20
Internal Link Dist (ft)		1368		527			370
Turn Bay Length (ft)	355		355		260		
Base Capacity (vph)	465	419	483	1546	829	864	2775
Starvation Cap Reductn	0	0	0	0	0	0	643
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.17	0.63	0.54	0.66	1.15	0.54	0.76

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	1654	1051	1321	979
v/c Ratio	0.81	0.74	1.46dr	1.59
Control Delay	22.6	21.8	46.2	297.3
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	22.6	21.8	46.2	297.3
Queue Length 50th (ft)	228	200	~293	~704
Queue Length 95th (ft)	261	247	#401	#878
Internal Link Dist (ft)	407	165	1128	
Turn Bay Length (ft)			560	560
Base Capacity (vph)	2093	1457	1326	614
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.79	0.72	1.00	1.59

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

dr Defacto Right Lane. Recode with 1 though lane as a right lane.

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	702	1257	301	443	739	121
v/c Ratio	0.56	1.18	0.58	0.19	0.61	0.21
Control Delay	28.7	105.1	40.5	12.1	28.5	6.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	28.7	105.1	40.5	12.1	28.5	6.9
Queue Length 50th (ft)	116	~724	71	46	144	0
Queue Length 95th (ft)	161	#1354	158	59	#391	50
Internal Link Dist (ft)	600			895	997	
Turn Bay Length (ft)			280		570	470
Base Capacity (vph)	1994	1067	1216	4083	1217	587
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.35	1.18	0.25	0.11	0.61	0.21

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Queues
5: Euclid Ave & SR-60 WB Ramps

03/19/2024

Lane Group	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	337	330	308	473	967	960	614
v/c Ratio	0.70	0.69	0.61	1.23	0.50	0.98	0.71
Control Delay	35.8	31.9	23.1	137.6	15.4	59.9	7.8
Queue Delay	0.0	0.0	0.0	0.0	0.6	0.0	0.0
Total Delay	35.8	31.9	23.1	137.6	15.9	59.9	7.8
Queue Length 50th (ft)	168	149	100	~335	268	~334	0
Queue Length 95th (ft)	263	249	187	m#386	m284	#461	101
Internal Link Dist (ft)		1448			399	863	
Turn Bay Length (ft)	345		345	284			295
Base Capacity (vph)	549	534	557	385	1949	977	865
Starvation Cap Reductn	0	0	0	0	543	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.61	0.62	0.55	1.23	0.69	0.98	0.71

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	271	406	1174	428	266	1152
v/c Ratio	0.61	0.88	0.98	0.54	0.75	0.55
Control Delay	35.7	45.2	54.6	5.6	30.4	3.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.3
Total Delay	35.7	45.2	54.6	5.6	30.4	3.6
Queue Length 50th (ft)	132	169	~394	0	76	6
Queue Length 95th (ft)	212	#324	#571	73	m98	m6
Internal Link Dist (ft)			1017			399
Turn Bay Length (ft)				289	364	
Base Capacity (vph)	482	498	1196	799	443	2086
Starvation Cap Reductn	0	0	0	0	0	375
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.56	0.82	0.98	0.54	0.60	0.67

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	WBT	WBR	NBL	NBT	SBT
Lane Group Flow (vph)	282	149	394	618	1470
v/c Ratio	0.77	0.33	1.14	0.28	1.10
Control Delay	43.5	6.7	104.3	8.5	80.4
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	43.5	6.7	104.3	8.5	80.4
Queue Length 50th (ft)	132	0	~243	96	~423
Queue Length 95th (ft)	206	43	m#297	m122	#586
Internal Link Dist (ft)	1348			410	289
Turn Bay Length (ft)		288	190		
Base Capacity (vph)	443	507	347	2233	1338
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.64	0.29	1.14	0.28	1.10

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBT	EBR	NBT	SBL	SBT
Lane Group Flow (vph)	143	410	1224	270	895
v/c Ratio	0.41	0.92	0.94	0.74	0.39
Control Delay	31.3	45.4	39.4	26.1	1.3
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	31.3	45.4	39.4	26.1	1.3
Queue Length 50th (ft)	61	117	294	98	8
Queue Length 95th (ft)	114	#280	#516	m58	m8
Internal Link Dist (ft)	1337		967		410
Turn Bay Length (ft)		328		131	
Base Capacity (vph)	378	473	1308	585	2276
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.38	0.87	0.94	0.46	0.39

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	498	491	239	573	484	1188	268
v/c Ratio	1.26	1.30	0.45	0.61	0.16	0.71	0.45
Control Delay	167.8	182.2	6.8	11.6	4.4	31.9	6.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	167.8	182.2	6.8	11.6	4.4	31.9	6.5
Queue Length 50th (ft)	~377	~397	0	174	40	176	3
Queue Length 95th (ft)	#577	#610	60	236	44	215	60
Internal Link Dist (ft)		1418			370	727	
Turn Bay Length (ft)	361		361				126
Base Capacity (vph)	395	379	533	936	2988	1681	595
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	1.26	1.30	0.45	0.61	0.16	0.71	0.45

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

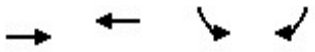
Lane Group	EBL	EBT	EBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	79	266	263	1018	958	467	1630
v/c Ratio	0.17	0.63	0.54	0.66	1.16	0.54	0.59
Control Delay	24.9	33.0	21.6	32.4	97.6	6.4	2.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.5
Total Delay	24.9	33.0	21.6	32.4	97.6	6.4	2.6
Queue Length 50th (ft)	34	130	82	150	~369	39	45
Queue Length 95th (ft)	71	225	165	187	#606	54	m20
Internal Link Dist (ft)		1368		527			370
Turn Bay Length (ft)	355		355		260		
Base Capacity (vph)	465	419	483	1546	829	864	2775
Starvation Cap Reductn	0	0	0	0	0	0	643
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.17	0.63	0.54	0.66	1.16	0.54	0.76

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	1651	1051	1321	979
v/c Ratio	0.81	0.75	1.45dr	1.59
Control Delay	22.7	21.9	45.4	295.2
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	22.7	21.9	45.4	295.2
Queue Length 50th (ft)	228	200	~293	~704
Queue Length 95th (ft)	261	247	#401	#878
Internal Link Dist (ft)	407	165	1128	
Turn Bay Length (ft)			560	560
Base Capacity (vph)	2100	1461	1330	615
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.79	0.72	0.99	1.59

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

dr Defacto Right Lane. Recode with 1 though lane as a right lane.

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	699	1257	301	442	740	121
v/c Ratio	0.56	1.18	0.58	0.19	0.61	0.21
Control Delay	28.7	105.0	40.5	12.1	28.5	6.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	28.7	105.0	40.5	12.1	28.5	6.9
Queue Length 50th (ft)	115	~724	71	46	145	0
Queue Length 95th (ft)	160	#1354	158	58	#392	50
Internal Link Dist (ft)	600			895	997	
Turn Bay Length (ft)			280		570	470
Base Capacity (vph)	1995	1067	1217	4086	1218	588
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.35	1.18	0.25	0.11	0.61	0.21

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Queues
5: Euclid Ave & SR-60 WB Ramps

03/19/2024

Lane Group	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	305	294	276	446	892	868	552
v/c Ratio	0.84	0.71	0.60	1.11	0.41	0.75	0.63
Control Delay	53.4	31.0	18.5	111.0	8.9	30.4	5.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	53.4	31.0	18.5	111.0	8.9	30.4	5.8
Queue Length 50th (ft)	170	107	52	~292	118	221	0
Queue Length 95th (ft)	#311	#215	138	#473	156	291	72
Internal Link Dist (ft)		1448			399	863	
Turn Bay Length (ft)	345		345	284			295
Base Capacity (vph)	383	428	472	403	2228	1210	884
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.80	0.69	0.58	1.11	0.40	0.72	0.62

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	242	378	1085	384	232	1033
v/c Ratio	0.63	0.86	0.85	0.48	0.70	0.48
Control Delay	37.5	41.8	32.8	4.6	43.1	9.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.2
Total Delay	37.5	41.8	32.8	4.6	43.1	9.8
Queue Length 50th (ft)	113	130	276	0	115	145
Queue Length 95th (ft)	198	#295	#425	59	191	189
Internal Link Dist (ft)			1017			399
Turn Bay Length (ft)				289	364	
Base Capacity (vph)	428	475	1286	800	428	2345
Starvation Cap Reductn	0	0	0	0	0	580
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.57	0.80	0.84	0.48	0.54	0.59

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	WBT	WBR	NBL	NBT	SBT
Lane Group Flow (vph)	257	135	431	590	1318
v/c Ratio	0.76	0.33	1.11	0.26	1.00
Control Delay	45.4	7.4	86.9	3.9	50.7
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	45.4	7.4	86.9	3.9	50.7
Queue Length 50th (ft)	121	0	~233	24	~348
Queue Length 95th (ft)	195	42	m#284	m38	#499
Internal Link Dist (ft)	1348			410	289
Turn Bay Length (ft)		288	190		
Base Capacity (vph)	399	461	390	2294	1312
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.64	0.29	1.11	0.26	1.00

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBT	EBR	NBT	SBL	SBT
Lane Group Flow (vph)	124	418	1270	247	836
v/c Ratio	0.33	0.88	0.94	0.78	0.38
Control Delay	27.7	38.3	40.2	29.0	4.8
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	27.7	38.3	40.2	29.0	4.8
Queue Length 50th (ft)	50	114	~361	91	94
Queue Length 95th (ft)	95	#264	#504	m104	m92
Internal Link Dist (ft)	1337		967		410
Turn Bay Length (ft)		328		131	
Base Capacity (vph)	442	526	1344	368	2213
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.28	0.79	0.94	0.67	0.38

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	467	473	211	500	431	1041	235
v/c Ratio	1.09	0.99	0.39	0.51	0.15	0.70	0.44
Control Delay	102.0	65.8	6.2	13.4	7.2	34.1	6.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	102.0	65.8	6.2	13.4	7.2	34.1	6.8
Queue Length 50th (ft)	~316	243	0	139	66	157	0
Queue Length 95th (ft)	#512	#467	54	194	92	195	56
Internal Link Dist (ft)		1418			370	727	
Turn Bay Length (ft)	361		361				126
Base Capacity (vph)	430	480	539	972	2881	1479	536
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	1.09	0.99	0.39	0.51	0.15	0.70	0.44

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

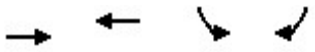
Lane Group	EBL	EBT	EBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	74	230	232	920	984	412	1555
v/c Ratio	0.16	0.49	0.48	0.44	1.02	0.72	0.56
Control Delay	24.8	19.2	18.9	23.6	45.4	13.6	4.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.6
Total Delay	24.8	19.2	18.9	23.6	45.4	13.6	5.2
Queue Length 50th (ft)	32	65	64	115	~272	120	146
Queue Length 95th (ft)	68	143	137	145	#553	171	m118
Internal Link Dist (ft)		1368		527			370
Turn Bay Length (ft)	355		355		260		
Base Capacity (vph)	465	467	483	2084	963	576	2775
Starvation Cap Reductn	0	0	0	0	0	0	746
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.16	0.49	0.48	0.44	1.02	0.72	0.77

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	1391	930	1088	808
v/c Ratio	0.73	0.70	1.14dr	1.25
Control Delay	20.5	20.9	21.6	146.3
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	20.5	20.9	21.6	146.3
Queue Length 50th (ft)	178	168	192	~483
Queue Length 95th (ft)	226	230	#287	#740
Internal Link Dist (ft)	407	165	1128	
Turn Bay Length (ft)			560	560
Base Capacity (vph)	2179	1516	1389	647
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.64	0.61	0.78	1.25

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

dr Defacto Right Lane. Recode with 1 though lane as a right lane.

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	605	1062	253	384	675	104
v/c Ratio	0.51	0.97	0.53	0.17	0.53	0.17
Control Delay	27.5	30.5	39.4	12.3	25.7	7.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	27.5	30.5	39.4	12.3	25.7	7.0
Queue Length 50th (ft)	95	232	57	39	119	0
Queue Length 95th (ft)	137	#626	138	53	329	49
Internal Link Dist (ft)	600			895	997	
Turn Bay Length (ft)			280		570	470
Base Capacity (vph)	2071	1096	1265	4226	1267	595
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.29	0.97	0.20	0.09	0.53	0.17

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	264	257	242	400	785	776	485
v/c Ratio	0.75	0.64	0.50	0.96	0.36	0.68	0.59
Control Delay	45.7	26.1	10.3	71.4	8.2	28.2	5.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	45.7	26.1	10.3	71.4	8.2	28.2	5.5
Queue Length 50th (ft)	143	83	13	~229	100	190	0
Queue Length 95th (ft)	#252	173	80	#412	133	254	66
Internal Link Dist (ft)		1448			399	863	
Turn Bay Length (ft)	345		345	284			295
Base Capacity (vph)	394	439	514	415	2293	1246	851
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.67	0.59	0.47	0.96	0.34	0.62	0.57

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	219	348	999	354	219	951
v/c Ratio	0.61	0.79	0.78	0.45	0.66	0.44
Control Delay	36.8	31.8	28.3	4.6	40.5	8.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.2
Total Delay	36.8	31.8	28.3	4.6	40.5	8.9
Queue Length 50th (ft)	100	95	237	0	106	124
Queue Length 95th (ft)	180	#231	#351	57	180	170
Internal Link Dist (ft)			1017			399
Turn Bay Length (ft)				289	364	
Base Capacity (vph)	449	511	1348	802	449	2458
Starvation Cap Reductn	0	0	0	0	0	595
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.49	0.68	0.74	0.44	0.49	0.51

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	WBT	WBR	NBL	NBT	SBT
Lane Group Flow (vph)	240	120	417	538	1231
v/c Ratio	0.74	0.31	0.91	0.22	0.96
Control Delay	50.3	8.2	60.4	6.2	44.2
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	50.3	8.2	60.4	6.2	44.2
Queue Length 50th (ft)	137	0	241	54	341
Queue Length 95th (ft)	217	44	#463	96	#555
Internal Link Dist (ft)	1348			410	289
Turn Bay Length (ft)		288	190		
Base Capacity (vph)	461	501	461	2399	1285
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.52	0.24	0.90	0.22	0.96

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBT	EBR	NBT	SBL	SBT
Lane Group Flow (vph)	116	395	1161	221	761
v/c Ratio	0.35	0.81	0.83	0.69	0.33
Control Delay	32.7	27.9	28.2	44.0	7.0
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	32.7	27.9	28.2	44.0	7.0
Queue Length 50th (ft)	52	79	245	106	73
Queue Length 95th (ft)	108	204	#510	201	142
Internal Link Dist (ft)	1337		967		410
Turn Bay Length (ft)		328		131	
Base Capacity (vph)	540	642	1471	540	2808
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.21	0.62	0.79	0.41	0.27

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	449	453	192	457	405	969	213
v/c Ratio	1.04	0.94	0.37	0.47	0.14	0.66	0.41
Control Delay	89.6	56.5	6.2	12.9	7.6	33.1	6.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	89.6	56.5	6.2	12.9	7.6	33.1	6.7
Queue Length 50th (ft)	~293	226	0	125	62	144	0
Queue Length 95th (ft)	#486	#438	51	178	87	180	54
Internal Link Dist (ft)		1418			370	727	
Turn Bay Length (ft)	361		361				126
Base Capacity (vph)	430	480	525	972	2881	1479	520
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	1.04	0.94	0.37	0.47	0.14	0.66	0.41

Intersection Summary

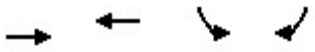
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	67	219	219	861	940	387	1472
v/c Ratio	0.14	0.47	0.45	0.41	0.97	0.67	0.53
Control Delay	24.6	18.2	17.8	23.3	32.6	13.1	4.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.5
Total Delay	24.6	18.2	17.8	23.3	32.6	13.1	5.0
Queue Length 50th (ft)	29	60	56	107	163	112	134
Queue Length 95th (ft)	63	135	127	135	#494	160	m121
Internal Link Dist (ft)		1368		527			370
Turn Bay Length (ft)	355		355		260		
Base Capacity (vph)	465	467	483	2084	965	576	2775
Starvation Cap Reductn	0	0	0	0	0	0	746
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.14	0.47	0.45	0.41	0.97	0.67	0.73

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	1221	823	959	714
v/c Ratio	0.68	0.66	0.95dr	1.04
Control Delay	20.0	20.5	16.3	66.5
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	20.0	20.5	16.3	66.5
Queue Length 50th (ft)	149	143	136	~334
Queue Length 95th (ft)	191	197	230	#615
Internal Link Dist (ft)	407	165	1128	
Turn Bay Length (ft)			560	560
Base Capacity (vph)	2270	1580	1456	685
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.54	0.52	0.66	1.04

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

dr Defacto Right Lane. Recode with 1 though lane as a right lane.

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	521	915	214	330	581	83
v/c Ratio	0.43	0.85	0.43	0.14	0.53	0.16
Control Delay	24.3	13.3	36.2	10.9	24.9	7.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	24.3	13.3	36.2	10.9	24.9	7.6
Queue Length 50th (ft)	76	99	44	32	90	0
Queue Length 95th (ft)	114	285	119	46	273	43
Internal Link Dist (ft)	600			895	997	
Turn Bay Length (ft)			280		570	470
Base Capacity (vph)	2389	1202	1477	4451	1480	666
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.22	0.76	0.14	0.07	0.39	0.12

Intersection Summary

Lane Group	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	234	224	216	358	2505	1653	600
v/c Ratio	0.71	0.76	0.58	0.73	0.77	0.73	0.59
Control Delay	45.4	50.5	23.4	31.7	17.5	23.3	4.2
Queue Delay	0.0	0.0	0.0	0.0	46.9	0.0	0.0
Total Delay	45.4	50.5	23.4	31.7	64.4	23.3	4.2
Queue Length 50th (ft)	127	126	60	87	554	289	0
Queue Length 95th (ft)	210	#234	134	m96	m557	349	61
Internal Link Dist (ft)		1448			399	863	
Turn Bay Length (ft)	345		345	284			295
Base Capacity (vph)	366	325	404	516	3264	2252	1017
Starvation Cap Reductn	0	0	0	0	995	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.64	0.69	0.53	0.69	1.10	0.73	0.59

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	453	327	2411	368	400	1516
v/c Ratio	0.76	1.02	0.98	0.39	0.92	0.45
Control Delay	44.5	87.1	36.2	2.8	48.0	12.1
Queue Delay	29.4	0.0	42.1	0.0	0.0	0.6
Total Delay	73.8	87.1	78.3	2.8	48.0	12.7
Queue Length 50th (ft)	127	~164	467	0	97	279
Queue Length 95th (ft)	#183	#338	#610	43	m#193	334
Internal Link Dist (ft)		1360	1017			399
Turn Bay Length (ft)	300			289	364	
Base Capacity (vph)	598	322	2471	941	437	3380
Starvation Cap Reductn	0	0	0	0	0	1343
Spillback Cap Reductn	159	0	496	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	1.03	1.02	1.22	0.39	0.92	0.74

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	79	79	316	274	1653	495	168
v/c Ratio	0.32	0.32	0.64	0.75	0.67	0.33	0.22
Control Delay	33.6	33.5	27.1	26.9	12.9	16.9	4.0
Queue Delay	0.0	0.0	0.0	0.0	12.4	0.0	0.0
Total Delay	33.6	33.5	27.1	26.9	25.4	16.9	4.0
Queue Length 50th (ft)	37	37	56	135	282	82	0
Queue Length 95th (ft)	76	76	97	m110	m362	138	39
Internal Link Dist (ft)		1348			410	289	
Turn Bay Length (ft)			288	190			110
Base Capacity (vph)	292	295	572	455	2452	1509	749
Starvation Cap Reductn	0	0	0	0	804	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.27	0.27	0.55	0.60	1.00	0.33	0.22

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	EBR	NBT	SBL	SBT
Lane Group Flow (vph)	547	137	137	1832	168	474
v/c Ratio	0.99	0.39	0.38	1.07	0.77	0.20
Control Delay	70.3	10.8	9.3	65.4	63.5	0.6
Queue Delay	37.9	0.0	0.0	1.6	0.0	0.0
Total Delay	108.2	10.8	9.3	66.9	63.5	0.6
Queue Length 50th (ft)	142	5	0	~534	46	0
Queue Length 95th (ft)	#243	54	48	#672	#179	0
Internal Link Dist (ft)		1337		967		410
Turn Bay Length (ft)	328		328		131	
Base Capacity (vph)	555	352	357	1707	217	2394
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	106	0	0	6	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	1.22	0.39	0.38	1.08	0.77	0.20

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	303	302	301	747	1947	926	211
v/c Ratio	0.88	0.96	0.79	0.95	0.59	0.39	0.30
Control Delay	62.4	75.7	39.1	28.5	12.3	21.4	4.1
Queue Delay	0.0	0.0	0.0	0.0	2.0	0.0	0.0
Total Delay	62.4	75.7	39.1	28.5	14.4	21.4	4.1
Queue Length 50th (ft)	176	176	117	216	350	110	0
Queue Length 95th (ft)	#331	#356	#256	m#307	389	138	44
Internal Link Dist (ft)		1418			370	727	
Turn Bay Length (ft)	361		361				126
Base Capacity (vph)	344	316	383	785	3303	2346	701
Starvation Cap Reductn	0	0	0	0	1151	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.88	0.96	0.79	0.95	0.90	0.39	0.30

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	EBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	311	300	285	2263	453	337	926
v/c Ratio	0.73	0.69	0.58	0.83	0.49	0.82	0.30
Control Delay	42.3	32.4	18.8	25.7	3.7	35.2	8.4
Queue Delay	0.4	0.3	0.0	0.1	0.0	0.0	0.0
Total Delay	42.7	32.7	18.8	25.8	3.7	35.2	8.4
Queue Length 50th (ft)	170	130	66	320	0	97	114
Queue Length 95th (ft)	#292	232	154	371	53	#167	m138
Internal Link Dist (ft)		1368		527			370
Turn Bay Length (ft)	355		355		260		
Base Capacity (vph)	425	435	491	2737	919	411	3059
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	11	11	0	55	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.75	0.71	0.58	0.84	0.49	0.82	0.30

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBT	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	1811	853	232	1169	926
v/c Ratio	1.04	0.71	0.34	1.05dr	1.15
Control Delay	75.5	40.6	5.0	21.9	109.3
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	75.5	40.6	5.0	21.9	109.3
Queue Length 50th (ft)	~605	325	0	333	~992
Queue Length 95th (ft)	#701	401	56	410	#1273
Internal Link Dist (ft)	407	165		1128	
Turn Bay Length (ft)				560	560
Base Capacity (vph)	1734	1206	691	1741	805
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	1.04	0.71	0.34	0.67	1.15

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

dr Defacto Right Lane. Recode with 1 though lane as a right lane.

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	779	1274	189	463	827	383
v/c Ratio	0.63	0.74	0.71	0.17	0.95	0.70
Control Delay	18.5	7.7	49.1	7.3	47.4	17.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	18.5	7.7	49.1	7.3	47.4	17.8
Queue Length 50th (ft)	125	101	34	30	138	39
Queue Length 95th (ft)	165	136	#133	41	#453	#259
Internal Link Dist (ft)	600			895	997	
Turn Bay Length (ft)			280		570	470
Base Capacity (vph)	3095	1721	267	4685	870	551
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.25	0.74	0.71	0.10	0.95	0.70

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	351	340	320	263	1747	2453	1000
v/c Ratio	1.07	1.06	0.86	0.70	0.53	1.01	0.94
Control Delay	105.3	99.7	46.9	33.7	14.2	45.0	25.8
Queue Delay	15.4	19.0	0.0	0.0	1.1	35.1	0.0
Total Delay	120.6	118.8	46.9	33.7	15.2	80.0	25.8
Queue Length 50th (ft)	~233	~218	130	58	343	~504	225
Queue Length 95th (ft)	#410	#405	#287	m79	387	#638	#594
Internal Link Dist (ft)		1448			399	863	
Turn Bay Length (ft)	345		345	284			295
Base Capacity (vph)	329	322	374	374	3269	2427	1065
Starvation Cap Reductn	0	0	0	0	1177	0	0
Spillback Cap Reductn	80	78	0	0	0	445	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	1.41	1.39	0.86	0.70	0.84	1.24	0.94

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	284	327	1726	337	432	2495
v/c Ratio	0.36	0.88	0.85	0.41	0.80	0.81
Control Delay	29.9	59.0	29.7	3.8	28.2	17.2
Queue Delay	0.1	0.0	0.0	0.0	0.0	46.9
Total Delay	30.1	59.0	29.7	3.8	28.2	64.1
Queue Length 50th (ft)	69	176	326	0	107	513
Queue Length 95th (ft)	104	#325	393	51	m104	m497
Internal Link Dist (ft)		1360	1017			399
Turn Bay Length (ft)	300			289	364	
Base Capacity (vph)	823	384	2031	821	557	3092
Starvation Cap Reductn	0	0	0	0	0	984
Spillback Cap Reductn	97	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.39	0.85	0.85	0.41	0.78	1.18

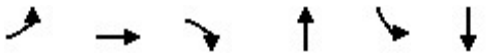
Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	285	284	147	200	558	1526	537
v/c Ratio	0.92	0.91	0.23	0.92	0.24	0.92	0.61
Control Delay	68.8	67.5	6.3	68.4	7.1	30.0	9.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.4	0.0
Total Delay	68.8	67.5	6.3	68.4	7.1	30.4	9.4
Queue Length 50th (ft)	148	147	0	103	98	356	67
Queue Length 95th (ft)	#296	#295	25	m#194	88	#518	166
Internal Link Dist (ft)		1348			410	289	
Turn Bay Length (ft)			288	190			110
Base Capacity (vph)	313	314	638	217	2315	1664	884
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	17	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.91	0.90	0.23	0.92	0.24	0.93	0.61

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	EBR	NBT	SBL	SBT
Lane Group Flow (vph)	158	143	142	926	411	1674
v/c Ratio	0.37	0.62	0.51	0.68	0.86	0.66
Control Delay	34.8	34.5	18.3	20.7	30.3	3.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	1.6
Total Delay	34.8	34.5	18.3	20.7	30.3	4.8
Queue Length 50th (ft)	38	46	16	173	145	28
Queue Length 95th (ft)	66	#120	72	251	m169	m36
Internal Link Dist (ft)		1337		967		410
Turn Bay Length (ft)	328		328		131	
Base Capacity (vph)	429	234	280	1358	542	2529
Starvation Cap Reductn	0	0	0	0	0	626
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.37	0.61	0.51	0.68	0.76	0.88

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	310	299	276	484	789	2095	263
v/c Ratio	0.76	0.76	0.53	0.81	0.25	0.85	0.38
Control Delay	45.5	43.2	12.3	25.5	10.3	29.3	8.7
Queue Delay	0.8	0.7	0.0	0.0	0.0	0.2	0.0
Total Delay	46.3	44.0	12.3	25.5	10.3	29.5	8.7
Queue Length 50th (ft)	172	162	31	141	121	309	33
Queue Length 95th (ft)	#303	#296	108	#216	155	360	90
Internal Link Dist (ft)		1418			370	727	
Turn Bay Length (ft)	361		361				126
Base Capacity (vph)	406	395	521	598	3114	2458	700
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	14	13	0	0	0	47	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.79	0.78	0.53	0.81	0.25	0.87	0.38

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	170	243	240	1084	516	526	2084
v/c Ratio	0.40	0.64	0.53	0.50	0.60	0.74	0.68
Control Delay	31.1	37.5	22.0	24.2	5.3	12.5	10.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	3.3
Total Delay	31.1	37.5	22.0	24.2	5.3	12.5	14.1
Queue Length 50th (ft)	84	129	72	139	0	94	361
Queue Length 95th (ft)	146	219	151	172	68	m107	399
Internal Link Dist (ft)		1368		527			370
Turn Bay Length (ft)	355		355		260		
Base Capacity (vph)	425	378	450	2178	865	710	3059
Starvation Cap Reductn	0	0	0	0	0	0	853
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.40	0.64	0.53	0.50	0.60	0.74	0.94

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBT	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	2084	1579	484	1121	784
v/c Ratio	0.87	0.94	0.31	1.15dr	1.27
Control Delay	38.3	48.0	0.5	43.1	167.3
Queue Delay	0.0	1.5	0.0	0.0	0.0
Total Delay	38.3	49.5	0.5	43.1	167.3
Queue Length 50th (ft)	635	738	0	496	~1068
Queue Length 95th (ft)	703	858	0	594	#1350
Internal Link Dist (ft)	407	165		1128	
Turn Bay Length (ft)				560	560
Base Capacity (vph)	2523	1755	1553	1360	619
Starvation Cap Reductn	0	68	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.83	0.94	0.31	0.82	1.27

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

dr Defacto Right Lane. Recode with 1 though lane as a right lane.

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	737	1684	274	800	1279	142
v/c Ratio	0.75	0.84	0.82	0.37	0.86	0.20
Control Delay	41.0	11.8	70.5	21.1	36.2	4.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	41.0	11.8	70.5	21.1	36.2	4.8
Queue Length 50th (ft)	250	290	96	136	389	0
Queue Length 95th (ft)	312	368	#217	165	#750	49
Internal Link Dist (ft)	600			895	997	
Turn Bay Length (ft)			280		570	470
Base Capacity (vph)	1747	2008	334	3278	1493	705
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.42	0.84	0.82	0.24	0.86	0.20

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	315	309	292	242	1568	2211	905
v/c Ratio	0.91	0.89	0.75	0.65	0.49	0.93	0.85
Control Delay	65.9	58.5	35.4	47.1	8.9	31.1	14.9
Queue Delay	0.0	0.0	0.0	0.0	0.4	0.0	0.0
Total Delay	65.9	58.5	35.4	47.1	9.3	31.1	14.9
Queue Length 50th (ft)	185	164	109	69	151	416	113
Queue Length 95th (ft)	#347	#334	#236	108	183	#544	#461
Internal Link Dist (ft)		1448			399	863	
Turn Bay Length (ft)	345		345	284			295
Base Capacity (vph)	348	348	389	374	3214	2372	1065
Starvation Cap Reductn	0	0	0	0	938	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.91	0.89	0.75	0.65	0.69	0.93	0.85

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	253	295	1558	305	389	2242
v/c Ratio	0.35	0.88	0.87	0.41	0.74	0.77
Control Delay	23.3	53.1	26.5	4.0	36.6	12.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.4
Total Delay	23.3	53.1	26.5	4.0	36.6	12.8
Queue Length 50th (ft)	43	111	206	0	76	218
Queue Length 95th (ft)	73	#243	#278	45	#133	276
Internal Link Dist (ft)		1360	1017			399
Turn Bay Length (ft)	300			289	364	
Base Capacity (vph)	727	341	1785	742	524	2922
Starvation Cap Reductn	0	0	0	0	0	220
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.35	0.87	0.87	0.41	0.74	0.83

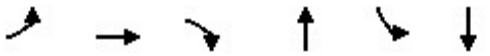
Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	258	258	137	179	505	1379	484
v/c Ratio	0.82	0.82	0.22	0.82	0.22	0.83	0.55
Control Delay	53.1	52.7	6.2	55.8	4.8	24.4	8.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	53.1	52.7	6.2	55.8	4.8	24.4	8.3
Queue Length 50th (ft)	128	128	0	91	78	311	54
Queue Length 95th (ft)	#245	#245	23	#187	42	#415	140
Internal Link Dist (ft)		1348			410	289	
Turn Bay Length (ft)			288	190			110
Base Capacity (vph)	342	343	675	217	2306	1655	875
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.75	0.75	0.20	0.82	0.22	0.83	0.55

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	NBT	SBL	SBT
Lane Group Flow (vph)	147	127	126	832	368	1505
v/c Ratio	0.35	0.51	0.45	0.59	0.83	0.59
Control Delay	34.5	24.5	15.4	17.8	29.8	6.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.8
Total Delay	34.5	24.5	15.4	17.8	29.8	7.7
Queue Length 50th (ft)	35	28	9	137	143	258
Queue Length 95th (ft)	62	83	60	214	m166	261
Internal Link Dist (ft)		1337		967		410
Turn Bay Length (ft)	328		328		131	
Base Capacity (vph)	429	251	280	1418	542	2530
Starvation Cap Reductn	0	0	0	0	0	640
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.34	0.51	0.45	0.59	0.68	0.80

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	278	271	251	432	716	1884	242
v/c Ratio	0.68	0.69	0.46	0.72	0.23	0.77	0.34
Control Delay	40.7	38.8	7.2	19.2	6.2	26.4	7.4
Queue Delay	1.6	1.7	0.0	0.0	0.0	0.0	0.0
Total Delay	42.3	40.4	7.2	19.2	6.2	26.4	7.4
Queue Length 50th (ft)	151	142	3	120	100	265	24
Queue Length 95th (ft)	243	#241	64	171	128	311	75
Internal Link Dist (ft)		1418			370	727	
Turn Bay Length (ft)	361		361				126
Base Capacity (vph)	406	394	548	598	3114	2458	703
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	40	38	0	0	0	1	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.76	0.76	0.46	0.72	0.23	0.77	0.34

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	151	221	218	979	463	474	1874
v/c Ratio	0.36	0.58	0.48	0.45	0.56	0.67	0.61
Control Delay	30.2	33.8	19.8	23.6	5.0	15.7	15.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	2.6
Total Delay	30.2	33.8	19.8	23.6	5.0	15.7	18.0
Queue Length 50th (ft)	73	110	60	123	0	135	325
Queue Length 95th (ft)	131	193	132	154	64	m180	378
Internal Link Dist (ft)		1368		527			370
Turn Bay Length (ft)	355		355		260		
Base Capacity (vph)	425	383	450	2178	831	710	3059
Starvation Cap Reductn	0	0	0	0	0	0	1023
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.36	0.58	0.48	0.45	0.56	0.67	0.92

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBT	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	1874	1421	432	1011	705
v/c Ratio	0.91	0.99	0.48	1.00dr	1.10
Control Delay	32.8	49.1	3.8	23.4	92.0
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	32.8	49.1	3.8	23.4	92.0
Queue Length 50th (ft)	357	411	0	230	~503
Queue Length 95th (ft)	#440	#575	54	304	#741
Internal Link Dist (ft)	407	165		1128	
Turn Bay Length (ft)				560	560
Base Capacity (vph)	2061	1434	895	1411	641
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.91	0.99	0.48	0.72	1.10

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

dr Defacto Right Lane. Recode with 1 though lane as a right lane.

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	663	1516	242	716	1152	132
v/c Ratio	0.69	0.78	0.77	0.33	0.80	0.19
Control Delay	34.5	8.9	61.7	18.0	31.3	5.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	34.5	8.9	61.7	18.0	31.3	5.2
Queue Length 50th (ft)	189	198	72	102	286	0
Queue Length 95th (ft)	241	253	#187	127	#641	48
Internal Link Dist (ft)	600			895	997	
Turn Bay Length (ft)			280		570	470
Base Capacity (vph)	2016	1955	315	3679	1442	679
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.33	0.78	0.77	0.19	0.80	0.19

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	280	272	259	211	1400	1958	800
v/c Ratio	0.91	0.83	0.70	0.47	0.44	0.90	0.79
Control Delay	66.1	46.9	26.8	33.9	7.3	26.6	11.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	66.1	46.9	26.8	33.9	7.3	26.6	11.4
Queue Length 50th (ft)	135	106	62	47	104	297	55
Queue Length 95th (ft)	#281	#247	#167	79	131	#378	#226
Internal Link Dist (ft)		1448			399	863	
Turn Bay Length (ft)	345		345	284			295
Base Capacity (vph)	307	326	372	448	3192	2181	1009
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.91	0.83	0.70	0.47	0.44	0.90	0.79

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	232	264	1379	274	347	2000
v/c Ratio	0.35	0.84	0.75	0.37	0.65	0.67
Control Delay	24.1	49.1	20.8	3.8	32.1	10.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.2
Total Delay	24.1	49.1	20.8	3.8	32.1	10.2
Queue Length 50th (ft)	41	97	169	0	67	170
Queue Length 95th (ft)	69	#216	219	42	106	216
Internal Link Dist (ft)		1360	1017			399
Turn Bay Length (ft)	300			289	364	
Base Capacity (vph)	677	323	1851	739	536	3008
Starvation Cap Reductn	0	0	0	0	0	284
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.34	0.82	0.75	0.37	0.65	0.73

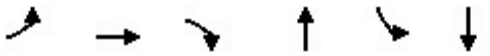
Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	225	228	116	158	442	1221	432
v/c Ratio	0.72	0.73	0.19	0.52	0.21	0.83	0.52
Control Delay	41.6	42.0	5.3	33.0	5.1	22.7	5.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	41.6	42.0	5.3	33.0	5.1	22.7	5.8
Queue Length 50th (ft)	91	92	0	59	31	219	20
Queue Length 95th (ft)	#202	#204	18	#125	47	#313	77
Internal Link Dist (ft)		1348			410	289	
Turn Bay Length (ft)			288	190			110
Base Capacity (vph)	323	324	641	304	2497	1652	899
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.70	0.70	0.18	0.52	0.18	0.74	0.48

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	NBT	SBL	SBT
Lane Group Flow (vph)	126	117	115	747	326	1337
v/c Ratio	0.19	0.32	0.29	0.67	0.73	0.55
Control Delay	22.7	13.5	6.7	15.9	33.5	6.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	22.7	13.5	6.7	15.9	33.5	6.8
Queue Length 50th (ft)	19	12	0	87	101	124
Queue Length 95th (ft)	44	58	34	138	#257	171
Internal Link Dist (ft)		1337		967		410
Turn Bay Length (ft)	328		328		131	
Base Capacity (vph)	681	363	402	1696	491	2756
Starvation Cap Reductn	0	0	0	0	0	128
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.19	0.32	0.29	0.44	0.66	0.51

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	242	242	222	389	632	1674	211
v/c Ratio	0.57	0.58	0.41	0.65	0.21	0.71	0.31
Control Delay	34.9	33.3	6.3	18.4	7.6	25.7	6.5
Queue Delay	0.1	0.1	0.0	0.0	0.0	0.0	0.0
Total Delay	35.0	33.3	6.3	18.4	7.6	25.7	6.5
Queue Length 50th (ft)	125	120	0	104	87	230	15
Queue Length 95th (ft)	207	207	56	148	113	272	61
Internal Link Dist (ft)		1418			370	727	
Turn Bay Length (ft)	361		361				126
Base Capacity (vph)	428	415	547	598	3048	2374	681
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	5	4	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.57	0.59	0.41	0.65	0.21	0.71	0.31

Intersection Summary

Lane Group	EBL	EBT	EBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	132	194	190	863	411	421	1663
v/c Ratio	0.33	0.51	0.44	0.38	0.51	0.59	0.53
Control Delay	30.5	30.1	18.0	22.1	4.7	13.6	13.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.8
Total Delay	30.5	30.1	18.0	22.1	4.7	13.6	14.0
Queue Length 50th (ft)	65	87	46	104	0	117	288
Queue Length 95th (ft)	118	162	111	132	59	163	325
Internal Link Dist (ft)		1368		527			370
Turn Bay Length (ft)	355		355		260		
Base Capacity (vph)	406	378	435	2248	809	710	3114
Starvation Cap Reductn	0	0	0	0	0	0	1014
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.33	0.51	0.44	0.38	0.51	0.59	0.79

Intersection Summary

Lane Group	EBT	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	1663	1263	389	901	626
v/c Ratio	0.84	0.92	0.25	0.93dr	1.02
Control Delay	23.9	32.3	0.4	18.9	65.7
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	23.9	32.3	0.4	18.9	65.7
Queue Length 50th (ft)	228	261	0	152	~303
Queue Length 95th (ft)	288	#395	0	213	#530
Internal Link Dist (ft)	407	165		1128	
Turn Bay Length (ft)				560	560
Base Capacity (vph)	2006	1396	1553	1342	611
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.83	0.90	0.25	0.67	1.02

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

dr Defacto Right Lane. Recode with 1 though lane as a right lane.

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	589	1347	221	642	1024	113
v/c Ratio	0.62	0.71	0.77	0.30	0.75	0.18
Control Delay	28.2	7.1	58.5	15.0	28.3	5.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	28.2	7.1	58.5	15.0	28.3	5.9
Queue Length 50th (ft)	138	134	54	75	202	0
Queue Length 95th (ft)	181	173	#171	95	#548	47
Internal Link Dist (ft)	600			895	997	
Turn Bay Length (ft)			280		570	470
Base Capacity (vph)	2362	1889	288	4187	1360	637
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.25	0.71	0.77	0.15	0.75	0.18

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	234	224	216	365	2491	1662	600
v/c Ratio	0.71	0.76	0.58	0.74	0.76	0.74	0.59
Control Delay	45.5	50.3	23.4	32.0	17.4	23.5	4.2
Queue Delay	0.0	0.0	0.0	0.0	46.0	0.0	0.0
Total Delay	45.5	50.3	23.4	32.0	63.4	23.5	4.2
Queue Length 50th (ft)	127	126	60	89	546	291	0
Queue Length 95th (ft)	210	#232	134	m98	m553	352	61
Internal Link Dist (ft)		1448			399	863	
Turn Bay Length (ft)	345		345	284			295
Base Capacity (vph)	366	325	404	516	3265	2250	1016
Starvation Cap Reductn	0	0	0	0	996	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.64	0.69	0.53	0.71	1.10	0.74	0.59

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	453	336	2403	368	400	1525
v/c Ratio	0.76	1.05	0.97	0.39	0.92	0.45
Control Delay	44.5	95.6	35.6	2.8	47.9	12.1
Queue Delay	27.9	0.0	42.4	0.0	0.0	0.7
Total Delay	72.4	95.6	78.1	2.8	47.9	12.7
Queue Length 50th (ft)	127	~183	465	0	96	281
Queue Length 95th (ft)	#183	#351	#606	43	m#191	337
Internal Link Dist (ft)		1360	1017			399
Turn Bay Length (ft)	300			289	364	
Base Capacity (vph)	598	321	2471	941	437	3380
Starvation Cap Reductn	0	0	0	0	0	1343
Spillback Cap Reductn	157	0	489	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	1.03	1.05	1.21	0.39	0.92	0.75

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	91	92	316	324	1663	511	158
v/c Ratio	0.38	0.38	0.65	0.78	0.68	0.36	0.22
Control Delay	35.2	35.2	27.5	24.5	13.0	18.8	4.5
Queue Delay	0.0	0.0	0.0	0.0	13.5	0.0	0.0
Total Delay	35.2	35.2	27.5	24.5	26.4	18.8	4.5
Queue Length 50th (ft)	44	45	56	155	298	91	0
Queue Length 95th (ft)	87	88	98	m119	m328	150	39
Internal Link Dist (ft)		1348			410	289	
Turn Bay Length (ft)			288	190			110
Base Capacity (vph)	280	282	552	520	2460	1415	707
Starvation Cap Reductn	0	0	0	0	809	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.33	0.33	0.57	0.62	1.01	0.36	0.22

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	EBR	NBT	SBL	SBT
Lane Group Flow (vph)	547	156	157	1867	168	514
v/c Ratio	1.00	0.43	0.42	1.09	0.77	0.21
Control Delay	74.2	10.8	9.3	70.9	68.5	0.4
Queue Delay	34.8	0.0	0.0	1.3	0.0	0.0
Total Delay	109.0	10.8	9.3	72.3	68.5	0.4
Queue Length 50th (ft)	142	5	0	~553	60	0
Queue Length 95th (ft)	#245	57	52	#691	#190	0
Internal Link Dist (ft)		1337		967		410
Turn Bay Length (ft)	328		328		131	
Base Capacity (vph)	547	364	371	1716	217	2403
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	106	0	0	5	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	1.24	0.43	0.42	1.09	0.77	0.21

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	343	321	318	737	1945	945	211
v/c Ratio	0.95	0.96	0.80	0.99	0.60	0.40	0.30
Control Delay	72.4	75.2	39.8	36.4	13.2	21.4	4.1
Queue Delay	0.0	0.0	0.0	0.0	2.3	0.0	0.0
Total Delay	72.4	75.2	39.8	36.4	15.5	21.4	4.1
Queue Length 50th (ft)	203	189	128	216	350	113	0
Queue Length 95th (ft)	#377	#372	#273	m#315	388	141	44
Internal Link Dist (ft)		1418			370	727	
Turn Bay Length (ft)	361		361				126
Base Capacity (vph)	362	334	398	748	3247	2346	701
Starvation Cap Reductn	0	0	0	0	1119	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.95	0.96	0.80	0.99	0.91	0.40	0.30

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	EBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	311	300	285	2251	503	337	1012
v/c Ratio	0.73	0.69	0.61	0.82	0.53	0.82	0.33
Control Delay	42.3	32.4	22.5	25.5	3.8	35.1	8.1
Queue Delay	0.6	0.4	0.0	0.1	0.0	0.0	0.0
Total Delay	42.9	32.8	22.5	25.7	3.8	35.1	8.1
Queue Length 50th (ft)	170	130	82	317	0	97	119
Queue Length 95th (ft)	#292	232	173	368	55	#167	m138
Internal Link Dist (ft)		1368		527			370
Turn Bay Length (ft)	355		355		260		
Base Capacity (vph)	425	435	471	2737	948	411	3059
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	15	15	0	57	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.76	0.71	0.61	0.84	0.53	0.82	0.33

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBT	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	1821	908	232	1173	931
v/c Ratio	1.04	0.74	0.34	1.05dr	1.16
Control Delay	76.5	44.4	6.8	23.4	112.7
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	76.5	44.4	6.8	23.4	112.7
Queue Length 50th (ft)	~653	381	12	363	~1083
Queue Length 95th (ft)	#749	462	71	440	#1370
Internal Link Dist (ft)	407	165		1128	
Turn Bay Length (ft)				560	560
Base Capacity (vph)	1752	1219	683	1747	806
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	1.04	0.74	0.34	0.67	1.16

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

dr Defacto Right Lane. Recode with 1 though lane as a right lane.

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	784	1279	189	476	858	395
v/c Ratio	0.67	0.69	0.71	0.19	0.77	0.63
Control Delay	24.2	6.5	53.6	10.5	30.5	15.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	24.2	6.5	53.6	10.5	30.5	15.8
Queue Length 50th (ft)	164	111	43	43	163	54
Queue Length 95th (ft)	212	146	#138	58	#437	#248
Internal Link Dist (ft)	600			895	997	
Turn Bay Length (ft)			280		570	470
Base Capacity (vph)	2509	1857	266	4390	1112	627
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.31	0.69	0.71	0.11	0.77	0.63

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	351	340	320	280	1766	2459	989
v/c Ratio	1.07	1.06	0.86	0.75	0.54	1.01	0.93
Control Delay	105.3	102.0	46.9	34.7	14.9	45.6	24.5
Queue Delay	15.4	16.8	0.0	0.0	1.2	34.4	0.0
Total Delay	120.6	118.7	46.9	34.7	16.2	80.0	24.5
Queue Length 50th (ft)	~233	~220	130	64	350	~509	214
Queue Length 95th (ft)	#410	#407	#287	m86	399	#641	#582
Internal Link Dist (ft)		1448			399	863	
Turn Bay Length (ft)	345		345	284			295
Base Capacity (vph)	329	320	374	374	3269	2427	1063
Starvation Cap Reductn	0	0	0	0	1189	0	0
Spillback Cap Reductn	80	76	0	0	0	450	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	1.41	1.39	0.86	0.75	0.85	1.24	0.93

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	274	349	1773	337	432	2501
v/c Ratio	0.34	0.92	0.86	0.41	0.87	0.82
Control Delay	29.5	65.1	29.3	3.6	31.9	17.6
Queue Delay	0.1	0.0	0.1	0.0	0.0	46.9
Total Delay	29.6	65.1	29.3	3.6	31.9	64.5
Queue Length 50th (ft)	66	191	328	0	112	515
Queue Length 95th (ft)	101	#355	395	50	m109	m497
Internal Link Dist (ft)		1360	1017			399
Turn Bay Length (ft)	300			289	364	
Base Capacity (vph)	823	384	2070	830	497	3067
Starvation Cap Reductn	0	0	0	0	0	984
Spillback Cap Reductn	101	0	9	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.38	0.91	0.86	0.41	0.87	1.20

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	283	282	147	267	586	1569	537
v/c Ratio	0.97	0.96	0.24	1.03	0.25	0.97	0.63
Control Delay	81.2	79.5	6.5	81.6	6.5	39.0	10.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	3.2	0.0
Total Delay	81.2	79.5	6.5	81.6	6.5	42.1	10.5
Queue Length 50th (ft)	149	148	0	~129	76	385	77
Queue Length 95th (ft)	#306	#303	26	m#224	m88	#554	181
Internal Link Dist (ft)		1348			410	289	
Turn Bay Length (ft)			288	190			110
Base Capacity (vph)	292	293	606	260	2351	1614	858
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	31	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.97	0.96	0.24	1.03	0.25	0.99	0.63

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	EBR	NBT	SBL	SBT
Lane Group Flow (vph)	137	183	180	1039	411	1713
v/c Ratio	0.29	0.75	0.61	0.78	0.89	0.69
Control Delay	32.4	45.7	23.7	25.3	32.1	3.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	2.0
Total Delay	32.4	45.7	23.7	25.3	32.1	5.5
Queue Length 50th (ft)	31	71	35	225	152	67
Queue Length 95th (ft)	57	#170	102	#316	m163	m68
Internal Link Dist (ft)		1337		967		410
Turn Bay Length (ft)	328		328		131	
Base Capacity (vph)	496	255	307	1331	499	2482
Starvation Cap Reductn	0	0	0	0	0	582
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.28	0.72	0.59	0.78	0.82	0.90

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	377	369	322	484	808	2111	263
v/c Ratio	0.85	0.87	0.60	0.93	0.27	0.86	0.38
Control Delay	50.9	52.9	17.1	45.6	14.9	29.6	8.8
Queue Delay	0.1	0.1	0.0	0.0	0.0	0.2	0.0
Total Delay	51.0	53.0	17.1	45.6	14.9	29.8	8.8
Queue Length 50th (ft)	213	216	64	145	129	313	34
Queue Length 95th (ft)	#376	#392	158	#240	164	364	90
Internal Link Dist (ft)		1418			370	727	
Turn Bay Length (ft)	361		361				126
Base Capacity (vph)	443	426	534	523	3003	2458	700
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	1	1	0	0	0	47	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.85	0.87	0.60	0.93	0.27	0.88	0.38

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	170	243	240	1103	657	526	2283
v/c Ratio	0.46	0.74	0.59	0.44	0.69	0.83	0.71
Control Delay	34.9	46.6	25.4	20.2	7.7	21.1	7.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	2.7
Total Delay	34.9	46.6	25.4	20.2	7.7	21.1	10.5
Queue Length 50th (ft)	88	137	75	129	31	78	356
Queue Length 95th (ft)	153	#260	158	158	141	m126	399
Internal Link Dist (ft)		1368		527			370
Turn Bay Length (ft)	355		355		260		
Base Capacity (vph)	370	329	404	2527	952	635	3225
Starvation Cap Reductn	0	0	0	0	0	0	797
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.46	0.74	0.59	0.44	0.69	0.83	0.94

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBT	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	2113	1692	474	1130	793
v/c Ratio	0.95	1.10	0.31	1.09dr	1.19
Control Delay	48.6	91.4	0.5	35.3	135.7
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	48.6	91.4	0.5	35.3	135.7
Queue Length 50th (ft)	669	~915	0	431	~957
Queue Length 95th (ft)	#765	#1055	0	521	#1235
Internal Link Dist (ft)	407	165		1128	
Turn Bay Length (ft)				560	560
Base Capacity (vph)	2216	1542	1553	1465	664
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.95	1.10	0.31	0.77	1.19

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

dr Defacto Right Lane. Recode with 1 though lane as a right lane.

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	755	1695	274	823	1358	142
v/c Ratio	0.76	0.84	0.83	0.38	0.91	0.20
Control Delay	41.8	11.8	72.9	21.6	40.2	4.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	41.8	11.8	72.9	21.6	40.2	4.8
Queue Length 50th (ft)	262	296	98	143	438	0
Queue Length 95th (ft)	325	374	#220	173	#821	48
Internal Link Dist (ft)	600			895	997	
Turn Bay Length (ft)			280		570	470
Base Capacity (vph)	1689	2019	329	3182	1500	707
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.45	0.84	0.83	0.26	0.91	0.20

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	315	309	292	275	1602	2225	895
v/c Ratio	0.91	0.90	0.75	0.74	0.50	0.94	0.84
Control Delay	65.9	60.2	35.4	51.6	9.0	31.8	14.6
Queue Delay	0.0	0.0	0.0	0.0	0.4	0.0	0.0
Total Delay	65.9	60.2	35.4	51.6	9.4	31.8	14.6
Queue Length 50th (ft)	185	167	109	79	156	421	111
Queue Length 95th (ft)	#347	#337	#236	#132	189	#550	#397
Internal Link Dist (ft)		1448			399	863	
Turn Bay Length (ft)	345		345	284			295
Base Capacity (vph)	348	345	389	374	3214	2372	1061
Starvation Cap Reductn	0	0	0	0	929	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.91	0.90	0.75	0.74	0.70	0.94	0.84

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	242	326	1635	305	389	2267
v/c Ratio	0.34	0.96	0.85	0.39	0.79	0.76
Control Delay	24.8	70.5	25.1	3.7	42.4	12.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.6
Total Delay	24.8	70.5	25.1	3.7	42.4	13.0
Queue Length 50th (ft)	45	137	228	0	84	233
Queue Length 95th (ft)	75	#291	289	44	#147	291
Internal Link Dist (ft)		1360	1017			399
Turn Bay Length (ft)	300			289	364	
Base Capacity (vph)	721	339	1927	777	495	2992
Starvation Cap Reductn	0	0	0	0	0	349
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.34	0.96	0.85	0.39	0.79	0.86

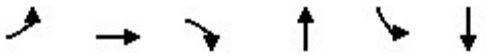
Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	263	263	137	308	567	1438	484
v/c Ratio	0.93	0.92	0.23	0.95	0.24	0.96	0.60
Control Delay	72.9	72.2	6.8	64.5	0.8	38.5	10.7
Queue Delay	56.2	56.6	0.0	0.0	0.0	0.0	0.0
Total Delay	129.0	128.8	6.8	64.5	0.8	38.5	10.7
Queue Length 50th (ft)	137	137	0	101	3	354	68
Queue Length 95th (ft)	#284	#284	25	m#252	m3	#511	164
Internal Link Dist (ft)		1348			410	289	
Turn Bay Length (ft)			288	190			110
Base Capacity (vph)	284	285	584	325	2368	1501	807
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	148	149	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	1.93	1.93	0.23	0.95	0.24	0.96	0.60

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	EBR	NBT	SBL	SBT
Lane Group Flow (vph)	126	189	186	1082	368	1574
v/c Ratio	0.27	0.75	0.63	0.76	0.88	0.63
Control Delay	32.4	42.8	25.4	23.2	34.8	14.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	31.7
Total Delay	32.4	42.8	25.4	23.2	34.8	46.4
Queue Length 50th (ft)	29	66	38	227	185	370
Queue Length 95th (ft)	54	#167	106	310	m193	m433
Internal Link Dist (ft)		1337		967		410
Turn Bay Length (ft)	328		328		131	
Base Capacity (vph)	488	264	304	1417	455	2491
Starvation Cap Reductn	0	0	0	0	0	1005
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.26	0.72	0.61	0.76	0.81	1.06

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	378	379	293	432	751	1907	242
v/c Ratio	0.78	0.82	0.51	0.89	0.26	0.80	0.35
Control Delay	42.4	45.3	12.4	42.8	13.9	28.2	8.1
Queue Delay	0.8	1.1	0.0	0.0	0.0	0.0	0.0
Total Delay	43.2	46.4	12.4	42.8	13.9	28.3	8.1
Queue Length 50th (ft)	206	216	42	125	115	276	26
Queue Length 95th (ft)	#352	#382	121	#207	147	324	79
Internal Link Dist (ft)		1418			370	727	
Turn Bay Length (ft)	361		361				126
Base Capacity (vph)	483	464	573	486	2881	2374	682
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	16	15	0	0	0	6	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.81	0.84	0.51	0.89	0.26	0.81	0.35

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	151	221	218	1014	724	474	2146
v/c Ratio	0.45	0.73	0.58	0.37	0.74	0.79	0.64
Control Delay	36.6	47.7	25.1	17.6	10.1	18.1	9.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	1.7
Total Delay	36.6	47.7	25.1	17.6	10.1	18.1	11.0
Queue Length 50th (ft)	80	123	64	109	59	95	328
Queue Length 95th (ft)	142	#239	144	135	211	m117	362
Internal Link Dist (ft)		1368		527			370
Turn Bay Length (ft)	355		355		260		
Base Capacity (vph)	333	301	374	2737	977	598	3336
Starvation Cap Reductn	0	0	0	0	0	0	960
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.45	0.73	0.58	0.37	0.74	0.79	0.90

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBT	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	1928	1574	432	1022	717
v/c Ratio	0.87	1.02	0.50	1.01dr	1.11
Control Delay	35.8	62.5	8.6	29.9	101.3
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	35.8	62.5	8.6	29.9	101.3
Queue Length 50th (ft)	486	~682	56	320	~695
Queue Length 95th (ft)	557	#821	143	400	#957
Internal Link Dist (ft)	407	165		1128	
Turn Bay Length (ft)				560	560
Base Capacity (vph)	2211	1538	860	1423	646
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.87	1.02	0.50	0.72	1.11

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

dr Defacto Right Lane. Recode with 1 though lane as a right lane.

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	698	1536	242	749	1260	132
v/c Ratio	0.71	0.78	0.79	0.34	0.87	0.19
Control Delay	35.3	8.8	64.6	18.4	35.8	5.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	35.3	8.8	64.6	18.4	35.8	5.1
Queue Length 50th (ft)	205	204	74	110	338	0
Queue Length 95th (ft)	260	260	#189	136	#733	48
Internal Link Dist (ft)	600			895	997	
Turn Bay Length (ft)			280		570	470
Base Capacity (vph)	1932	1974	308	3538	1441	679
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.36	0.78	0.79	0.21	0.87	0.19

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	280	272	259	243	1432	1985	789
v/c Ratio	0.91	0.84	0.70	0.54	0.45	0.91	0.79
Control Delay	66.1	48.9	26.8	35.4	7.4	27.6	11.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	66.1	48.9	26.8	35.4	7.4	27.6	11.5
Queue Length 50th (ft)	135	108	62	55	107	303	57
Queue Length 95th (ft)	#281	#251	#167	90	135	#416	224
Internal Link Dist (ft)		1448			399	863	
Turn Bay Length (ft)	345		345	284			295
Base Capacity (vph)	307	322	372	448	3192	2181	1000
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.91	0.84	0.70	0.54	0.45	0.91	0.79

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	221	293	1454	274	347	2017
v/c Ratio	0.31	0.86	0.81	0.38	0.66	0.69
Control Delay	22.8	51.2	23.5	4.0	32.7	10.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.2
Total Delay	22.8	51.2	23.5	4.0	32.7	11.1
Queue Length 50th (ft)	38	109	186	0	68	181
Queue Length 95th (ft)	65	#238	240	43	107	230
Internal Link Dist (ft)		1360	1017			399
Turn Bay Length (ft)	300			289	364	
Base Capacity (vph)	728	344	1787	723	525	2927
Starvation Cap Reductn	0	0	0	0	0	240
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.30	0.85	0.81	0.38	0.66	0.75

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	232	233	116	288	496	1275	432
v/c Ratio	0.82	0.81	0.20	0.88	0.21	0.87	0.54
Control Delay	55.5	55.1	7.2	61.1	5.0	28.5	9.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	55.5	55.1	7.2	61.1	5.0	28.5	9.0
Queue Length 50th (ft)	117	118	0	142	42	293	49
Queue Length 95th (ft)	#237	#237	23	#280	60	#394	128
Internal Link Dist (ft)		1348			410	289	
Turn Bay Length (ft)			288	190			110
Base Capacity (vph)	305	307	601	340	2456	1549	823
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.76	0.76	0.19	0.85	0.20	0.82	0.52

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	NBT	SBL	SBT
Lane Group Flow (vph)	105	172	168	967	326	1402
v/c Ratio	0.19	0.57	0.48	0.81	0.86	0.63
Control Delay	24.6	24.9	13.4	21.9	48.4	7.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.1
Total Delay	24.6	24.9	13.4	21.9	48.4	8.0
Queue Length 50th (ft)	18	40	13	148	121	134
Queue Length 95th (ft)	38	#114	65	215	#259	185
Internal Link Dist (ft)		1337		967		410
Turn Bay Length (ft)	328		328		131	
Base Capacity (vph)	556	301	352	1394	401	2488
Starvation Cap Reductn	0	0	0	0	0	276
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.19	0.57	0.48	0.69	0.81	0.63

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	346	346	256	389	664	1697	211
v/c Ratio	0.72	0.75	0.42	0.80	0.23	0.71	0.31
Control Delay	38.6	40.4	6.4	34.4	13.6	25.7	6.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	38.6	40.4	6.4	34.4	13.6	25.7	6.5
Queue Length 50th (ft)	185	192	5	109	98	233	16
Queue Length 95th (ft)	#296	#332	63	#169	126	276	61
Internal Link Dist (ft)		1418			370	727	
Turn Bay Length (ft)	361		361				126
Base Capacity (vph)	480	461	603	486	2893	2388	683
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.72	0.75	0.42	0.80	0.23	0.71	0.31

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	132	194	190	896	667	421	1939
v/c Ratio	0.40	0.63	0.51	0.33	0.68	0.70	0.58
Control Delay	35.3	39.4	21.5	17.1	7.4	16.1	9.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.8
Total Delay	35.3	39.4	21.5	17.1	7.4	16.1	9.8
Queue Length 50th (ft)	69	98	48	94	35	95	280
Queue Length 95th (ft)	126	180	118	118	142	121	322
Internal Link Dist (ft)		1368		527			370
Turn Bay Length (ft)	355		355		260		
Base Capacity (vph)	333	308	374	2737	982	598	3336
Starvation Cap Reductn	0	0	0	0	0	0	966
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.40	0.63	0.51	0.33	0.68	0.70	0.82

Intersection Summary

Lane Group	EBT	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	1712	1412	379	911	637
v/c Ratio	0.81	0.96	0.24	0.93dr	1.02
Control Delay	26.5	41.6	0.4	22.6	67.3
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	26.5	41.6	0.4	22.6	67.3
Queue Length 50th (ft)	303	399	0	202	~400
Queue Length 95th (ft)	366	#557	0	268	#653
Internal Link Dist (ft)	407	165		1128	
Turn Bay Length (ft)				560	560
Base Capacity (vph)	2117	1473	1553	1377	626
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.81	0.96	0.24	0.66	1.02

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

dr Defacto Right Lane. Recode with 1 though lane as a right lane.

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	621	1364	221	678	1126	113
v/c Ratio	0.64	0.71	0.79	0.31	0.82	0.18
Control Delay	28.9	7.0	61.4	15.4	31.3	5.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	28.9	7.0	61.4	15.4	31.3	5.8
Queue Length 50th (ft)	150	138	57	82	244	0
Queue Length 95th (ft)	195	178	#173	104	#628	46
Internal Link Dist (ft)	600			895	997	
Turn Bay Length (ft)			280		570	470
Base Capacity (vph)	2262	1909	281	4023	1366	639
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.27	0.71	0.79	0.17	0.82	0.18

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Appendix I
Detailed Construction Trip Generation By Construction Phase

Unmitigated Construction, Ontario Regional Sports Complex

(Based on schedule provided by the Applicant/City)

Activities		Schedule		Daily Construction Trips			
Development Component/Activity	**Construction Activity**	**Start Date**	**End Date**	**Hauling**	**Vendor**	**Worker**	**Total PCE Adj**
Phase 1 Mass Grading and Demolition	Asphalt Demolition & Reprocessing	9/3/2024	10/1/2024	0	10	16	26
Phase 1 Mass Grading and Demolition	Building Demolition	9/3/2024	9/25/2024	20	10	16	86
		OVERLAP: 9/3/2024		**20**	**20**	**32**	**112**
Vineyard Avenue (10,560 Linear Feet)	Demolition-Clear & Grub	9/4/2024	9/26/2024	0	16	16	32
East Riverside Drive (3,250 Linear Feet)	Demolition-Clear & Grub	9/4/2024	9/9/2024	0	16	16	32
		OVERLAP: 9/4/2024 - 9/9/2024		**20**	**52**	**64**	**176**
East Riverside Drive (3,250 Linear Feet)	Rough Grading	9/10/2024	9/14/2024	0	0	20	20
		OVERLAP: 9/10/2024 - 9/14/2024		**20**	**36**	**68**	**164**
East Riverside Drive (3,250 Linear Feet)	Fine Grading	9/16/2024	9/24/2024	0	10	20	30
		OVERLAP: 9/16/2024 - 9/24/2024		**20**	**46**	**68**	**174**
East Riverside Drive (3,250 Linear Feet)	Utility Trenching (SWR, SD, WTR, Dry's)	9/25/2024	12/26/2024	0	18	50	68
		OVERLAP: 9/25/2024		**20**	**54**	**98**	**212**
Phase 1 Mass Grading and Demolition	Manure Removal	9/26/2024	10/30/2024	221	20	8	691
Phase 2 (PA 4) Mass Grading and Demolition	Building Demolition	9/26/2024	10/1/2024	10	10	16	56
		OVERLAP: 9/26/2024		**231**	**64**	**90**	**847**
Vineyard Avenue (10,560 Linear Feet)	Rough Grading	9/27/2024	10/8/2024	0	0	20	20
		OVERLAP: 9/27/2024 - 10/1/2024		**231**	**58**	**110**	**861**
Phase 4 Mass Grading and Demolition	Building Demolition	10/2/2024	10/10/2024	20	10	16	86
		OVERLAP: 10/2/2024 - 10/8/2024		**241**	**48**	**94**	**865**
Vineyard Avenue (10,560 Linear Feet)	Fine Grading	10/9/2024	10/23/2024	0	10	20	30
		OVERLAP: 10/9/2024 - 10/10/2024		**241**	**58**	**94**	**875**
Vineyard Avenue (10,560 Linear Feet)	Utility Trenching (SWR)	10/12/2024	12/31/2024	0	18	50	68
Vineyard Avenue (10,560 Linear Feet)	Utility Trenching (SWR)	1/1/2025	6/2/2025	0	18	50	68
		OVERLAP: 10/12/2024 - 10/23/2024		**221**	**66**	**128**	**857**
Phase 1 Mass Grading and Demolition	Rough Grading	10/31/2024	11/22/2024	0	100	30	130
Phase 2 (PA 4) Mass Grading and Demolition	Manure Removal	10/31/2024	11/15/2024	200	20	8	628
		OVERLAP: 10/31/2024 - 11/15/2024		**200**	**138**	**88**	**826**
Phase 2 (PA 5) Mass Grading and Demolition	Building Demolition	11/16/2024	11/21/2024	10	10	16	56
Phase 2 (PA 5) Mass Grading and Demolition	Manure Removal	11/16/2024	12/2/2024	200	20	8	628
Phase 1 Mass Grading and Demolition	Fine Grading	11/18/2024	12/16/2024	0	16	10	26
		OVERLAP: 11/18/2024 - 11/21/2024		**210**	**182**	**164**	**976**
Phase 2 (PA 4) Mass Grading and Demolition	Rough Grading	11/26/2024	11/30/2024	0	100	30	130
		OVERLAP: 11/26/2024 - 11/30/2024		**200**	**172**	**148**	**920**
Phase 2 (PA 4) Mass Grading and Demolition	Fine Grading	12/2/2024	12/6/2024	0	16	10	26
Phase 3 Mass Grading and Demolition	Rough Grading	12/2/2024	12/12/2024	0	100	30	130
		OVERLAP: 12/2/2024		**200**	**188**	**158**	**946**
PA 4 Retail / Commercial	Utility Construction	12/7/2024	12/31/2024	0	27	16	43
PA 4 Retail / Commercial	Utility Construction	1/1/2025	1/1/2025	0	27	16	43
		OVERLAP: 12/7/2024 - 12/12/2024		**0**	**179**	**156**	**335**
Phase 3 Mass Grading and Demolition	Fine Grading	12/13/2024	12/30/2024	0	16	10	26
Phase 4 Mass Grading and Demolition	Rough Grading	12/13/2024	12/21/2024	0	100	30	130
		OVERLAP: 12/13/2024 - 12/16/2024		**0**	**195**	**166**	**361**
PA 1 Parking Structure A	Utility Construction	12/19/2024	12/31/2024	0	27	16	43
PA 1 Parking Structure A	Utility Construction	1/1/2025	1/13/2025	0	27	16	43
		OVERLAP: 12/19/2024 - 12/21/2024		**0**	**206**	**172**	**378**
Phase 2 (PA 5) Mass Grading and Demolition	Rough Grading	12/23/2024	12/31/2024	0	100	30	130
Phase 2 (PA 5) Mass Grading and Demolition	Rough Grading	1/1/2025	2/12/2025	0	100	30	130
		OVERLAP: 12/23/2024 - 12/26/2024		**0**	**179**	**156**	**335**
East Riverside Drive (3,250 Linear Feet)	Roadway Paving	12/31/2024	12/31/2024	0	22	30	52
East Riverside Drive (3,250 Linear Feet)	Roadway Paving	1/1/2025	1/22/2025	0	22	30	52
PA 1 Baseball Stadium	Utility Construction	1/1/2025	2/21/2025	0	27	16	43
		OVERLAP: 1/1/2025		**0**	**221**	**158**	**379**
Phase 4 Mass Grading and Demolition	Fine Grading	1/2/2025	1/13/2025	0	16	10	26
		OVERLAP: 1/2/2025 - 1/3/2025		**0**	**210**	**152**	**362**
PA 4 Retail / Commercial	Substructure	1/4/2025	2/24/2025	0	1	40	41
PA 4 Surface Parking, South	Utility Construction	1/4/2025	2/1/2025	0	27	16	43
		OVERLAP: 1/4/2025 - 1/13/2025		**0**	**238**	**208**	**446**
PA 1 Parking Structure A	Substructure	1/16/2025	4/2/2025	0	2	40	42
PA 2 Retail / Commercial	Utility Construction	1/16/2025	2/10/2025	0	27	16	43
		OVERLAP: 1/16/2025 - 1/22/2025		**0**	**224**	**238**	**462**
East Riverside Drive (3,250 Linear Feet)	Landscaping	1/24/2025	2/15/2025	0	28	40	68
Street A Construction (East Riverside Dr. to Ontario Ave, 2,150LF)	Fine Grading	1/25/2025	1/30/2025	0	10	20	30

Unmitigated Construction, Ontario Regional Sports Complex

(Based on schedule provided by the Applicant/City)

Activities		Schedule		Daily Construction Trips			
Development Component/Activity	**Construction Activity**	**Start Date**	**End Date**	**Hauling**	**Vendor**	**Worker**	**Total PCE Adj**
PA 1 Baseball Stadium	Foundation, FTGs, & Substructure	1/25/2025	4/11/2025	0	2	50	52
PA 4 Retail / Commercial	Superstructure-Columns, Elevated Decks, Shear Walls	1/30/2025	6/6/2025	0	1	80	81
		OVERLAP: 1/30/2025		**0**	**243**	**398**	**641**
Street A Construction (East Riverside Dr. to Ontario Ave, 2,150LF)	Utility Trenching (SWR, SD, WTR, Dry's)	1/31/2025	3/20/2025	0	18	50	68
		OVERLAP: 1/31/2025 - 2/1/2025		**0**	**251**	**428**	**679**
PA 4 Surface Parking, South	Parking Lot Paving Construction	2/3/2025	4/1/2025	0	20	20	40
		OVERLAP: 2/3/2025 - 2/10/2025		**0**	**244**	**432**	**676**
PA 2 Retail / Commercial	Substructure	2/11/2025	4/28/2025	0	2	40	42
PA 3 Retail / Commercial	Utility Construction	2/11/2025	3/7/2025	0	27	16	43
PA 3 Hotel	Utility Construction	2/11/2025	3/7/2025	0	27	16	43
Phase 2 (PA 5) Mass Grading and Demolition	Fine Grading	2/15/2025	4/25/2025	0	16	10	26
		OVERLAP: 2/15/2025		**0**	**189**	**468**	**657**
PA 2 Surface Parking Lot, East	Utility Construction	3/7/2025	4/16/2025	0	27	16	43
		OVERLAP: 3/7/2025		**0**	**160**	**388**	**548**
PA 1 Parking Structure A	Superstructure-Columns, Elevated Decks, Shear Walls	3/10/2025	7/15/2025	0	2	80	82
PA 3 Retail / Commercial	Substructure	3/10/2025	4/29/2025	0	2	40	42
PA 3 Hotel	Substructure	3/10/2025	4/29/2025	0	2	40	42
PA 1 Baseball Stadium	Superstructure-Columns, Elevated Decks	3/19/2025	6/3/2025	0	2	80	82
		OVERLAP: 3/19/2025 - 3/20/2025		**0**	**114**	**596**	**710**
Street A Construction (East Riverside Dr. to Ontario Ave, 2,150LF)	Roadway Paving	3/22/2025	4/11/2025	0	22	20	42
Street B Construction (Street A to Ontario Ave, 800LF)	Fine Grading	3/22/2025	3/25/2025	0	0	20	20
		OVERLAP: 3/22/2025 - 3/25/2025		**0**	**118**	**586**	**704**
Street B Construction (Street A to Ontario Ave, 800LF)	Utility Trenching (SWR, SD, WTR, Dry's)	3/26/2025	4/12/2025	0	1	16	17
		OVERLAP: 3/26/2025 - 4/1/2025		**0**	**119**	**582**	**701**
PA 2 Retail / Commercial	Superstructure-Columns, Elevated Decks, Shear Walls	4/4/2025	8/9/2025	0	2	80	82
PA 3 Retail / Commercial	Superstructure-Columns, Elevated Decks, Shear Walls	4/4/2025	6/19/2025	0	2	80	82
PA 3 Hotel	Superstructure-Columns, Elevated Decks, Shear Walls	4/4/2025	6/19/2025	0	2	80	82
Vineyard Avenue (10,560 Linear Feet)	Utility Trenching (SD, WTR, Dry's)	4/11/2025	6/7/2025	0	18	50	68
		OVERLAP: 4/11/2025		**0**	**121**	**812**	**933**
Street A Construction (East Riverside Dr. to Ontario Ave, 2,150LF)	Landscaping	4/12/2025	5/10/2025	0	28	40	68
		OVERLAP: 4/12/2025		**0**	**125**	**782**	**907**
Chino Avenue (3,250 Linear Feet)	Demolition-Clear & Grub	4/14/2025	4/24/2025	0	15	16	31
Street B Construction (Street A to Ontario Ave, 800LF)	Roadway Paving	4/14/2025	4/21/2025	0	20	20	40
		OVERLAP: 4/14/2025 - 4/16/2025		**0**	**132**	**786**	**918**
PA 2 Surface Parking Lot, East	Parking Lot Paving Construction	4/17/2025	7/18/2025	0	20	20	40
Street B Construction (Street A to Ontario Ave, 800LF)	Landscaping	4/22/2025	5/2/2025	0	0	20	20
Chino Avenue (3,250 Linear Feet)	Rough Grading	4/25/2025	5/8/2025	0	0	20	20
		OVERLAP: 4/25/2025		**0**	**117**	**810**	**927**
PA 5 Multipurpose Fields / Park	Utility Construction	4/28/2025	6/24/2025	0	27	16	43
		OVERLAP: 4/28/2025		**0**	**128**	**816**	**944**
Chino Avenue (3,250 Linear Feet)	Fine Grading	5/9/2025	5/26/2025	0	8	20	28
Ontario Avenue (2,640 Linear Feet)	Fine Grading	5/9/2025	5/26/2025	0	0	20	20
PA 1 Baseball Stadium	Superstructure-Structural Steel , Rough Metal, Stud F	5/9/2025	9/13/2025	0	2	220	222
		OVERLAP: 5/9/2025 - 5/10/2025		**0**	**132**	**916**	**1048**
PA 4 Retail / Commercial	Superstructure-Stairwalls, Elevators, Cable Railing, Ste	5/14/2025	8/23/2025	0	2	30	32
		OVERLAP: 5/14/2025 - 5/26/2025		**0**	**106**	**906**	**1012**
PA 3 Retail / Commercial	Superstructure-Stairwalls, Elevators, Cable Railing, Ste	5/27/2025	8/11/2025	0	2	30	32
PA 3 Hotel	Superstructure-Stairwalls, Elevators, Cable Railing, Ste	5/27/2025	8/11/2025	0	2	30	32
Chino Avenue (3,250 Linear Feet)	Utility Trenching (SWR, SD, WTR, Dry's)	5/28/2025	8/28/2025	0	18	50	68
Ontario Avenue (2,640 Linear Feet)	Utility Trenching (SWR, SD, WTR, Dry's)	5/28/2025	8/28/2025	0	17	50	67
PA 5 Multipurpose Fields / Park	Landscape Construction	5/31/2025	12/31/2025	0	20	20	40
PA 5 Multipurpose Fields / Park	Landscape Construction	1/1/2026	2/11/2026	0	20	20	40
		OVERLAP: 5/31/2025 - 6/2/2025		**0**	**157**	**1046**	**1203**
PA 1 Baseball Stadium	Exterior Envelope	6/5/2025	10/10/2025	0	0	80	80
		OVERLAP: 6/5/2025 - 6/6/2025		**0**	**135**	**916**	**1051**
PA 1 Parking Structure A	Superstructure-Stairwalls, Elevators, Cable Railing, Ste	6/21/2025	9/5/2025	0	2	30	32
		OVERLAP: 6/21/2025 - 6/24/2025		**0**	**114**	**656**	**770**
PA 5 Parking Structure B	Utility Construction	6/26/2025	7/24/2025	0	26	30	56
PA 5 Surface Parking, South	Utility Construction	6/26/2025	8/5/2025	0	26	30	56
PA 5 Parking Structure B	Substructure	7/15/2025	9/29/2025	0	1	40	41
		OVERLAP: 7/15/2025		**0**	**142**	**820**	**962**
PA 1 Parking Structure A	MEP, FP Rough-ins	7/18/2025	9/6/2025	0	1	20	21

Unmitigated Construction, Ontario Regional Sports Complex

(Based on schedule provided by the Applicant/City)

Activities		Schedule		Daily Construction Trips			
Development Component/Activity	**Construction Activity**	**Start Date**	**End Date**	**Hauling**	**Vendor**	**Worker**	**Total PCE Adj**
PA 2 Retail / Commercial	Superstructure-Stairwalls, Elevators, Cable Railing, Ste	7/18/2025	10/2/2025	0	1	30	31
PA 3 Retail / Commercial	MEP, FP Rough-ins	7/18/2025	9/6/2025	0	1	20	21
PA 3 Hotel	MEP, FP Rough-ins	7/18/2025	9/6/2025	0	1	20	21
		OVERLAP: 7/18/2025		**0**	**144**	**830**	**974**
PA 4 Retail / Commercial	MEP, FP Rough-ins	8/1/2025	9/20/2025	0	1	20	21
		OVERLAP: 8/5/2025		**0**	**99**	**800**	**899**
PA 5 Surface Parking, South	Parking Lot Paving Construction	8/7/2025	10/15/2025	0	20	20	40
		OVERLAP: 8/9/2025		**0**	**93**	**790**	**883**
PA 1 Parking Structure A	Finishes Buildouts	8/13/2025	9/6/2025	0	0	20	20
PA 1 Parking Structure A	Finishing/Landscape	8/13/2025	9/27/2025	0	1	10	11
PA 2 Retail / Commercial	MEP, FP Rough-ins	8/13/2025	10/2/2025	0	1	20	21
PA 3 Retail / Commercial	Finishes Buildouts	8/13/2025	9/6/2025	0	0	20	20
PA 3 Retail / Commercial	Finishing/Landscape/Hardscape	8/13/2025	9/27/2025	0	1	40	41
PA 3 Hotel	Finishes Buildouts	8/13/2025	9/6/2025	0	0	20	20
PA 3 Hotel	Finishing/Landscape/Hardscape	8/13/2025	9/27/2025	0	1	40	41
PA 1 Parking Structure A	Architectural Coating	8/15/2025	9/6/2025	0	0	20	20
PA 3 Retail / Commercial	Architectural Coating	8/21/2025	9/6/2025	0	0	20	20
PA 3 Hotel	Architectural Coating	8/21/2025	9/6/2025	0	0	20	20
PA 1 Baseball Stadium	Canopies w/Lighting (incl. Outfield Lighting) Finishes	8/22/2025	11/6/2025	0	1	20	21
		OVERLAP: 8/22/2025 - 8/23/2025		**0**	**92**	**900**	**992**
PA 4 Retail / Commercial	Finishes Buildouts	8/27/2025	9/20/2025	0	0	20	20
PA 4 Retail / Commercial	Finishing/Landscape/Hardscape	8/27/2025	10/11/2025	0	1	40	41
		OVERLAP: 8/27/2025 - 8/28/2025		**0**	**91**	**930**	**1021**
Chino Avenue (3,250 Linear Feet)	Roadway Paving	8/30/2025	10/3/2025	0	22	30	52
Ontario Avenue (2,640 Linear Feet)	Roadway Paving	8/30/2025	10/3/2025	0	21	30	51
Vineyard Avenue (10,560 Linear Feet)	Landscaping	9/2/2025	11/15/2025	0	28	40	68
PA 4 Retail / Commercial	Architectural Coating	9/5/2025	9/22/2025	0	0	20	20
PA 5 Parking Structure B	Superstructure-Columns, Elevated Decks, Shear Walls	9/5/2025	12/16/2025	0	1	80	81
		OVERLAP: 9/5/2025		**0**	**128**	**1030**	**1158**
PA 2 Retail / Commercial	Finishes Buildouts	9/9/2025	10/3/2025	0	1	20	21
PA 2 Retail / Commercial	Finishing/Landscape/Hardscape	9/9/2025	10/24/2025	0	2	40	42
PA 2 Retail / Commercial	Architectural Coating	9/11/2025	10/3/2025	0	0	20	20
		OVERLAP: 9/9/2025 - 9/13/2025		**0**	**126**	**900**	**1026**
PA 6 Indoor Facility	Utility Construction	9/30/2025	10/28/2025	0	27	16	43
Vineyard Avenue (10,560 Linear Feet)	Roadway Paving	10/1/2025	12/31/2025	0	22	30	52
Vineyard Avenue (10,560 Linear Feet)	Roadway Paving	1/1/2026	1/24/2026	0	22	30	52
		OVERLAP: 10/1/2025 - 10/2/2025		**0**	**168**	**536**	**704**
Chino Avenue (3,250 Linear Feet)	Landscaping	10/6/2025	10/16/2025	0	28	40	68
Ontario Avenue (2,640 Linear Feet)	Landscaping	10/6/2025	10/16/2025	0	28	40	68
		OVERLAP: 10/6/2025 - 10/10/2025		**0**	**178**	**466**	**644**
PA 1 Baseball Stadium	Interior Finishes and Buildout (MEP, FP)	10/14/2025	12/31/2025	0	1	160	161
PA 1 Baseball Stadium	Interior Finishes and Buildout (MEP, FP)	1/1/2026	1/23/2026	0	1	160	161
		OVERLAP: 10/14/2025 - 10/15/2025		**0**	**178**	**506**	**684**
PA 6 Indoor Facility	Substructure	10/29/2025	12/31/2025	0	1	40	41
PA 6 Indoor Facility	Substructure	1/1/2026	1/13/2026	0	1	40	41
PA 6 Surface Parking	Utility Construction	10/29/2025	11/26/2025	0	26	30	56
		OVERLAP: 10/29/2025 - 11/6/2025		**0**	**100**	**420**	**520**
PA 5 Parking Structure B	Superstructure-Stairwalls, Elevators, Cable Railing, Ste	11/21/2025	12/31/2025	0	2	30	32
PA 5 Parking Structure B	Superstructure-Stairwalls, Elevators, Cable Railing, Ste	1/1/2026	2/5/2026	0	2	30	32
PA 6 Surface Parking	Parking Lot Paving Construction	11/29/2025	12/31/2025	0	20	20	40
PA 6 Surface Parking	Parking Lot Paving Construction	1/1/2026	2/6/2026	0	20	20	40

Unmitigated Construction, Ontario Regional Sports Complex

(Based on schedule provided by the Applicant/City)

Activities		Schedule		Daily Construction Trips			
Development Component/Activity	**Construction Activity**	**Start Date**	**End Date**	**Hauling**	**Vendor**	**Worker**	**Total PCE Adj**
PA 1 Baseball Stadium	Architectural Coating	12/6/2025	12/31/2025	0	1	20	21
PA 1 Baseball Stadium	Architectural Coating	1/1/2026	2/20/2026	0	1	20	21
PA 1 Baseball Stadium	Finishing/Landscape	12/6/2025	12/31/2025	0	1	80	81
PA 1 Baseball Stadium	Finishing/Landscape	1/1/2026	2/20/2026	0	1	80	81
		OVERLAP: 12/6/2025 - 12/16/2025		**0**	**95**	**510**	**605**
PA 5 Parking Structure B	MEP, FP Rough-ins	12/19/2025	12/31/2025	0	1	20	21
PA 5 Parking Structure B	MEP, FP Rough-ins	1/1/2026	2/7/2026	0	1	20	21
PA 6 Indoor Facility	Superstructure-Columns, Elevated Decks, Shear Walls	12/22/2025	12/31/2025	0	1	80	81
PA 6 Indoor Facility	Superstructure-Columns, Elevated Decks, Shear Walls	1/1/2026	4/2/2026	0	1	80	81
		OVERLAP: 12/22/2025 - 12/31/2025		**0**	**96**	**530**	**626**
		OVERLAP: 1/1/2026 - 1/13/2026		**0**	**70**	**500**	**570**
PA 5 Parking Structure B	Finishes Buildouts	1/16/2026	2/10/2026	0	0	20	20
PA 5 Parking Structure B	Finishing/Landscape/Hardscape	1/16/2026	3/3/2026	0	2	30	32
PA 5 Parking Structure B	Architectural Coating	1/19/2026	2/10/2026	0	0	20	20
		OVERLAP: 1/19/2026 - 1/23/2026		**0**	**71**	**530**	**601**
PA 6 Indoor Facility	Superstructure-Stairwalls, Elevators, Cable Railing, Ste	3/12/2026	5/27/2026	0	1	30	31
		OVERLAP: 3/12/2026 - 4/2/2026		**0**	**2**	**110**	**112**
PA 6 Indoor Facility	MEP, FP Rough-ins	4/7/2026	5/27/2026	0	1	20	21
PA 6 Indoor Facility	Finishes Buildouts	5/2/2026	5/27/2026	0	0	20	20
PA 6 Indoor Facility	Finishing/Landscape/Hardscape	5/2/2026	6/17/2026	0	1	40	41
PA 6 Indoor Facility	Architectural Coating	5/5/2026	5/27/2026	0	0	20	20
		OVERLAP: 5/5/2026 - 5/27/2026		**0**	**3**	**130**	**133**
PA 7 Community Center/Admin Building	Utility Construction	5/29/2026	6/26/2026	0	27	16	43
		OVERLAP: 5/29/2026 - 6/17/2026		**0**	**28**	**56**	**84**
PA 7 Community Center/Admin Building	Substructure	6/27/2026	9/11/2026	0	1	40	41
PA 7 Community Center/Admin Building	Superstructure-Columns, Elevated Decks, Shear Walls	8/19/2026	12/24/2026	0	1	80	81
		OVERLAP: 8/19/2026 - 9/11/2026		**0**	**2**	**120**	**122**
PA 7 Community Center/Admin Building	Superstructure-Stairwalls, Elevators, Cable Railing, Ste	12/3/2026	12/31/2026	0	2	30	32
PA 7 Community Center/Admin Building	Superstructure-Stairwalls, Elevators, Cable Railing, Ste	1/1/2027	3/15/2027	0	2	30	32
		OVERLAP: 12/3/2026 - 12/24/2026		**0**	**3**	**110**	**113**
PA 7 Community Center/Admin Building	MEP, FP Rough-ins	1/26/2027	4/12/2027	0	1	**20**	21
		OVERLAP: 1/26/2027 - 3/15/2027		**0**	**3**	**50**	**53**
PA 7 Community Center/Admin Building	Finishes Buildouts	3/19/2027	4/13/2027	0	0	20	20
PA 7 Community Center/Admin Building	Finishing/Landscape/Hardscape	3/19/2027	5/4/2027	0	1	40	41
PA 7 Community Center/Admin Building	Architectural Coating	3/22/2027	4/13/2027	0	0	20	20
		OVERLAP: 3/22/2027 - 4/12/2027		**0**	**2**	**100**	**102**
PA 7 Activity Area	Utility Construction	4/14/2027	5/24/2027	0	27	16	43
		OVERLAP: 4/14/2027 - 5/4/2027		**0**	**28**	**56**	**84**
PA 7 Activity Area	Landscape Construction	5/26/2027	9/4/2027	0	1	40	41
PA 7 Recreation Surface Parking Lot	Utility Construction	5/26/2027	7/5/2027	0	26	16	42
		OVERLAP: 5/26/2027 - 7/5/2027		**0**	**27**	**56**	**83**
PA 7 Recreation Surface Parking Lot	Parking Lot Paving Construction	7/7/2027	9/20/2027	0	20	20	40
			Maximums	**241**	**251**	**1,046**	**1,203**

Appendix L3 Parking Memorandum

Appendices

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FEHR PEERS

Memorandum

Date: March 19, 2024

To: Jay Bautista, P.E., City of Ontario Traffic/Transportation Manager

From: Spencer Reed, P.E.
Paul Herrmann, P.E.
Brian Wolfe

Subject: Ontario Regional Sports Complex Parking Assessment

OC20-0741

Fehr & Peers conducted a parking assessment of the Ontario Ranch Sports Park (Project) to confirm that the proposed parking supply is sufficient for the estimated peak parking demand. The Project's unique uses and location adjacent to high volume roadways has resulted in the City of Ontario requesting that enough parking be provided on site to limit off-site parking and people walking into the site. The assessment concludes that the proposed parking supply is adequate for typical and peak demand operations. The following details the analysis and findings.

Project Description

The proposed Project is a 199-acre sports complex with an associated mixture of commercial and recreation uses. The Project site is bounded by Riverside Drive to the north, Chino Avenue to the south, Cucamonga Creek Flood Control Channel to the east, and Vineyard Avenue to the west, as shown in **Figure 1** below. A total of 6,263 parking spaces are proposed across a variety of surface parking lots and parage garages. The uses within the Project include:

- Retail – 40,000 sf (square feet)
- Fast Casual Restaurant – 140,000 sf
    - 100,000 sf of fast casual restaurant will be for Chicken 'N Pickle
- Park (Skate Park, Tot Lot, Picnic Area) – 11.21 acres
- Hotel – 100 rooms
- Soccer Fields – 13 fields
- Baseball Fields – 9 fields
- Batting Cages – 12 cages
- Indoor Athletic Center – 8 basketball courts or 16 volleyball courts
- Tennis Courts/Pickle Ball Courts – 8 courts
- Swimming Pool – 8 lanes with splash area
- Recreation Community Center – 70,000 sf community use and 25,000 sf office

- Minor League Baseball Stadium – 4,500 attendee baseball game attendance and 6,000 attendee special event attendance with a 20,000 sf office

Figure 1 – Site Plan

Source: City of Ontario, 2023.

Approach

Parking demand estimates were developed for each land use based on the availability of existing data. Parking data and analysis methodologies from *Shared Parking, 3rd Edition* (Urban Land Institute [ULI], 2020) was applied to the following land uses:

- Retail – 40,000 sf
- Fast Casual Restaurant – 40,000 sf
- Park (Skate Park, Tot Lot, Picnic Area) – 11.21 acres
- Hotel – 100 rooms

- Recreation Community Center – 70,000 sf community use and 25,000 sf office
- Minor League Baseball Stadium – 4,500 attendee baseball game and 20,000 sf office

Parking demand estimates for the Chicken 'N Pickle entertainment complex were calculated separately from the shared parking analysis. This tenant has existing locations in Texas, Kansas, Missouri, Oklahoma, and Arizona. The parking demand estimate for the Chicken 'N Pickle restaurant was analyzed separately using empirical data and usage characteristics for a current location in San Antonio, Texas. The use of the empirical data provides a better estimation of parking demand based on the unique aspects of the restaurant and its operational characteristics.

Parking demand estimates for the sports fields, batting cages, indoor athletic center, swimming pool, and 6,000 attendee special event were also calculated separately from the shared parking analysis data as these land uses are not identified in *Shared Parking, 3rd Edition*. The parking demand estimates were developed based on prior parking data, usage characteristic, and professional judgment.

The typical parking demand estimates for the standard ULI data uses and custom data uses were combined to develop a total parking demand for the Project.

SCENARIOS

The operations of the Project will result in various scenarios with different levels of activity between the commercial and recreational components., The following scenarios were identified for consideration of parking demand analysis:

Weekday

- Weekday Baseball/Soccer Practice
    - Parking demand for weekday with baseball/soccer fields used for practice only. Typical parking demand conditions for commercial uses.
- Weekday Minor League Baseball Game with Baseball/Soccer Practice
    - Parking demand for a weekday minor league baseball game with baseball/soccer fields used for practice only. Typical parking demand conditions for commercial uses.

Weekend

- Weekend Minor League Baseball Game with Baseball/Soccer Practice
    - Parking demand for a weekend minor league baseball game with baseball/soccer fields used for practice only. Typical parking demand conditions for commercial uses.

- Weekend Minor League Baseball Game with Baseball/Soccer Games
    - Parking demand for a weekend minor league baseball game with baseball/soccer fields used for games only. Typical parking demand conditions for commercial uses.
- Weekend Minor League Baseball Game with Baseball/Soccer Tournaments
    - Parking demand for a weekend minor league baseball game with the baseball/soccer fields used for tournaments. Typical parking demand conditions for commercial uses.
- Weekend Special Event with Baseball/Soccer Practice
    - Parking demand for a 6,000-attendee weekend special event with baseball/soccer fields used for practice only. Typical parking demand for commercial uses.
- Weekend Special Event with Baseball/Soccer Games
    - Parking demand for a 6,000-attendee weekend special event with baseball/soccer fields used for games only. Typical parking demand conditions for commercial uses.
- Weekend Special Event with Baseball/Soccer Tournaments
    - Parking demand for a 6,000-attendee weekend special event with the baseball/soccer fields used for tournaments. Typical parking demand conditions for commercial uses.

Methodology and Assumptions

Parking demand analysis was conducted for each scenario identified. It was determined that the Weekend Special Event with Baseball/Soccer Tournaments scenario would generate the highest peak parking demand. The methodology and assumptions associated with the estimation of parking demand and the comparison to proposed parking supply is presented below.

LAND USES WITH STANDARD ULI PARKING DATA

A shared parking analysis was conducted using methodologies and assumptions provided in *Shared Parking, 3rd Edition*. The ULI sponsored a national study in 1984 that established a basic methodology for analyzing parking demand in mixed-use developments and developed averages for parking rates by land use. The analysis presented in this memorandum utilizes the data from the updated *Shared Parking, 3rd Edition* report published in 2020.

The shared parking methodology establishes the base parking rate, parking demand reductions, and hourly/monthly demand patterns for each land use. The overall parking demand is calculated by considering the parking demand patterns and parking demand reductions (potential for non-auto modes and internal capture) for each component of the project being analyzed.

Parking Rates

The shared parking analysis for the Project used base parking rates for visitors and employees as determined by ULI. **Table 1** presents the parking rates for both visitors/customers and employees and demonstrates the typical parking needs for some of the Projects land uses.

Table 1: Parking Demand Rates by Land Use

		Weekday		Weekend	
ULI Land Use	Unit	Visitor	Employee	Visitor	Employee
Retail	ksf	2.90	0.70	3.20	0.80
Fast Casual	ksf	12.40	2.00	12.40	2.00
Park	acre	4.00	0.40	5.00	0.50
Hotel	rooms	1.00	0.15	1.00	0.15
Recreation Center	ksf	1.70	0.10	1.71	0.08
Recreation Center Office	ksf	0.30	3.50	0.03	0.35
Baseball Stadium	seats	0.31	0.01	0.34	0.01
Baseball Stadium Office	ksf	0.30	3.50	0.03	0.35

Source: *Shared Parking, 3rd Edition* (Urban Land Institute)

Separate rates were used for weekdays and weekend and for each user. The derived rates use the daily/hourly/seasonal patterns for calculating the parking demand based on the unique travel characteristics of the project being analyzed.

Adjustments were made for two travel factors in accordance with the ULI shared parking methodology: the potential for non-auto modes and estimated internal capture of parking between the land uses in the area.

Parking Demand Reductions

The shared parking analysis allows for adjustment in the base parking rate due to factors such as mode split/walk-in and non-captive ratio. These factors are based on the mix of uses in the project, size of the uses, and location of the project.

- Mode Adjustment – One factor that affects the overall parking demand at a particular development is the number of visitors and employees that arrive by automobile. The alternatives considered in the analysis account for the effects of pedestrian, bicycle, drop-off, and transit access to the site.
- Noncaptive Ratio – Also known as trip internalization. Based on data from empirical studies through sources such as ULI, it is known that a certain percentage of trips in mixed-use

developments (depending on the mix of land uses in the project) are trips moving between the land uses on site, i.e., they were internally captured on the site. Adjustments were made to the analysis to account for trip internalization.

Table 2 documents the adjustment percentages applied to each of the land uses for visitors and employees for different periods of the day. The non-captive ratio was applied based on the mix and size of the uses in the Project. It is assumed that some patrons will only park a vehicle once, but they will visit multiple components of the Project.

Table 2: Shared Parking Model Reductions

	Mode Adjustment		Noncaptive Ratio			
			Weekday		Weekend	
ULI Land Use	Weekday	Weekend	Daytime	Evening	Daytime	Evening
Retail						
- Visitor	1.0	1.0	0.98	0.99	0.99	0.99
- Employee	1.0	1.0	1.0	1.0	1.0	1.0
Fast Casual						
- Visitor	1.0	1.0	0.89	0.90	0.92	0.91
- Employee	1.0	1.0	1.0	1.0	1.0	1.0
Park						
- Visitor	1.0	1.0	0.96	0.96	0.96	0.96
- Employee	1.0	1.0	1.0	1.0	1.0	1.0
Hotel						
- Visitor	1.0	1.0	1.0	1.0	1.0	1.0
- Employee	1.0	1.0	1.0	1.0	1.0	1.0
Recreation Center						
- Visitor	1.0	1.0	0.96	0.96	0.96	0.96
- Employee	1.0	1.0	1.0	1.0	1.0	1.0
Recreation Center Office						
- Visitor	1.0	1.0	1.0	1.0	1.0	1.0
- Employee	1.0	1.0	1.0	1.0	1.0	1.0
Baseball Stadium						
- Visitor	1.0	1.0	0.95	.99	1.0	1.0
- Employee	1.0	1.0	1.0	1.0	1.0	1.0
Baseball Stadium Office						
- Visitor	1.0	1.0	1.0	1.0	1.0	1.0
- Employee	1.0	1.0	1.0	1.0	1.0	1.0

Source: *Shared Parking, 3rd Edition* (Urban Land Institute)

The mode split adjustment was applied based on the location of the Project and the ability of visitors and employees to travel to the Project by a mode other than automobile which they would have to park (i.e., walking or biking). A factor of 1.0 was selected for visitors and employees to represent a conservative estimate (highest) of parking demand. The non-captive ratio adjustment was applied based on data provided in *Shared Parking, 3rd Edition*. The mix of uses with the Project

will result in some internalization and the values presented in *Shared Parking, 3rd Edition* represent an appropriate level of parking reduction due to the mix of uses.

Parking Demand Patterns

The shared parking analysis uses monthly adjustment factors and time-of-day adjustment factors to account for the variation in parking demand for different land uses. Based on the anticipated land uses and parking demand reductions applied, monthly adjustment factors are applied based on the month that will result in the greatest parking demand (peak month). The time-of-day factors were applied based on the peak month of demand to determine the estimated parking demand throughout the day. **Appendix A** documents the Project standard ULI land uses weekday and weekend peak month adjustment and time-of-day adjustment for visitors and employees and documents the estimated peak hour parking demand for those land uses.

Shared Parking Demand

Table 3 presents the weekday shared parking demand results for the Project. **Table 4** presents the weekend shared parking demand results for the Project.

Table 3: Weekday Parking Demand for Standard ULI Land Uses

ULI Land Use	6:00 AM	7:00 AM	8:00 AM	9:00 AM	10:00 AM	11:00 AM	12:00 PM	1:00 PM	2:00 PM	3:00 PM	4:00 PM	5:00 PM	6:00 PM	7:00 PM	8:00 PM	9:00 PM	10:00 PM	11:00 PM	12:00 AM
Retail	3	8	18	40	67	84	106	106	102	94	94	94	98	90	75	51	22	9	0
Fast Casual Restaurant	38	60	112	164	303	455	521	521	473	321	291	322	449	427	270	165	113	60	38
Park	1	3	6	13	25	33	42	46	48	46	44	34	44	48	48	48	40	25	5
Hotel	49	52	60	55	50	50	48	48	50	50	48	51	49	46	48	51	51	52	51
Recreation Center	0	0	0	2	27	64	81	85	90	90	85	89	94	89	85	62	9	0	0
Recreation Center Office	3	13	43	80	91	87	72	74	87	83	72	51	21	13	4	3	1	0	0
Baseball Stadium	0	5	5	22	22	22	80	80	80	80	80	83	184	738	1,432	1,432	1,224	358	5
Baseball Stadium Office	1	6	19	36	41	39	32	33	39	37	32	23	9	6	2	1	0	0	0

Table 4: Weekend Parking Demand for Standard ULI Land Uses

ULI Land Use	6:00 AM	7:00 AM	8:00 AM	9:00 AM	10:00 AM	11:00 AM	12:00 PM	1:00 PM	2:00 PM	3:00 PM	4:00 PM	5:00 PM	6:00 PM	7:00 PM	8:00 PM	9:00 PM	10:00 PM	11:00 PM	12:00 AM
Retail	4	9	38	66	87	108	114	119	119	114	110	99	91	86	80	63	39	13	0
Fast Casual Restaurant	35	63	117	172	316	476	546	546	495	336	304	331	462	439	277	170	116	62	39
Park	0	0	1	2	21	39	47	55	59	61	60	53	44	50	61	61	58	33	10
Hotel	49	52	60	55	50	50	48	48	50	50	48	51	49	46	48	51	51	52	51
Recreation Center	0	0	0	1	26	62	80	84	89	89	84	89	93	89	84	61	9	0	0
Recreation Center Office	0	2	6	8	9	10	9	8	6	4	2	1	0	0	0	0	0	0	0
Baseball Stadium	0	0	0	2	2	2	2	2	2	2	9	415	796	1,418	1,570	1,570	1,570	45	45
Baseball Stadium Office	0	1	3	4	4	5	4	4	3	2	1	0	0	0	0	0	0	0	0

LAND USES WITH CUSTOM PARKING DATA

Parking demand estimates for the Chicken 'N Pickle casual restaurant, sports fields, batting cages, indoor athletic center, swimming pool, and 6,000 attendee special event was calculated separately from the shared parking analysis as the land uses are either not represented in the ULI data or empirical data for a comparable site was available and utilized to prepare a parking demand estimate.

Chicken 'N Pickle Casual Restaurant

While the casual restaurant land use is identified in ULI, the unique nature of the proposed tenant and the availability of empirical data resulted in not using the shared parking data. The proposed tenant, Chicken N Pickle, is an indoor/outdoor entertainment complex including a casual restaurant and sports bar that boasts pickle ball courts and a variety of yard games. There are currently existing locations in Texas, Kansas, Missouri, Oklahoma, and Arizona.

Daily trip generation data for an existing 78,000 sf location in San Antonio, Texas was utilized to estimate weekday and weekend parking demand for that site by reviewing and in and out driveway split for a 24-hour period. As the Project location is proposing a 100,000 sf facility, the weekday and weekend parking demand information from the San Antonio, Texas location was factored according to the difference in the square footage to estimate parking demand for the Project location. To prepare a conservative estimate of parking demand, no credits for mode adjustment or internalization were applied to this use. The weekday and weekend hourly parking demand for the Chicken 'N Pickle, along with the other custom uses is provided in **Table 5** and **Table 6**, respectively.

Sports Fields

The sports fields consist of both soccer and baseball fields. The days and time periods of use will vary depending on what activities are occurring. Assumptions regarding the activities, time of use, participants, and parking demand are provided.

Soccer Fields

It was determined that the soccer fields could be used for practices, regular games, and tournament games. It was assumed that practices will occur on weekdays from 4:00 PM to 8:00 PM and regular games and tournaments will occur on weekends from 8:00 AM to 8:00 PM.

The following parking assumptions for each type of activity are presented below:

- Practice
    - One team of 15 players, 15 spectators, and 1 coach
    - Average vehicle occupancy of 1.6 players/spectators per vehicle and 1 coach per vehicle
    - Resulting in parking demand of 20 spaces per field
- Regular Game
    - Two teams of 15 players and 1 coach each (30 players and 2 coaches total) and 75 spectators
    - Average vehicle occupancy of 3.2 players/spectators per vehicle and 1 coach per vehicle
    - Resulting in parking demand of 35 spaces per field
- Tournament Game
    - Two teams of 15 players and 1 coach each (30 players and 2 coaches total) and 75 spectators
    - Average vehicle occupancy of 3 players/spectators per vehicle and 1 coach per vehicle
    - Resulting in parking demand of 37 spaces per field

Weekday peak parking demand was determined to be 20 spaces per field resulting in a peak demand of 260 parking spaces per hour.

Weekend parking demand was determined to be higher with the tournament games than regular games. Tournament style games typically have a larger attendance and therefore represent a higher parking demand per field than practices or regular games. Additionally, practices were assumed to have a lower average vehicle occupancy rate than soccer games and tournaments as some parents drop off/pick up their kids. The use of all 13 soccer fields for tournament play on weekends between the hours of 8:00 AM and 8:00 PM represents a conservative parking demand estimate of 481 parking spaces per hour for the soccer fields.

To account for additional tournament soccer teams and spectators that may not be actively using the fields during a given hour, the 481-parking space demand for players and spectators was factored by an average vehicle occupancy rate of 3.0 to represent a greater demand for parking.

The weekday and weekend hourly parking demand for the soccer fields, along with the other custom uses is provided in **Table 5** and **Table 6**, respectively.

Baseball Fields

It was determined that the baseball fields could be used for practices, regular games, and tournament games. It was assumed that practices will occur on weekdays from 4:00 PM to 8:00 PM and regular games and tournaments will occur on weekends from 8:00 AM to 8:00 PM.

The following parking assumptions for each type of activity are presented below:

- Practice
    - One team of 20 players,20 spectators, and 1 coach,
    - Average vehicle occupancy of 1.5 players/spectators per vehicle and 1 coach per vehicle
    - Resulting in parking demand of 27 spaces per field
- Regular Game
    - Two teams of 20 players and 1 coach each (40 players and 2 coaches total) and 20 spectators
    - Average vehicle occupancy of 2.5vehicles per player/spectator and 1 coach per vehicle
    - Resulting in parking demand of 34 spaces per field
- Tournament Game
    - Two teams of 20 players and 1 coach each (40 players and 2 coaches total) and 20 spectators
    - Parking demand of 2.9 vehicles per player/spectator and 1 coach per vehicle
    - Resulting in parking demand of 30 spaces per field

Weekday peak parking demand was determined to be 27 spaces per field resulting in a peak demand of 243 parking spaces per hour.

Weekend parking demand was determined to be higher with the tournament games than regular games. Tournament style games typically have a larger attendance and therefore represent a higher parking demand per field than practices or regular games. Additionally, practices were assumed to have a lower average vehicle occupancy rate than soccer games and tournaments as some parents drop off/pick up their kids. The use of all 9 baseball fields for tournament play on weekends between the hours of 8:00 AM and 8:00 PM represents a conservative parking demand estimate of 270 parking spaces per hour for the baseball fields.

To account for additional tournament baseball teams and spectators that may not be actively using the fields during a given hour, the 270-parking space demand for players and spectators was factored by 2.9 to represent a greater demand of parking.

The weekday and weekend hourly parking demand for the baseball fields, along with the other custom uses is provided in **Table 5** and **Table 6**, respectively.

Batting Cages

The batting cages are anticipated to be an ancillary use to the baseball fields and only accessible to programs that use the baseball fields. To provide a conservative estimate of parking demand, it was assumed that the batting cages could have a separate parking demand from the baseball fields. In addition, it was assumed that the batting cages would be utilized during the same periods of time as the baseball fields, on weekdays from 4:00 PM to 8:00 PM and on weekends from 8:00 AM to 8:00 PM. The following parking assumptions were made for the batting cages:

- 4 persons per batting cage
- Parking demand of 0.5 spaces per person
- Resulting in parking demand of 2 spaces per batting cage

Weekday and weekend peak parking demand was determined to be 2 spaces per batting cage resulting in a peak demand of 24 parking spaces per hour. The weekday and weekend hourly parking demand for the batting cages, along with the other custom uses is provided in **Table 5** and **Table 6**, respectively.

Indoor Athletic Center

The indoor athletic center could be configured to operate up to 8 basketball courts, up to 16 volleyball courts, or a combination of both. Given the number of players per volleyball team (assumed 14 players per volleyball team versus 12 players per basketball team) and the higher number of volleyball courts, it was determined that the configuration of 16 volley courts would result in a higher parking demand.

It was assumed that use of the volleyball courts will occur on weekdays and weekends from 8:00 AM to 8:00 PM. The following parking assumptions were made for the volleyball courts:

- Two teams of 14 players and 1 coach each with 14 spectators for practice and 56 spectators for games
- Average vehicle occupancy of 1.3 players/spectators per vehicle and 1 coach per vehicle for practices and an average vehicle occupancy of 2.1 players/spectators per vehicle and 1 coach per vehicle for games
- Resulting in parking demand of 23 spaces per volleyball court for practices and 42 spaces per volleyball court for games

Weekday and weekend peak parking demand was determined to be 23 spaces per volleyball court for practices and 42 spaces per volleyball court for games resulting in a peak demand of 368 parking spaces per hour and 672 parking spaces per hour for practices and games respectively. The weekday

and weekend hourly parking demand for the volleyball court, along with the other custom uses is provided in **Table 5** and **Table 6**, respectively.

Tennis/Pickle Ball Court

The tennis/pickle ball courts will consist of 8 courts that can accommodate tennis or pickle ball. It was assumed that use of the tennis/pickle ball courts will operate on weekdays and weekends from 8:00 AM to 8:00 PM. The following parking assumptions were made for the tennis/pickle ball courts:

- Two teams of 2 players each
- Two additional teams of 2 players waiting to play per court
- Parking demand of 1 space per player
- Resulting in parking demand of 8 spaces per tennis/pickle ball court

Given the increase in popularity of pickle ball, the addition of waiting teams was included in this parking demand estimate. Weekday and weekend peak parking demand was determined to be 8 spaces per tennis/pickle ball court resulting in a peak demand 64 parking spaces per hour. The weekday and weekend hourly parking demand for the tennis/pickle ball, along with the other custom uses is provided in **Table 5** and **Table 6**, respectively.

Swimming Pool

The swimming pool will consist of 8 lanes for lap swimming. It was assumed that use of the swimming pool will occur on weekdays and weekends from 8:00 AM to 8:00 PM. The following parking assumptions were made for the swimming pool:

- 2 swimmers per lane
- Parking demand of 1 space per swimmer
- Resulting in parking demand of 2 spaces per lane

Weekday and weekend peak parking demand was determined to be 2 spaces per lane resulting in a peak demand of 16 parking spaces per hour. The weekday and weekend hourly parking demand for the swimming pool, along with the other custom uses is provided in **Table 5** and **Table 6**, respectively.

Special Event

The minor league baseball stadium can be utilized for special events such as concerts or other performances with up to 6,000 attendees. It was assumed that special events would only occur on weekends from 5:00 PM to 12:00 AM (midnight). The following parking assumptions were made for the special event:

- 6,000 attendees
- Parking demand of 2.5 people per vehicle
- Resulting in parking demand of 2,400 spaces

Weekend peak parking demand was determined to be 2,400 spaces per hour. This analysis is taking a conservative approach by assuming a longer time period than typical concerts (6 hours versus 3 hours). This longer time period does not account for any buildup or drawdown of parking demand but rather assumes the peak parking demand is present for the entirety of the 6-hour period. The weekend hourly parking demand for the special event, along with the other custom uses is provided in **Table 5** and **Table 6**, respectively.

It should be noted that the minor league baseball stadium cannot be used at the same time for a baseball game and special event. As the special event has a greater seat capacity and parking demand than the minor league baseball game, the special event scenario will result in the higher parking demand for the Project.

Table 5: Weekday Parking Demand for Custom Land Uses

ULI Land Use	6:00 AM	7:00 AM	8:00 AM	9:00 AM	10:00 AM	11:00 AM	12:00 PM	1:00 PM	2:00 PM	3:00 PM	4:00 PM	5:00 PM	6:00 PM	7:00 PM	8:00 PM	9:00 PM	10:00 PM	11:00 PM	12:00 AM
Chicken 'N Pickle	0	3	54	69	50	53	69	90	85	77	158	194	218	210	176	136	96	35	0
Soccer Fields (Practice)											260	260	260	260					
Baseball Fields (Practice)											243	243	243	243					
Batting Cages											24	24	24	24					
Indoor Athletic Center (Volleyball)			368	368	368	368	368	368	368	368	368	368	368	368					
Tennis/Pickle Ball Court			64	64	64	64	64	64	64	64	64	64	64	64					
Swimming Pool			16	16	16	16	16	16	16	16	16	16	16	16					
Special Event																			

Table 6: Weekend Parking Demand for Custom Land Uses

ULI Land Use	6:00 AM	7:00 AM	8:00 AM	9:00 AM	10:00 AM	11:00 AM	12:00 PM	1:00 PM	2:00 PM	3:00 PM	4:00 PM	5:00 PM	6:00 PM	7:00 PM	8:00 PM	9:00 PM	10:00 PM	11:00 PM	12:00 AM
Chicken 'N Pickle	1	8	81	167	127	81	133	151	206	219	241	321	355	351	368	329	253	153	0
Soccer Fields (Tournament)			481	481	481	481	481	481	481	481	481	481	481	481					
Baseball Fields (Tournament)			270	270	270	270	270	270	270	270	270	270	270	270					
Batting Cages			24	24	24	24	24	24	24	24	24	24	24	24					
Indoor Athletic Center (Volleyball)			672	672	672	672	672	672	672	672	672	672	672	672					
Tennis/Pickle Ball Court			64	64	64	64	64	64	64	64	64	64	64	64					
Swimming Pool			16	16	16	16	16	16	16	16	16	16	16	16					
Special Event												2,400	2,400	2,400	2,400	2,400	2,400	2,400	

Findings

Combining the weekday parking demand of the standard ULI land uses in **Table 3** and the custom land uses in **Table 5** results in a peak weekday parking demand of 2,642 spaces at 7:00 PM as presented in **Table 7**. A graphical representation of the weekday parking demand is presented in **Figure 2**.

Combining the weekend parking demand of the standard ULI land uses in **Table 4** and the custom land uses in **Table 6** results in a peak weekend parking demand of 5,021 paces at 6:00 PM as presented in **Table 8**. A graphical representation of the weekday parking demand is presented in **Figure 3**.

Graphical representations of all the scenarios considered in this analysis are presented in **Appendix B**.

The state of the practice considers a parking supply buffer of 5% - 15% appropriate to account for turnover and parking inefficiencies. As documented by the Urban Land Institute (ULI) in *Shared Parking, Third Edition* (2020), ""A parking facility will be perceived as full at somewhat less than its actual capacity, generally in the rate of 85 to 95 percent occupancy" (p. 15). The parking spaces associated with this factor provide a cushion of parking supply to account for mis-parked vehicles, vehicle maneuvers, and vacancies associated with reserved spaces. As a result of this consideration the Project could be considered full when parking spaces are 90% utilized. It is recommended that the peak parking demand of 5,021 spaces not exceed 90% utilization of the total parking supply. Therefore, a minimum of 5,579 (5,021 ÷ 0.90 = 5,579) parking spaces should be provided. As the Project is proposing a parking supply of 6,293 spaces there is sufficient parking supply to accommodate the peak parking demand of the Project.

Table 7: Weekday Parking Demand for Minor League Baseball Game with Baseball/Soccer Practice

ULI Land Use	6:00 AM	7:00 AM	8:00 AM	9:00 AM	10:00 AM	11:00 AM	12:00 PM	1:00 PM	2:00 PM	3:00 PM	4:00 PM	5:00 PM	6:00 PM	7:00 PM	8:00 PM	9:00 PM	10:00 PM	11:00 PM	12:00 AM
Retail	3	8	18	40	67	84	106	106	102	94	94	94	98	90	75	51	22	9	0
Casual Restaurant	38	60	112	164	303	455	521	521	473	321	291	322	449	427	270	165	113	60	38
Park	1	3	6	13	25	33	42	46	48	46	44	34	44	48	48	48	40	25	5
Hotel	49	52	60	55	50	50	48	48	50	50	48	51	49	46	48	51	51	52	51
Recreation Center	0	0	0	2	27	64	81	85	90	90	85	89	94	89	85	62	9	0	0
Recreation Center Office	3	13	43	80	91	87	72	74	87	83	72	51	21	13	4	3	1	0	0
Baseball Stadium	0	5	5	22	22	22	80	80	80	80	80	83	184	738	1,432	1,432	1,224	358	5
Baseball Stadium Office	1	6	19	36	41	39	32	33	39	37	32	23	9	6	2	1	0	0	0
Chicken 'N Pickle	0	3	54	69	50	53	69	90	85	77	158	194	218	210	176	136	96	35	0
Soccer Fields (Practice)											260	260	260	260					
Baseball Fields (Practice)											243	243	243	243					
Batting Cages											24	24	24	24					
Indoor Athletic Center (Volleyball)			368	368	368	368	368	368	368	368	368	368	368	368					
Tennis/Pickle Ball Court			64	64	64	64	64	64	64	64	64	64	64	64					
Swimming Pool			16	16	16	16	16	16	16	16	16	16	16	16					
Special Event																			
Total	95	150	765	929	1,124	1,335	1,499	1,531	1,502	1,326	1,879	1,916	2,141	2,642	2,140	1,949	1,556	539	99
Total with 10% Buffer	105	165	842	1022	1236	1469	1649	1684	1652	1459	2067	2108	2355	2906	2354	2144	1712	593	109
Supply	6,263	6,263	6,263	6,263	6,263	6,263	6,263	6,263	6,263	6,263	6,263	6,263	6,263	6,263	6,263	6,263	6,263	6,263	6,263
Difference	6,158	6,098	5,421	5,241	5,027	4,794	4,614	4,579	4,611	4,804	4,196	4,155	3,908	3,357	3,909	4,119	4,551	5,670	6,154

Figure 2 – Weekday Minor League Baseball Game with Baseball/Soccer Practice

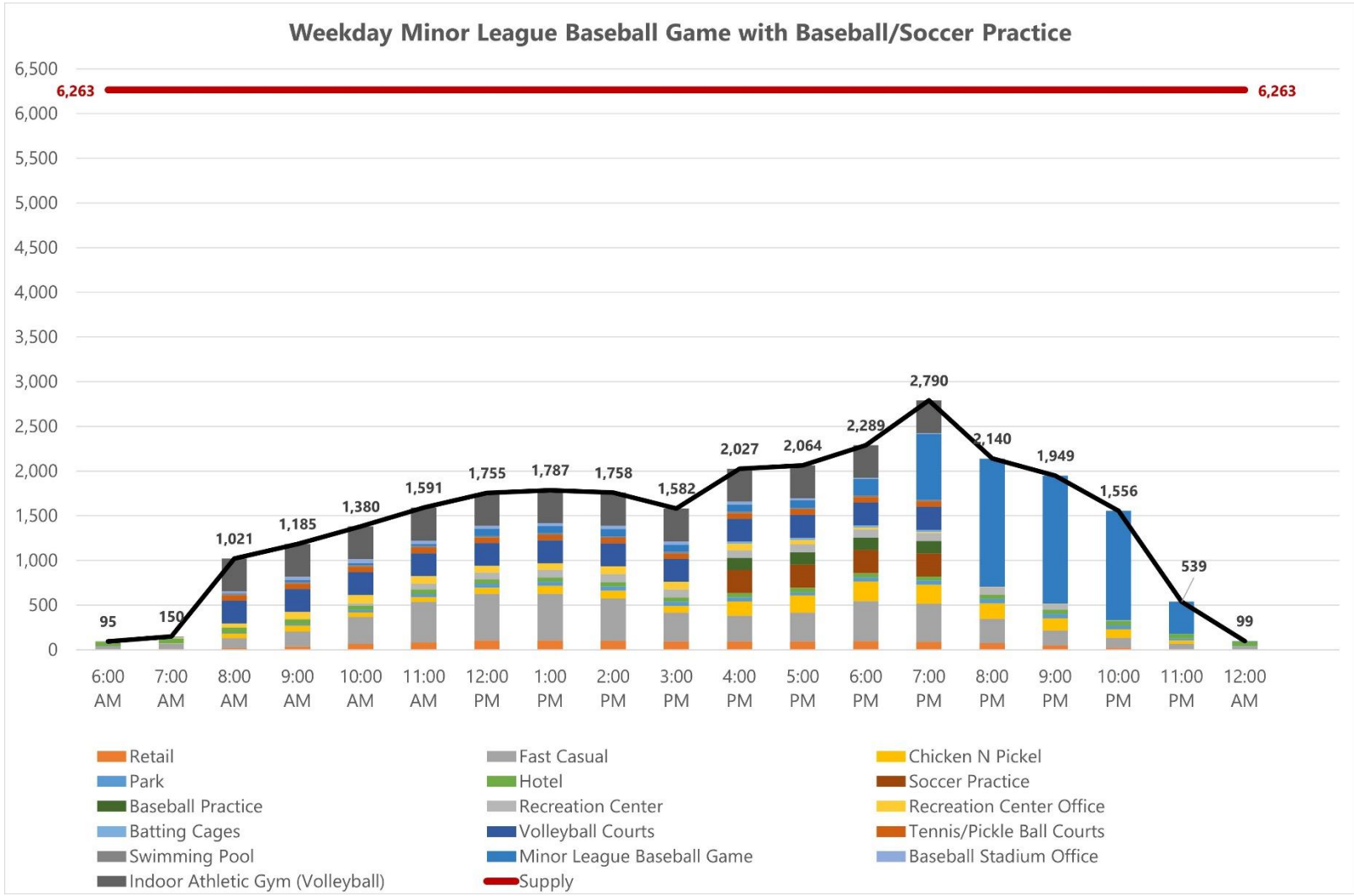
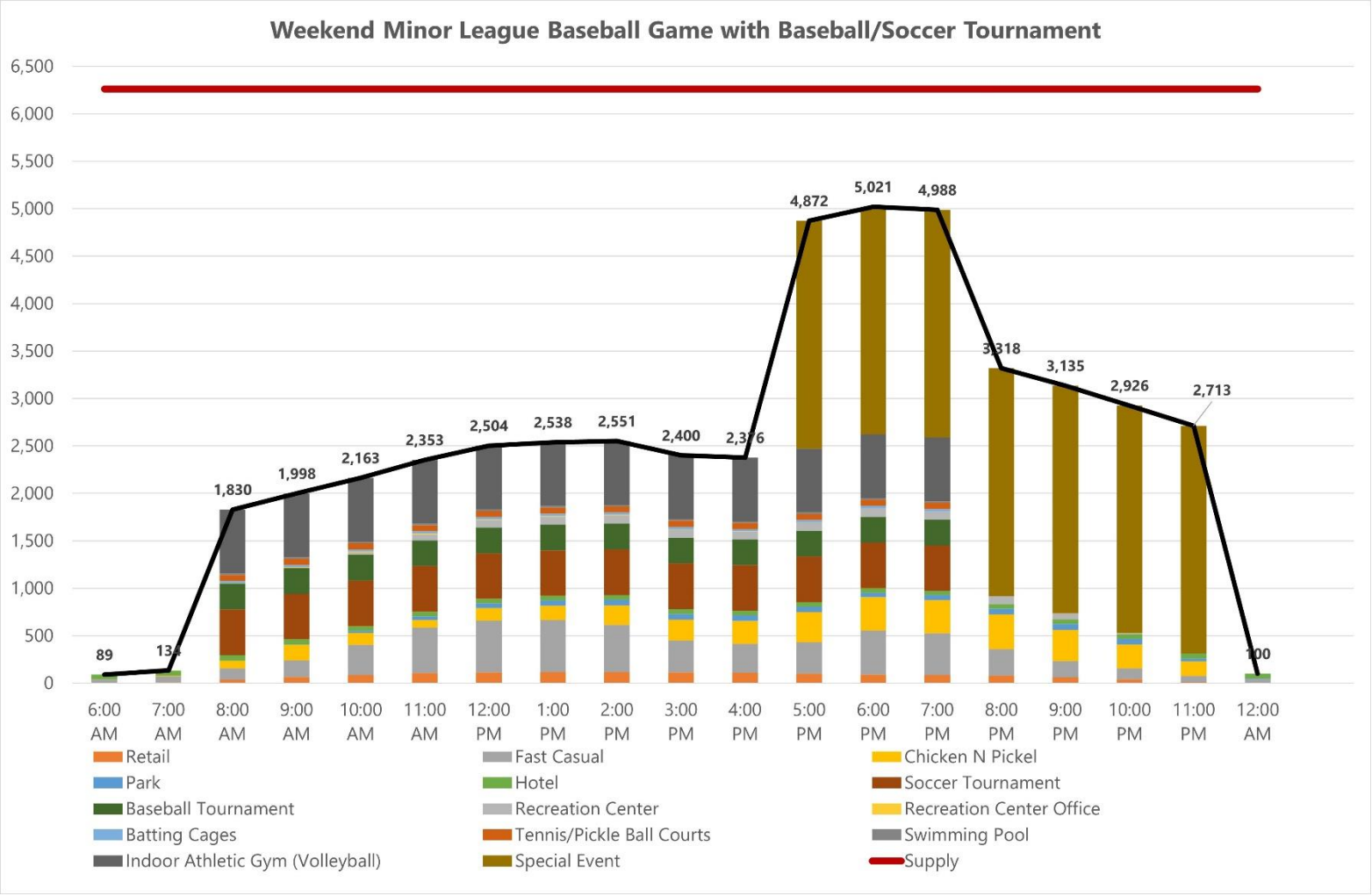


Table 8: Weekend Parking Demand

ULI Land Use	6:00 AM	7:00 AM	8:00 AM	9:00 AM	10:00 AM	11:00 AM	12:00 PM	1:00 PM	2:00 PM	3:00 PM	4:00 PM	5:00 PM	6:00 PM	7:00 PM	8:00 PM	9:00 PM	10:00 PM	11:00 PM	12:00 AM
Retail	4	9	38	66	87	108	114	119	119	114	110	99	91	86	80	63	39	13	0
Casual Restaurant	35	63	117	172	316	476	546	546	495	336	304	331	462	439	277	170	116	62	39
Park	0	0	1	2	21	39	47	55	59	61	60	53	44	50	61	61	58	33	10
Hotel	49	52	60	55	50	50	48	48	50	50	48	51	49	46	48	51	51	52	51
Recreation Center	0	0	0	1	26	62	80	84	89	89	84	89	93	89	84	61	9	0	0
Recreation Center Office	0	2	6	8	9	10	9	8	6	4	2	1	0	0	0	0	0	0	0
Baseball Stadium																			
Baseball Stadium Office	0	1	3	4	4	5	4	4	3	2	1	0	0	0	0	0	0	0	0
Chicken 'N Pickle	1	8	81	167	127	81	133	151	206	219	241	321	355	351	368	329	253	153	0
Soccer Fields (Tournament)			481	481	481	481	481	481	481	481	481	481	481	481					
Baseball Fields (Tournament)			270	270	270	270	270	270	270	270	270	270	270	270					
Batting Cages			24	24	24	24	24	24	24	24	24	24	24	24					
Indoor Athletic Center (Volleyball game)			672	672	672	672	672	672	672	672	672	672	672	672					
Tennis/Pickle Ball Court			64	64	64	64	64	64	64	64	64	64	64	64					
Swimming Pool			16	16	16	16	16	16	16	16	16	16	16	16					
Special Event													2,400	2,400	2,400	2,400	2,400	2,400	
Total	89	134	1,830	1,998	2,163	2,353	2,504	2,538	2,551	2,400	2,376	4,872	5,021	4,988	3,318	3,135	2,926	2,713	100
Total with 10% Buffer	98	147	2,013	2,197	2,379	2,588	2,754	2,791	2,806	2,640	2,613	5,359	5,524	5,487	3,650	3,449	3,219	2,984	110

Supply	6,263	6,263	6,263	6,263	6,263	6,263	6,263	6,263	6,263	6,263	6,263	6,263	6,263	6,263	6,263	6,263	6,263	6,263	6,263
Difference	6,165	6,116	4,250	4,066	3,884	3,675	3,509	3,472	3,457	3,623	3,650	904	739	776	2,613	2,814	3,044	3,279	6,153

Figure 3 – Weekend Minor League Baseball Game with Baseball/Soccer Tournament



Appendix A

Table 1: Project ULI Land Uses Weekday Peak Month

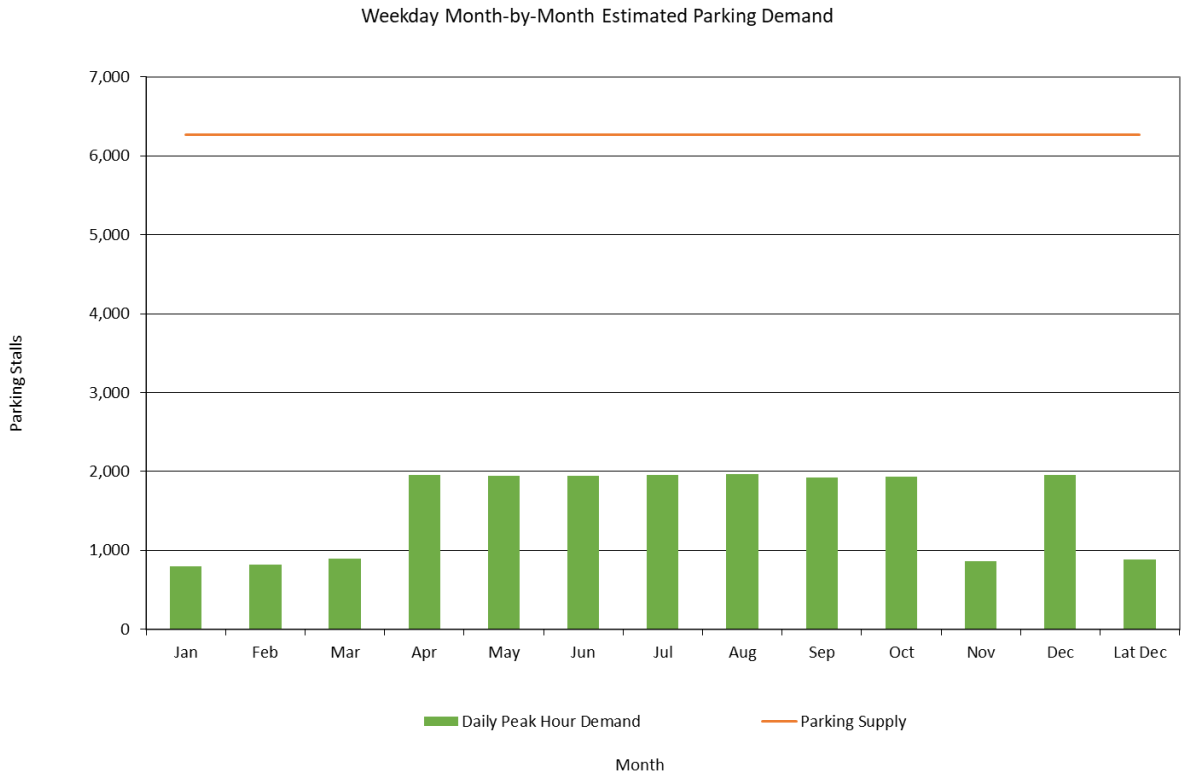


Table 2: Project ULI Land Uses Weekend Peak Month

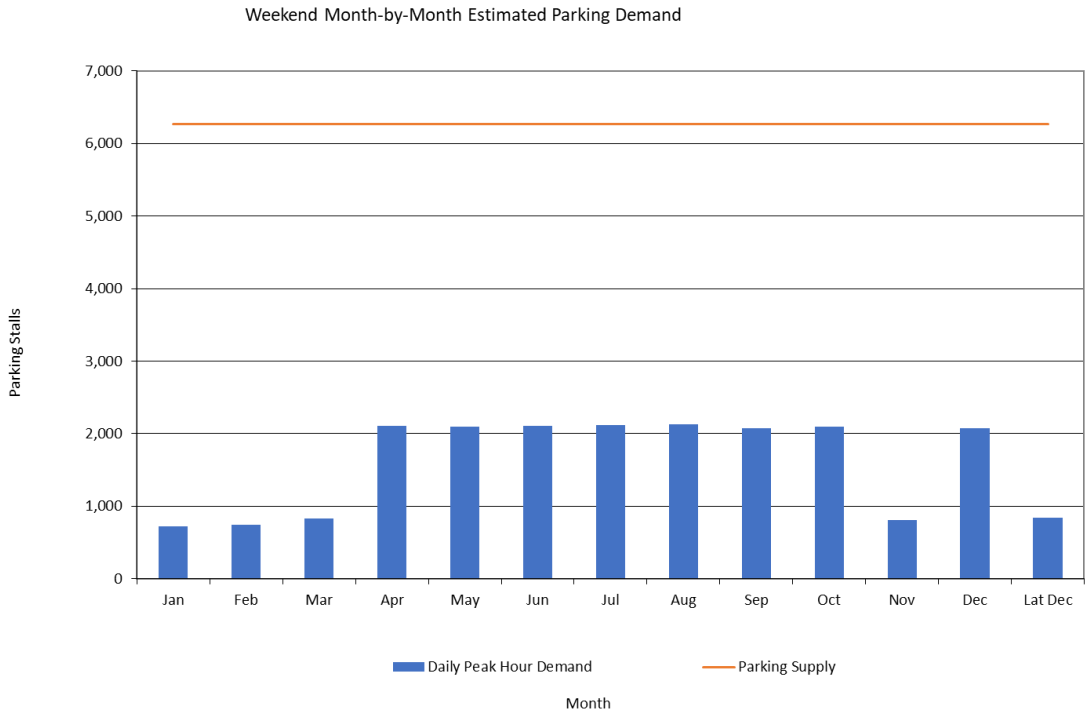


Table 3: Project ULI Land Uses Weekday Peak Hour

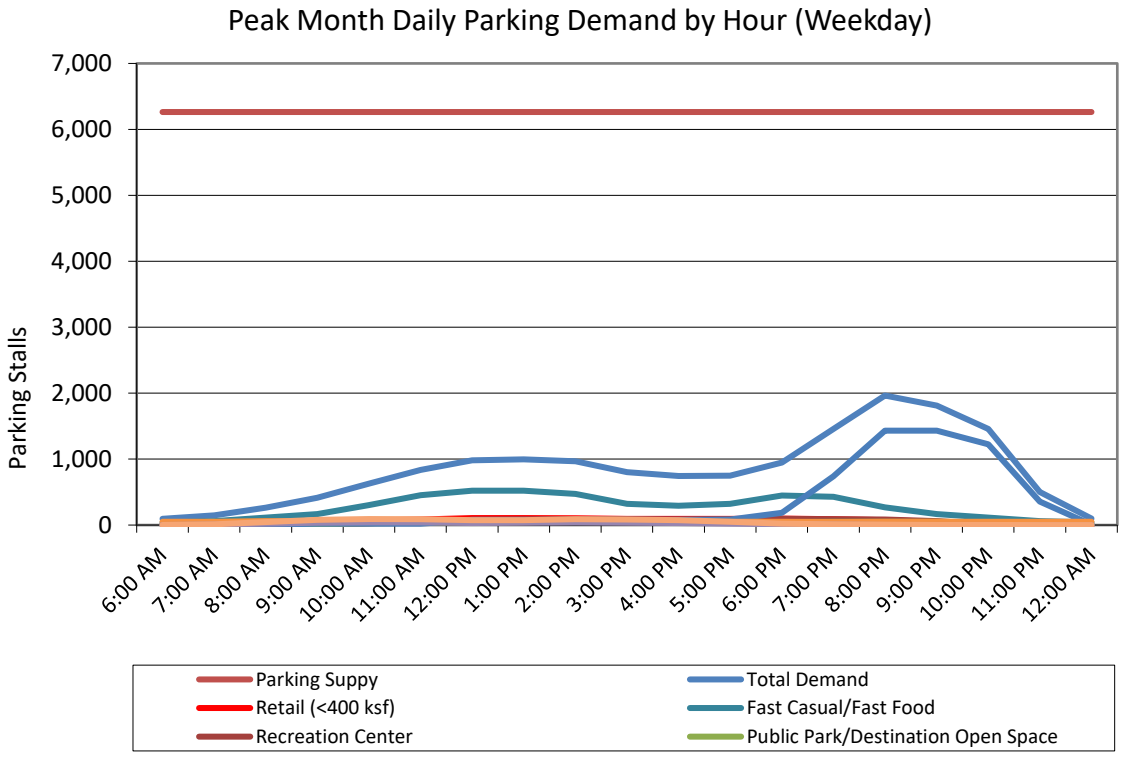
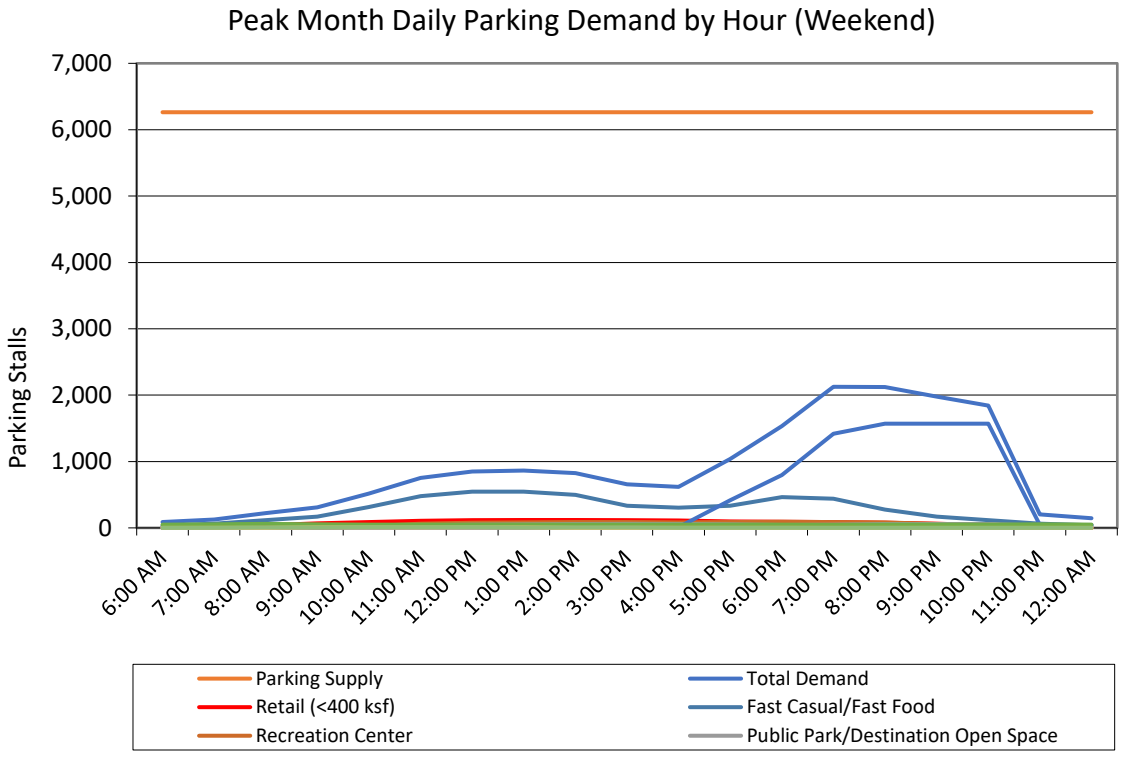
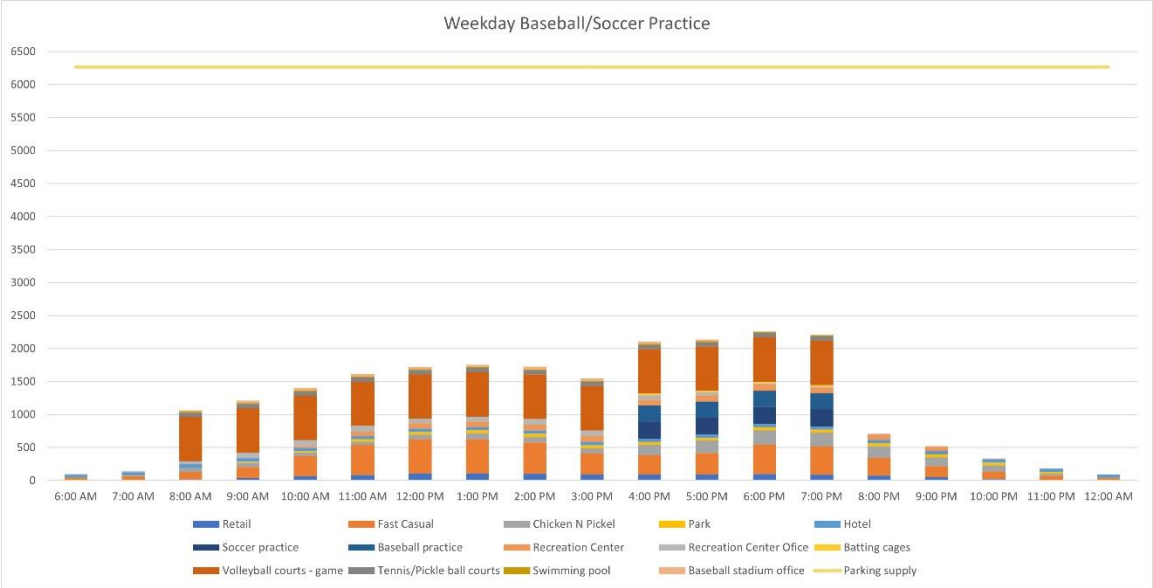


Table 4: Project ULI Land Uses Weekend Peak Hour

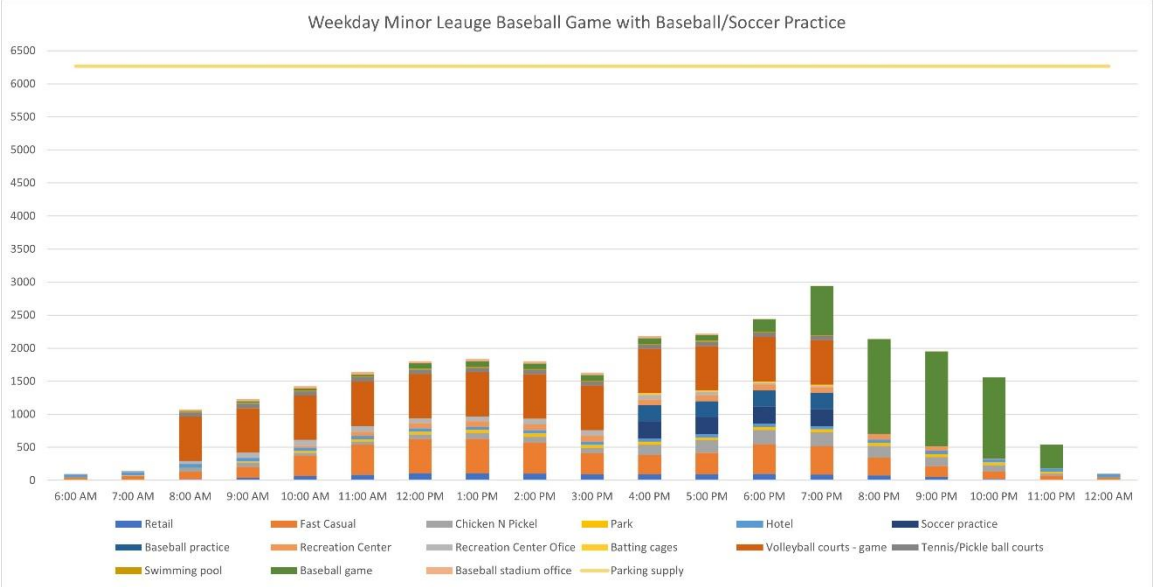


Appendix B

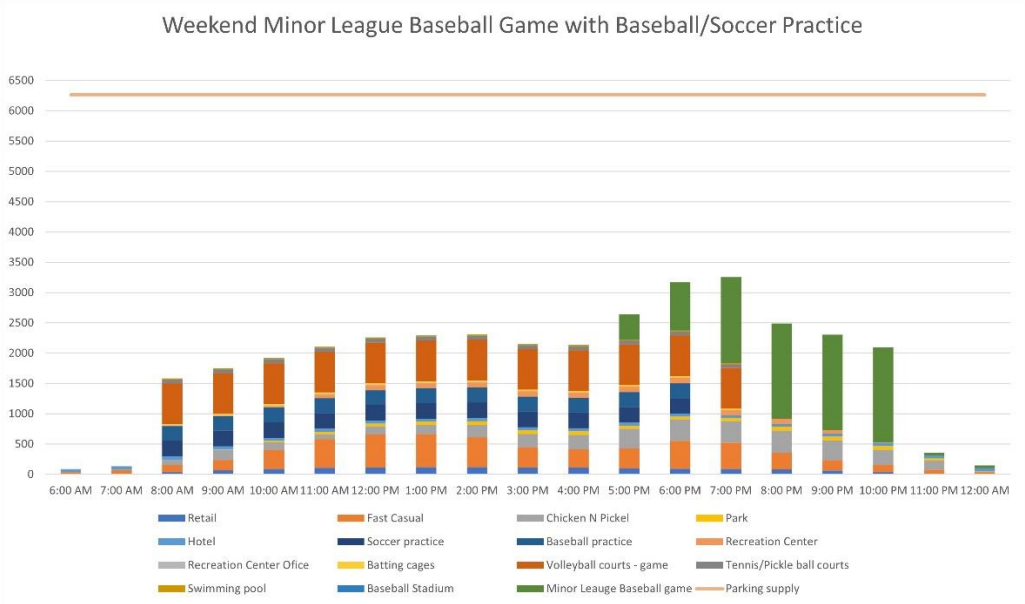
Scenario 1: Weekday Baseball/Soccer Practice



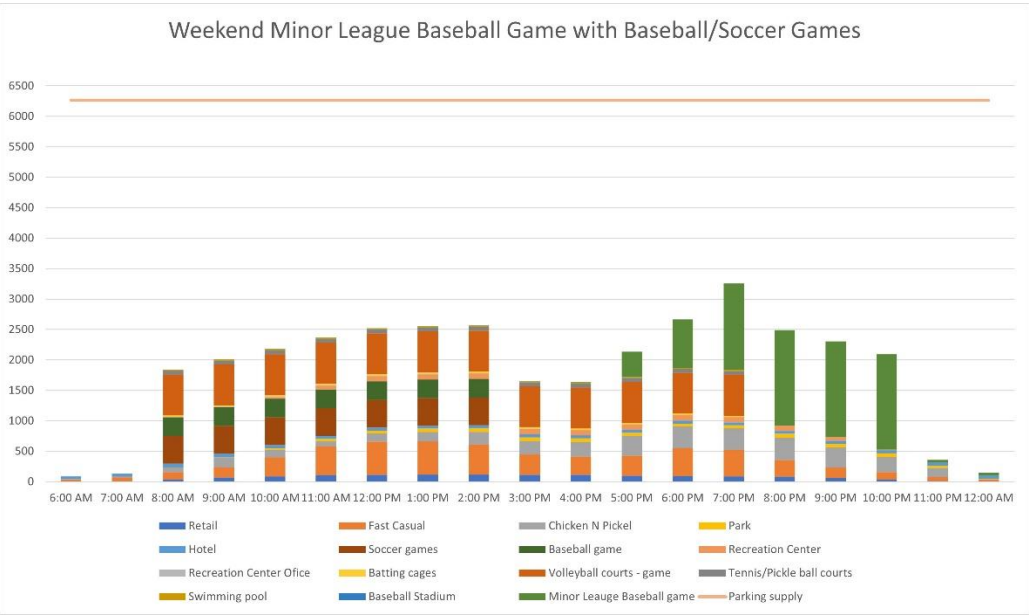
Scenario 2: Weekday Minor League Baseball Game with Baseball/Soccer Practice



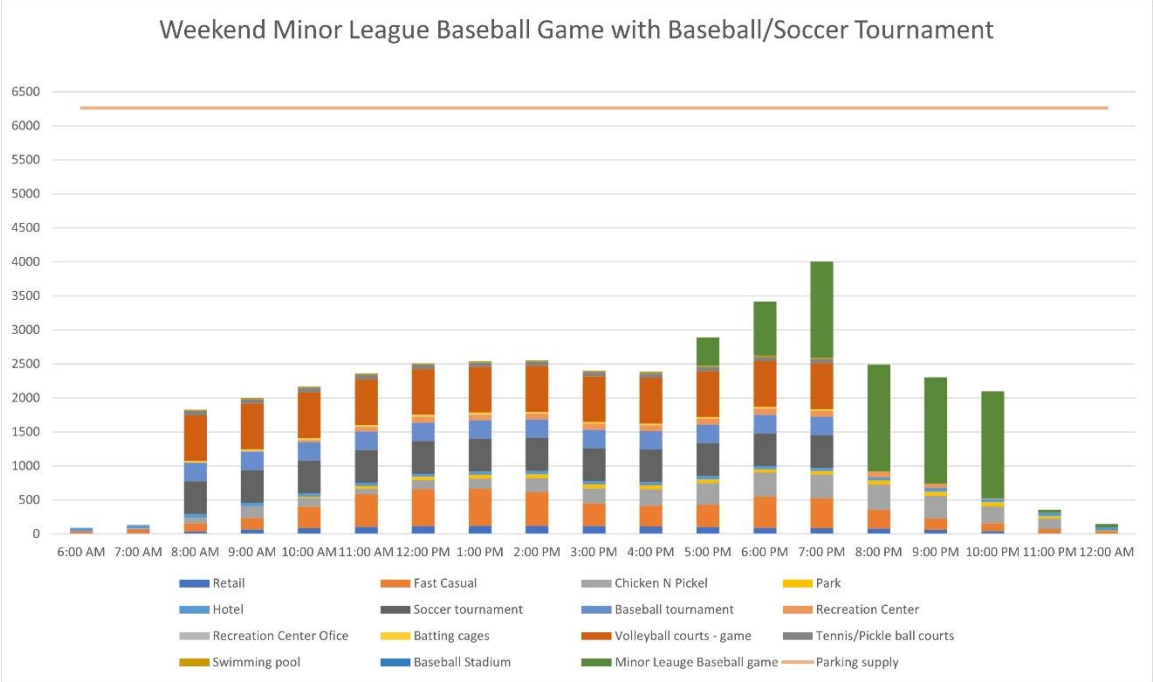
Scenario 3: Weekend Minor League Baseball Game with Baseball/Soccer Practice



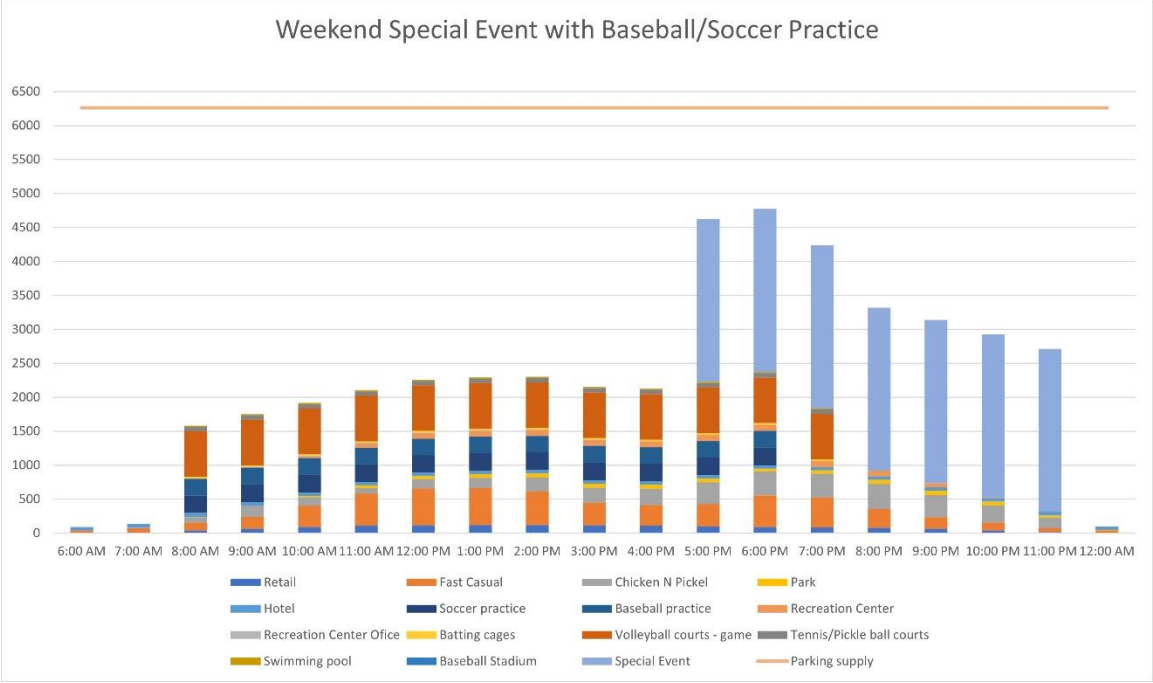
Scenario 4: Weekend Minor League Baseball Game with Baseball/Soccer Games



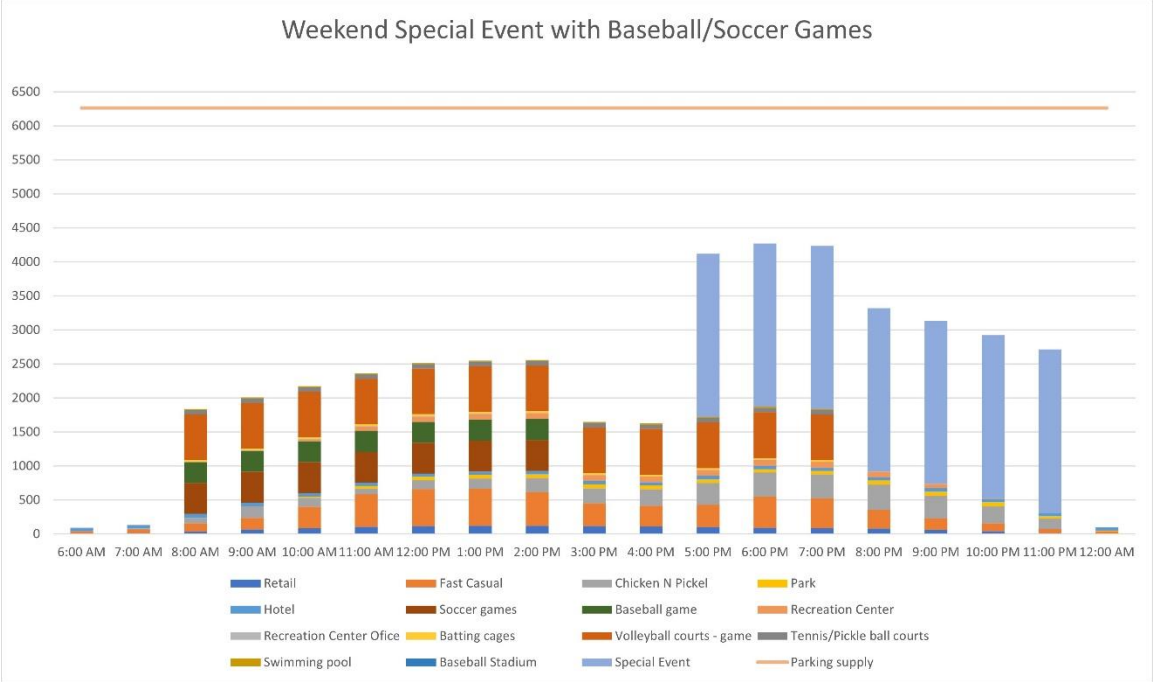
Scenario 5: Weekend Minor League Baseball Game with Baseball/Soccer Tournaments



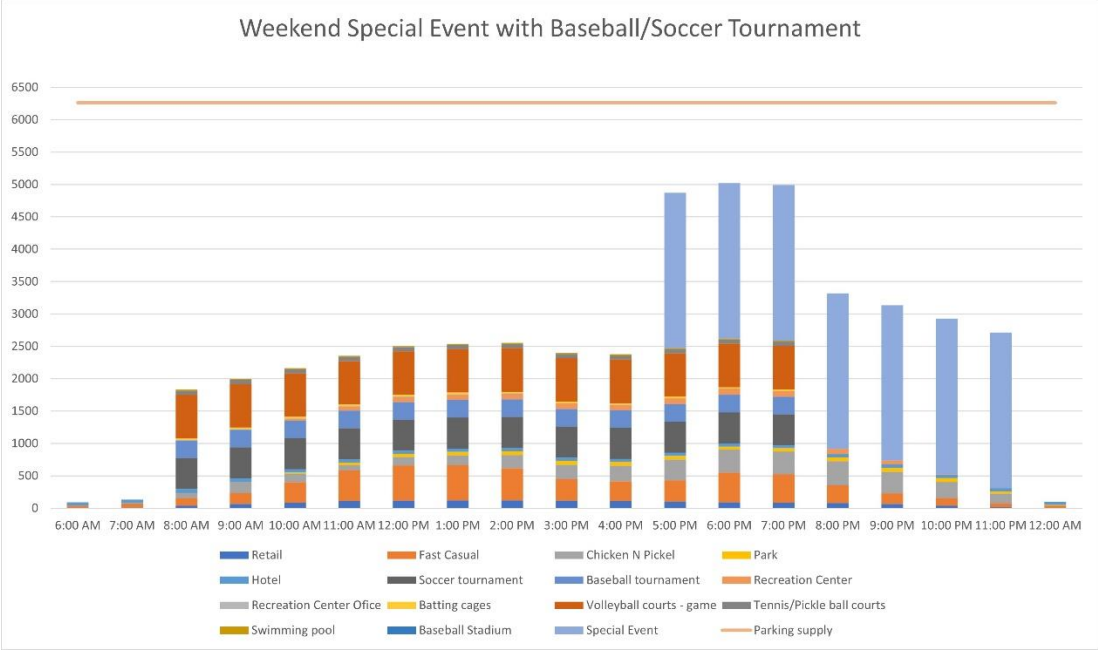
Scenario 6: Weekend Special Event with Baseball/Soccer Practice



Scenario 7: Weekend Special Event with Baseball/Soccer Games



Scenario 8: Weekend Special Event with Baseball/Soccer Tournament



Appendix M Water Supply Assessment

Appendices

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February 2024

Water Supply Assessment for the Ontario Regional Sports Complex

City of Ontario

Prepared for:

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PLACEWORKS

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1.1 INTRODUCTION

This document, which is prepared for the City of Ontario, is a Water Supply Assessment (WSA) intended to meet the requirements of Senate Bill (SB) 610. The water demand for the Ontario Regional Sports Complex project ("proposed project or ORSC") is calculated and the adequacy of water supplies to meet the proposed land use changes is evaluated.

SB 610 established the primary legal standards for assessing the sufficiency of water supplies for new development projects. This statute requires a WSA to be conducted for any project subject to the California Environmental Quality Act (CEQA) that meets the criteria under SB 610. The public water supplier or land use agency – in this case the City of Ontario – must prepare a WSA that documents the availability and reliability of water supplies for the project, considering normal, single dry, and multiple dry years over a 20-year horizon. Since the proposed project would have a water demand equivalent to, or greater than, more than 500 dwelling units, it meets the definition of a project as defined by Government Code Section 10912(a)(1) and requires the preparation of a WSA.

References used in preparing this document include the following:

- City of Ontario, June 2021. *2020 Urban Water Management Plan (UWMP)*. Prepared by Stetson Engineering.
- AKM Consulting Engineers, June 2020. Draft City of Ontario Water Master Plan Update.
- Chino Basin Desalter Authority, June 2021. *2020 Urban Water Management Plan*. Prepared by Stetson Engineering.
- Inland Empire Utilities Agency, June 2021. *2020 Urban Water Management Plan*. Prepared by Kennedy Jenks.
- San Antonio Water Company, September 2021. *2020 Urban Water Management Plan*. Prepared by WSC.
- Water Facilities Authority, June 2021. *2020 Urban Water Management Plan*. Prepared by Stetson Engineering.
- City of Ontario, May 2022. *The Ontario Plan (TOP) 2050 Supplemental Environmental Impact Report*. Prepared by PlaceWorks.

1.2 SITE LOCATION AND EXISTING CONDITIONS

The Proposed Project would allow for development of a variety of recreational opportunities—from a semi-professional Minor League Baseball stadium, retail, and hospitality area to a new City recreation center and aquatics center surrounded by a variety of baseball/softball, soccer, and multiuse fields—on an approximately 199-gross-acre site in the city. The project site is in the southern portion of Ontario, which is known as the Ontario Ranch. The Proposed Project is on the southeast corner of Vineyard Avenue and Riverside Drive in the Armstrong Ranch Specific Plan area. The project site is bounded to the north by Riverside Drive, to the south by Chino Avenue, to the west by the unimproved right-of-way (ROW) for Vineyard Avenue, and to the

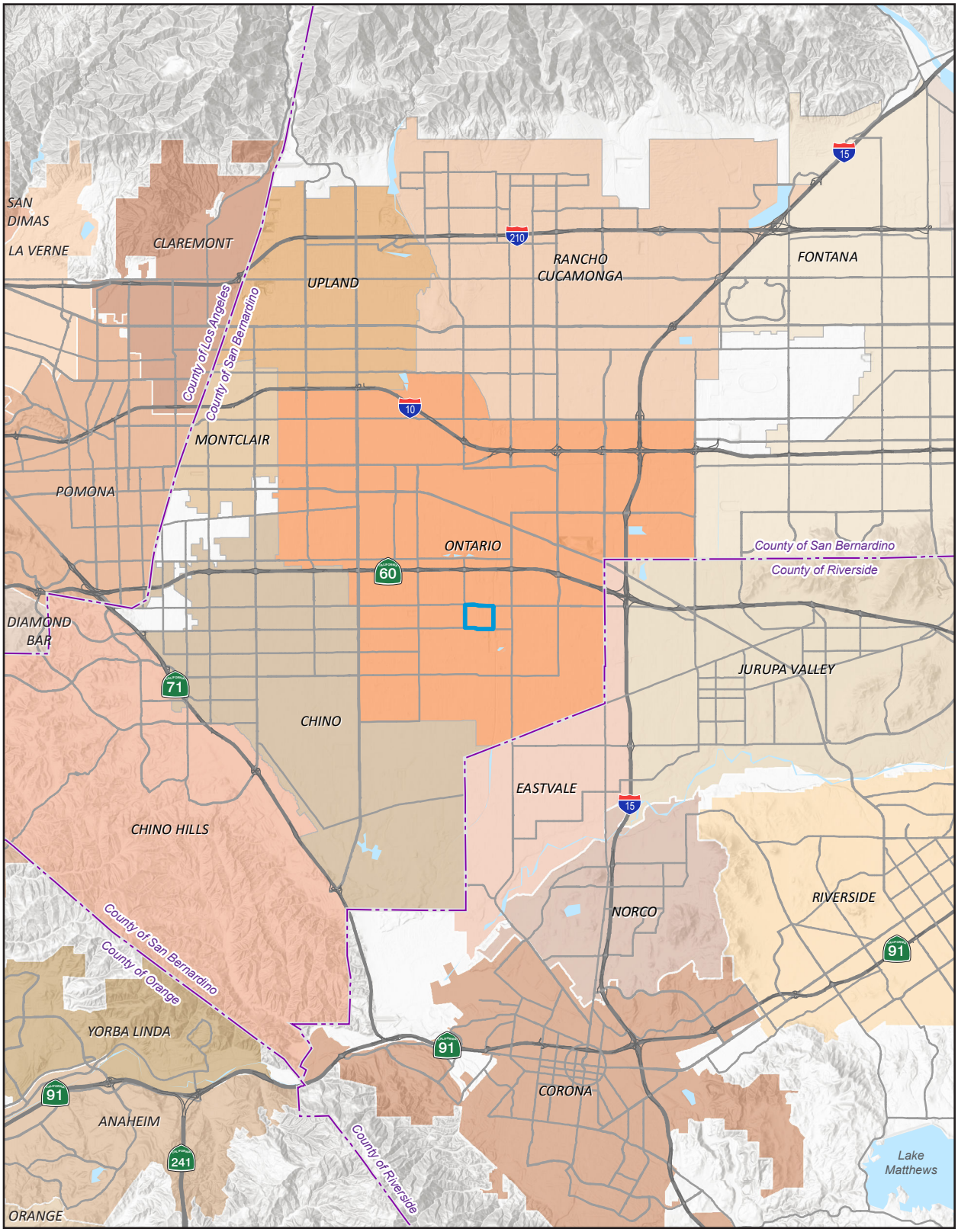
east by the Cucamonga Creek Flood Control Channel. Regional location is provided in Figure 1, *Regional Location Map*. The project site currently includes agricultural uses, including the raising of livestock and dairy farming, plant nursery, horse stables, and vacant land (see Figure 2, *Aerial Photograph*).

1.3 PROJECT DESCRIPTION AND HISTORY

The project site is in the Armstrong Ranch Specific Plan, which the City adopted in December 2017. As approved by the City, the Armstrong Ranch Specific Plan allowed for the development of up to 891 dwelling units with a variety of single-family detached and attached dwellings. In 2015, a WSA was prepared for the Armstrong Ranch Specific Plan that evaluated a larger number of residential units (994 units) than was included in the approved Specific Plan and Certified EIR. A total water demand of 606 acre-feet per year (AFY) was projected in the 2015 WSA, assuming 994 low-density residential units. The 2015 WSA concluded the City's available water supply would meet the projected water demand of the Armstrong Ranch Specific Plan during normal, single dry and multiple dry years.

The ORSC would provide a variety of experiences including a 6,000-seat capacity, semipro, Minor League Baseball stadium with supportive retail/hospitality uses and a new city regional park and community recreation facilities, including a new recreational center; aquatics center; and baseball, softball, and soccer fields. The land use plan under the Proposed Project comprises seven planning areas (PA)and include: Baseball Stadium (PA 1); Commercial Retail (PA 2); Baseball Stadium Retail-Hospitality (PA 3), Baseball Stadium Retail-Hospitality South (PA 4); City Park–Active Fields (PA 5); City Park–Indoor Athletic Facility (PA 6); and Community Recreation Center (PA 7), as shown in Figure 3, *Ontario Regional Sports Complex Planning Areas*. The amenities are shown in Table 1, *Ontario Regional Sport Complex Amenities Summary*, and Figure 4, *Conceptual Land Use Plan*.

Figure 1 - Regional Location



Project Boundary

Note: Unincorporated county areas are shown in white.

Source: Generated using ArcMap 2023.

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Scale (Miles)

PlaceWorks

1. Introduction

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Figure 2 - Aerial Photograph

Project Boundary

0 800
Scale (Feet)

Source: Nearmap 2023.

PlaceWorks

1. Introduction

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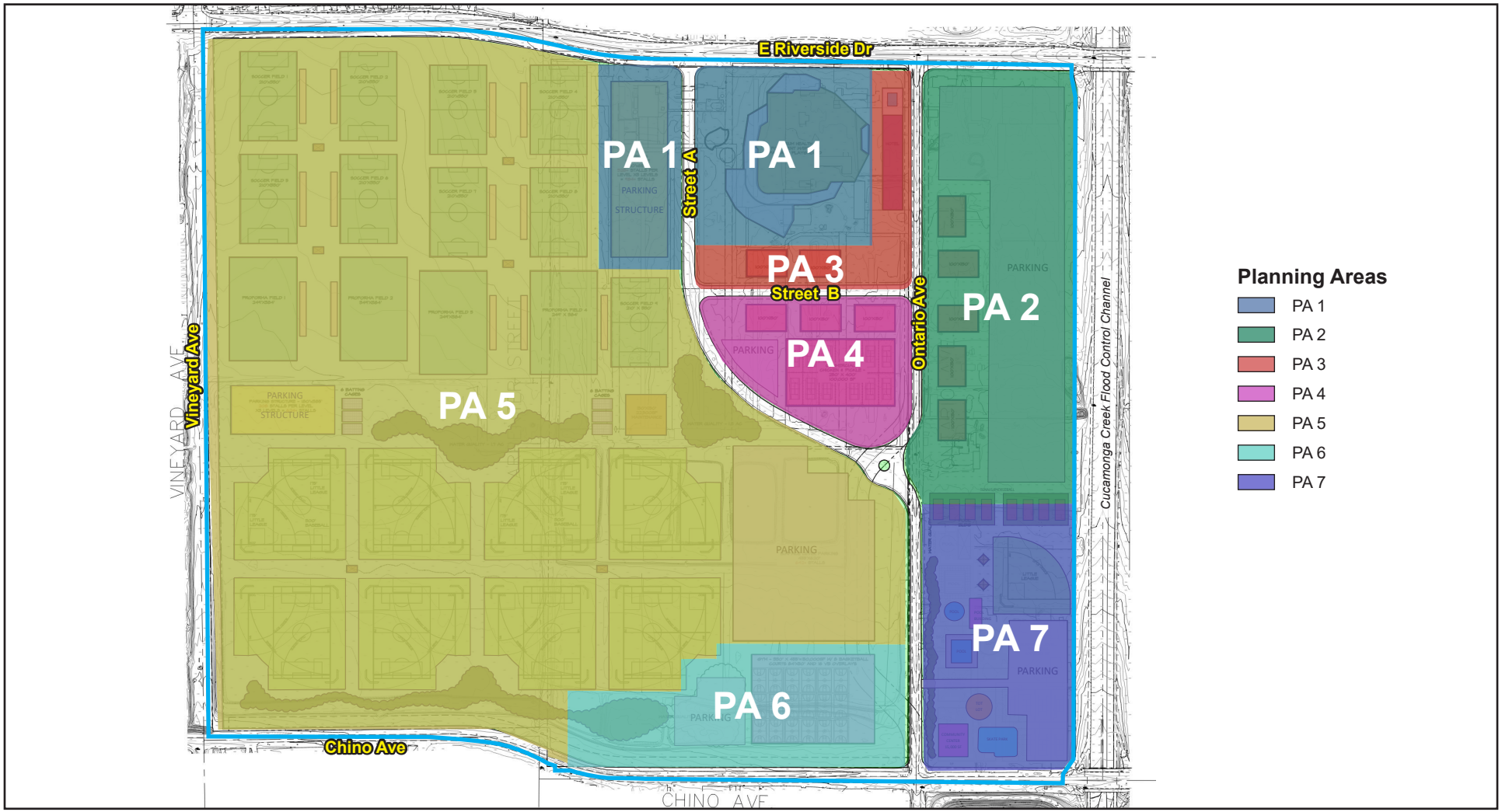
Figure 3 - Ontario Regional Sports Complex Planning Areas



Source: Ontario 2023.

1. Introduction

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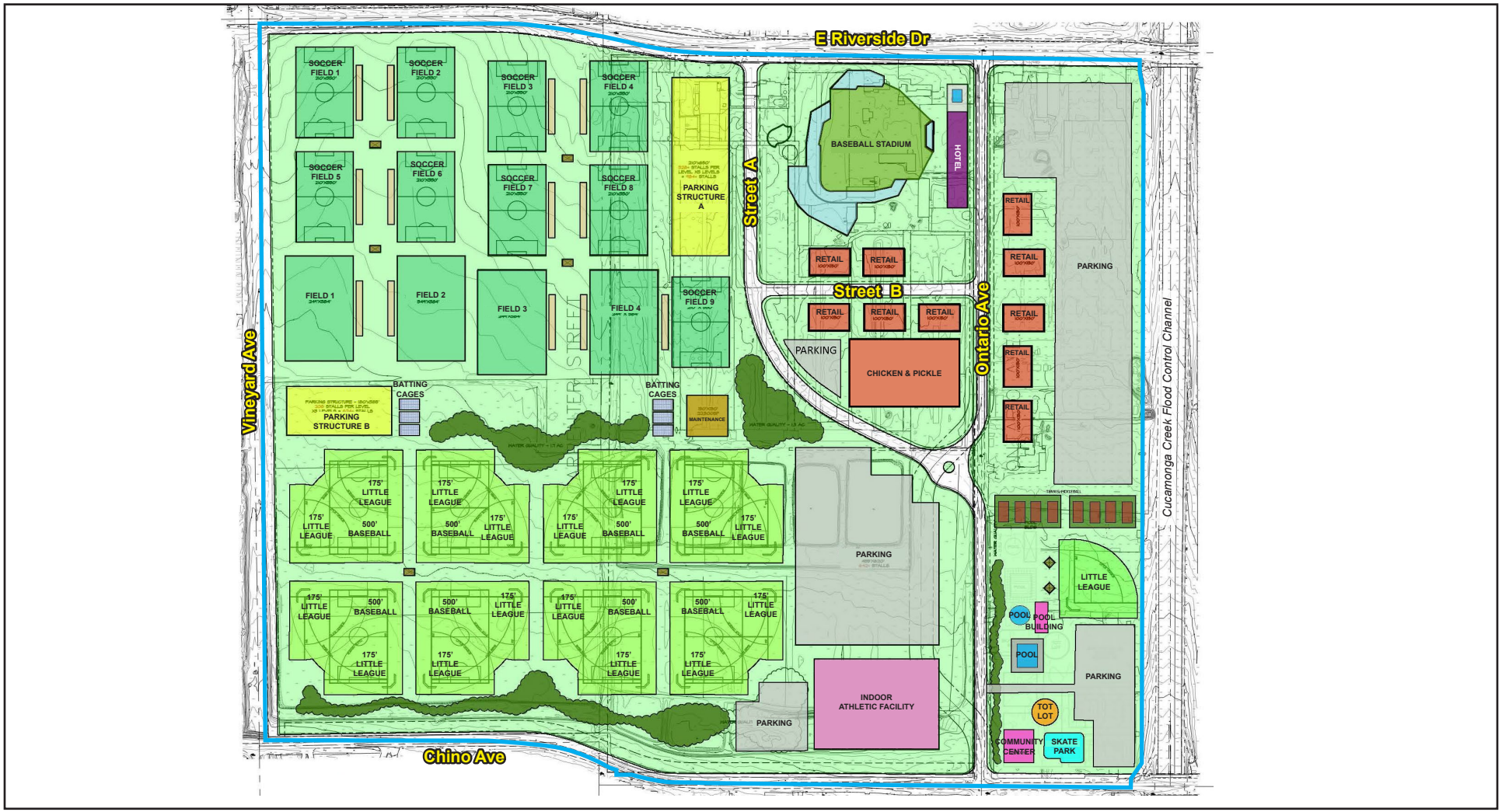
Figure 4 - Conceptual Land Use Plan



Project Boundary

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Scale (Feet)

Source: RUM Design Group 2023; Ontario 2023.

1. Introduction

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Table 1 Proposed Project Amenities Summary

Land Use	Acres	Building Square Feet			Number of Amenities
		Commercial	Parking	Stadium	
PA 1 BASEBALL STADIUM	**16.01**	**—**	**185,000**	**450,000**	**6,000-Seat Capacity 1,600 Parking Spaces**
Baseball Field Facility	11.33	—	—	—	6,000-Seat Capacity
Conditioned Space	—	—	—	110,000	—
Unconditioned Space	—	—	—	340,000	—
Parking Structure A (4-stories)	4.68	—	185,000	—	1,600 parking spaces
PA 2 COMMERCIAL RETAIL	**19.62**	**45,000**	**—**	**—**	**1,500 Parking Spaces**
Retail/Commercial, East	5.06	45,000	—	—	—
Surface Parking, East	14.56	—	—	—	1,500 parking spaces
PA 3 BASEBALL STADIUM RETAIL Stadium Retail and Hospitality	**4.58**	**91,000**	**—**	**—**	**100 Rooms**
Retail/Commercial	2.17	21,000	—	—	—
Hotel	2.41	70,000	—	—	100 Rooms
PA 4 BASEBALL STADIUM RETAIL and Hospitality South	**8.54**	**114,000**	**—**	**—**	**250 Parking Spaces**
Retail/Commercial	6.54	114,000	—	—	—
Surface Parking, South	2.00	—	—	—	250 Parking Spaces
PA 5 CITY PARK, Active Fields	**110.90**	**23,300**		**—**	**2,000 Parking Spaces**
Multipurpose Fields (Soccer/Football)	41.13	—	—	—	13 Fields
Multiuse Fields (Baseball/Softball/Little League)	45.11	—	—	—	8 Fields
Park	10.87	23,000	—	—	—
Parking Structure B (3 stories)	3.59	—	87,000	—	1,000 Parking Spaces
Surface Parking, South	10.2	—	—	—	1,000 Parking Spaces
PA-6 CITY PARK, Indoor Athletic Facility	**7.58**	**159,450**	**—**	**—**	**388 Parking Spaces**
Indoor Athletic Facility	4.46	159,450	—	—	26 Courts
Surface Parking	3.12	—	—	—	388 Parking Spaces
PA-7 COMMUNITY RECREATION CENTER	**15.68**	**108,000**	**—**	**—**	**525 Parking Spaces**
Community Center/ Admin Building	3.46	70,000	—	—	—
Activity Area	8.05	38,000	—		1 Field/8 Courts
Recreation Surface Parking	4.17	—	—	—	525 parking spaces
Right-of-Way	*16.1*	—	—	—	**—**
TOTAL	**199**	**540,750**	**272,000**	**450,000**	**6,000-Seat Capacity 100 rooms 6,263 Parking Spaces**

1. Introduction

1.3.1 Planning Area 1: Baseball Stadium

The proposed project would create a 16-acre sports entertainment area with a semiprofessional Minor League Baseball stadium in PA 1. The baseball stadium would have a capacity of 6,000 seats with 4,500 fixed seats and 30,000 square feet of concession areas. Detailed programming for the baseball stadium is provided in Attachment A. For the California league, there would be up to 66 regular season home games and up to 5 postseason home games, for a total of 71 home games. The baseball games are expected to average 3,400 visitors. In addition to baseball games, the stadium could host other events, such as concerts with an average attendance of 2,942 visitors and 2,190 visitors for other events (i.e., baseball camps, high school and NCAA tournaments, etc.). A maximum of 46 events are assumed at the stadium other than Minor League Baseball.

The baseball stadium employment would fluctuate based on the season, but generally would be 43 combined full-time and part-time staff during the stadium offseason and a total of 346 combined employees for regular season games (i.e., full-time baseball and facilities staff, concession staff, part-time staff for game nights and concerts/other events). Employment for the 46 other events is assumed to be similar to employment during the regular season.

Landscaping Plans

The exterior of the stadium would provide landscaping in accordance with the City of Ontario landscape requirements. In addition, the interior of the stadium includes irrigation of natural grass turf in accordance with the Minor League Baseball requirements.

1.3.2 Planning Area 2: Commercial Retail

The 19.62-acre commercial retail area in PA 2 is east of Ontario Avenue and west of the Cucamonga Creek Flood Control Channel but excludes PA 7 at the southeast corner near Ontario Avenue and Chino Avenue, as shown in Figure 4. PA 2 includes 45,000 square feet of support retail/commercial uses on 5.06 acres (see Table 1).

1.3.3 Planning Area 3: Baseball Stadium Retail and Hospitality

The baseball stadium would be supported by ancillary retail buildings in both PA 3 and PA 4. PA 3 is a 4.58-acre site that would wrap around the southern and eastern portions of the baseball stadium (see Figure 4). PA 3 would allow for a 21,000-square-foot retail building on 2.17 acres and a hotel on the remaining 2.41 acres. The hotel would be 70,000 square feet and would include 100 rooms, meeting rooms, and a café.

1.3.4 Planning Area 4: Baseball Stadium Retail and Hospitality South

PA 4 is south of the baseball stadium and would include up to 114,000 square feet of retail/commercial uses on a 8.54 acre site.

1.3.5 Planning Area 5: City Park Active Fields

The western portion of the 199-acre project site west of Ontario Avenue would be dedicated for use as a regional sports park. PA 5 would encompass 110.90 acres and would have 13 lighted soccer fields, 8 lighted baseball/softball/Little League fields, and a central park and picnic area. The open space park would encompass approximately 10.87 acres near the middle of PA 5, between the multi-purpose fields to the north and little fields to the south.

Multipurpose Fields

As shown on Figure 4, the project site would include 13 multipurpose fields providing for soccer or football activities. For some of these fields, the City is considering the use of synthetic turf to allow year-round use. For this analysis, it is assumed that six fields would be natural grass turf and the remaining seven fields would be synthetic turf. All natural turf fields and landscaping would use recycled water. The primary users of the multipurpose fields would be the American Youth Soccer Organization, which typically plays a fall season from August to November and a spring season from February to May. The average daily attendance is estimated to be 4,118 visitors. More detailed programming for the multipurpose fields is provided in Attachment A.

Baseball/Softball Fields

As shown on Figure 4, the project site would include eight multiuse baseball/softball/Little League fields for youth sports that would either use natural grass turf or synthetic turf. Similar to the analysis of the multi-purpose fields, it is assumed that half (i.e., four baseball/softball/Little League fields) would be natural grass turf and the remaining four fields would be synthetic turf. All natural turf fields would use recycled water. The fall softball/baseball season is from August to November, and the spring season is from April to June. More detailed programming for the baseball and softball fields is provided in Attachment A.

1.3.6 Planning Area 6: City Park Indoor Athletic Facility

PA 6 is a 7.58-acre site in the central portion of the project site that would include a two-story, 159,450-square-foot indoor athletic facility on 4.46 acres and a 3.12-acre parking lot. The facility would include basketball and volleyball courts, multi-purpose spaces, offices, and a 1,200-square-foot kitchen. The indoor athletic facility would have a maximum of 1,960 daily visitors during a sports event and approximately 49 employees.

1.3.7 Planning Area 7: Community Recreation Center

The community recreation center is at the southeast corner of Ontario Avenue and Chino Avenue. It would be bounded by PA 2 to the north, the Cucamonga Creek Flood Control Channel to the east, Chino Avenue to the south, and Ontario Avenue to the west. The community recreation center would include a 70,000-square-foot community center/administration building, a 13,000-square-foot aquatics facility with outdoor pool, a Little League field, 25,000-square-foot operator facility, maintenance yard, picnic shelter, eight exercise stations, playground, outdoor skate park, and eight tennis and pickleball courts. More detailed programming for the Little League field is provided in Attachment A.

1. Introduction

1.3.8 Infrastructure Improvements

The ORSC requires various improvements to existing infrastructure, such as street widening, intersection improvements, and the extension of numerous utilities to the project site. The existing land uses within the project site are currently on well water and septic systems. Existing recycled water lines would be extended west along Riverside Drive to the project site, and new potable water and recycled water pipelines would be installed beneath future Vineyard Avenue to the west, Chino Avenue to the south and Ontario Avenue. Ontario Avenue would be reconstructed within the project site. The outdoor water demand would be provided by recycled water, including all natural turf fields, open space park areas, and landscape areas.

2. Water Supply Assessment

2.1 WATER PURVEYOR

The Ontario Municipal Utilities Company (OMUC) provides water service to residents, businesses, and other users in the City of Ontario, including areas surrounding the project site. As of 2020, OMUC provided water to a population of approximately 181,107 people. The primary source of water is groundwater from the Chino Groundwater Basin (Chino Basin). Other water supplies include treated groundwater from the Chino Basin Desalter Authority (CDA), recycled water from Inland Empire Utilities Agency (IEUA), imported water from the Water Facilities Authority (WFA), and purchased water from the San Antonio Water Company (SAWCo).

According to the City's 2020 Water Master Plan Update[1], the City's water system consists of the following:

- Five primary pressure zones (925, 1010, 1074, 1212, and 1348)
- Over 620 miles of water transmission and distribution pipelines ranging in size from 2 inches to 42 inches in diameter
- 7,277 fire hydrants
- 35,906 water meters
- 17 active wells
- Twelve reservoirs with a total volume of 75 million gallons
- Six active booster pump stations
- Fifteen pressure reducing stations
- Two connections to Water Facilities Authority
- Two connections to Chino Desalter Authority
- Five inter-agency connections
- Two ion exchange treatment facilities
- Four altitude valves

In 2022, potable water demands were 32,661 acre-feet per year (AFY) and recycled water demands were 10,066 AFY (including agricultural demands) for a total of 42,727 AFY.[2,3] The total demands in the year 2045 are projected to be 73,668 AFY. Potable water demands are projected to be 57,609 AFY and recycled water demands are projected to be 16,059 AFY (including agricultural demands).

[1] AKM Consulting Engineers, June 2020. *Draft City of Ontario Water Master Plan Update.*
[2] Ontario Municipal Utilities Company. April 12, 2023. *2022 Water Production Summary.*
[3] Inland Empire Utilities Agency. 2022. *FY 2020-21 Exhibit for Recycled Water Reconciliation.*

The passage of SB X7-7 (also known as the Water Conservation Act of 2009) resulted in increased efforts to reduce potable water usage by requiring all California urban water suppliers to achieve a 20 percent reduction in demands (from a historical baseline) by 2020. Using a 15-year base period of 1995 to 2004, the City's baseline water usage averaged 245 gallons per capita per day (GPCD). The City's per-capita water use during Fiscal Year 2019-20 was 161 GPCD, which is below the 2020 target of 196 GPCD.[4]

It is required that every urban water supplier assess the reliability to provide water service to its customers under normal, single dry, and multiple dry years. As discussed in the City's 2020 Urban Water Management Plan (UWMP), the City is capable of meeting the water demands of its customers in normal, single dry, and multiple dry years between 2020 and 2045.[5]

2.2 LEGAL REQUIREMENTS

SB 610 establishes the legal requirements for assessing the sufficiency of water supplies for new development projects that qualify as a project pursuant to CEQA. Affected land developments are those that meet certain size thresholds. The previously evaluated Armstrong Ranch Specific Plan met the threshold for preparation of a WSA because it was a proposed residential development of more than 500 dwelling units. The current project also meets the requirement for preparation of a WSA because the the water demand is estimated to be equal to, or greater than, the amount of water required by a 500 dwelling unit project.

The basic requirement is that a WSA must "include a discussion with regard to whether the public water system's total projected water supplies available during normal, single dry, and multiple dry water years during a 20-year projection will meet the projected water demand associated with the proposed project, in addition to the water system's existing and planned future uses, including agricultural and manufacturing uses." If the water demand for a proposed project is accounted for in an adopted UWMP, the WSA preparer may incorporate that information into the WSA.

The WSA also requires additional analysis if any portion of the water purveyor's water supplies include groundwater. A description of any groundwater basin or basins from which the proposed project will be supplied in addition to a detailed description and analysis of the amount and location of groundwater pumped by the public water system for the past five years should be provided. The WSA should also include an analysis of the sufficiency of the groundwater from the basin or basins from which the proposed project will be supplied. For a basin for which a court or the State Water Resources Control Board has adjudicated the rights to pump groundwater, the order or decree adopted by the court, or the State Water Resources Control Board, should be included.

Upon adoption, the WSA is incorporated into the CEQA document being prepared for the project, and the lead agency must determine, based on the entire record, whether projected water supplies will be sufficient to satisfy demands for the project, in addition to existing and future uses.

[4] City of Ontario, 2021. *2020 Urban Water Management Plan.*
[5] City of Ontario, 2021. *2020 Urban Water Management Plan.*

2.3 WATER DEMAND ANALYSIS

This section provides the current and projected future water demands for the City of Ontario, the estimated water demand for the proposed project, and also assesses if the proposed project or previously proposed project was included in the projection of future water demands for the City of Ontario, as described in the 2020 UWMP. As per Section 10910 (c) (2) of the California Water Code:

> *"if the projected water demand associated with the proposed project was accounted for in the most recently adopted urban water management plan, the public water system may incorporate the requested information from the urban water management plan in preparing the elements of the assessment required to comply with subdivisions (d), (e), (f), and (g)."*

2.3.1 City of Ontario Water Demands

The primary source of water for the proposed project would be existing water supplies used by the City to provide service to its customers. This section analyzes the water demands of existing and planned future City customers.

Current and projected potable and recycled water demands by customer class are presented in Table 2. The City's total 2020 demand was 39,921 AFY. Potable water demands were 32,109 AFY and recycled water demands were 7,812 AFY (including agricultural demands). The projected 2045 total demand is 73,668 AFY, with potable water demands projected to be 57,609 AFY and recycled water demands projected to be 16,059 AFY (including agricultural demands).

Table 2 Current and Projected Water Demands for the City of Ontario (AFY)

Use Type	2020	2025	2030	2035	2040	2045
Potable Water						
Single Family	12,502	15,723	17,540	19,109	22,431	22,431
Multi-Family	5,068	6,374	7,110	7,746	9,093	9,093
Commercial	5,359	6,740	7,519	8,191	9,615	9,615
Industrial	2,078	2,613	2,915	3,176	3,728	3,728
Institutional/Governmental	538	677	755	822	965	965
Landscape	4,631	5,824	6,497	7,078	8,309	8,309
Losses	1,565	1,968	2,196	2,392	2,808	2,808
Other	368	463	516	562	660	660
Sub Total	**32,109**	**40,382**	**45,058**	**49,076**	**57,609**	**57,609**
Recycled Water Demand						
Recycled Water Demand	7,812	12,168	13,465	14,762	16,059	16,059
Total	**39,921**	**52,550**	**58,513**	**63,838**	**73,668**	**73,668**

AFY = Acre-feet/year
Source: City of Ontario 2020 UWMP, 2021.

2. Water Supply Assessment

2.3.2 Proposed Project Water Demand

A description of the proposed project and buildout projections are provided in Table 1 above. The current land uses (livestock and dairy farming, plant nursery, and horse stables) use private groundwater wells for their water source. Therefore, the proposed development would require connections to the City's new or extended water mains for potable water use. Recycled water would be used for irrigating the natural turf Little League field, baseball/softball fields and multi-purpose fields, open space park areas and landscape areas. Potable water would be used for irrigating the Minor League Baseball Stadium field.

Table 3 provides the total water demand estimate for the proposed development and detailed calculations are provided in Attachment A. Indoor water demand was determined using potable water demand factors from the City's 2020 Water Master Plan and 2020 Recycled Water Master Plan. In addition, the City provided indoor water demands from metered data for similar athletic facilities (i.e., community centers and indoor athletic facilities) within the City. Outdoor water demand was determined using a combination of metered outdoor water demands provided by the City for existing multi-purpose fields and baseball and softball fields and the Maximum Allowable Water Allowance (MAWA) methodology was used to determine the water demand for open space park areas and landscaping.

Table 3 Water Demand Estimate for the Proposed Development

Land Use	Units	Water Demand Rate	Total Domestic Water Usage (gpd)
Potable Water			
Hotel	100 rooms	130 gpd/room [1]	13,000
Retail PA 2	5.06 acres	1,800 gpd/ac [1]	9,108
Retail PA 3	2.17 acres	1,800 gpd/ac [1]	3,906
Retail PA 4	6.54 acres	1,800 gpd/ac [1]	11,772
Baseball Stadium - Indoor	See Attachment A		5,033
Baseball Stadium - Field	390-ft Grass Field	5,028,056 gal/yr/field [2]	13,775
City Park	4,118 visitors (average)	3 gpcd [3]	12,354
Community Center	70,000 sf	11 gal/yr/sf [4]	2,110
Indoor Athletic Facility - building	159,450 sf	11 gal/yr/sf [4]	4,805
kitchen	1,200 sf	0.0685 gpd/sf [5]	82
Sub Total	**-**	**-**	**75,945 gpd (85.1 AFY)**
Recycled Water			
Little League Stadium	1 natural turf field	2,154,240 gal/yr/field [6]	5,902
Baseball/Softball Fields	4, 390-ft natural turf fields	5,028,056 gal/yr/field [2]	55,102
Multi-Purpose Fields	6 natural turf fields	3,900,072 gal/yr/field [7]	64,111
Open Space Park	236,749 sf [8]	---	8,420
Landscaping (hotel/retail)	704,801 sf [9]	**---**	6,267
Sub Total	**-**	**-**	**139,802 gpd (157 AFY)**
Total	**-**	**-**	**215,748 gpd (242 AFY)**

ac = acre; sf = square foot; gpd = gallons per day; gpd/ac = gallons per day per acre; gpcd = gallons per capita per day; gpd/sf = gallons per day per square foot; gal/yr/field = gallons per year per field.

[1] Source: AKM Consulting Engineers, June 2020. Draft City of Ontario Water Master Plan Update.

[2] Based on information provided by the City for 390-ft grass turf field.

[3] Conservatively used the same water demand (3 gpcd) as the baseball stadium. AECOM, 2015. Stadium Reconstruction Project – Water Utility Technical Memorandum.

[4] Based on information provided by the City for existing community centers (Westwind Community Center and Anthony Munoz Park; including restrooms, fountains, pool). See Attachment A for detailed calculation.

[5] Energy Information Administration, 2017. Daily water consumption in large commercial buildings - snack bar or concession stand.

[6] Based on information provided by the City for little league field.

[7] Based on information provided by the City for multi-purpose fields for sports complex.

[8] Assumes 50 percent of open space park is natural turf area. Water demand determined using Maximum Allowable Water Allowance (MAWA) from DWR Model Water Efficient Landscape Ordinance (MWELO) water budget workbook for nonresidential landscapes.

[9] Assumes 25 percent of hotel/retail acreage landscaped. Water demand determined using Maximum Allowable Water Allowance (MAWA) from DWR Model Water Efficient Landscape Ordinance (MWELO) water budget workbook for nonresidential landscapes.

As shown in Table 3, the total potable water demand is estimated to be 75,945 gallons per day (gpd) or 85.1 AFY. The total recycled water demand is estimated to be 139,802 gpd or 157 AFY. Therefore, the total water demand for the project would be 215,748 gpd or 242 AFY. Detailed water demand calculations are included in Attachment A.

2.3.3 Proposed Project with Respect to Approved Armstrong Ranch Specific Plan and 2020 UWMP

The original project proposed for the site was the Armstrong Ranch Specific Plan, which was approved by the City in December 2017. The Specific Plan provided for up to 891 dwelling units on approximately 189.8 acres. A WSA was prepared for the Armstrong Ranch Specific Plan that evaluated a larger number of residential units (994 units) than was included in the approved Specific Plan and Certified EIR. A total water demand of 606 acre-feet per year (AFY) was projected in the 2015 WSA. The 2015 WSA concluded the City's available water supply would meet the projected water demand of the Armstrong Ranch Specific Plan during normal, single dry and multiple dry years.

Based on the land use maps and future water demand and population projections provided in Appendix B of the 2015 UWMP and Appendix E of the 2020 UWMP, it appears that the original project (Armstrong Ranch Specific Plan) was included in both the 2015 and 2020 UWMP. The WSA for the Armstrong Ranch Specific Plan estimated a total water demand of 606 AFY. The 2015 and 2020 UWMPs stated that the City's available water supply would meet the projected water demands during normal, single dry and multiple dry years. The proposed project's total water demand of 242 AFY is less than the original project's water demand of 606 AFY. Therefore, the conclusions reached in the 2015 and 2020 UWMPs that the City can meet its future water demand during normal, single-dry, and multiple dry years over the next 25 year period is valid, including the water demand for the proposed project. Additionally, both the City's 2020 Water Master Plan and 2020 Recycled Water Master Plan accounted for the water demand of the Armstrong Ranch Specific Plan for future planning efforts.

2.4 WATER SUPPLY ANALYSIS

This section identifies the sources of water used by the City of Ontario and evaluates the water supplies that would be used by the City and the proposed project during normal, single-dry, and multiple-dry years through the year 2045. Water sources used by the City include groundwater from the Chino Basin, treated groundwater from CDA, recycled water from IEUA, imported water from WFA, and purchased water from SAWCo.

The City of Ontario extracts groundwater from 17 active wells within the Chino Basin. Groundwater from the Chino Basin is used by the City of Ontario either directly by pumping into its distribution system or by treating the groundwater at one of its two treatment plants and then pumping the treated groundwater into the City of Ontario's distribution system. The ultimate capacity of Ontario's existing and future wells is projected to be 98.5 million gallons per day (mgd) or 110,337 AFY. Additional information on the City's groundwater resources and groundwater rights is provided in Section 2.5.

In addition to its well production, the City of Ontario also purchases treated Chino Basin groundwater from the CDA. The CDA was formed in 2002 as a Joint Powers Authority consisting of Inland Empire Utilities Agency; Jurupa Community Services District; Cities of Chino, Chino Hills, Norco and Ontario, and Santa Ana River Water Company. Western Municipal Water District joined in 2010.

CDA can produce up to 40,000 AF from the Chino Basin every year for the purpose of groundwater cleanup and control of contaminant migration. The member agencies have contract entitlements to receive a total of 35,200 AFY of treated water from CDA. The City's current contract entitlement is 8,533 AFY; however, this may increase in years where the amount of water produced is greater than the projected amount of 40,000 AF. The CDA currently owns and operates two desalters (Chino I and Chino II Desalters) that consist of groundwater extraction wells connected to pumps and pipelines that direct water to advanced treatment facilities. The final product is a high-quality drinking water, which is sold to member agencies through "take or pay" contracts.[6]

Recycled water is provided to the City of Ontario by IEUA, which owns and operates four regional water recycling plants that produce disinfected and filtered tertiary treated recycled water in compliance with California Title 22 regulations. IEUA provides recycled water to the City of Ontario and their local agencies through a distribution system consisting of pipelines, booster pump stations, pressure regulating station, and reservoirs.[7]

The City has been obtaining recycled water from IEUA since 1972. Currently, recycled water is used in the City for agricultural irrigation, landscape irrigation, golf course irrigation, and industrial uses. As stated in the City's 2020 UWMP, the City has the right of first purchase of their Base Entitlement. Base Entitlement is defined as the total quantity of sewage delivered into the regional sewerage system by the City less normal processing losses resulting from the treatment of sewage. Based on the City's current Recycled Water Master Plan and the 2020 UWMP, the City has enough recycled water rights to meet future recycled water demands. IEUA estimated that the total amount of wastewater collected within the City's service area during FY 2022-23 was approximately 13,853 AFY. In the same fiscal year the City used 8,790 AF of recycled water for direct use and 3,517 AFY of recycled water for groundwater recharge.[8]

The City also obtains treated imported water from the WFA, which is a wholesale water supplier to the cities of Chino, Chino Hills, Ontario, Upland, and the Monte Vista Water District. The WFA purchases imported water from IEUA, which in turn purchases untreated water from the Metropolitan Water District (MWD).[9] The MWD obtains its water from the State Water Project (SWP) and has projected 100 percent water supply reliability over the next 20 years, as per its 2020 UWMP.[10]

WFA owns and operates the Agua de Lejos Treatment Plant located in the City of Upland. The Agua de Lejos Treatment Plant is a conventional surface water treatment facility that treats and disinfects imported water supplies from the SWP delivered by MWD through IEUA. The Agua de Lejos Treatment Plant began operating in 1988 and has a treatment capacity of 81 mgd.[11] The City owns 31.4 percent of the plant capacity (25.4 mgd,

[6] City of Ontario, 2021. *2020 Urban Water Management Plan.*
[7] Inland Empire Utilities Agency. 2021. *2020 Urban Water Management Plan.*
[8] Inland Empire Utilities Agency. 2023. *FY 2022-23 Exhibit for Recycled Water Reconciliation.*
[9] City of Ontario, 2021. *2020 Urban Water Management Plan.*
[10] Metropolitan Water District of Southern California. 2021. *2020 Urban Water Management Plan.*
[11] City of Ontario. 2021. *2020 Urban Water Management Plan.*

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28,500 AFY). The maximum capacity available to the City is 19,924 AFY, which equals the total capacity of 28,000 AFY less the Dry Year Yield shift obligation of 8,076 AFY.[12]

The City also purchases water from SAWCo which delivers potable and irrigation water to a variety of shareholders. These shareholders include most residents of San Antonio Heights (an unincorporated area of San Bernardino County), the Cities of Upland and Ontario, Monte Vista Water District, the United States Forest Service, the San Bernardino County Flood Control District, local golf courses, rock quarries, and grove irrigators. In 2020, SAWCo's total active share entitlement was 12,570 AF. The City has an entitlement of 600 AF. SAWCo's water supply sources include surface water obtained from the San Antonio Canyon, water from the San Antonio Tunnel, and groundwater sources from the Chino Basin, Six Basins, and Cucamonga Basin.[13]

Water supplies provided to the City for the year 2022 are summarized in Table 4.

Table 4 Water Supply Sources for the City of Ontario in 2022

Water Supplier	Water Source	Amount (AFY)
City of Ontario	Groundwater	18,967
Chino Basin Desalter Authority (CDA)	Purchased/Imported Water	9,083
Water Facilities Authority (WFA)	Purchased/Imported Water	4,235
San Antonio Water Company (SAWCo)	Purchased/Imported Water	376
Inland Empire Utilities Authority (IEUA)	Recycled Water	10,066
Total		**42,727**

Source: City of Ontario 2022 Water Production Summary, 2023; Inland Empire Utilities Agency FY 2021-22 Exhibit for Recycled Water Reconciliation, 2023.
AFY = Acre-feet per year

It is required that every urban water supplier assess the reliability to provide water service to its customers under normal, dry, and multiple dry water years. This evaluation from the 2020 UWMP is provided in Table 5. The City depends on a combination of imported and local supplies to meet its water demands and has taken numerous steps to ensure that it has adequate supplies. The City's projected water supplies are based on historical long-term averages and supplies during previous dry year conditions obtained from CDA, SAWCo, WFA and groundwater supplies from the Chino Basin. In the event that water from CDA, SAWCo, and WFA may be limited, the City has the flexibility to increase groundwater production from the Chino Basin. Consequently, water supplies available to the City are projected to meet demands for the next 25 years during normal years, single-dry years, and multiple-dry years, as shown in Table 5.[14]

[12] City of Ontario. 2016. *2015 Urban Water Management Plan.*
[13] City of Ontario. 2016. *2015 Urban Water Management Plan.*
[14] City of Ontario. 2021. *2020 Urban Water Management Plan.*

Table 5 Normal, Single Dry, and Multiple Dry Year Supply and Demand (AFY)

		2025	2030	2035	2040	2045
Normal Year						
Supply Totals		52,550	58,513	63,838	73,668	73,668
Demand Totals		52,550	58,513	63,838	73,668	73,668
Difference		0	0	0	0	0
Single Dry Year						
Supply Totals		57,058	63,534	68,847	79,989	79,989
Demand Totals		57,058	63,534	68,847	79,989	79,989
Difference		0	0	0	0	0
Multiple Dry Year						
First Year	Supply Totals	56,080	62,445	67,667	78,618	78,618
	Demand Totals	56,080	62,445	67,667	78,618	78,618
	Difference	0	0	0	0	0
Second Year	Supply Totals	56,248	62,632	67,870	78,853	78,853
	Demand Totals	56,248	62,632	67,870	78,853	78,853
	Difference	0	0	0	0	0
Third Year	Supply Totals	59,493	66,246	71,786	83,403	83,403
	Demand Totals	59,493	66,246	71,786	83,403	83,403
	Difference	0	0	0	0	0
Fourth Year	Supply Totals	54,628	60,428	65,481	76,078	76,078
	Demand Totals	54,628	60,428	65,481	76,078	76,078
	Difference	0	0	0	0	0
Fifth Year	Supply Totals	47,463	52,820	57,237	66,500	66,500
	Demand Totals	47,463	52,820	57,237	66,500	66,500
	Difference	0	0	0	0	0

Source: City of Ontario 2020 UWMP, 2021.
Notes: Supply and demand are equal for years 2040 and 2045 because the City anticipates buildout to occur in 2040.

The City will increase its total normal-year water supply from 39,921 AF of water delivered in 2020 to 73,668 AF in 2045. The increased water supply will come from full utilization of the City's groundwater rights in the Chino Basin (including increased groundwater recharge with recycled water). The Chino Basin was adjudicated under the Chino Basin Judgment in 1978. During drought cycles, the Chino Basin has been managed to maintain sustainable groundwater levels. Therefore, based on historical and on-going management practices, the City will be able to rely on the Chino Basin for adequate supply over the next 25 years under single dry years and drought periods of five consecutive years. [15]

Additionally, an increase in imported water is assumed to be available in wet and normal years. With the ability for the City to store water in the Chino Basin, in its local and supplemental storage accounts as well as the MWD's Dry-Year Yield (DDY) Program storage account, the City has the capability and water supply available to reduce imported water deliveries in dry years and increase groundwater production to meet future demands.

[15] City of Ontario. 2021. *2020 Urban Water Management Plan.*

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Section 2.5 provides a description of the management of groundwater resources in the Chino Basin, as well as information on basin management.

2.5 GROUNDWATER ANALYSIS

Since most of the potable water supplied by the City of Ontario comes from groundwater, SB 610 requires a groundwater analysis to be included as part of the WSA. The Water Code requires that the WSA include:

- Groundwater information from the 2020 UWMP
- Groundwater basin description including the legal rights to pump
- Historic use of groundwater from the 2020 UWMP
- Projected use of groundwater
- Sufficiency of groundwater from the Chino Basin

The City of Ontario's legal right to pump water in an amount necessary to meet its demands has been adjudicated and the safe yield of the aquifer has been determined. The construction of Wells 45, 46, and 47, as part of the Dry Year Yield Storage Program, increases the City's groundwater pumping capacity to meet peak demands. The City also has stored water in the Chino Basin and participates in an ongoing groundwater recharge program, using stormwater, dry-weather runoff, and recycled water, that ensures the safe yield of the Chino Basin is not exceeded. In addition, the City participates in water conservation efforts, adopts ordinances pertaining to water shortage contingency planning and the prevention of water waste, conservation pricing, and various public outreach programs to encourage its customers to reduce their water consumption.

2.5.1 Groundwater Information from the 2020 UWMP

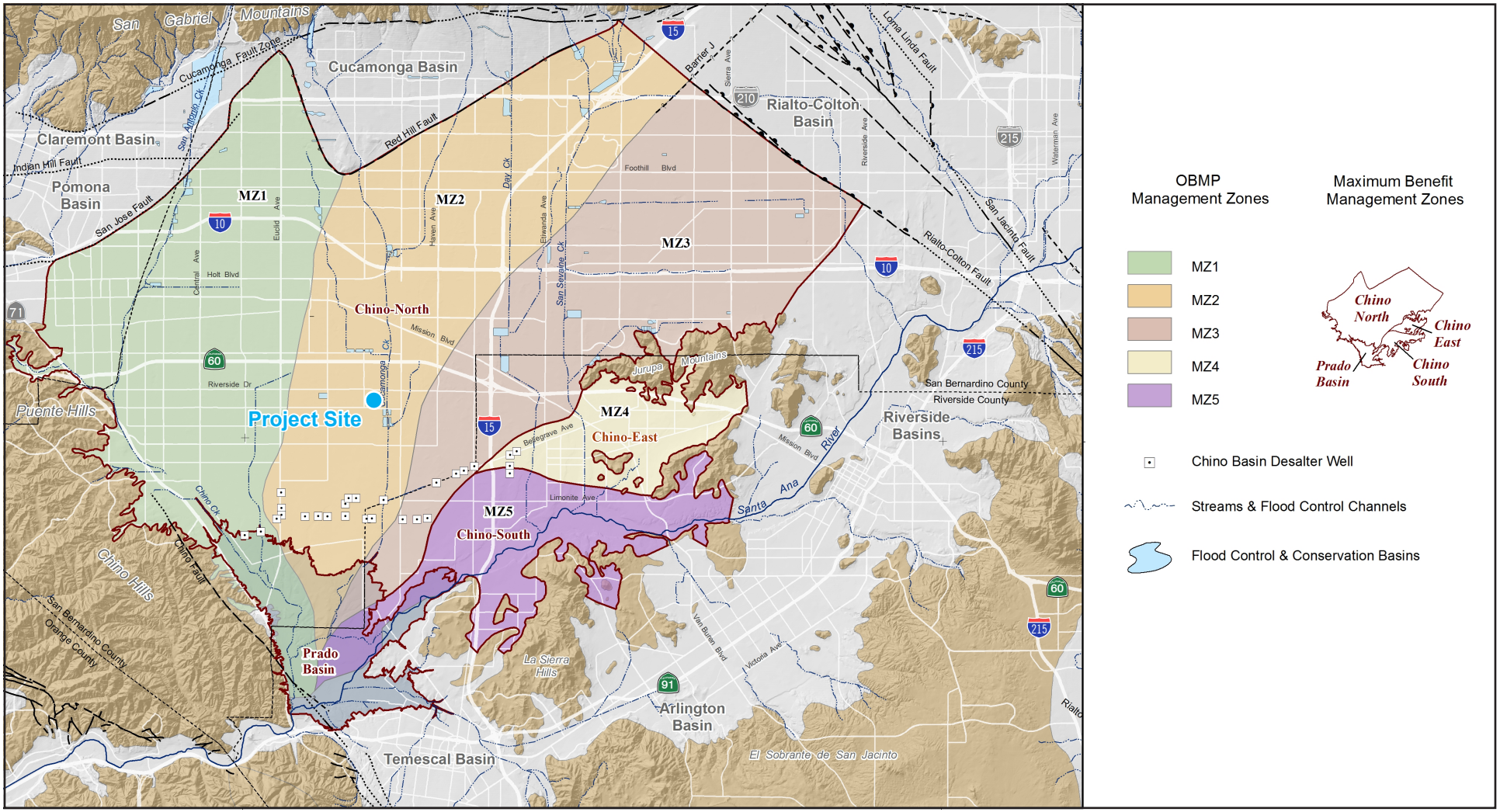
The 2020 UWMP adopted by the City in June 2021 contains a description of the Chino Groundwater Basin, the City's current and projected water supplies and demands, the reliability of the water supply, water shortage plans, the Optimum Basin Management Plan, and the adjudication judgment administered by the Chino Basin Watermaster. In addition, Appendix E of the UWMP explains the methods and calculations by which the future water demand of the City was estimated, based on the land use designations in the General Plan.

2.5.1.1 GROUNDWATER BASIN DESCRIPTION

The City of Ontario obtains its groundwater from the Chino Groundwater Basin. The Chino Basin encompasses about 235 square miles of the upper Santa Ana River watershed and lies within portions of San Bernardino, Riverside, and Los Angeles counties. The Chino Basin has approximately five to six million-acre feet of water in storage and an estimated one million acre-feet of storage capacity. The Chino Basin is divided into five management zones, based on similar hydrologic conditions, as shown in Figure 5, *Chino Groundwater Basin Management Zones*. The City of Ontario is located approximately in the center of the Chino Basin.

Groundwater quality in Chino Basin is generally good with better quality in the northern portion of the basin where recharge occurs. Salinity (TDS) and nitrate-nitrogen concentrations are higher in the southern portion of the basin. The Chino Basin has been extensively studied by the Chino Basin Watermaster. Reports are available at this website: http://www.cbwm.org/.

Figure 5 - Chino Groundwater Basin Management Zones



Source: Wildermuth International, 2017.

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The Chino Basin Watermaster began development of the Optimum Basin Management Program (OBMP) in 1998 and completed it in 2000. The OBMP was updated in 2020. The purpose of the program is to address both water quality and water supply considerations. The southern portion of the Chino Basin requires groundwater treatment to control the outflow of salts and nitrates into the Santa Ana River. As such, one of the main benefits of the CDA is to remove salts and nitrates to clean up the Chino Basin. CDA operates 22 groundwater extraction wells that prevent brackish groundwater from flowing into the Santa Ana River. CDA removes salts from brackish groundwater extracted from the lower Chino Basin through the Chino I and II Desalter facilities. The Chino I Desalter is in the City of Chino and has a total capacity of 14.2 MGD. The Chino II Desalter is in Jurupa Valley and was expanded in 2017 to have a total capacity of 33 MGD.[16]

The OBMP and its implementation agreement, the Peace Agreement, was approved by the Court in October 2000. One of the stipulations of the OBMP requires member agencies to extract approximately 40,000 AFY of groundwater from the southern portion of the Chino Basin, treat it to potable water standards, and then deliver it to the member agencies. Member agencies have contract entitlements to receive a total of 35,200 AFY of treated water from CDA. The City's current contract entitlement is 8,533 AFY.[17]

2.5.1.1 LEGAL RIGHT TO PUMP FROM THE CHINO BASIN

Water rights to the Chino Basin were adjudicated in 1978 by the Superior Court of the State of California for San Bernardino County. Since that time, the Chino Basin has been sustainably managed, as required by the Judgment, under the direction of the court-appointed Watermaster. The original Watermaster was the Chino Basin Municipal Water District (now IEUA). Since 1998, the Watermaster has been the Chino Basin Watermaster.

Multiple cities and water purveyors pump groundwater from the Chino Basin for all or part of their municipal and industrial water supplies. Agricultural users also pump groundwater from the Basin. The safe yield of the Chino Basin is 131,000 AFY as of 2020. The safe yield quantity is allocated among three pools of right holders as follows:

- Overlying Agricultural Pool (dairymen, farmers, and the State of California)
- Overlying Non-Agricultural Pool (businesses and industries)
- Appropriative Pool (local cities, public water districts, and private water companies)

The Operating Safe Yield (OSY) is defined as the annual amount of groundwater which the Watermaster determines can be produced from the Appropriative Pool parties without replenishment obligation. The City of Ontario is a member of both the Overlying Non-Agricultural Pool and the Appropriative Pool and is therefore subject to the regulations imposed by the Chino Basin Watermaster. The Judgment allocates a portion of the safe yield to the Overlying Non-Agricultural Pool and a portion of the OSY to the Appropriative Pool.

[16] City of Ontario. 2021. *2020 Urban Water Management Plan.*
[17] City of Ontario. 2021. *2020 Urban Water Management Plan.*

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Pursuant to the Judgment, the City has appropriative rights to approximately 21 percent of the OSY allocated to the Appropriative Pool and 53 percent of the safe yield assigned to the Overlying Non-Agricultural Pool.[18] With an OSY of 40,834 AFY, the City's current appropriative right is approximately 8,470 AFY as of July 2021. As of July 2021, the safe yield is allocated at 82,800 AFY to the Overlying Agricultural Pool and 7,350 AFY to the Overlying Non-Agricultural Pool. The City has purchased and has rights to 3,921 AF of Overlying Non-Agricultural Pool water.[19]

The Judgment states that all Chino Basin users can pump enough water from the Basin to meet their requirements. If pumping by a party exceeds its share of the safe yield, assessments are levied by the Chino Basin Watermaster to replace overproduction. The Judgment also recognizes that there is a substantial amount of available unused groundwater storage capacity in the Chino Basin that can be used for storage and the conjunctive use of supplemental and basin waters.[20] The Chino Basin Watermaster has the authority to reallocate shares of unallocated safe yield water on an annual basis, as per the latest 2019 Watermaster Resolution No. 2019-03.[21] The Watermaster publishes an annual report that summarizes the status and management of the Chino Basin. A copy of the Chino Basin Judgment and latest Watermaster Annual Report can be found at www.cbwm.org.

The City of Ontario also participates in the Dry Year Yield (DYY) Storage Program, which is a cooperative conjunctive use program involving MWD, IEUA, Chino Basin Watermaster, Three Valleys Municipal Water District, and some of the Chino Basin groundwater producers. Under the DYY Program, MWD is allowed to store up to 100,000 AF of water in the Chino Basin when surplus water is available and the Chino Basin groundwater producers can extract 33,000 AFY for three years in dry, drought, or emergency periods. The City authorized execution of an agreement with IEUA to participate in the DYY program in 2003. Participation obligates the City to reduce its use of imported water compared to a baseline by a fixed amount, known as the "shift obligation." The City's shift obligation is 8,076 AFY. During years when MWD calls for extraction, the City's WFA purchases would be reduced by up to 8,076 AFY compared to the previous year. Because Jurupa Community Services District does not have an imported water connection, it has entered into an agreement with the City to meet its shift obligation. Under this agreement, Jurupa Community Services District conveys groundwater to the City in an amount equal to its shift obligation. This program allows the City to be less reliant upon imported water supplies and the additional groundwater capacity allows the City to increase the percentage of groundwater supply used to meet peak demands.[22,23]

In addition to the appropriative pool and overlying non-agricultural pool water rights, as well as the contract obligations through the DYY Program, the following is a summary of other groundwater rights for Chino Basin:

[18] City of Ontario. 2021. *2020 Urban Water Management Plan.*
[19] City of Ontario. 2021. *2020 Urban Water Management Plan.*
[20] Wildermuth Environmental, Inc. September 2018. *2018 Recharge Master Plan. Prepared for the Chino Basin Watermaster and the Inland Empire Utilities Agency.*
[21] Chino Basin Watermaster. 2019. *Watermaster Resolution No. 2019-03. Resolution of the Chino Basin Watermaster Regarding 2018 Appropriative Pool Pooling Plan and CAMA Amendments.*
[22] City of Ontario. 2021. 2020 *Urban Water Management Plan.*
[23] Chino Basin Watermaster. 2022. *2022-2023 Assessment Package.*

- **LAND USE CONVERSIONS**

  As of 2022, the City receives 5,575 AFY from the Chino Basin due to conversions from agricultural to non-agricultural land uses. The Chino Basin Watermaster reallocates the unused portion of the Chino Basin Safe Yield from the Overlying Agricultural Pool to the Appropriative Pool members as a supplement to the Appropriative Pool share of Operating Safe Yield rights in any year.[24,25]

- **FONTANA RECYCLED WATER RIGHTS**

  The City also has a long-term contract to purchase up to 3,000 AFY of recharged recycled water rights from the City of Fontana, which does not operate its own water system.[26]

- **CITY GROUNDWATER STORAGE**

  The City has rights to store water in the Chino Basin (Appropriative and Overlying Non- Agricultural) and has been increasing its various storage accounts in recent years. The City holds water in both local storage accounts and supplemental accounts. Local storage accounts hold unpumped OSY groundwater rights and stormwater that has been recharged into the Chino Basin. Supplemental accounts hold both imported water and recycled water that has been recharged into the Chino Basin. As of June 30, 2023, the City has 108,912 AF in storage pursuant to Appropriative rights and zero AF in storage pursuant to Overlying Non-Agricultural rights.[27,28]

- **INCREASED GROUNDWATER RECHARGE**

  The City is entitled to water rights due to groundwater recharge with stormwater and recycled water in the Chino Basin. The credited amount is based on the volume recharged and therefore varies annually but is projected to increase over time. In 2019, 2,544 AF of recycled water was recharged for the City. In 2021, no recharge credits were purchased by the City due to limitations on groundwater storage capacity. In 2022, 6,400 AF was recharged for the City including 3,000 AF from the city of Fontana. [29]

The various groundwater rights held by the City of Ontario are summarized in Table 6.

[24] City of Ontario. 2021. 2020 *Urban Water Management Plan.*
[25] Chino Basin Watermaster. 2022. *2022-2023 Assessment Package.*
[26] City of Ontario. 2021. 2020 *Urban Water Management Plan.*
[27] City of Ontario. 2021. 2020 *Urban Water Management Plan.*
[28] Chino Basin Watermaster. 2022. *2022-2023 Assessment Package.*
[29] Chino Basin Watermaster. 2022. *2022-2023 Assessment Package.*

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Table 6 City of Ontario Groundwater Rights Summary

	Current as of 2022 (AFY)
Dry Year Storage Program	0
Appropriative Pool	8,470
Overlying Non-Agricultural Pool	3,921
Land Use Conversions	5,575
Groundwater Recharge Credits	Varies
Fontana Recycled Water Rights	Max. 3,000
Groundwater Storage Accounts	Appropriative Pool: 108,912
	Overlying Non-Agricultural: 0

Source: Chino Basin Watermaster 2022-2023 Assessment Package, 2022 and City of Ontario 2020 UWMP, 2021.

2.5.2 Historic Use of Groundwater

The City owns and operates 17 active groundwater wells. The amount of groundwater pumped by the City of Ontario from the Chino Basin since 2000 is listed below in Table 7. A map of the location of the groundwater wells and pressure zones is shown on Figure 6, *Ontario Ultimate Water System.*

Table 7 Historic Groundwater Production

Calendar Year	Groundwater produced (AFY)
2016	22,751
2017	24,672
2018	26,109
2019	19,604
2020	18,295
2021	17,171
2022	18,967
Average	**21,081**

Source: Chino Basin Watermaster 2022-2023 Assessment Package, 2021 and City of Ontario 2020 UWMP, 2021.

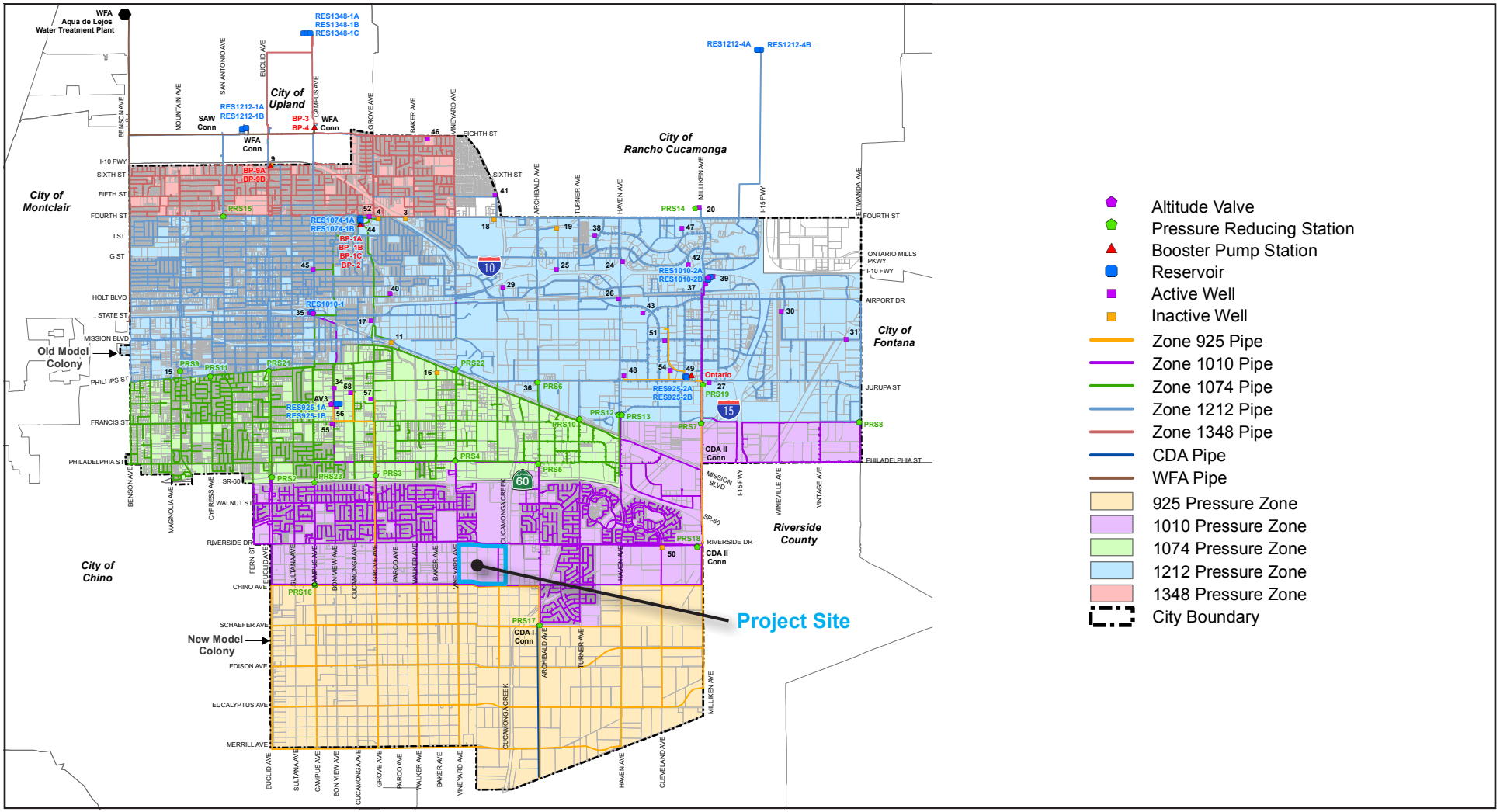
2.5.3 Projected Use of Groundwater

The proposed project will receive water from the City of Ontario, using groundwater extracted from the Chino Basin, treated groundwater from the CDA, recycled water from the IEUA, and imported water from the WFA.

Groundwater from the Chino Basin will be directly pumped by the City of Ontario into its distribution system or by treating the groundwater at the City's two ion-exchange facilities before pumping it into the distribution system. The City's current well capacity is 38,600 gallons per minute (gpm) or 55.6 mgd. The City's ultimate source of supply will be equal to or greater than 68,404 gpm, this includes the nine future wells.

The projected amount of groundwater pumped by the City of Ontario from the Chino Basin up to the year 2045 is listed below in Table 8.

Figure 6 - Ontario Ultimate Water System



Source: AKM, 2011.

2. Water Supply Assessment

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Table 8 Projected Groundwater Production

Calendar Year	Groundwater produced (AFY)
2025	20,249
2030	22,915
2035	24,943
2040	31,476
2045	31,476

Source: City of Ontario 2020 UWMP, 2021.

2.5.4 Sufficiency of Groundwater from Chino Basin

According to the 2020 UWMP, the City's water supply (including conservation measures) will be sufficient to supply all its needs to residential, commercial, and industrial customers through the year 2045 during normal, single dry, and multiple dry years. The City of Ontario's legal right to pump water in an amount necessary to meet its demands has been adjudicated and will ensure the long-term reliability of the groundwater source as the safe yield of the aquifer has been determined.

Approximately two-thirds of the City's water supply is groundwater pumped through its own wells located in the Chino Basin. The construction of Wells 45, 46, and 47, as part of the DYY Storage Program, increases the City's groundwater pumping capacity to meet peak demands. The City also has 108,912 AF of stored water in the Chino Basin as of 2022 and participates in an ongoing groundwater recharge program, using stormwater, dry-weather runoff, and recycled water, that ensures the safe yield of the Chino Basin is not exceeded. The expansion of the groundwater desalter program and ongoing expansion of the recycled water program will reduce the City's dependence on groundwater pumping. In addition, the City adopts ordinances pertaining to water shortage contingency planning and the prevention of water waste, conservation pricing, and various public outreach programs to encourage its customers to reduce their water consumption.[30]

2.6 WATER SHORTAGE CONTINGENCY PLANNING

To prepare for water shortages, the City adopted Ordinance No. 3027 on September 1, 2015, in response to the Emergency Conservation Regulations mandated by the State Water Resources Control Board. Under this ordinance, the Water Conservation Plan was updated with more stringent prohibitions and penalties. Ordinance 3027 updated the City's Water Conservation Plan that is codified in Chapter 8A, Title 6 of the City's Municipal Code ("Water Conservation Plan").

The City Council adopted its 2020 Water Shortage Contingency Plan in June 2021, which describes the methods to achieve and the implications of reducing water supplies to at least 50 percent. The City and OMUC implement various programs to reduce customer water consumption, including stringent use restrictions, actions, and penalties, as well as public outreach, education, and communication programs.

[30] City of Ontario. 2021. 2020 *Urban Water Management Plan.*

Depending on the initiative of the City's customers to voluntarily conserve water at times of crisis, the City can determine when and how quickly to implement the mandatory conservation phases. The severity of the water shortage will influence which methods will be implemented. The demand reduction stages that correspond to water shortage levels are as follows:

- Stage 1 – Water supply shortage of up to 10 percent or as otherwise directed by executive order or State agency regulation
- Stage 2 – Water supply shortage between 10 and 20 percent
- Stage 3 – Water supply shortage between 20 and 30 percent
- Stage 4 – Water supply shortage between 30 and 40 percent
- Stage 5 – Water supply shortage between 40 and 50 percent
- Stage 6 – Water supply shortage greater than 50 percent

As of May 2023, the City entered into a Voluntary Conservation Stage where the public is encouraged to voluntariy conserve water described in the Water Shortage Contingecy Plan.

2.7 WATER EFFICIENCY STRATEGIES

The City has implemented "Demand Management Measures" to reduce its water demands and achieve its water use targets. These measures include:

- Adoption of an ordinance to promote conservation and prevent water waste. The City adopted Ordinance No. 3027 in October 2015 to establish water conservation measures, staged water supply shortage demand management measures, and prevent water waste. The adoption of Ordinance No. 3027 was part of a comprehensive water shortage planning effort to manage the City's response to water supply challenges it may encounter.
- Metering of all customer connections, including separate metering for single-family residential, commercial, industrial, large landscape, and institutional/governmental facilities.
- Implementation of conservation pricing. The City's current water rate structure is tiered to promote water conservation by customers. In the event the customer uses more than the amount of water allotted for the budgeted allocation, a Drought Surcharge rate would apply.
- Development of public education and outreach programs regarding water conservation. The City developed a public information program to educate the public on the benefits of water conservation. The program involves the dissemination of information through literature provided at City Hall and other City of Ontario facilities and articles in the City of Ontario newsletter. The City includes periodic information flyers with the water bills to address water conservation and other important matters. The City also periodically holds public seminars and workshops with other local agencies to promote water conservation.
- Implementation of actions to assess and manage water distribution system losses. The City has water conservation literature that alerts customers to be on the lookout for water system leaks and to correct them promptly. As part of normal operation and maintenance of the water system, City staff performs preventive maintenance. This includes regular checks on valves and meters and pipeline maintenance. If leaks are encountered or suspected during routine inspection of the system, further evaluation is conducted

and leaks are subsequently repaired. The City also monitors the water system for loss by comparing water production to water sales.

- Provision of rebate programs. The City routinely hosts seminars and workshops in the community to promote landscape and offers a rebate program for the purchase of landscape-related items to both residential and commercial customers to promote water conservation. The City also offers a rebate program for the purchase of high-efficiency washing machines, high-efficiency toilets, and weather-based irrigation controllers. [31]

Furthermore, the City along with other IEUA member agencies implement a Regional Water Use Efficiency Business Plan. The Business Plan references SB X7-7 and the State Water Resources Control Board's Emergency Conservation Regulations that help guide the development of water reduction goals. The Business Plan describes in detail how the region and the City will achieve the water reduction goals. In addition, the City participates in water conservation efforts through the California Urban Water Conservation Council committing to implement Best Management Practices for more efficient use or conservation of water.[32]

2.8 SUMMARY

A WSA was prepared to assess the water demand and supply conditions with implementation of the proposed project. As shown in Table 3, the total indoor/potable water demand for the proposed project is conservatively estimated to be 75,945 gpd or 85.1 AFY. The total recycled water demand is conservatively estimated to be 139,802 gpd or 157 AFY. Therefore, the total water demand for the project will be 215,748 gpd or 242 AFY.

According to the City's 2020 UWMP, the City has adequate supplies to serve 100 percent of its customers during normal, dry year, and multiple dry year demand through 2045 with projected population increases and future development projects. Additionally, the original Armstrong Ranch Specific Plan projected a water demand of 606 AFY, which was incorporated into the 2015 and 2020 UWMPs as well as the 2020 Water Master Plan and the 2020 Recycled Water Master Plan. The projected total water demand for the current project is 242 AFY, or approximately 40 percent of the previously projected water demand. Therefore, implementation of the proposed project will not interfere with the City's ability to meet all existing and future water demands of its customers in normal, single-dry, and multiple-dry years.

This WSA concludes that the City will have sufficient water supplies available during normal, single dry, and multiple dry years through the year 2045 to meet all projected water demands associated with its existing and future customers, including the proposed project. In the unlikely event of a water shortage, implementation of the City's Water Conservation Plan and water efficiency strategies would ensure that sufficient water supplies were available to serve its customers, including the project and existing and future users.

[31] City of Ontario. 2021. *2020 Urban Water Management Plan.*
[32] Inland Empire Utilities Agency. 2022. Regional *Water Use Efficiency Business Plan FY 2022-24.*

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Attachment A – Detailed Water Demand Calculations

Attachment A – Detailed Water Demand Calculations

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ONTARIO SPORTS COMPLEX - Water Demand Summary

Potable Water Demand	Recycled Water Demand	Total Water Demand
27,720,104 gal/yr	51,027,744 gal/yr	78,747,848 gal/yr
85.1 afy	157 afy	242 AFY
75,945 gpd	139,802 gpd	215,748 gpd

Land Uses

City Park/Recreation			gal/yr		
Oudoor	Natural Turf/Park Areas		48,740,336	Pot. Fraction	0.35
Potable Water			4,509,210	RW Fraction	0.65
Indoor Athletic Facility			1,783,953		
Community Rec			770,000		
Stadium (Minor League Baseball)					
Outdoor		Grass Turf	5,028,056		
Indoor			1,836,995		
Hotel			4,745,000		
Retail (PA3)			1,425,690		
Commercial Space					
Retail (PA2)			3,324,420		
Retail (PA4)			4,296,780		
Outdoor (landscaping)			2,287,408		

WSA Criteria

DU	Demand Factor	People Per Household	
500	380 gpd/du		190,000 GPD
	LDR		212.8 AFY

Approved Project - Armstrong Ranch SP

994	544 gpd/du	old 2015 rate	540,736 GPD
	LDR	in 2015 WSA	606 AFY

ONTARIO SPORTS COMPLEX - WATER DEMAND CALCULATIONS

City Park/Recreation

NATURAL TURF FIELDS WATER DEMAND				
	gal/yr/field	Fields	gal/yr	gpd
390ft Grass Turf	5,028,056	4	20,112,224	55,102
Little League Grass Turf	2,154,240	1	2,154,240	5,902
Multi-Purpose/Soccer Fields	3,900,072	6	23,400,432	64,111

OPEN SPACE PARK WATER DEMAND				
	acres	natural turf	acres	Turf Area sf
open space park area	10.87	~50%	5.435	236,749

MAWA		((ETo - Eppt) x0.62)*(0.45 x LA)	
Eto	49.2	inches/yr	Ontario 2020 UWMP
PPT	10.68	inches/yr	Ontario 2020 UWMP
Eppt	2.67	inches/yr	25% of PPT
Landscape Area (LA)	236,749	square feet of natural turf	
		Assumes 50% of fields natural turf	
	3,073,440	gal/yr	
	8,420	gpd	
Total Outdoor Water	48,740,336	gal/yr	
	149.6	AFY	

1 afy = 325,851 gal/yr

INDOOR/POTABLE WATER DEMAND		
Average Attendees	4,118	average daily attendance
	3	gpcd
	4,509,210	gal/yr
	12,354	gpd
	13.8	AFY

TOTAL WATER DEMAND		
	53,249,546	gal/yr
	163.4	AFY

ONTARIO SPORTS COMPLEX - WATER DEMAND CALCULATIONS

Stadium (Minor League Baseball)

INDOOR/POTABLE WATER DEMAND					
		OFFSEASON			
	Games	Concerts	Other	Remaining	Total
No. per year	71	26	20	248	365
Visitors	3400	2942	2190		
Employees	346	346	346	43	
Restrooms	724,200	229,500	131,400	0	1,085,100
Concessions	145,905	53,430	41,100	0	240,435
Employees	245,660	89,960	69,200	106,640	511,460

Potable Demand factors			
restrooms	3	gpcd	
concessions	0.0685	gal/sf	30,000 sf
employees	10	gpcd	

gal/yr
gal/yr
gal/yr

Total Indoor Stadium Water Demand

1,836,995	gal/yr	5.64	AFY	0.27
5,033	gpd			

1 afy = 325,851 gal/yr

STADIUM FIELD WATER DEMAND			
	gal/yr/field	Fields	gal/yr
390ft Grass Turf	5,028,056	1	5,028,056

Total Outdor Stadium Water Demand - POTABLE WATER (per 1/5/24 email, Christy Stevens)

5,028,056	gal/yr	15.43	AFY	0.73
13,775	gpd			

TOTAL WATER DEMAND			
6,865,051	gal/yr	21.1	AFY
18,808			

ONTARIO SPORTS COMPLEX - WATER DEMAND CALCULATIONS

Stadium Retail/Hospitality (PA 3)

INDOOR/POTABLE WATER DEMAND				
Hotel	70,000 SF			
	100 rooms	4,745,000 gal/yr	14.56 AFY	
		13,000 gpd		
Retail	21,000 SF			
	2.17 acre	1,425,690 gal/yr	4.38 AFY	
		3,906 gpd		
Total Indoor Stadium Hospitality Water Demand				
		6,170,690 gal/yr	18.94 AFY	
Commercial Retail (PA 2)				
Retail	45,000 SF			
	5.06 acre	3,324,420 gal/yr	10.20 AFY	
		9,108 gpd		
Commercial Retail (PA 4)				
Retail	114,000 SF			
	6.54 acre	4,296,780 gal/yr	13.19 AFY	
		11,772 gpd		

OUTDOOR LANDSCAPING - WATER DEMAND			
MAWA		((ETo - Eppt) x0.62)*(0.45 x LA)	
Eto	49.2	inches/yr	Ontario 2020 UWMP
PPT	10.68	inches/yr	Ontario 2020 UWMP
Eppt	2.67	inches/yr	25% of PPT
	2.4	Hotel acreage	
	13.8	Retail acreage (PA2, PA3, PA4)	
	704,801	total SF	
LA	176,200	assumed 25% of total hotel/retail area is landscaped	

Total Outdoor Water	2,287,408 gal/yr	7.02 AFY	
	6,267 gpd		

TOTAL WATER DEMAND		
16,088,406 gal/yr	49.4 AFY	

Potable Demand factors		
130 gpd/room	Water Master Plan, Hospitality	
1,800 gpd/ac	Water Master Plan, General Commercial	

1 afy = 325,851 gal/yr

ONTARIO SPORTS COMPLEX - WATER DEMAND CALCULATIONS

1 afy = 325,851 gal/yr

Indoor Athletic Facility

INDOOR/POTABLE WATER DEMAND		
Building	159,450	sf
Kitchen	1,200	sf

Potable Demand Factor		
kitchen	0.0685	gpd/SF

City provided:	sf	gal/yr	gal/yr/sf
Westwind Community Center	80,000	866,932	10.8
Anthony Munoz Park	60,000	744,634	12.4

avg potable water demand rate 11 gal/yr/sf

potable indoor water demand	11	gal/yr/sf	
(restrooms, fountains, pool)	1,753,950	gal/yr	
	4,805	gpd	
kitchen water demand	82	gpd	
	30,003	gal/yr	
	82	gpd	
TOTAL	1,783,953	gal/yr	5.5 AFY
	4,888	gpd	

ONTARIO SPORTS COMPLEX - WATER DEMAND CALCULATIONS

1 afy = 325,851 gal/yr

Community Center

INDOOR/POTABLE WATER DEMAND				
Building	70,000 sf			
	sf	gal/yr	gal/yr/sf	
Westwind Community Center	80,000	866,932	10.8	
Anthony Munoz Park	60,000	744,634	12.4	
avg potable water demand rate (restrooms, fountains, pool)			11 gal/yr/sf	(see Indoor Athletic Facility)
rec center water demand		770,000 gal/yr	2.4 AFY	
		2,110 gpd		

Appendix N ONT-IAC Consistency Analysis

Appendices

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Project Comment Worksheet For Major Land Use Actions within the ONT Airport Influence Area

1. Project Distribution Information (To be filled by City of Ontario)

PALU File No. 2024-001

Date Received: 2/5/2024
Distribution Date: 2/9/2024
Comment Due Date: 2/28/2024
Submitting Agency: City of Ontario

City of Ontario Contact Info
Name: Lorena Mejia
Phone: 909-395-2276
E-mail: lmejia@ontarioca.gov

2. Project Information (To be filled by Submitting Agency)

Site Address: Multiple sites see attached maps and tables

Assessor's Parcel No.: Multiple sites see attached maps and tables

Project File No.: PGPA23-002

Structure/Bldg. Height: See section 4-2

Submitting Agency Contact Info
Name: Lorena Mejia
Phone: 909-395-2276
E-mail: lmejia@ontarioca.gov

Existing Land Use: The properties are located along Vineyard Avenue between Riverside Drive and Edison Avenue, please see the attached maps and tables.

Type of Major Land Use Action: General Plan Amendment

Project Description (Attach additional sheets if necessary): A General Plan Amendment to change the following land use designations A) 98.24 acres of Low-Density Residential to Open Space-Parkland; B) 36.18 acres of Medium-Density Residential to Open Space-Parkland ; C) 51.57 acres of Low-Density Residential to Hospitality; and D) 94 acres Low-Density Residential to Medium-Density Residential. See attached maps for project location and proposed land use changes.

3. Project Compatibility Zone Impacts (To be filled by Submitting Agency)

The proposed project is impacted by the following ONT ALUCP Compatibility Zones (Check all that Apply):

Safety
- ☐ Zone 1
- ☐ Zone 1A
- ☐ Zone 2
- ☐ Zone 3
- ☐ Zone 4
- ☐ Zone 5

Noise Impact
- ☐ 75+ dB CNEL
- ☐ 70 - 75 dB CNEL
- ☐ 65 - 70 dB CNEL
- ☐ 60 - 65 dB CNEL

Airspace Protection
- ☐ High Terrain Zone
- ☑ FAA Notification Surfaces
- ☑ Airspace Obstruction Surfaces
- ☐ Airspace Avigation Easement Area

Allowable Height: Over 200 FT

Overflight Notification
- ☐ Avigation Easement Dedication
- ☐ Recorded Overflight Notification
- ☑ Real Estate Transaction Disclosure

4. Project & ALUCP Consitency Information (To be filled by Submitting Agency)

Fill out the following if applicable (Attach additional sheets if necessary):

4-1. Describe the proposed land use(s) within the respective Safety Zone(s). *(Fill out only if applicable)*

Not applicable. All properties are located outside of the Safety Zones. See attached map.

4-2. Describe the proposed land use(s) within the respective Noise Impact Zone(s). *(Fill out only if applicable)*

Not applicable. All properties are located outside of the Noise Impact Zones. See attached map.

4-3. Describe how the proposed land use(s) will penetrate allowable heights as defined by Policy Map 2-4 or have the potential to create an electrical or visual hazard to aircraft in flight. *(Fill out only if applicable)*

The Project Site is located south of ONT in an area where the allowable building heights are greater than 200 feet. Any future development or structures will be required to be less than 200 feet in height. Any future development that exceeds 200 feet in height would require FAA approval and separate notification of the ONT-IAC Technical Advisory Group for review and to verify consistency with the ONT ALUCP.

5. ALUCP Consistency Determination (To be filled by Submitting Agency)

The proposed project is located within the Airport Influence Area of Ontario International Airport (ONT) and was evaluated and found to be consistent with the policies and criteria of the Airport Land Use Compatibility Plan (ALUCP) for ONT.

PALU File No. 2024-001

6. ONT-IAC TAG Comments (To be filled by Participating Agencies)

6-1. Do you agree with the Submitting Agencies Consistency Determination?

☐ Yes ☐ No

6-2. If no, explain reasons why project is inconsistent. If applicable can conditions be added to acheive consistency with the ALUCP (list conditions/ attach additional pages if needed)?

City Fontana and Upland responded to the project notification.

Participating Agency Member/Designee Information

Name: _____

Phone: _____

E-mail: _____

Agency: _____

6-3. Would you like to convene an ONT-IAC Technical Staff Group Meeting to discuss issues or concerns with the proposed project?

☐ Yes ☐ No

6-4. Would you like to convene the ONT-IAC Mediation Board to make a Consistency Determination?

☐ Yes ☐ No

7. Summary of Participating Agencies Comments (To be filled by City of Ontario)

7-1. Participating Agency(ies) agree with the Submitting Agency's Consistency Determination. ☑ Yes ☐ No

7-2. Participating Agency(ies) disagree with the Submitting Agency's Consistency Determination for the following reasons.

7-3. Does the proposed project need to be revised and re-submitted to the ONT-IAC Technical Advisory Group?

☐ Yes ☑ No

7-4. The ONT-IAC Technical Staff Group needs to meet and discuss the proposed project.

☐ Yes ☑ No

7-5. The ONT-IAC Mediation Board is needed to make a Consistency Determination.

☐ Yes ☑ No

ONT-IAC Project Comment Worksheet

PALU File No. 2024-001

6. ONT-IAC TAG Comments (To be filled by Participating Agencies)

6-1. Do you agree with the Submitting Agencies Consistency Determination?

☑ Yes ☐ No

6-2. If no, explain reasons why project is inconsistent. If applicable can conditions be added to acheive consistency with the ALUCP (list conditions/ attach additional pages if needed)?

Participating Agency Member/Designee Information

Name: DiTanyon Johnson-Principal Planner

Phone: 909 350-6678

E-mail: djohnson@fontanaca.gov

Agency: City of Fontana

6-3. Would you like to convene an ONT-IAC Technical Staff Group Meeting to discuss issues or concerns with the proposed project?

☐ Yes ☑ No

6-4. Would you like to convene the ONT-IAC Mediation Board to make a Consistency Determination?

☐ Yes ☑ No

7. Summary of Participating Agencies Comments (To be filled by City of Ontario)

7-1. Participating Agency(ies) agree with the Submitting Agency's Consistency Determination. ☐ Yes ☐ No

7-2. Participating Agency(ies) disagree with the Submitting Agency's Consistency Determination for the following reasons.

7-3. Does the proposed project need to be revised and re-submitted to the ONT-IAC Technical Advisory Group?

☐ Yes ☐ No

7-4. The ONT-IAC Technical Staff Group needs to meet and discuss the proposed project.

☐ Yes ☐ No

7-5. The ONT-IAC Mediation Board is needed to make a Consistency Determination.

☐ Yes ☐ No

PALU File No. 2024-001

6. ONT-IAC TAG Comments (To be filled by Participating Agencies)

6-1. Do you agree with the Submitting Agencies Consistency Determination?

☑ Yes ☐ No

6-2. If no, explain reasons why project is inconsistent. If applicable can conditions be added to acheive consistency with the ALUCP (list conditions/ attach additional pages if needed)?

Participating Agency Member/Designee Information

Name: Joshua Winter, Senior Planner
Phone: (909) 931-4143
E-mail: jwinter@uplandca.gov
Agency: City Of Upland

6-3. Would you like to convene an ONT-IAC Technical Staff Group Meeting to discuss issues or concerns with the proposed project?

☐ Yes ☑ No

6-4. Would you like to convene the ONT-IAC Mediation Board to make a Consistency Determination?

☐ Yes ☑ No

7. Summary of Participating Agencies Comments (To be filled by City of Ontario)

7-1. Participating Agency(ies) agree with the Submitting Agency's Consistency Determination. ☐ Yes ☐ No

7-2. Participating Agency(ies) disagree with the Submitting Agency's Consistency Determination for the following reasons.

7-3. Does the proposed project need to be revised and re-submitted to the ONT-IAC Technical Advisory Group?

☐ Yes ☐ No

7-4. The ONT-IAC Technical Staff Group needs to meet and discuss the proposed project.

☐ Yes ☐ No

7-5. The ONT-IAC Mediation Board is needed to make a Consistency Determination.

☐ Yes ☐ No

ONT-IAC Project Comment Worksheet - Project Submittal Requirements

Submit Project Comment Worksheet and application submittal items listed below electronically via e-mail at lmejia@ci.ontario.ca.us or upload documents onto the ONT-IAC website staff portal.
(Check all that apply)

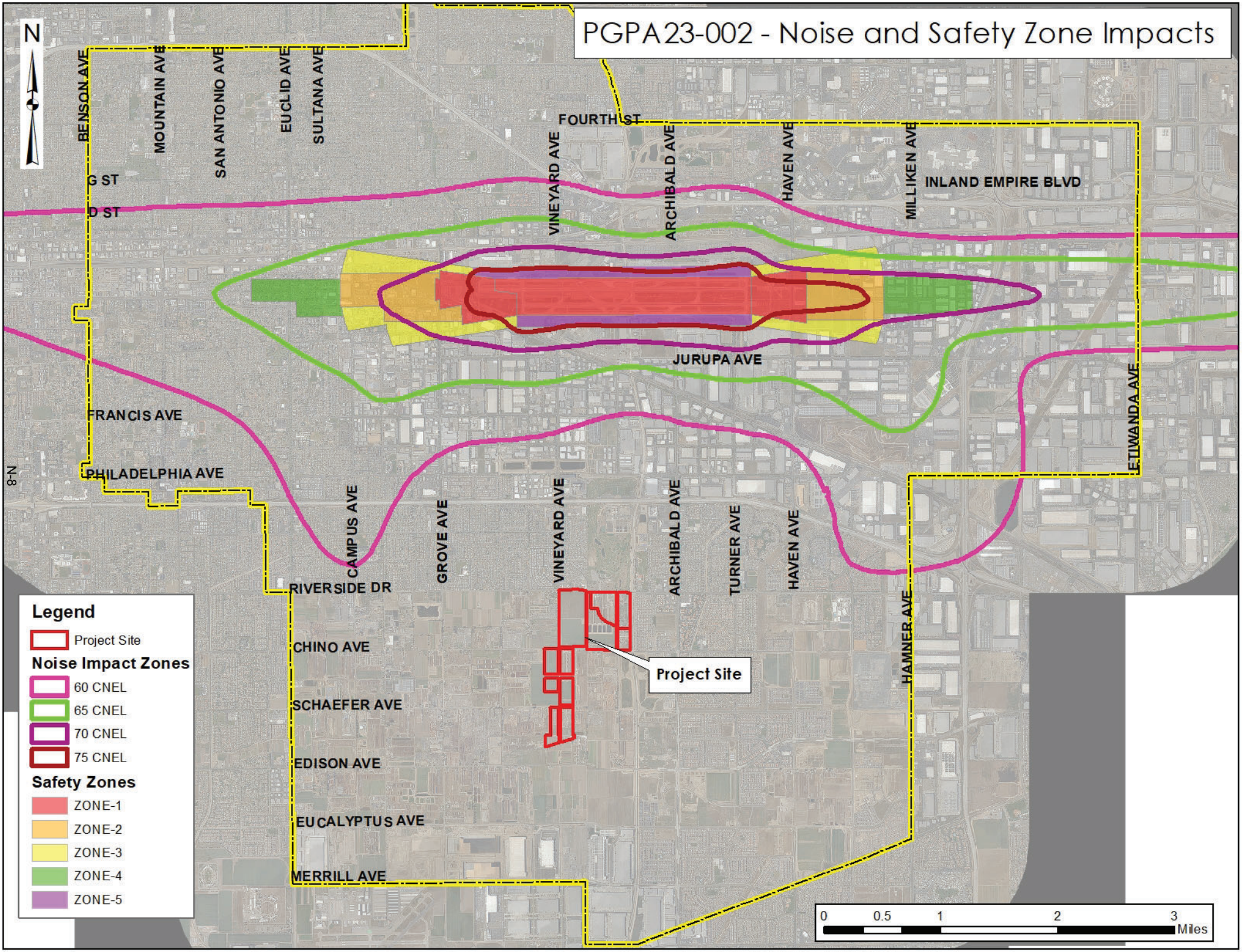
- [x] **AIA Project Vicinity Map:** A map depicting the project site location in relationship to ONT Airport Influence Area.
- [ ] **Site Plan:** Site boundaries and size; existing uses that will remain; location of existing & proposed structures, open spaces; ground elevations & heights of structures and trees; & plot safety zones and noise contours (if applicable).
- [ ] **Residential Uses:** Number of Dwelling units per acre.
- [ ] **Non-residential Uses:** Floor area for each type of proposed use.
- [ ] **Intensity Calculations:** Only applies to projects within the Safety Zones.
- [ ] **Environmental Document:** Initial Study, Draft EIR, etc. (If available)
- [x] **Additional Information:** If necessary additional information requested by the affected to enable a comprehensive review of proposed project.
- [ ] **City or Area Wide Projects:** Some projects may have not have a specific location and the above mentioned items may not apply and maybe substituted with a detailed description.

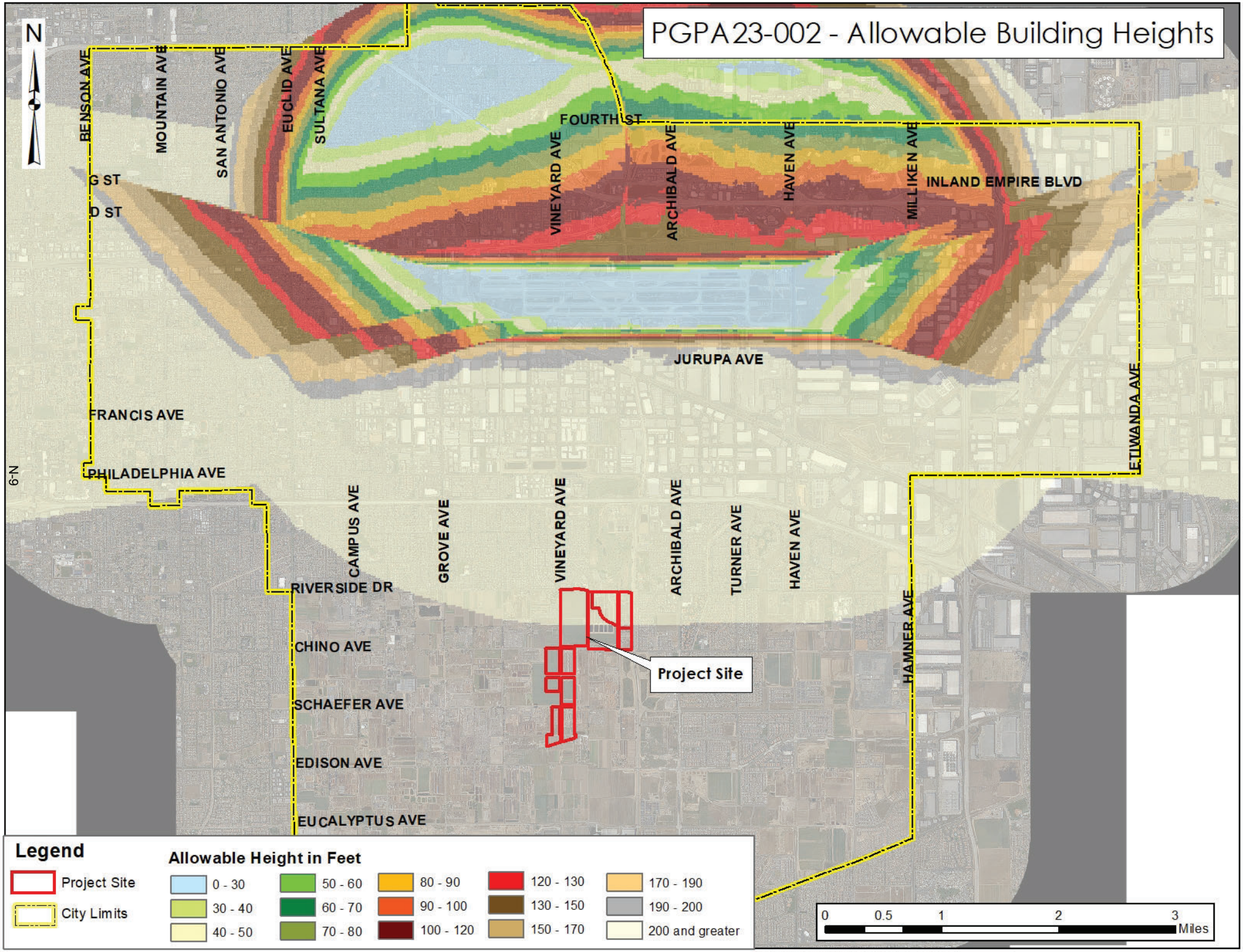
ONT-IAC Project Comment Worksheet - Application Instructions

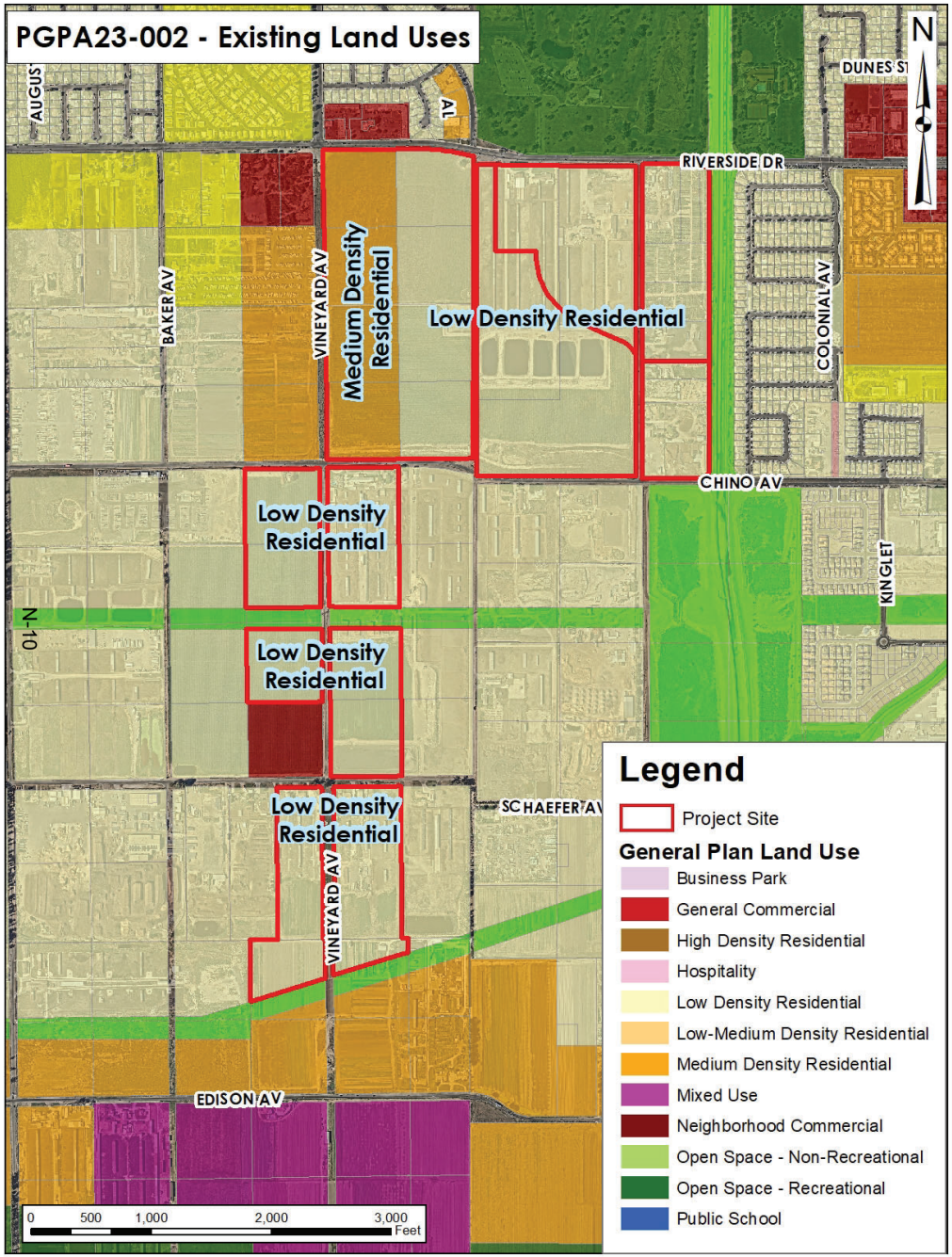
1. **Project Distribution Information** - This section will be filled out by the City of Ontario and a project file number will be assigned.
2. **Project Information** - This section to be filled out by Submitting Agency. This section is for listing basic project information such as location, existing land use and proposed project description.
3. **Project Compatibility Zone Impacts** - When filling out this section refer to the Policy Maps or GIS Tool to identify what impact zones the project is located within. Safety Zones are solely located within the City of Ontario.
4. **Project & ALUCP Consistency Information -** This section is to be filled out only if applicable. Section 4-1 would only apply to the City of Ontario if the project is located within one or multiple safety zones. Section 4-2 is asking the proposed land use be described within each noise impact zone. Proposed projects may fall within one or two noise impact zones. Describe the proposed use/activity that falls within each of the noise impact zones. Section 4-3 is related to airspace protection policies. The proposed building/structure height may be exceeding what is allowed, the circumstance for the excessive height should be explained (example: wireless facilities often need to reach certain heights to properly function and provide adequate coverage). The second part of this section is to identify if the project has the potential to create electrical or visual hazards, this may be in the form of solar panels, building facade that creates glare or telecommunications facilities.
5. **ALUCP Consistency Determination** - Each Submitting Agency shall make their own consistency determination below are standard statements that can be used for filling out this form:
   - The proposed project is located within the Airport Influence Area of Ontario International Airport (ONT) and was evaluated and found to be consistent with the policies and criteria of the Airport Land Use Compatibility Plan (ALUCP) for ONT.
   - The proposed project is located within the Airport Influence Area of Ontario International Airport (ONT) and was evaluated and found to be consistent with the policies and criteria of the Airport Land Use Compatibility Plan (ALUCP) for ONT provided the following conditions are met: (List Conditions)

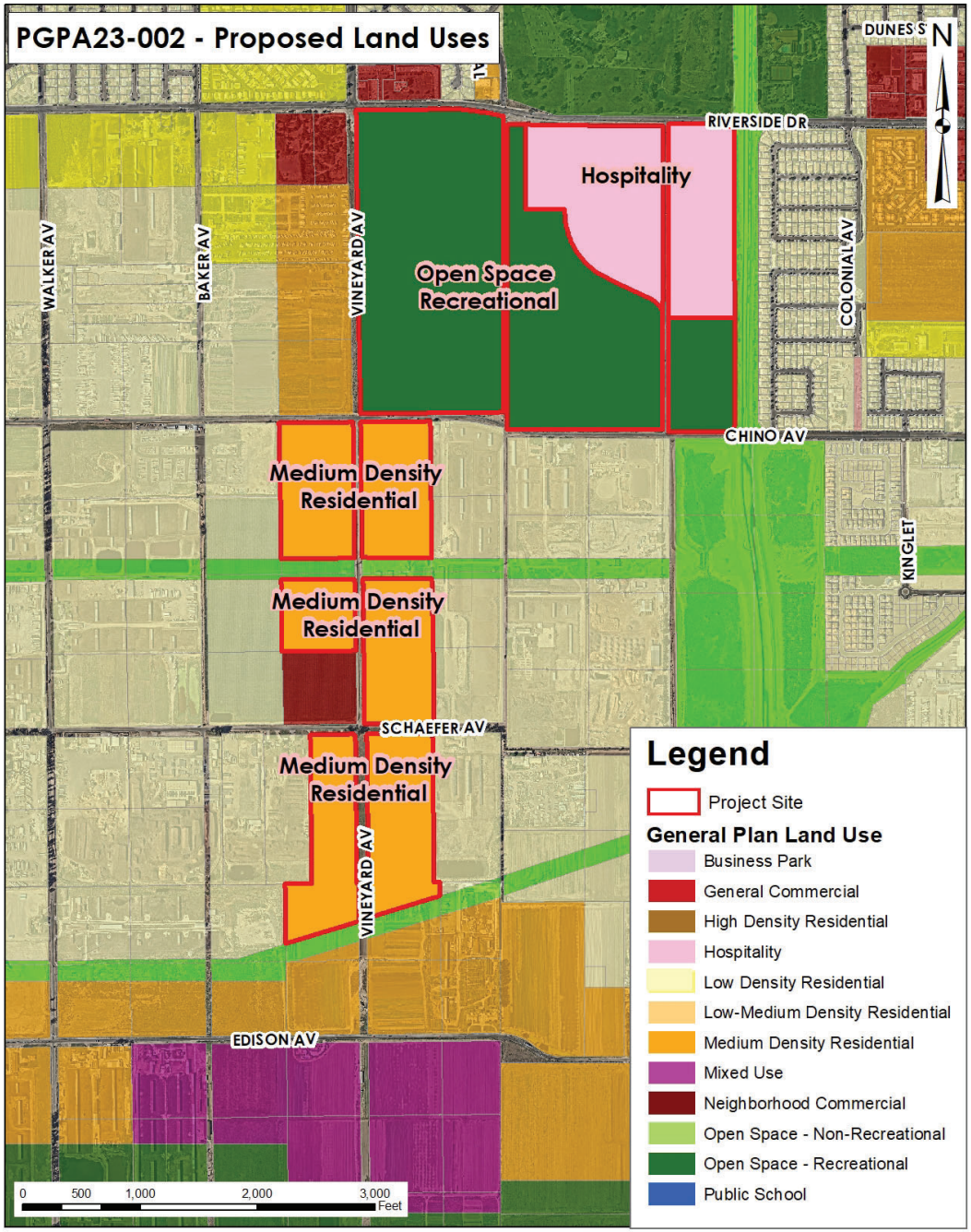
- The proposed project is located within the Airport Influence Area of Ontario International Airport (ONT) and was evaluated and found not to be consistent with the policies and criteria of the Airport Land Use Compatibility Plan (ALUCP) for the following reason(s): (List Reason(s))
- The proposed project is located within the Airport Influence Area of Ontario International Airport (ONT) and was evaluated and found to be an existing land use ***(describe why project is considered an existing land use)*** and is not subject to the policies and criteria of the Airport Land Use Compatibility Plan (ALUCP) for ONT.

6. **ONT-IAC TAG Comments -** This Section is to be filled out by the Participating Agencies. Participating Agencies shall agree or disagree with the Submitting Agency's Consistency Determination. If the Participating Agency disagrees they must list reason(s) why project is inconsistent.
7. **Summary of Participating Agencies Comments -** This section shall be filled out by the City of Ontario.


PGPA23-002 - Noise and Safety Zone Impacts
N
BENSON AVE
MOUNTAIN AVE
SAN ANTONIO AVE
EUCLID AVE
SULTANA AVE
FOURTH ST
VINEYARD AVE
ARCHIBALD AVE
HAVEN AVE
MILLIKEN AVE
INLAND EMPIRE BLVD
G ST
D ST
JURUPA AVE
ETIWANDA AVE
FRANCIS AVE
PHILADELPHIA AVE
8-N
CAMPUS AVE
GROVE AVE
VINEYARD AVE
ARCHIBALD AVE
TURNER AVE
HAVEN AVE
HAMNER AVE
RIVERSIDE DR
CHINO AVE
SCHAEFER AVE
EDISON AVE
EUCALYPTUS AVE
MERRILL AVE
Project Site
Legend
Project Site
Noise Impact Zones
60 CNEL
65 CNEL
70 CNEL
75 CNEL
Safety Zones
ZONE-1
ZONE-2
ZONE-3
ZONE-4
ZONE-5
0
0.5
1
2
3
Miles


PGPA23-002 - Allowable Building Heights
N
BENSON AVE
MOUNTAIN AVE
SAN ANTONIO AVE
EUCLID AVE
SULTANA AVE
FOURTH ST
VINEYARD AVE
ARCHIBALD AVE
HAVEN AVE
MILLIKEN AVE
INLAND EMPIRE BLVD
G ST
D ST
JURUPA AVE
ETIWANDA AVE
FRANCIS AVE
PHILADELPHIA AVE
6-N
CAMPUS AVE
GROVE AVE
VINEYARD AVE
ARCHIBALD AVE
TURNER AVE
HAVEN AVE
HAMNER AVE
RIVERSIDE DR
CHINO AVE
SCHAEFER AVE
EDISON AVE
EUCALYPTUS AVE
Project Site
Legend
Project Site
City Limits
Allowable Height in Feet
0 - 30
30 - 40
40 - 50
50 - 60
60 - 70
70 - 80
80 - 90
90 - 100
100 - 120
120 - 130
130 - 150
150 - 170
170 - 190
190 - 200
200 and greater
0
0.5
1
2
3
Miles


PGPA23-002 - Existing Land Uses
N
AUGUSTA
DUNES ST
RIVERSIDE DR
BAKER AV
VINEYARD AV
COLONIAL AV
Medium Density Residential
Low Density Residential
CHINO AV
Low Density Residential
KINGLET
N-10
Low Density Residential
Low Density Residential
SCHAEFER AV
VINEYARD AV
EDISON AV
0 500 1,000 2,000 3,000 Feet
Legend
Project Site
General Plan Land Use
Business Park
General Commercial
High Density Residential
Hospitality
Low Density Residential
Low-Medium Density Residential
Medium Density Residential
Mixed Use
Neighborhood Commercial
Open Space - Non-Recreational
Open Space - Recreational
Public School


PGPA23-002 - Proposed Land Uses
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DUNES ST
RIVERSIDE DR
Hospitality
WALKER AV
BAKER AV
VINEYARD AV
Open Space Recreational
COLONIAL AV
CHINO AV
Medium Density Residential
KINGLET
Medium Density Residential
SCHAEFER AV
Medium Density Residential
VINEYARD AV
EDISON AV
0 500 1,000 2,000 3,000 Feet
Legend
Project Site
General Plan Land Use
Business Park
General Commercial
High Density Residential
Hospitality
Low Density Residential
Low-Medium Density Residential
Medium Density Residential
Mixed Use
Neighborhood Commercial
Open Space - Non-Recreational
Open Space - Recreational
Public School

Proposed General Plan Consistency Determination Table

APN	Existing Land Use	General Location Description	Existing General Plan Land Use	Proposed General Plan Land Use	Noise Impact Zone	Safety Impact Zone	Airspace Protection Zones	Consistency Determination
21621405	Single-Family	Properties bounded by Riverside Drive (north), Chino Avenue (south), unimproved Vineyard Avenue right-of-way (west), and Cucamonga Creek Flood Control Channel (east).	LDR - Low Density Residential	MDR - Medium Density Residential	N/A - Outside of Noise Impact Zone	N/A - Outside of any Safety Zone	N/A - Land Use Change	Consistent with ONT ALUCP
21621406	Vacant	Properties bounded by Riverside Drive (north), Chino Avenue (south), unimproved Vineyard Avenue right-of-way (west), and Cucamonga Creek Flood Control Channel (east).	LDR - Low Density Residential	MDR - Medium Density Residential	N/A - Outside of Noise Impact Zone	N/A - Outside of any Safety Zone	N/A - Land Use Change	Consistent with ONT ALUCP
21621407	Vacant	Properties bounded by Riverside Drive (north), Chino Avenue (south), unimproved Vineyard Avenue right-of-way (west), and Cucamonga Creek Flood Control Channel (east).	LDR - Low Density Residential	MDR - Medium Density Residential	N/A - Outside of Noise Impact Zone	N/A - Outside of any Safety Zone	N/A - Land Use Change	Consistent with ONT ALUCP
21631407	Vacant	Properties bounded by Riverside Drive (north), Chino Avenue (south), unimproved Vineyard Avenue right-of-way (west), and Cucamonga Creek Flood Control Channel (east).	LDR - Low Density Residential	MDR - Medium Density Residential	N/A - Outside of Noise Impact Zone	N/A - Outside of any Safety Zone	N/A - Land Use Change	Consistent with ONT ALUCP
21631408	Vacant	Properties bounded by Riverside Drive (north), Chino Avenue (south), unimproved Vineyard Avenue right-of-way (west), and Cucamonga Creek Flood Control Channel (east).	LDR - Low Density Residential	MDR - Medium Density Residential	N/A - Outside of Noise Impact Zone	N/A - Outside of any Safety Zone	N/A - Land Use Change	Consistent with ONT ALUCP
21810101	Vacant	Properties bounded by Riverside Drive (north), Chino Avenue (south), unimproved Vineyard Avenue right-of-way (west), and Cucamonga Creek Flood Control Channel (east).	MDR - Medium Density Residential	Open Space - Parkland	N/A - Outside of Noise Impact Zone	N/A - Outside of any Safety Zone	N/A - Land Use Change	Consistent with ONT ALUCP

Proposed General Plan Consistency Determination Table

APN	Existing Land Use	General Location Description	Existing General Plan Land Use	Proposed General Plan Land Use	Noise Impact Zone	Safety Impact Zone	Airspace Protection Zones	Consistency Determination
21810102	Vacant	Properties bounded by Riverside Drive (north), Chino Avenue (south), unimproved Vineyard Avenue right-of-way (west), and Cucamonga Creek Flood Control Channel (east).	MDR - Medium Density Residential	Open Space - Parkland	N/A - Outside of Noise Impact Zone	N/A - Outside of any Safety Zone	N/A - Land Use Change	Consistent with ONT ALUCP
21810103	Agriculture	Properties bounded by Riverside Drive (north), Chino Avenue (south), unimproved Vineyard Avenue right-of-way (west), and Cucamonga Creek Flood Control Channel (east).	MDR - Medium Density Residential	Open Space - Parkland	N/A - Outside of Noise Impact Zone	N/A - Outside of any Safety Zone	N/A - Land Use Change	Consistent with ONT ALUCP
21810104	Agriculture	Properties bounded by Riverside Drive (north), Chino Avenue (south), unimproved Vineyard Avenue right-of-way (west), and Cucamonga Creek Flood Control Channel (east).	MDR - Medium Density Residential	Open Space - Parkland	N/A - Outside of Noise Impact Zone	N/A - Outside of any Safety Zone	N/A - Land Use Change	Consistent with ONT ALUCP
21810105	Agriculture	Properties bounded by Riverside Drive (north), Chino Avenue (south), unimproved Vineyard Avenue right-of-way (west), and Cucamonga Creek Flood Control Channel (east).	LDR - Low Density Residential	Open Space - Parkland	N/A - Outside of Noise Impact Zone	N/A - Outside of any Safety Zone	N/A - Land Use Change	Consistent with ONT ALUCP
21810106	Vacant	Properties bounded by Riverside Drive (north), Chino Avenue (south), unimproved Vineyard Avenue right-of-way (west), and Cucamonga Creek Flood Control Channel (east).	LDR - Low Density Residential	Open Space - Parkland	N/A - Outside of Noise Impact Zone	N/A - Outside of any Safety Zone	N/A - Land Use Change	Consistent with ONT ALUCP
21810107	Agriculture	Properties bounded by Riverside Drive (north), Chino Avenue (south), unimproved Vineyard Avenue right-of-way (west), and Cucamonga Creek Flood Control Channel (east).	LDR - Low Density Residential	Open Space - Parkland	N/A - Outside of Noise Impact Zone	N/A - Outside of any Safety Zone	N/A - Land Use Change	Consistent with ONT ALUCP

Proposed General Plan Consistency Determination Table

APN	Existing Land Use	General Location Description	Existing General Plan Land Use	Proposed General Plan Land Use	Noise Impact Zone	Safety Impact Zone	Airspace Protection Zones	Consistency Determination
21810108	Agriculture	Properties bounded by Riverside Drive (north), Chino Avenue (south), unimproved Vineyard Avenue right-of-way (west), and Cucamonga Creek Flood Control Channel (east).	LDR - Low Density Residential	Open Space - Parkland	N/A - Outside of Noise Impact Zone	N/A - Outside of any Safety Zone	N/A - Land Use Change	Consistent with ONT ALUCP
21810210	Vacant	Properties bounded by Riverside Drive (north), Chino Avenue (south), unimproved Vineyard Avenue right-of-way (west), and Cucamonga Creek Flood Control Channel (east).	LDR - Low Density Residential	Open Space - Parkland	N/A - Outside of Noise Impact Zone	N/A - Outside of any Safety Zone	N/A - Land Use Change	Consistent with ONT ALUCP
21810210	Vacant	Properties bounded by Riverside Drive (north), Chino Avenue (south), unimproved Vineyard Avenue right-of-way (west), and Cucamonga Creek Flood Control Channel (east).	LDR - Low Density Residential	HOS - Hospitality	N/A - Outside of Noise Impact Zone	N/A - Outside of any Safety Zone	N/A - Land Use Change	Consistent with ONT ALUCP
21810211	Vacant	Properties bounded by Riverside Drive (north), Chino Avenue (south), unimproved Vineyard Avenue right-of-way (west), and Cucamonga Creek Flood Control Channel (east).	LDR - Low Density Residential	Open Space - Parkland	N/A - Outside of Noise Impact Zone	N/A - Outside of any Safety Zone	N/A - Land Use Change	Consistent with ONT ALUCP
21810211	Vacant	Properties bounded by Riverside Drive (north), Chino Avenue (south), unimproved Vineyard Avenue right-of-way (west), and Cucamonga Creek Flood Control Channel (east).	LDR - Low Density Residential	HOS - Hospitality	N/A - Outside of Noise Impact Zone	N/A - Outside of any Safety Zone	N/A - Land Use Change	Consistent with ONT ALUCP
21811104	Vacant	Properties bounded by Riverside Drive (north), Chino Avenue (south), unimproved Vineyard Avenue right-of-way (west), and Cucamonga Creek Flood Control Channel (east).	LDR - Low Density Residential	Open Space - Parkland	N/A - Outside of Noise Impact Zone	N/A - Outside of any Safety Zone	N/A - Land Use Change	Consistent with ONT ALUCP

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Proposed General Plan Consistency Determination Table

APN	Existing Land Use	General Location Description	Existing General Plan Land Use	Proposed General Plan Land Use	Noise Impact Zone	Safety Impact Zone	Airspace Protection Zones	Consistency Determination
21811105	Vacant	Properties bounded by Riverside Drive (north), Chino Avenue (south), unimproved Vineyard Avenue right-of-way (west), and Cucamonga Creek Flood Control Channel (east).	LDR - Low Density Residential	Open Space - Parkland	N/A - Outside of Noise Impact Zone	N/A - Outside of any Safety Zone	N/A - Land Use Change	Consistent with ONT ALUCP
21811106	Vacant	Properties bounded by Riverside Drive (north), Chino Avenue (south), unimproved Vineyard Avenue right-of-way (west), and Cucamonga Creek Flood Control Channel (east).	LDR - Low Density Residential	HOS - Hospitality	N/A - Outside of Noise Impact Zone	N/A - Outside of any Safety Zone	N/A - Land Use Change	Consistent with ONT ALUCP
21811108	Agriculture	Properties bounded by Riverside Drive (north), Chino Avenue (south), unimproved Vineyard Avenue right-of-way (west), and Cucamonga Creek Flood Control Channel (east).	LDR - Low Density Residential	HOS - Hospitality	N/A - Outside of Noise Impact Zone	N/A - Outside of any Safety Zone	N/A - Land Use Change	Consistent with ONT ALUCP
21811109	Agriculture	Properties bounded by Riverside Drive (north), Chino Avenue (south), unimproved Vineyard Avenue right-of-way (west), and Cucamonga Creek Flood Control Channel (east).	LDR - Low Density Residential	HOS - Hospitality	N/A - Outside of Noise Impact Zone	N/A - Outside of any Safety Zone	N/A - Land Use Change	Consistent with ONT ALUCP
21811111	Agriculture	Properties bounded by Riverside Drive (north), Chino Avenue (south), unimproved Vineyard Avenue right-of-way (west), and Cucamonga Creek Flood Control Channel (east).	LDR - Low Density Residential	HOS - Hospitality	N/A - Outside of Noise Impact Zone	N/A - Outside of any Safety Zone	N/A - Land Use Change	Consistent with ONT ALUCP
21811112	Vacant	Properties bounded by Riverside Drive (north), Chino Avenue (south), unimproved Vineyard Avenue right-of-way (west), and Cucamonga Creek Flood Control Channel (east).	LDR - Low Density Residential	HOS - Hospitality	N/A - Outside of Noise Impact Zone	N/A - Outside of any Safety Zone	N/A - Land Use Change	Consistent with ONT ALUCP

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Proposed General Plan Consistency Determination Table

APN	Existing Land Use	General Location Description	Existing General Plan Land Use	Proposed General Plan Land Use	Noise Impact Zone	Safety Impact Zone	Airspace Protection Zones	Consistency Determination
21811145	Agriculture	Properties bounded by Riverside Drive (north), Chino Avenue (south), unimproved Vineyard Avenue right-of-way (west), and Cucamonga Creek Flood Control Channel (east).	LDR - Low Density Residential	Open Space - Parkland	N/A - Outside of Noise Impact Zone	N/A - Outside of any Safety Zone	N/A - Land Use Change	Consistent with ONT ALUCP
21811149	Agriculture	Properties bounded by Riverside Drive (north), Chino Avenue (south), unimproved Vineyard Avenue right-of-way (west), and Cucamonga Creek Flood Control Channel (east).	LDR - Low Density Residential	HOS - Hospitality	N/A - Outside of Noise Impact Zone	N/A - Outside of any Safety Zone	N/A - Land Use Change	Consistent with ONT ALUCP
21811150	Vacant	Properties bounded by Riverside Drive (north), Chino Avenue (south), unimproved Vineyard Avenue right-of-way (west), and Cucamonga Creek Flood Control Channel (east).	LDR - Low Density Residential	HOS - Hospitality	N/A - Outside of Noise Impact Zone	N/A - Outside of any Safety Zone	N/A - Land Use Change	Consistent with ONT ALUCP
21812101	Vacant	Properties located along Vineyard Avenue between Chino Avenue (north), Southern California Edison Easement (south)	LDR - Low Density Residential	MDR - Medium Density Residential	N/A - Outside of Noise Impact Zone	N/A - Outside of any Safety Zone	N/A - Land Use Change	Consistent with ONT ALUCP
21812102	Vacant	Properties located along Vineyard Avenue between Chino Avenue (north), Southern California Edison Easement (south)	LDR - Low Density Residential	MDR - Medium Density Residential	N/A - Outside of Noise Impact Zone	N/A - Outside of any Safety Zone	N/A - Land Use Change	Consistent with ONT ALUCP
21812103	Vacant	Properties located along Vineyard Avenue between Chino Avenue (north), Southern California Edison Easement (south)	LDR - Low Density Residential	MDR - Medium Density Residential	N/A - Outside of Noise Impact Zone	N/A - Outside of any Safety Zone	N/A - Land Use Change	Consistent with ONT ALUCP
21812104	Vacant	Properties located along Vineyard Avenue between Chino Avenue (north), Southern California Edison Easement (south)	LDR - Low Density Residential	MDR - Medium Density Residential	N/A - Outside of Noise Impact Zone	N/A - Outside of any Safety Zone	N/A - Land Use Change	Consistent with ONT ALUCP

Proposed General Plan Consistency Determination Table

APN	Existing Land Use	General Location Description	Existing General Plan Land Use	Proposed General Plan Land Use	Noise Impact Zone	Safety Impact Zone	Airspace Protection Zones	Consistency Determination
21818102	Vacant	Properties located along Vineyard Avenue between Chino Avenue (north), Southern California Edison Easement (south)	LDR - Low Density Residential	MDR - Medium Density Residential	N/A - Outside of Noise Impact Zone	N/A - Outside of any Safety Zone	N/A - Land Use Change	Consistent with ONT ALUCP
21818115	Vacant	Properties located along Vineyard Avenue between Chino Avenue (north), Southern California Edison Easement (south)	LDR - Low Density Residential	MDR - Medium Density Residential	N/A - Outside of Noise Impact Zone	N/A - Outside of any Safety Zone	N/A - Land Use Change	Consistent with ONT ALUCP