4.11 TRAFFIC AND CIRCULATION

4.11.1 Introduction

This section of the EIR summarizes the results of Traffic Analysis Reports entitled *City of Ontario Bates Specific Plan Signal Warrant Analysis and City of Ontario Bates Specific Plan Traffic Impact Analysis (Revised),* prepared by Kunzman Associates, on November 10, 2006, and January 19, 2007, respectively. Included in this section is a description of the existing circulation system that would provide access to and from the project site; identification of standards of significance; impact analysis; and recommendation of mitigation measures to reduce any potentially significant impacts to less than significant levels. The Traffic Analysis Reports are included as Appendix G in this EIR.

4.11.2 Environmental Setting

The proposed project is a Specific Plan for the development of an approximately 400-room hotel, a 200-bed hospital, 250,000 square feet of office space, 75,000 square feet of medical office, and 80,000 square feet of auto dealership on approximately 41.29 acres. The proposed project is located on the east side of Haven Avenue and south of the I-10 Freeway in the City of Ontario.

Existing Street System

Regional Access

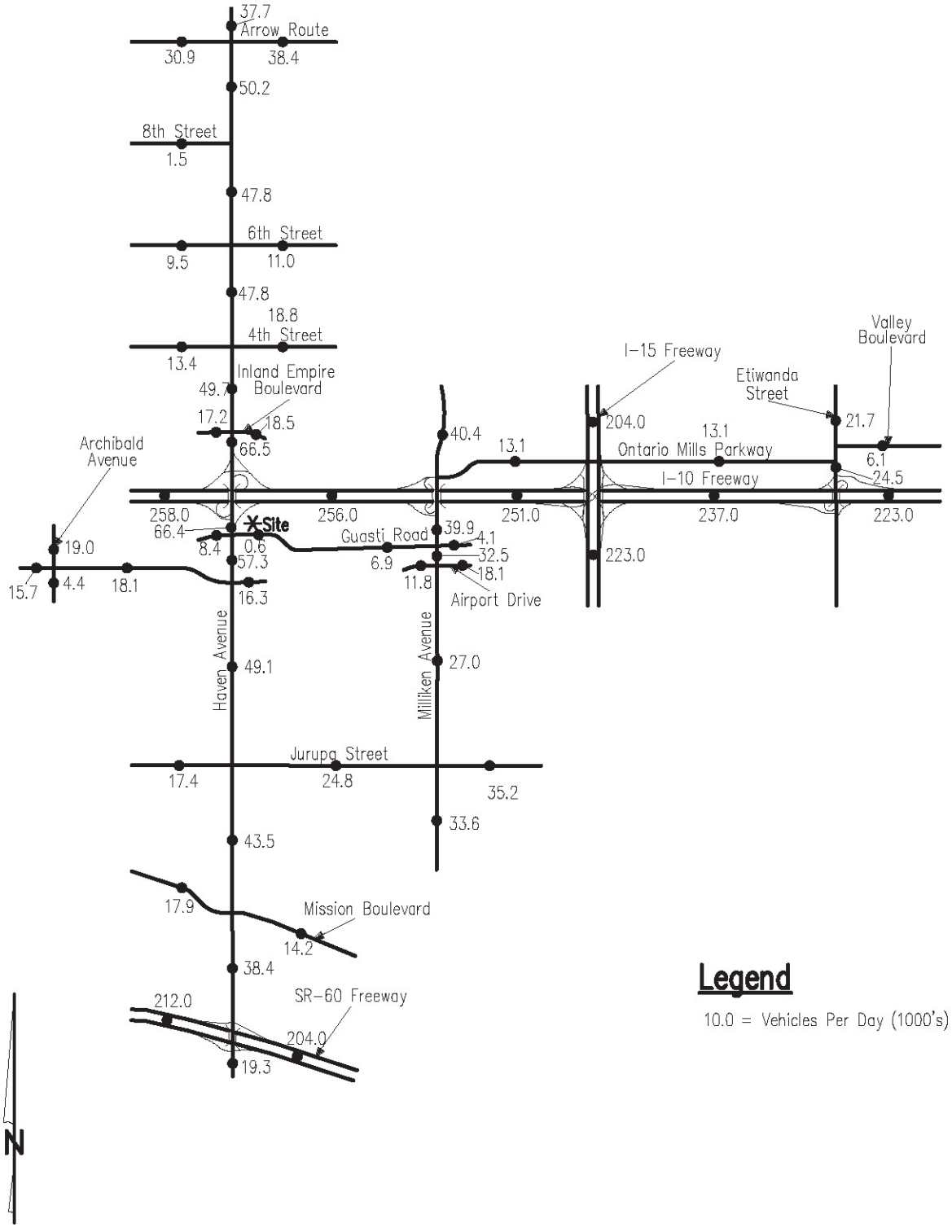
Regional access to the project site is provided by the I-15 Freeway, I-10 Freeway, and SR-60 Freeway. The I-10 provides access from the north. The SR-60 provides regional access to the project site from the south. The I-15 provides regional access to the project site from the east. State Route-60 and I-10 link the City of Ontario with the metropolitan areas of Los Angeles County to the west and with the San Bernardino County to the east. SR-60 also provides a link with the Riverside County to the southeast.

Local Access

Local access is provided by various roadways in the vicinity of the project site. The east-west roadways which will be most affected by the proposed project include Arrow Route, 8th Street, 6th Street, 4th Street, Inland Empire Boulevard, Ontario Mills Parkway, Valley Boulevard, Guasti Road, East Airport Drive, Jurupa Street, and Mission Boulevard. North-south roadways expected to provide local access include Archibald Avenue, Haven Avenue, Milliken Avenue, and Etiwanda Street.

Existing Volumes

The analysis of traffic conditions takes place during peak hour periods. These periods are when changes to the utilization of the transportation infrastructure are most significant. The same peak AM and PM periods were utilized in conducting traffic counts to maintain uniformity in the presentation of existing traffic conditions. The traffic counts for all the intersections were collected by Kunzman Associates during the months of April, May, July, and September 2006 between 7:00-9:00 AM and 4:00-6:00 PM. Figure 4.11-1 depicts the existing average daily traffic volumes.



Source: Kunzman Assoc., 12/06.

Existing Average Daily Traffic Volumes

Ontario Gateway Specific Plan
City of Ontario, California

Figure 4.11-1

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The existing intersection performance is measured by its Level of Service (LOS). The LOS indicates the operational condition of an intersection during a given time period. LOS is measured on a scale of "A" to "F", with "A" representing excellent operating conditions and "F" representing extremely congested conditions. The City of Ontario General Plan states that peak hour intersection operations of LOS "D" or better are generally acceptable.

The existing delay and LOS for intersections in the vicinity of the proposed project are shown in Table 4.11-1. The study area intersections currently operate at LOS D or better during the peak hours for existing traffic conditions except for the following study area intersections that operate at LOS E to F during the peak hours:

Haven Avenue (NS) at:

- Arrow Route (EW)
- Inland Empire Boulevard (EW)

Table 4.11-1
Existing Intersection Delay and Level of Service

Intersection	Traffic Control[3]	Intersection Approach Lanes[1]												Peak Hour Delay-LOS[2]	
		Northbound			Southbound			Eastbound			Westbound				
		L	T	R	L	T	R	L	T	R	L	T	R	Morning	Evening
Archibald Avenue (NS) at:															
East Airport Drive (EW)	TS	2	3	0	2	2	1	2	3	0	1	3	2>	32.1-C	33.9-C
Haven Avenue (NS) at:															
Arrow Route (EW)	TS	2	3	1>	2	3	0	2	2	1>	2	2	0	29.7-C	94.8-F
8th Avenue (EW)	CSS	0	3	0	0	3	0	0	0	1	0	0	0	14.0-B	15.2-C
6th Avenue (EW)	TS	2	3	0	2	3	0	1	2	1	1	2	1	22.7-C	23.9-C
4th Avenue (EW)	TS	2	3	1>>	2	3	0	2	2	0	2	2	1	30.4-C	43.5-D
Inland Empire Boulevard (EW)	TS	2	4	1>>	2	4	1>>	2	2	2>	2	2	1>>	38.2-D	62.2-E
I-10 Freeway WB Ramps (EW)	TS	0	4	1>>	0	3	2>>	0	0	0	1	0	2	15.5-B	12.1-B
I-10 Freeway EB Ramps (EW)	TS	0	4	1>>	0	4	1>>	2	0	1	0	0	0	17.6-B	16.0-B
Guasti Road (EW)	TS	2	4	0	2	4	1	2	1	1	1	1	1	27.0-C	41.1-D
East Airport Drive (EW)	TS	2	4	1	2	4	1	2	2	0	2	2	1>	38.5-D	34.9-C
Jurupa Street (EW)	TS	1	4	1	1	4	1>>	2	3	1	2	2	1>	36.8-D	43.1-D
Mission Boulevard (EW)	TS	1	3	1	1	3	1	2	3	1	2	3	1	36.0-D	44.1-D
SR-60 Freeway WB Ramps (EW)	TS	2	3	0	0	3	1	0	0	0	2	0	1>>	7.4-A	15.1-B
SR-60 Freeway EB Ramps (EW)	TS	0	2	1	2	3	0	2	0	1	0	0	0	18.1-B	14.2-B
Milliken Avenue (NS) at:															
I-10 Freeway WB Ramps/Ontario Mills Parkway (EW)	TS	2	4	1>	2	4	1>	2	1	1	2	2	1	37.3-D	44.2-D
I-10 Freeway EB Ramps (EW)	TS	2	4	0	0	4	1>	2	0	1	0	0	0	13.6-B	13.0-B
Guasti Road (EW)	TS	1	3	0	2	3	1>>	2	1	0	1	1	1>>	30.6-C	34.4-C
East Airport Drive (EW)	TS	1	3	0	1	3	1>	2	2	1	1	2	0	31.2-C	32.2-C
Jurupa Street (EW)	TS	2	3	1	2	3	1>	2	3	1>	2	3	0	28.1-C	31.7-C
Etiwanda Street (NS) at:															
Valley Boulevard (EW)	TS	0	3	1	2	3	0	0	0	0	2	0	1	14.3-B	14.6-B

1. When a right turn is designated, the lane can either be striped or unstriped. To function as a right turn lane there must be sufficient width for right turning vehicles to travel outside the through lanes. L=Left; T=Through; R=Right; >=Right Turn Overlap; >>=Free Right Turn
2. Delay and LOS calculated using the following analysis software: Traffix, Version 7.8.0115 (2006). Per the 2000 Highway Capacity Manual, overall average intersection delay and LOS are shown for intersections with traffic signal or all way stop control.. For intersections with cross street stop control, the delay and LOS for the worst individual movement (or movements sharing a single lane) are shown
3. TS=Traffic Signal; CSS=Cross Street Stop

The existing AM and PM peak hour intersection traffic conditions are shown on Figures 4.11-2 and 4.11-3, respectively.

Method of Analysis

The analysis of the traffic impacts from the proposed development and the assessment of the required mitigation measures to satisfy the CMP were based on the evaluation of existing and forecast traffic conditions in the vicinity of the site with and without the proposed project. The following scenarios are evaluated:

- Existing Conditions (2006)
- Project Opening Year Conditions (2008)
- Horizon Year Conditions (2030)

Existing intersection traffic conditions were established through morning and evening peak hour traffic counts obtained by Kunzman Associates during the months of April, May, July, and September 2006.

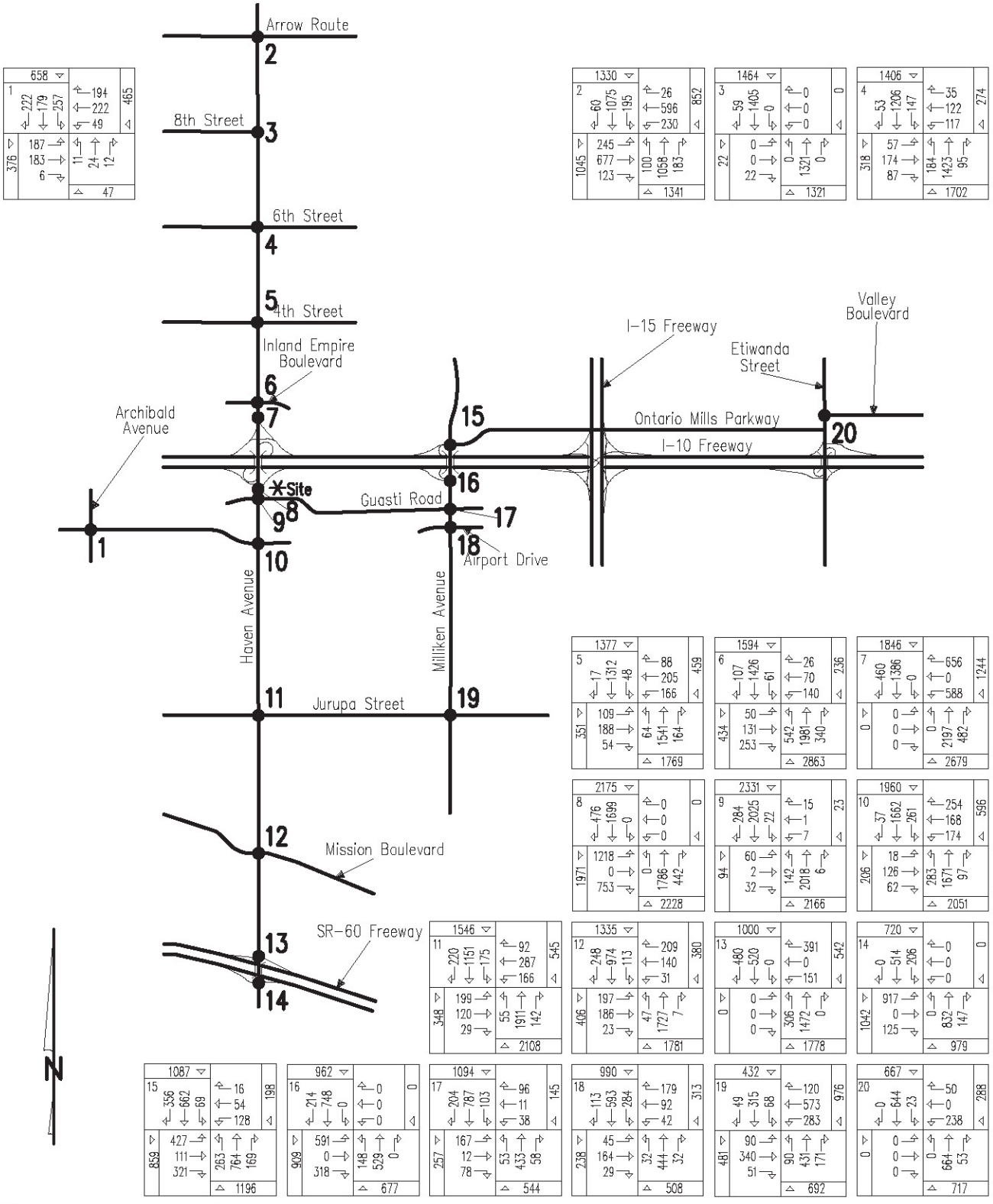
In addition, truck classification counts were conducted at the study area intersections. The existing percent of trucks was used in the conversion of trucks to Passenger Car Equivalent's (PCE's). Project traffic volumes for all future projections were estimated using the manual approach described in the CMP guidelines.

Project traffic volumes for all future projections were estimated using the manual approach described in the Congestion Management Program guidelines. Trip generation has been estimated based on the Institute of Transportation Engineers, *Trip Generation*, 7th Edition, 2003.

The distribution of the project traffic was based on the select zone evening peak period traffic distribution from the Year 2030 Comprehensive Transportation Plan (CMP) traffic model. The socio-economic data inputs to the Comprehensive Transportation Plan traffic model are representative of the planned project development intensity.

Based upon discussions with SANBAG staff, the average daily traffic volume forecasts have been determined using the growth increment approach on the CMP traffic model Year 2000 and Year 2030 average daily traffic volume forecasts. Assuming a linear growth between 2000 and 2030 a growth factor of 0.8 is used.

Future traffic projections have been interpolated from existing traffic counts and from the Southern California Associated Government Comprehensive Transportation Plan traffic model. The existing traffic count data serves as both the starting point for the refinement process, and also provides important insight into current travel patterns and the relationship between peak hour and daily traffic conditions. The traffic model is consistent with the City of Ontario General Plan.



Kunzman Associates

Intersection reference numbers are in upper left corner of turning movement boxes.

3460/bbas

NT

Existing AM Peak Hour Intersection Turning Traffic Volume

Ontario Gateway Specific Plan
City of Ontario, California

Figure 4.11-2

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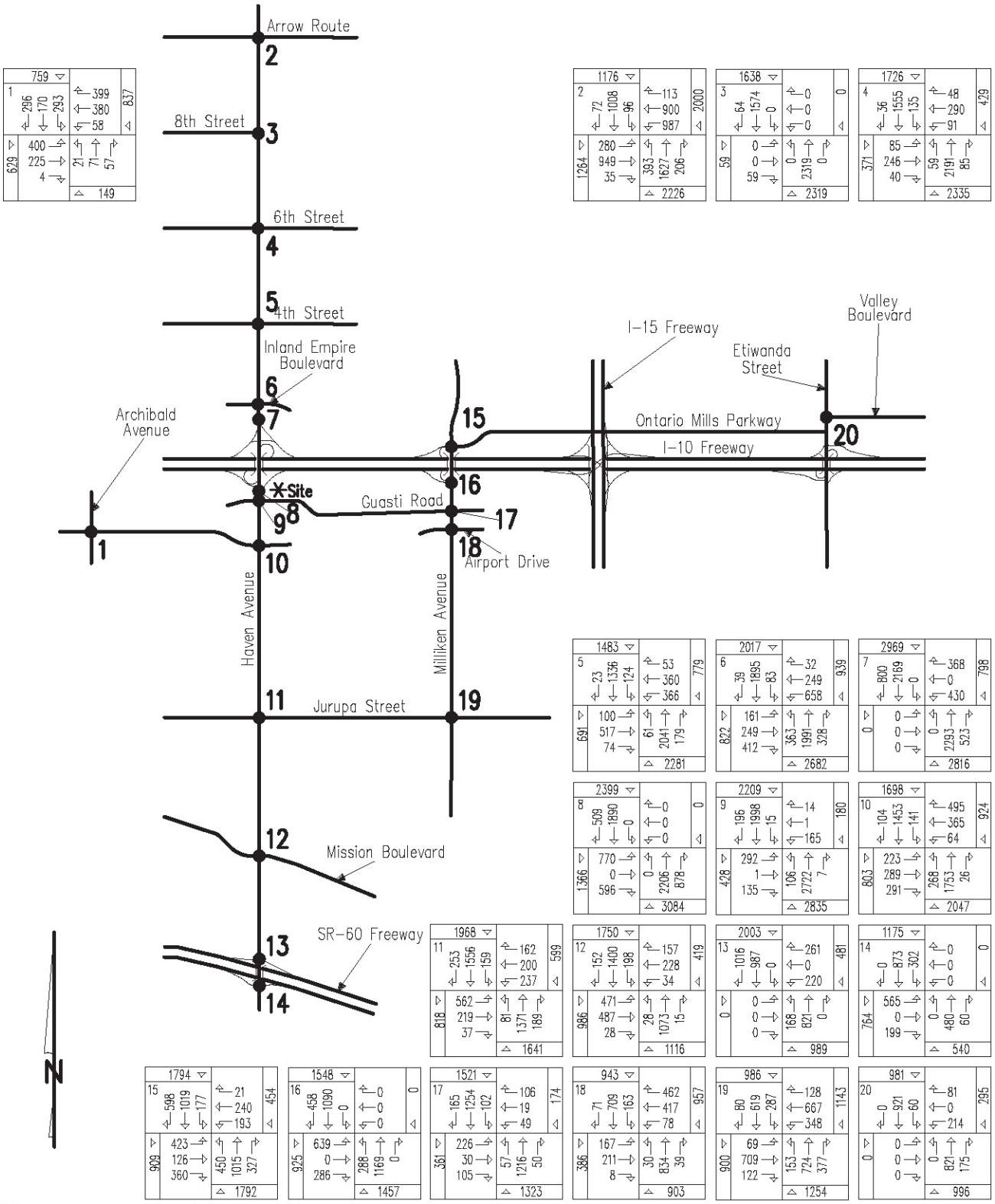

Kunzman Associates

Intersection reference numbers are in upper left corner of turning movement boxes.

3460/bbas

NT

Existing PM Peak Hour Intersection Turning Traffic Volume

Ontario Gateway Specific Plan
City of Ontario, California

Figure 4.11-3

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The City of Ontario General Plan designates land uses to all areas of the City. The 2030 traffic model includes the zoning for each area of the City and those projects known at the time the traffic model is developed.

The initial turning movement proportions are estimated based upon the relationship of each approach leg's forecast traffic volume to the other legs forecast volumes at the intersection. The initial estimate of turning movement proportions is then entered into a spreadsheet program consistent with the National Cooperative Highway Research Program Report 255. A linear programming algorithm is used to calculate individual turning movements that match the known directional roadway segment volumes. This program computes a likely set of intersection turning movements from intersection approach counts and the initial turning proportions from each approach leg. Quality control checks and forecast adjustments were performed as necessary to ensure that all future traffic volume forecasts reflect a minimum of 10 percent growth over existing traffic volumes. The result of this traffic forecasting procedure is a series of traffic volumes suitable for traffic operations analysis.

The Opening Year (2008) traffic volumes have been interpolated from the Year 2030 traffic volumes based upon a portion of the future growth increment. Project traffic volumes were then added to the Year 2030 Comprehensive Transportation Plan traffic model volumes. Quality control checks and forecast adjustments were performed as necessary to ensure that all future traffic volume forecasts reflect a minimum of 10 percent growth over existing traffic volumes.

The technique used to assess the capacity needs of an intersection is known as the Intersection Delay Method based on the 2000 HCM (Table 4.11-2). According to the CMP, signalized intersections are considered deficient (LOS F) if the overall intersection critical volume to capacity ratio equals or exceeds 1.0, even if the LOS defined by the delay value is below the defined LOS standard. The volume to capacity ratio is defined as the critical volumes divided by the intersection capacity. A volume to capacity ratio greater than 1.0 implies an infinite queue.

For existing and Opening Year traffic conditions, saturation flow rates of 1,800 vehicles per hour of green for through and right turn lanes and 1,700 vehicles per lane for single left turn lanes, 1,600 vehicles per lane for dual left turn lanes and 1,500 vehicles per lane for triple left turn lanes have been assumed for the capacity analysis. For Year 2030 traffic conditions, saturation flow rates of 1,900 vehicles per hour of green for through and right turn lanes and 1,800 vehicles per lane for single left turn lanes, 1,700 vehicles per lane for dual left turn lanes and 1,800 vehicles per lane for double right turn lanes have been assumed for the capacity analysis. These are the default values recommended by the CMP.

As required by the CMP, the peak hour traffic volumes have been adjusted to peak 15 minute volumes for analyses purposes using the existing observed peak 15 minute to peak hour factors for all scenarios analyzed. Where feasible improvements in accordance with the local jurisdiction's General Plan and which result in acceptable operations cannot be identified, the Year 2030 peak hour factor has been adjusted upwards to 0.95. This is specifically allowed by CMP guidelines to account for the effects of congestion on peak spreading. Peak spreading refers to the tendency of traffic to spread more evenly across time as congestion increases.

Table 4.11-2
Level of Service Criteria for Signalized Intersections[1]
San Bernardino County

Level of Service (LOS)	Description	Average Total Delay Per Vehicle (Seconds)	
		Signalized	Unsignalized
A	Level of service A occurs when progression is extremely favorable and most vehicles arrive during the green phase. Most vehicles do not stop at all. Short cycle lengths may also contribute to low delay.	0 to 10.00	0 to 10.00
B	Level of service B generally occurs with good progression, and/or short cycle lengths, or both. More vehicles stop than with LOS A, causing higher levels of average total delay.	10.01 to 20.00	10.01 to 15.00
C	Average traffic delays. These higher delays may result from fair progression, longer cycles lengths, or both. Individual cycle failures may begin to appear at this level. The number of vehicles stopping is significant at this level, though many still pass through the intersection without stopping.	20.01 to 35.00	15.01 to 25.00
D	Long traffic delays At Level D, the influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavorable progression, long cycle lengths, and high v/c ratios. Many vehicles stop, and proportion of vehicles not stopping declines. Individual cycles failures are noticeable.	35.01 to 55.00	25.01 to 35.00.
E	Very long traffic delays. This level is considered by many agencies (i.e. SANBAG) to be the limit of acceptable delay. These high delay values generally indicate poor progression, long cycle failures are frequent occurrences.	55.01 to 80.00	35.01 to 50.00
F	Severe congestion. This level, considered to be unacceptable to most drivers, often occurs with oversaturation, that is, when arrival flow rates exceed the capacity of the intersection. It may also occur at high v/c ratios below 1.0 with many individual cycle failures. Poor progression and long cycle lengths may also be major contributing factors to such delay levels.	80.01 and up	50.01 and up

1. Source: Highway Capacity Manual, Special Report 209, Transportation Research Board, National Research Council, Washington D.C., 2000.

The traffic mitigation needs anticipated at the time of the project opening with full occupancy and the Year 2030 were combined into a summary of mitigation requirements and costs. The mitigation cost responsibility for the proposed project was estimated based on the percent of the increase in traffic from the existing condition to the Years 2030 that was attributed to the project-generated traffic.

Project Traffic Generation

The project site is proposed to be developed with a 400-room hotel, a 200-bed hospital, 250,000 square feet of office space, 75,000 square feet of medical office, and 80,000 square feet of auto

dealership on approximately 41.29 acres. The proposed project is located on the east side of Haven Avenue and south of the I-10 Freeway in the City of Ontario.

The traffic generated by the proposed project is determined by multiplying an appropriate trip generation rate by the quantity of land use. Trip generation rates were determined for daily traffic, and morning and evening peak hour inbound and outbound traffic for the proposed land uses. Table 4.11-3 shows the project trip generation based upon rates obtained from the Institute of Transportation Engineers, Trip Generation, 7th Edition, 2003.

Table 4.11-3
Project Traffic Generation[1]

Land Use	Quantity	Units[2]	Peak Hour						Daily
			Morning			Evening			
			Inbound	Outbound	Total	Inbound	Outbound	Total	
Trip Generation Rates:									
Hotel	400	RM	0.34	0.22	0.56	0.31	0.28	0.59	8.17
Hospital	200	BD	0.79	0.34	1.13	0.47	0.83	1.30	11.81
Office	250.00	TSF	1.36	0.19	1.55	0.25	1.24	1.49	11.01
Medical Office	75.00	TSF	1.96	0.52	2.48	1.00	2.72	3.72	36.13
Auto Dealership	80.00	TSF	1.52	0.53	2.05	1.03	1.61	2.64	33.34
Trips Generated:									
Hotel	400	RM	136	88	224	124	112	236	3,268
Hospital	200	BD	158	68	226	94	166	260	2,362
Office	250.00	TSF	340	48	388	63	310	373	2,753
Medical Office	75.00	TSF	147	39	186	75	204	279	2,710
Auto Dealership	80.00	TSF	122	42	164	82	129	211	2,667
Subtotal			903	285	1,188	438	921	1,359	13,760
Internal (10%)			-90	-29	-119	-44	-92	-136	-1,376
Total			813	256	1,069	394	829	1,223	12,384

1. 1. Source: Institute of Transportation Engineers, Trip Generation, 7th Edition, 2003, Land Use Categories 310, 610, 710, 720 and 841.
2. RM=Rooms; BD=Beds; TSF=Thousand Square Feet

The proposed development is projected to generate a total of approximately 12,384 daily vehicle trips, 1,069 of which will occur during the morning peak hour and 1,223 of which will occur during the evening peak hour. Traffic volumes shown in Table 4.11-3 consist of the total trips generated for each project land use. As a medical office trip generated by the proposed project will also be making trips to the commercial retail land use within the project, a double counting of these trips occurs. Ten percent of the traffic generated by the proposed project has been identified for the internal interaction between the proposed land uses.

For the commercial retail land use, a portion of the traffic would come from pass-by trips, trips that are currently on the roadway system. In order to analyze a "conservative" scenario in terms of the assignment traffic, the traffic volumes from the commercial retail portion of the project site have not been reduced as a result of the pass-by trips.

Construction Traffic

Currently the project site is an operating business containing an approximate 200,000 square-foot metal industrial building (industrial/storage and distribution), and approximately 9,600 square feet of office space. Development of the proposed Specific Plan would generate short-term

construction trips. However, the additional construction trips are not anticipated to exceed existing conditions. Construction activities are not anticipated to generate the need for a detour or closure of Haven Avenue. However, if detours are necessary they would be evaluated by the City at the time of development application submittal. The City of Ontario periodically reviews traffic operations in the vicinity of the project once the project is constructed to assure that the traffic operations are satisfactory.

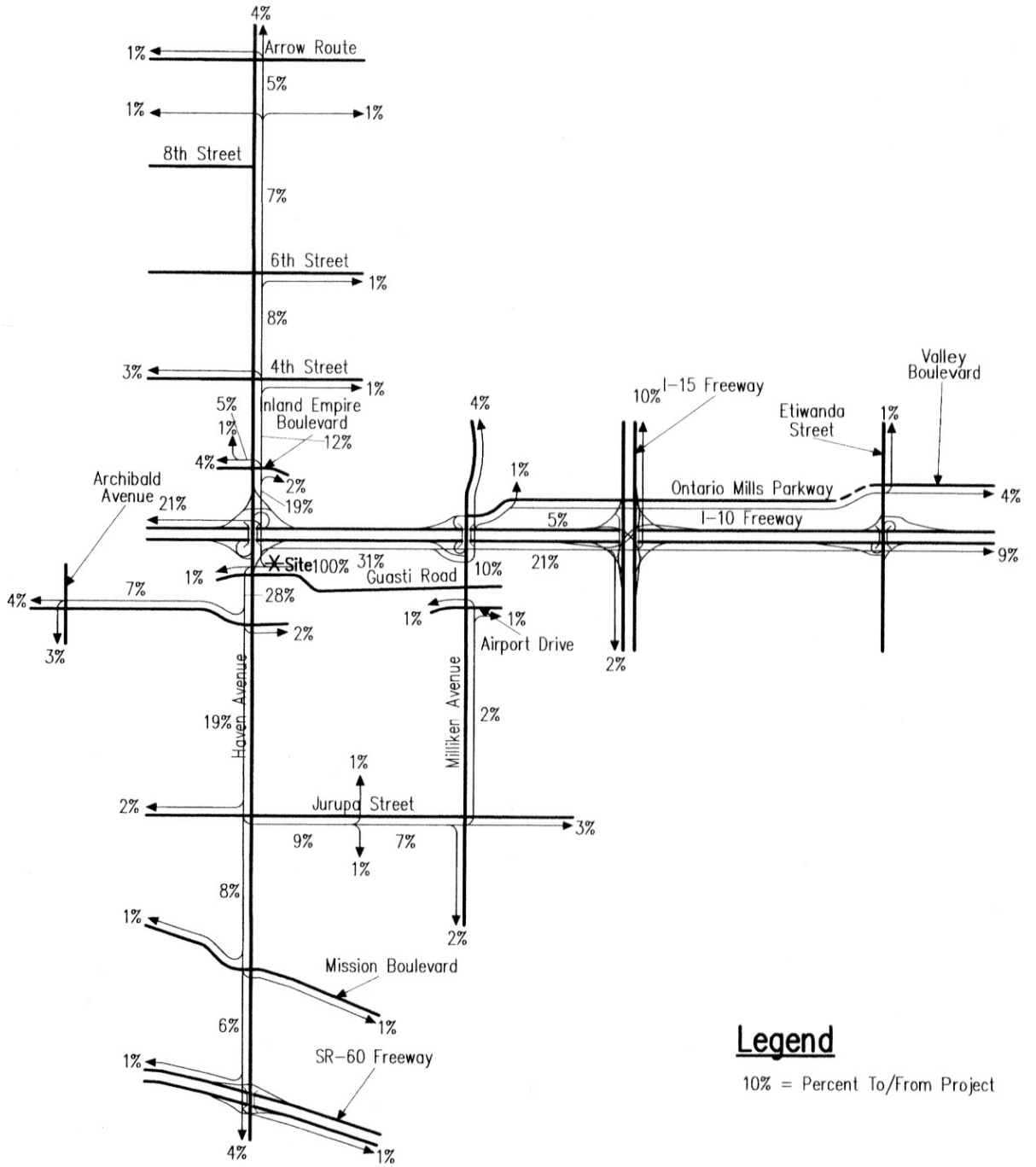
Trip Distribution and Assignment

Trip distribution is the process which identifies the routes and directions the project traffic will utilize to and from the project site. The Comprehensive Transportation Plan (CTP) traffic model has been used to evaluate the regional distribution of project traffic. The directional distribution of the project traffic is shown on Figures 4.11-4 and Figure 4.11-5 for both the years 2008 and 2030, respectively. Based on the identified traffic generation and distribution, project average daily traffic volumes have been calculated and shown in Figures 4.11-6 and 4.11-7 for both the years 2008 and 2030, respectively. Morning and evening peak hour intersection turning movement volumes expected from the proposed project are shown in Figures 4.11-8 and 4.11-9 for the year 2008, respectively. Figures 4.11-10 and 4.11-11 show the morning and evening peak hour intersection turning movement volumes expected from the proposed project for the year 2030, respectively.

Congestion Management Program Traffic Contribution Test

The Congestion Management Program requires no analysis further than five miles from the project site. The roadway elements that must be analyzed in accordance with Congestion Management Program requirements are dependent on both the analysis year (project Opening Year or Horizon Year) and project generated traffic volumes. The identification of the study area, and the intersections and highway segments requiring analysis, was based on an estimate of the two-way traffic volumes on the roadway segments near the project site. The Congestion Management Program requires that all arterial segments be included in the analysis when the anticipated project volume equals or exceeds 50 two-way trips in the peak hours. The Congestion Management Program requirement is 100 two-way peak hour trips for freeways. Figure 4.11-12 graphically depicts the Congestion Management Program project traffic contribution test volumes on all of the roadway segments adjacent to the potential Congestion Management Program intersection analysis locations previously identified, until the project volume contribution has clearly dropped below the Congestion Management Program 80 trip threshold for non-State highway facilities and 50 trip threshold for State highway facilities.

The project contributes traffic greater than the Congestion Management Program freeway threshold volume of 100 two-way peak hour trips to a Freeway. The project contributes traffic greater than the Congestion Management Program arterial link threshold volume of 50 two-way trips in the peak hours on facilities serving Congestion Management Program intersections in the City of Ontario. This means that the City of Ontario must notify the Congestion Management Agency (San Bernardino Associated Governments) and the California Department of Transportation in accordance with Congestion Management Program requirements. Each of



Source: Kunzman Assoc., 02/07.

Project Year 2008 Traffic Distribution

Ontario Gateway Specific Plan
City of Ontario, California

Figure 4.11-4

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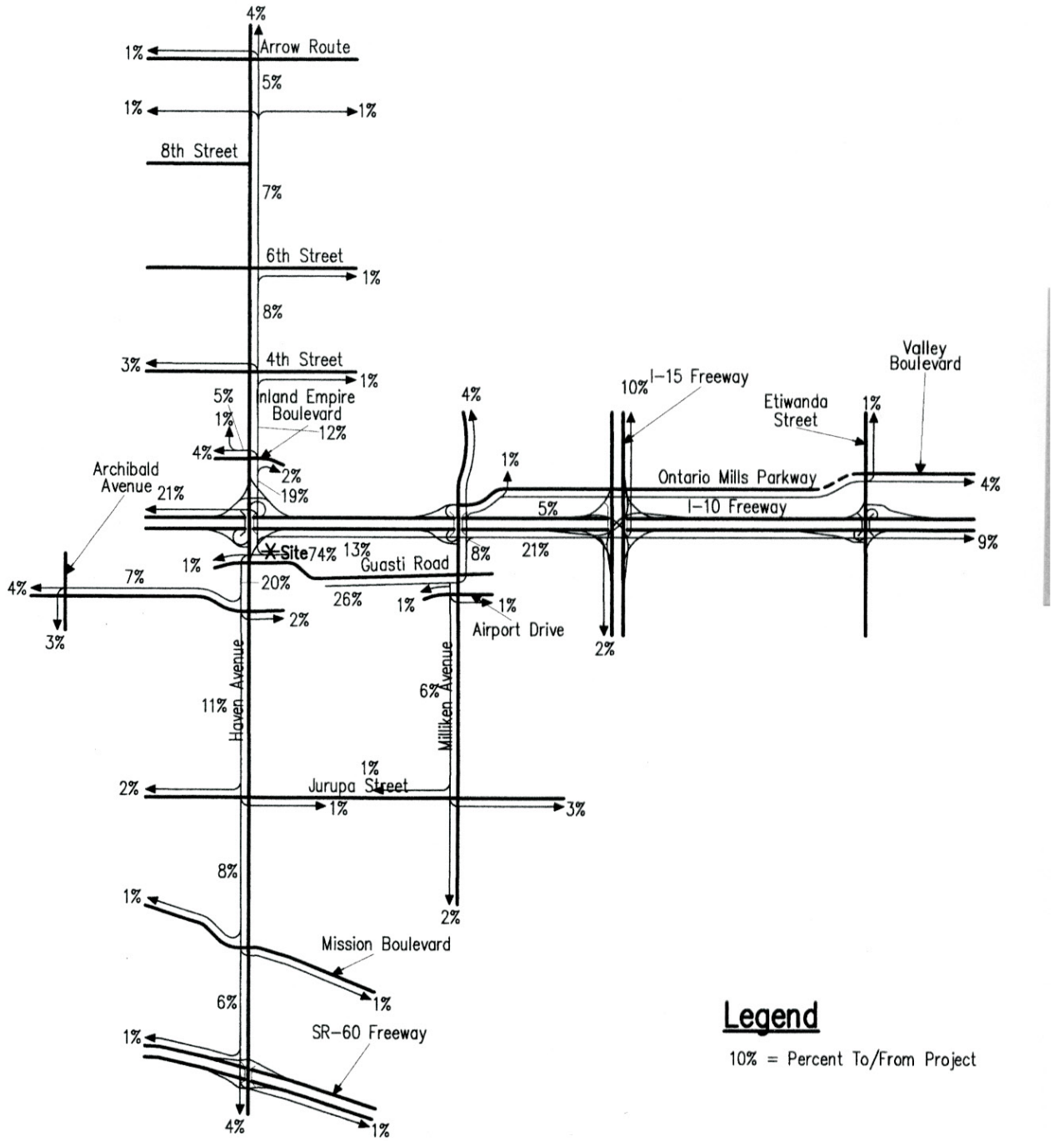

Source: Kunzman Assoc., 02/07.

Project Year 2030 Traffic Distribution

Ontario Gateway Specific Plan
City of Ontario, California

Figure 4.11-5

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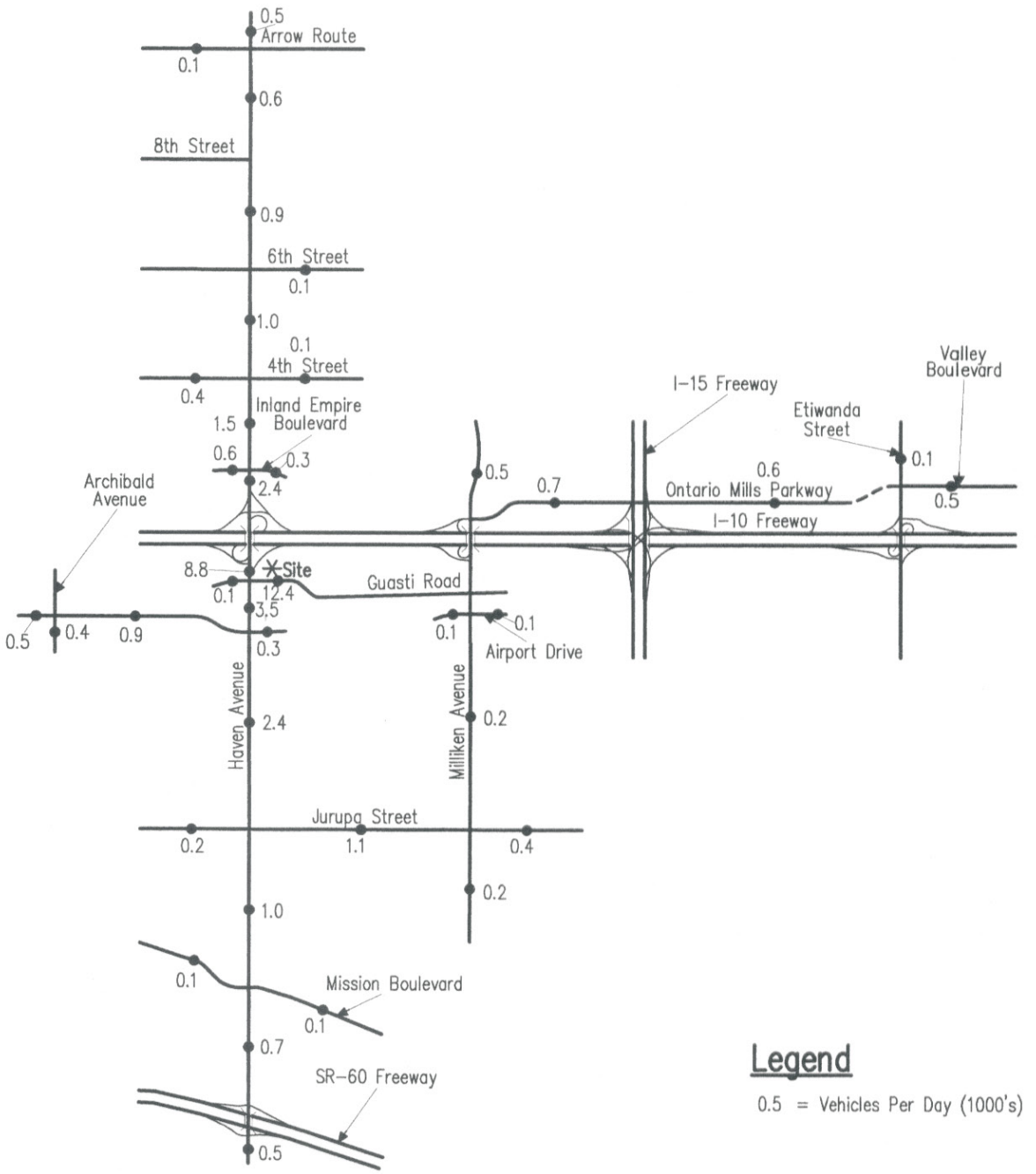

Source: Kunzman Assoc., 02/07.

Project Opening Year 2008 Average Daily Traffic Volumes

Ontario Gateway Specific Plan
City of Ontario, California

Figure 4.11-6

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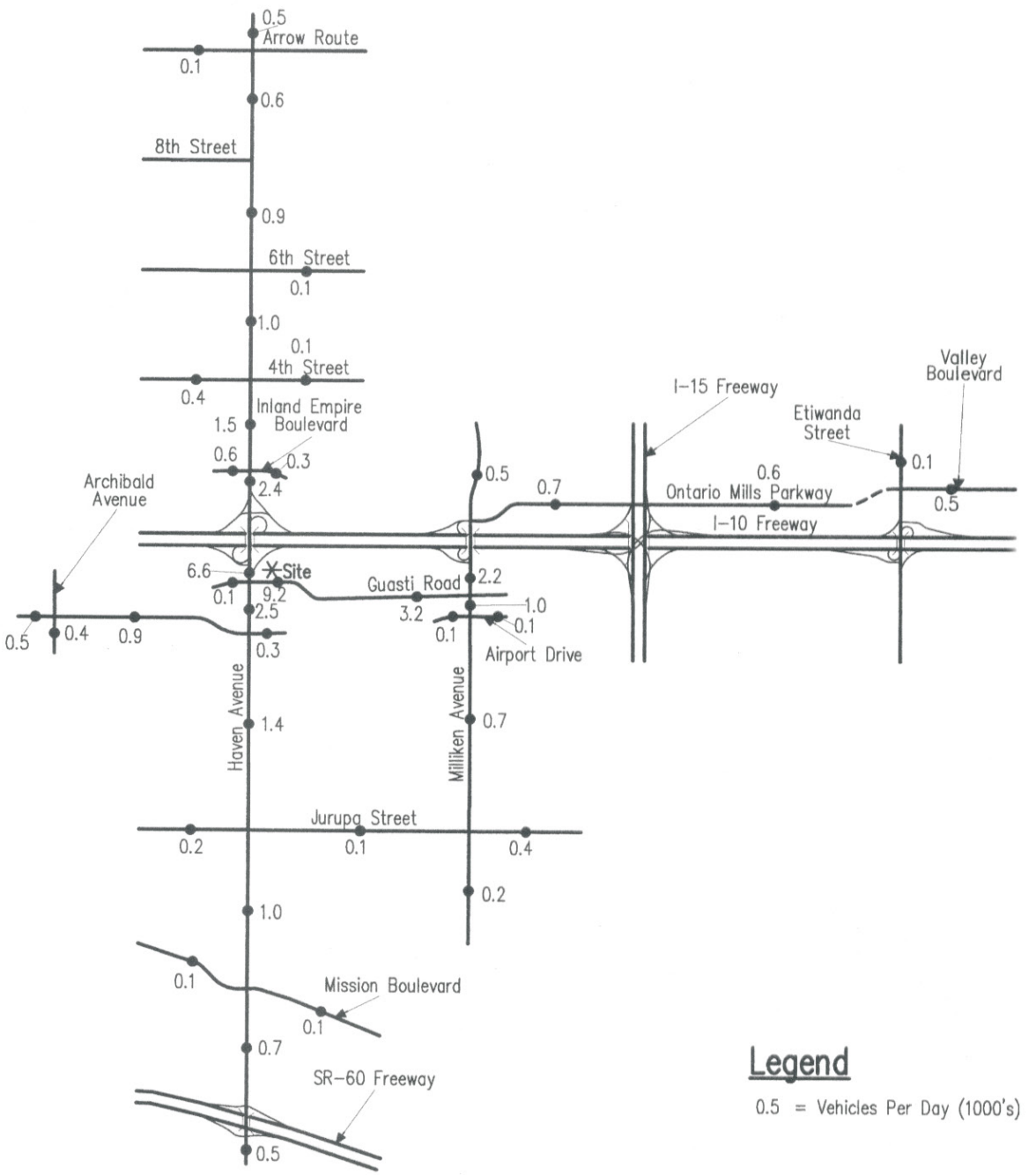

Source: Kunzman Assoc., 02/07.

Project Year 2030
Average Daily Traffic Volumes

Ontario Gateway Specific Plan
City of Ontario, California

Figure 4.11-7

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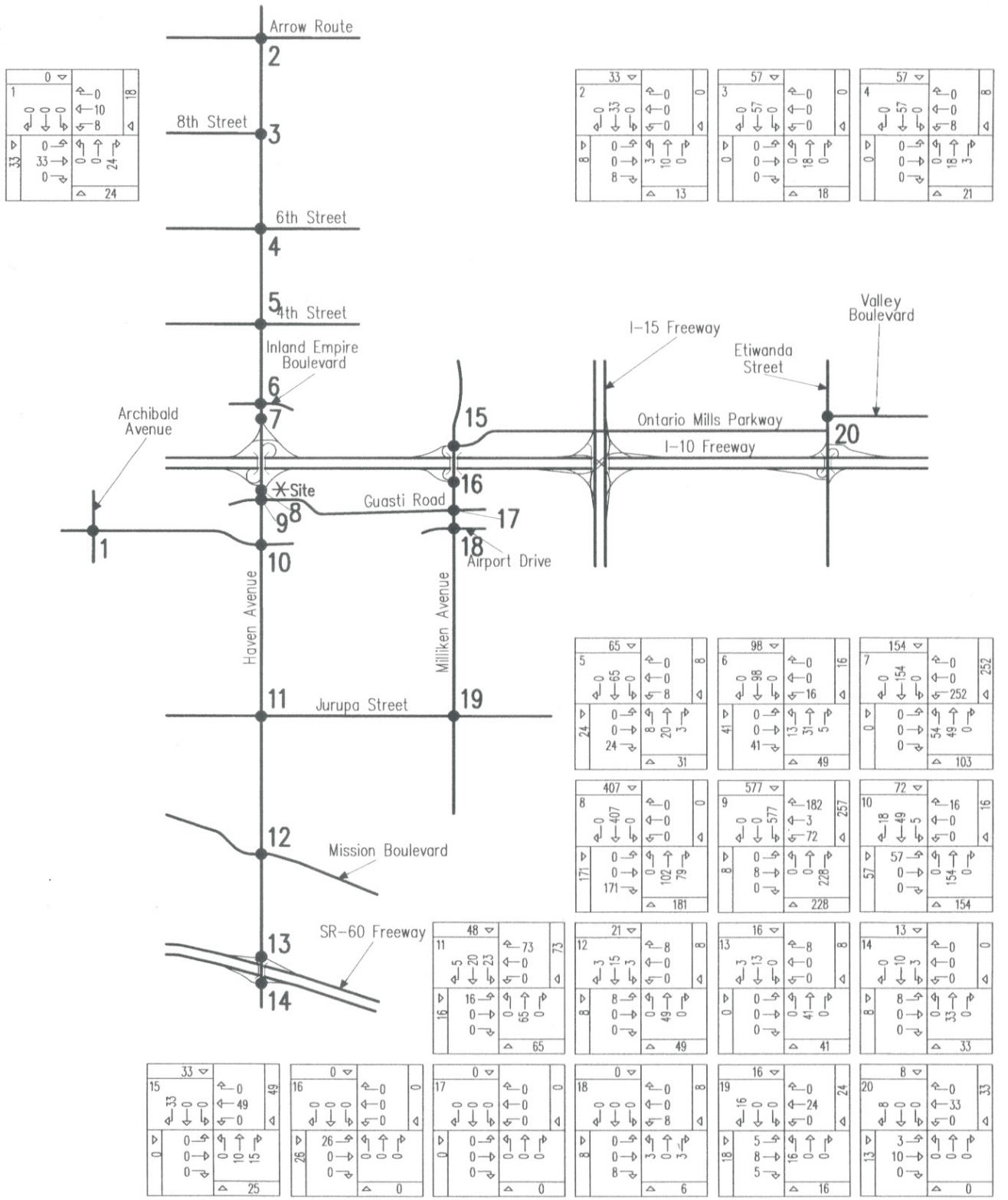


Intersection reference numbers are in upper left corner of turning movement boxes.

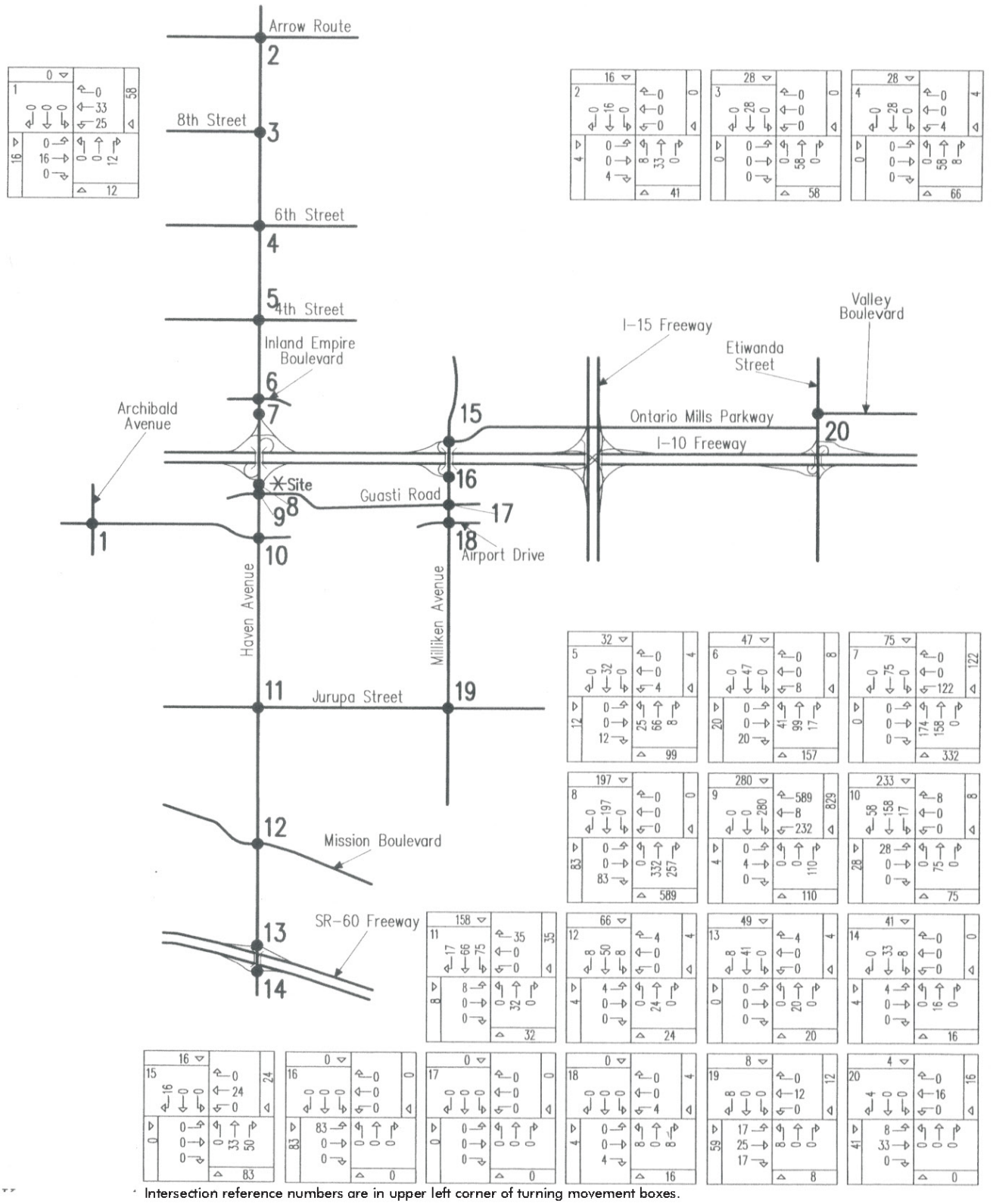
Source: Kunzman Assoc., 02/07.

Project Opening Year 2008 Morning Peak Hour Intersection Turning Movement Volumes

Ontario Gateway Specific Plan
City of Ontario, California

Figure 4.11-8

LILBURN CORPORATION



* Intersection reference numbers are in upper left corner of turning movement boxes.

Source: Kunzman Assoc., 02/07.

Project Opening Year 2008 Evening Peak Hour Intersection Turning Movement Volumes

Ontario Gateway Specific Plan
City of Ontario, California

Figure 4.11-9

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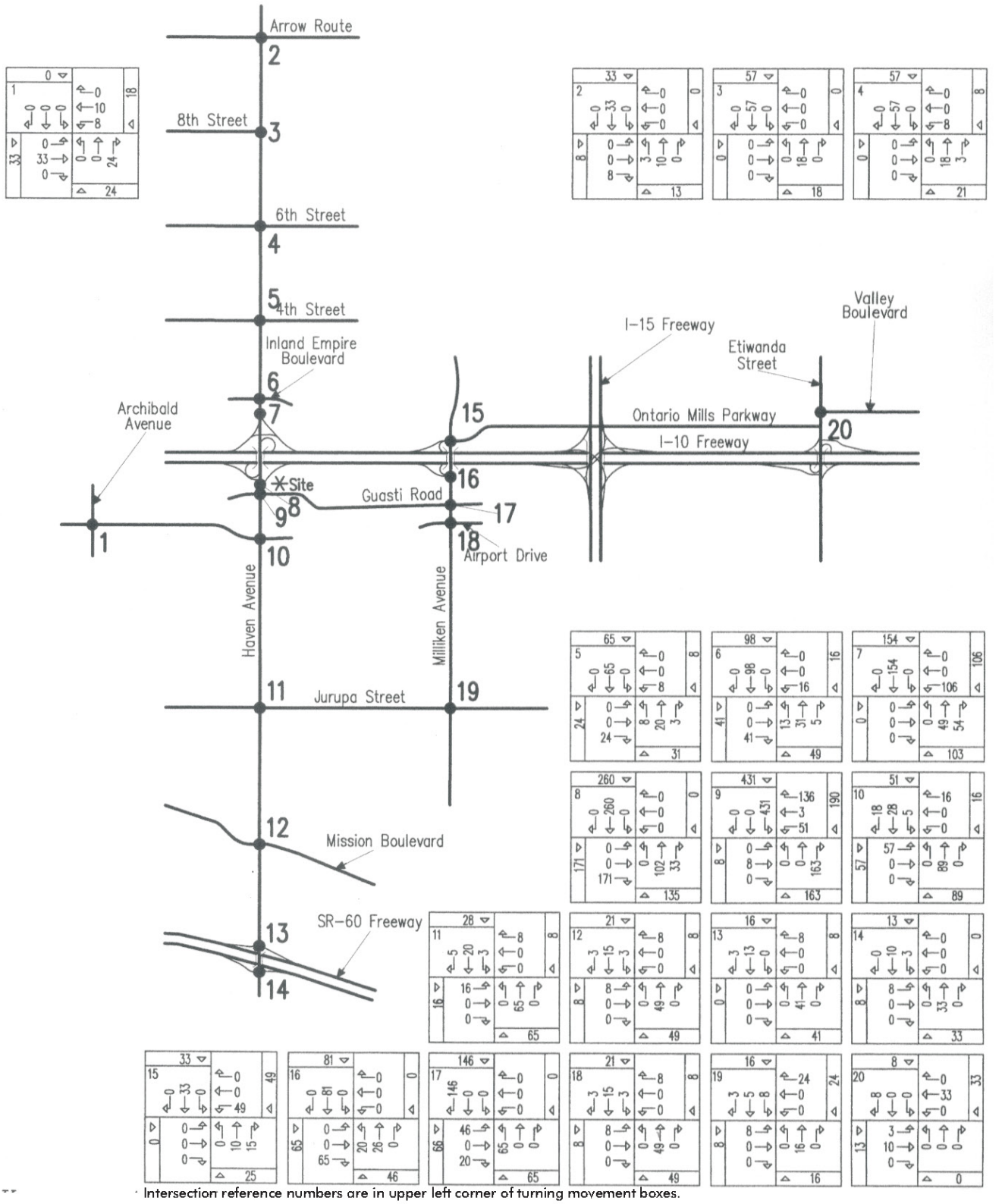

Intersection reference numbers are in upper left corner of turning movement boxes.

Source: Kunzman Assoc., 02/07.

Project Year 2030 Morning Peak Hour Intersection Turning Movement Volumes

Ontario Gateway Specific Plan
City of Ontario, California

Figure 4.11-10

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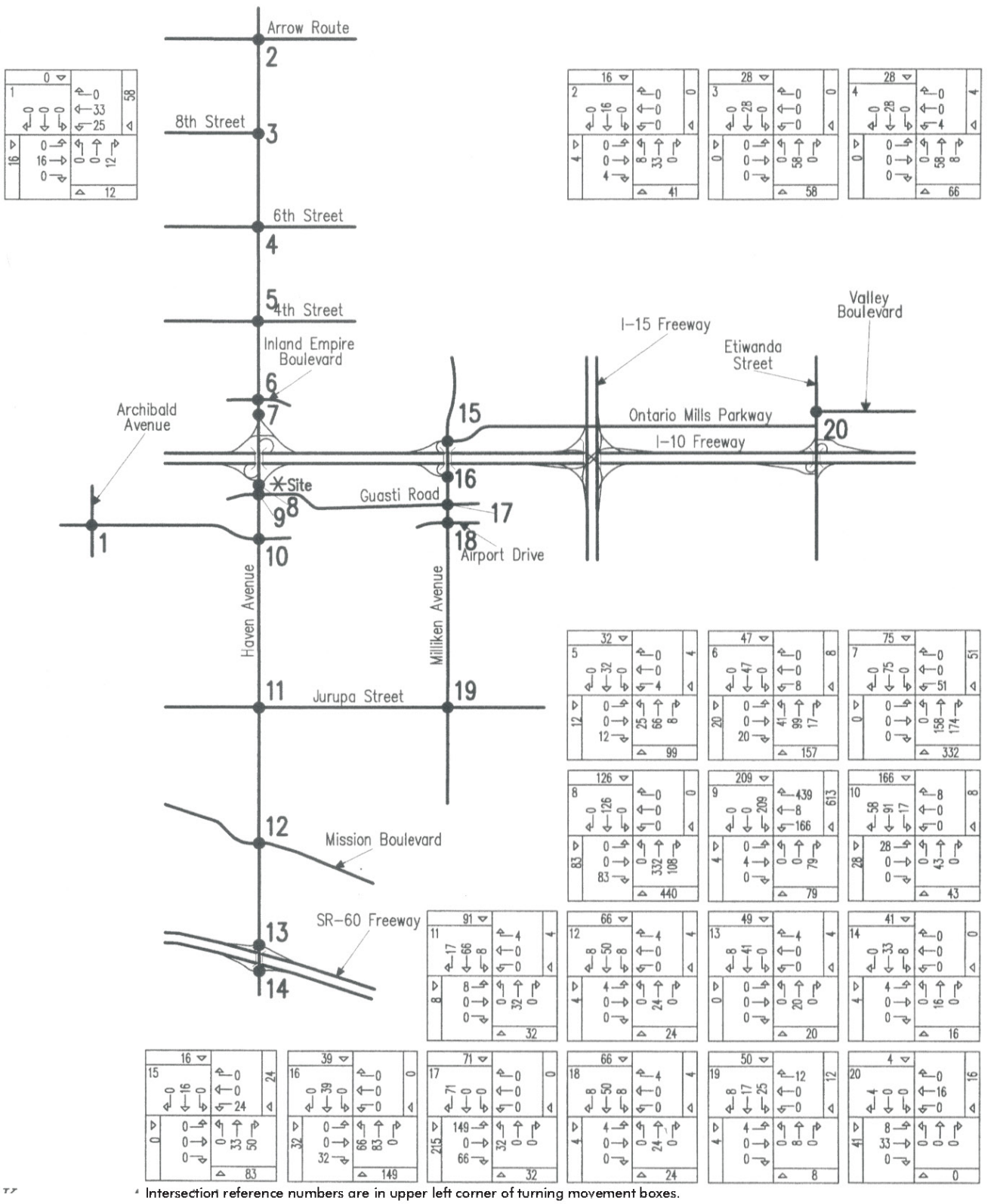

[a] Intersection reference numbers are in upper left corner of turning movement boxes.

Source: Kunzman Assoc., 02/07.

Project Year 2030 Evening Peak Hour Intersection Turning Movement Volumes

Ontario Gateway Specific Plan
City of Ontario, California

Figure 4.11-11

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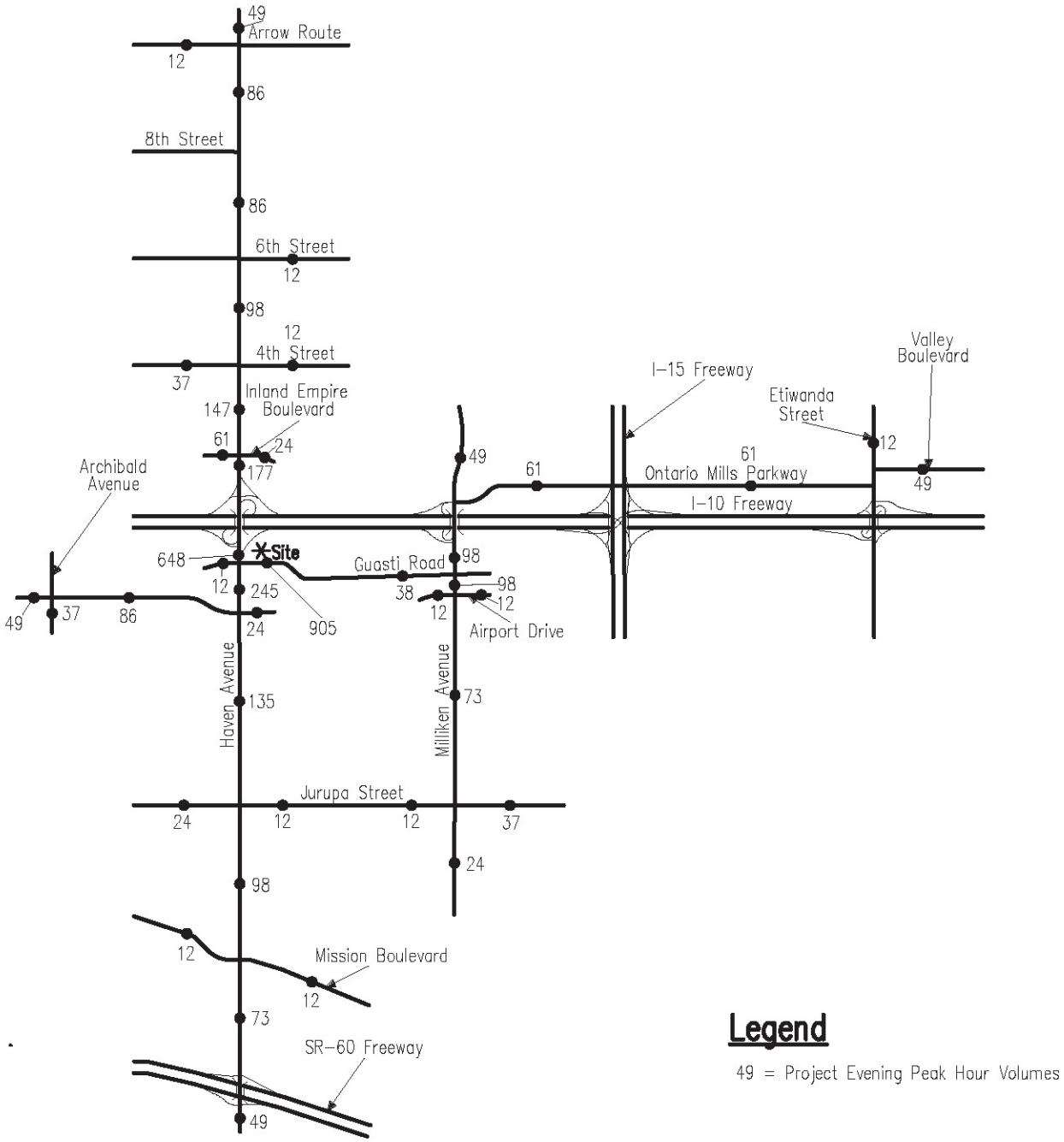


Kunzman Associates

Source: Kunzman Assoc., 02/07.

3460/13

Congestion Management Program
Project Traffic Contribution Test Volumes

Ontario Gateway Specific Plan
City of Ontario, California

Figure 4.11-12

LILBURN CORPORATION

these agencies must also be provided with a copy of the Congestion Management Program traffic impact analysis, once the document is accepted by the City of Ontario.

Applicable Plans and Regulations

Federal

There are no federal regulations related to transportation/traffic that apply to the proposed Specific Plan.

State

Congestion Management Program Traffic Impact Assessment

The Congestion Management Program (CMP) was enacted by the State Legislature with the passage of Proposition 111 in 1990. The program is intended to address the impact of local growth on the regional transportation system. In San Bernardino County, the CMP is administered by the San Bernardino Associated Governments (SANBAG). As required by the Congestion Management Program for San Bernardino County, a traffic impact assessment would be submitted to SANBAG and California Department of Transportation (DOT) to determine the potential impacts of the proposed project designated monitoring locations included in the CMP highway system. The analysis would be prepared in accordance with the procedures outlined in the Congestion Management Program.

Local

Southern California Association of Governments

SCAG's Regional Comprehensive Plan and Guide (RCPG) and Regional Housing Needs Assessment (RHNA) are tools for coordinating regional planning and development strategies in southern California.

City of Ontario General Plan

General Plan goals, objectives, and policies related to transportation/traffic are located in the Circulation, and Air Quality Elements, and include:

Circulation

Goal 11.0: Provide adequate transportation facilities throughout the City consistent with the Land Use Element of the General Plan.

Policy 11.2: Require that new development be consistent with the provisions of the Countywide Congestion Management Program.

Air Quality

Goal 13.0: Work with other agencies and jurisdictions to control traffic growth and congestion on a regional level.

Policy 13.4: Support and implement locally applicable portions of the Regional Mobility Plan and Air Quality Management Plan.

4.11.3 Impacts and Mitigation Measures

Thresholds of Significance

The proposed project would result in a significant impact to transportation/circulation if it would:

- Cause an increase in traffic, which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)
- Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways
- Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks
- Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)
- Result in inadequate emergency access
- Result in inadequate parking capacity
- Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)

Definition of Deficiency

The definition of an intersection deficiency has been obtained from the City of Ontario General Plan. The General Plan states that peak hour intersection operations of Level of Service D or better are generally acceptable. Therefore, any intersection operating at Level of Service E to F will be considered deficient.

For freeway facilities, the Congestion Management Program controls the definition of deficiency for purposes of this study. The Congestion Management Program definition of deficiency is based on maintaining a level of service standard of Level of Service E or better, except where an existing Level of Service F condition is identified in the Congestion Management Program document (San Bernardino County Congestion Management Program Table 2-1). A Congestion

Management Program deficiency is, therefore, defined as any freeway segment operating or projected to operate at Level of Service F, unless the segment is identified explicitly in the Congestion Management Program document.

The identification of a Congestion Management Program deficiency requires further analysis in satisfaction of Congestion Management Program requirements, including:

- Evaluation of the mitigation measures required to restore traffic operations to an acceptable level with respect to Congestion Management Program Level of Service standards.

- Calculation of the project share of new traffic on the impacted Congestion Management Program facility during peak hours of traffic.

- Estimation of the cost required to implement the improvements required to restore traffic operations to an acceptable level of service as described above.

Impacts Determined to Have No Impact

Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks.

The proposed project lies within one-quarter mile of LA/Ontario International Airport. The proposed project would comply with the building height requirements as set forth by the Federal Aviation Authority (FAA). The proposed buildings would not exceed a maximum height of 170 feet. The emergency helicopter landings at the proposed heliport would also comply with the FAA and Heliport Permit regulations. Therefore, a less than significant impact is anticipated.

Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

The proposed project would comply with all the applicable road design and safety guidelines of the City of Ontario Development Code. In addition, a Trip Reduction Plan in accordance with the City requirements would be submitted by the development applicants within the proposed Ontario Gateway Specific Plan. No impacts are anticipated.

Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?

The project does not conflict with any transportation policies, plans or programs. Therefore, no impacts are anticipated.

Impacts Determined to be Potentially Significant

Cause an increase in traffic, which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?

Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?

Result in inadequate emergency access?

Impact TC-1

The proposed project would increase vehicle trips, and affect the level of service along arterial roadways and intersections. This would be a significant impact to existing road segments and intersections in the region.

Trip generation rates were determined for daily traffic and morning peak hour inbound and outbound traffic, and evening peak hour inbound and outbound traffic for the proposed land uses. By multiplying the traffic generation rates by the land use quantities, the traffic volumes are determined.

Table 4.11-3 shows that the Specific Plan would generate approximately 12,348 daily vehicle trips, 1,069 vehicles during the AM peak hour and 1,223 vehicles during the PM peak hour.

Future Traffic Conditions

The Horizon Year 2030 average daily traffic volume forecasts with the project are developed using a growth increment process based on volumes predicted by the Comprehensive Transportation Plan traffic model Year 2000 and Year 2030 traffic models. The growth increment for Horizon Year 2030 on each roadway segment is the increase in Comprehensive Transportation Plan traffic model volumes from existing Year 2006 to Year 2030. The final Year 2030 roadway segment volume used for analysis purposes is then determined by adding the Year 2030 growth increment volume to the existing counted volume.

The Opening Year (2008) traffic projections have been interpolated between Year 2030 traffic volumes and existing traffic volumes utilizing a portion of the growth increment.

Opening Year 2008 Traffic Without Project

The Opening Year (2008) delay and LOS for the study area roadway network without the proposed project are shown in Table 4.11-4. Opening Year (2008) without project traffic conditions, the following study area intersections are projected to operate at LOS E to F during the peak hours, without improvements:

Table 4.11-4
Opening Year (2008) Without Project Intersection Delay and Level of Service

Intersection	Traffic Control[3]	Intersection Approach Lanes[1]												Peak Hour Delay-LOS[2]	
		Northbound			Southbound			Eastbound			Westbound				
		L	T	R	L	T	R	L	T	R	L	T	R	Morning	Evening
Archibald Avenue (NS) at:															
East Airport Drive (EW)	TS	2	3	0	2	2	1	2	3	0	1	3	2>	29.8-C	35.3-D
Haven Avenue (NS) at:															
Arrow Route (EW)	TS	2	3	1>	2	3	0	2	2	1>	2	2	0	31.1-C	99.9-F[4]
8th Avenue (EW)	CSS	0	3	0	0	3	0	0	0	1	0	0	0	15.1-C	17.5-C
6th Avenue (EW)	TS	2	3	0	2	3	0	1	2	1	1	2	1	23.6-C	27.5-C
4th Avenue (EW)	TS	2	3	1>>	2	3	0	2	2	0	2	2	1	31.8-C	46.5-D
Inland Empire Boulevard (EW)	TS	2	4	1>>	2	4	1>>	2	2	2>	2	2	1>>	42.5-D	68.1-E
I-10 Freeway WB Ramps (EW)	TS	0	4	1>>	0	3	2>>	0	0	0	1	0	2	17.9-B	13.4-B
I-10 Freeway EB Ramps (EW)	TS	0	4	1>>	0	4	1>>	2	0	1	0	0	0	19.1-B	17.4-B
Guasti Road (EW)	TS	2	4	0	2	4	1	2	1	1	1	1	1	27.9-C	38.4-D
East Airport Drive (EW)	TS	2	4	1	2	4	1	2	2	0	2	2	1>	41.4-D	36.8-D
Jurupa Street (EW)	TS	1	4	1	1	4	1>>	2	3	1	2	2	1>	41.8-D	47.5-D
Mission Boulevard (EW)	TS	1	3	1	1	3	1	2	3	1	2	3	1	39.8-D	52.2-D
SR-60 Freeway WB Ramps (EW)	TS	2	3	0	0	3	1	0	0	0	2	0	1>>	7.7-A	19.7-B
SR-60 Freeway EB Ramps (EW)	TS	0	2	1	2	3	0	2	0	1	0	0	0	20.3-C	14.8-B
Milliken Avenue (NS) at:															
I-10 Freeway WB Ramps/Ontario Mills Parkway (EW)	TS	2	4	1>	2	4	1>	2	1	1	2	2	1	41.5-D	59.1-E
I-10 Freeway EB Ramps (EW)	TS	2	4	0	0	4	1>	2	0	1	0	0	0	16.6-B	15.9-B
Guasti Road (EW)	TS	1	3	0	2	3	1>>	2	1	0	1	1	1>>	36.9-D	43.3-D
East Airport Drive (EW)	TS	1	3	0	1	3	1>	2	2	1	1	2	0	35.3-D	47.7-D
Jurupa Street (EW)	TS	2	3	1	2	3	1>	2	3	1>	2	3	0	29.8-C	41.6-D
Etiwanda Street (NS) at:															
Valley Boulevard (EW)	TS	0	3	1	2	3	0	0	0	0	3	0	1	15.2-B	16.1-B

1. When a right turn is designated, the lane can either be striped or unstriped. To function as a right turn lane there must be sufficient width for right turning vehicles to travel outside the through lanes. L=Left; T=Through; R=Right; >=Right Turn Overlap; >>=Free Right Turn
2. Delay and LOS calculated using the following analysis software: Traffix, Version 7.8.0115 (2006). Per the 2000 Highway Capacity Manual, overall average intersection delay and LOS are shown for intersections with traffic signal or all way stop control.. For intersections with cross street stop control, the delay and LOS for the worst individual movement (or movements sharing a single lane) are shown
3. TS=Traffic Signal; CSS=Cross Street Stop
4. 99.9-F = Delay High, Intersection Unstable, Level of Service F.

Haven Avenue (NS) at:

- Arrow Route (EW)
- Inland Empire Boulevard (EW)

Milliken Avenue (NS) at:

- I-10 Freeway WB Ramps/Ontario Mills Parkway (EW)

Year 2008 Traffic With Project

The Opening Year (2008) delay and LOS for the study area roadway network with the proposed project are shown in Table 4.11-5. Opening Year (2008) with project morning and evening peak hour intersection turning movement volumes are shown on Figures 4.11-13 and 4.11-14.

For Opening Year (2008) with project traffic conditions, the following study area intersections are projected to operate at LOS E to F during the peak hours, without improvements:

Haven Avenue (NS) at:

- Arrow Route (EW)
- Inland Empire Boulevard (EW)
- Guasti Road (EW)

Milliken Avenue (NS) at:

- I-10 Freeway WB Ramps/Ontario Mills Parkway (EW)

Table 4.11-5
Opening Year (2008) With Project Intersection Delay and Level of Service

Intersection	Traffic Control[3]	Intersection Approach Lanes[1]												Peak Hour Delay-LOS[2]	
		Northbound			Southbound			Eastbound			Westbound				
		L	T	R	L	T	R	L	T	R	L	T	R	Morning	Evening
Archibald Avenue (NS) at:															
East Airport Drive (EW)	TS	2	3	0	2	2	1	2	3	0	1	3	2>	29.8-C	35.7-D
Haven Avenue (NS) at:															
Arrow Route (EW)	TS	2	3	1>	2	3	0	2	2	1>	2	2	0	31.3-C	99.9-F[4]
8th Avenue (EW)	CSS	0	3	0	0	3	0	0	0	1	0	0	0	15.5-C	17.8-C
6th Avenue (EW)	TS	2	3	0	2	3	0	1	2	1	1	2	1	23.7-C	28.2-C
4th Avenue (EW)	TS	2	3	1>>	2	3	0	2	2	0	2	2	1	32.4-C	49.3-D
Inland Empire Boulevard (EW)	TS	2	4	1>>	2	4	1>>	2	2	2>	2	2	1>>	44.8-D	76.1-E
I-10 Freeway WB Ramps (EW)	TS	0	4	1>>	0	3	2>>	0	0	0	1	0	2	46.0-D	19.0-B
I-10 Freeway EB Ramps (EW)	TS	0	4	1>>	0	4	1>>	2	0	1	0	0	0	31.8-C	23.2-C
Guasti Road (EW)	TS	2	4	0	2	4	1	2	1	1	1	1	1	48.18-D	991.9-E
East Airport Drive (EW)	TS	2	4	1	2	4	1	2	2	0	2	2	1>	42.4-D	39.2-D
Jurupa Street (EW)	TS	1	4	1	1	4	1>>	2	3	1	2	2	1>	44.3-D	53.1-D
Mission Boulevard (EW)	TS	1	3	1	1	3	1	2	3	1	2	3	1	41.2-D	54.5-D
SR-60 Freeway WB Ramps (EW)	TS	2	3	0	0	3	1	0	0	0	2	0	1>>	7.7-A	19.8-B
SR-60 Freeway EB Ramps (EW)	TS	0	2	1	2	3	0	2	0	1	0	0	0	20.9-C	14.9-B
Milliken Avenue (NS) at:															
I-10 Freeway WB Ramps/Ontario Mills Parkway (EW)	TS	2	4	1>	2	4	1>	2	1	1	2	2	1	44.9-D	59.3-E
I-10 Freeway EB Ramps (EW)	TS	2	4	0	0	4	1>	2	0	1	0	0	0	16.7-B	16.1-B
Guasti Road (EW)	TS	1	3	0	2	3	1>>	2	1	0	1	1	1>>	36.9-D	43.3-D
East Airport Drive (EW)	TS	1	3	0	1	3	1>	2	2	1	1	2	0	35.5-D	47.7-D
Jurupa Street (EW)	TS	2	3	1	2	3	1>	2	3	1>	2	3	0	29.9-C	41.7-D
Etiwanda Street (NS) at:															
Valley Boulevard (EW)	TS	0	3	1	2	3	0	0	0	0	3	0	1	15.4-B	16.3-B

1. When a right turn is designated, the lane can either be striped or unstriped. To function as a right turn lane there must be sufficient width for right turning vehicles to travel outside the through lanes. L=Left; T=Through; R=Right; >=Right Turn Overlap; >>=Free Right Turn
2. Delay and LOS calculated using the following analysis software: Traffix, Version 7.8.0115 (2006). Per the 2000 Highway Capacity Manual, overall average intersection delay and LOS are shown for intersections with traffic signal or all way stop control.. For intersections with cross street stop control, the delay and LOS for the worst individual movement (or movements sharing a single lane) are shown
3. TS=Traffic Signal; CSS=Cross Street Stop
4. 99.9-F = Delay High, Intersection Unstable, Level of Service F.

A traffic signal warrant analysis was proposed by Kunzman Associates to determine if any traffic signal would be warranted.

According to the analysis, a traffic signal is warranted at the intersection of Project Central Driveway (NS) at Guasti Road (EW) for the Opening Year (2008) with project traffic conditions.

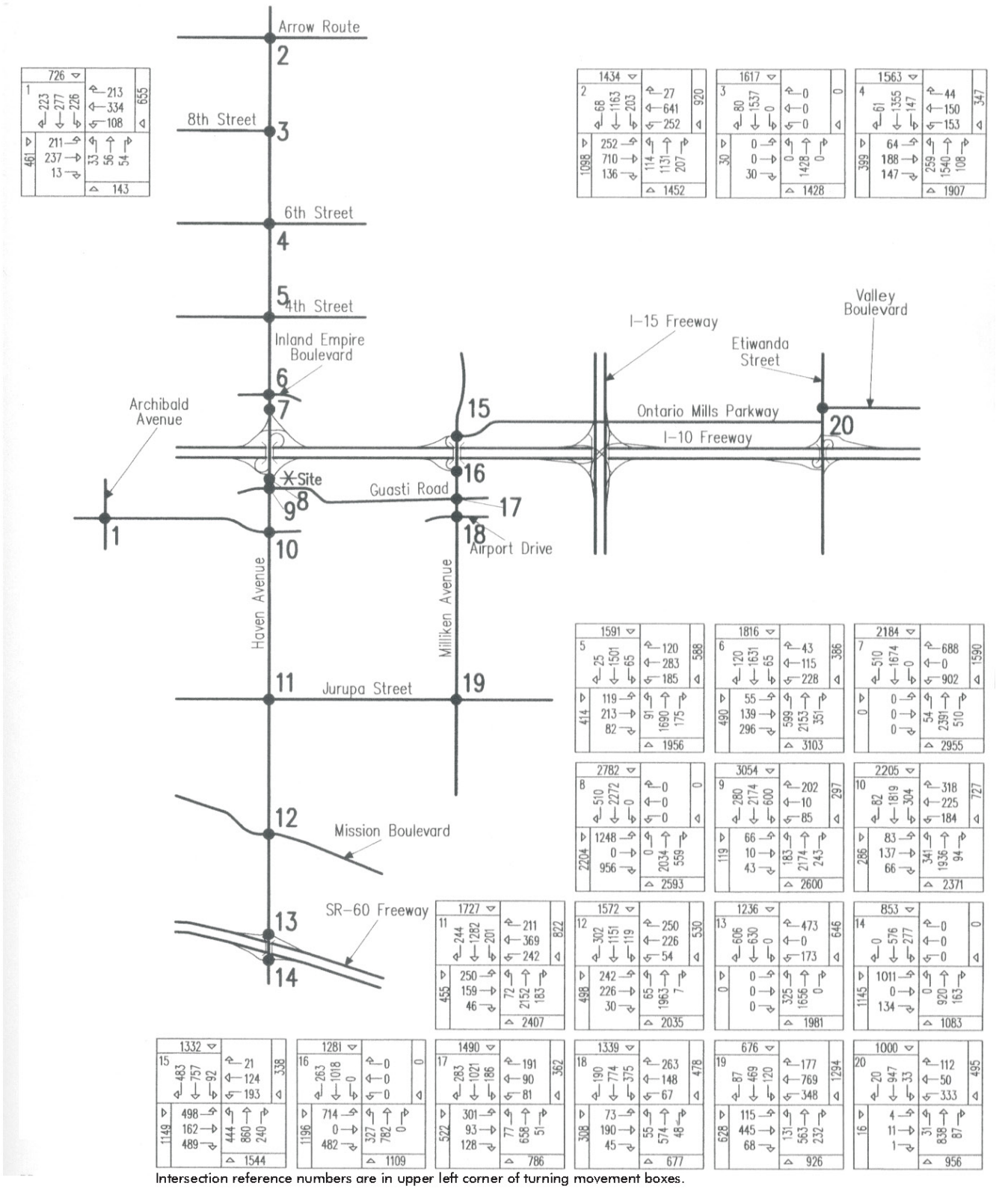
Year 2030 Without Project

The Year 2030 delay and LOS for the study area roadway network without the proposed project are shown in Table 4.11-6.

For Year 2030 without project traffic conditions, the following study area intersections are projected to operate at LOS E to F during the peak hours, without improvements:

Archibald Avenue (NS) at:

- East Airport Drive (EW)



Intersection reference numbers are in upper left corner of turning movement boxes.

Source: Kunzman Assoc., 02/07.

Opening Year 2008 with Project Morning Peak Hour Intersection Turning Movement Volumes

Ontario Gateway Specific Plan
City of Ontario, California

Figure 4.11-13

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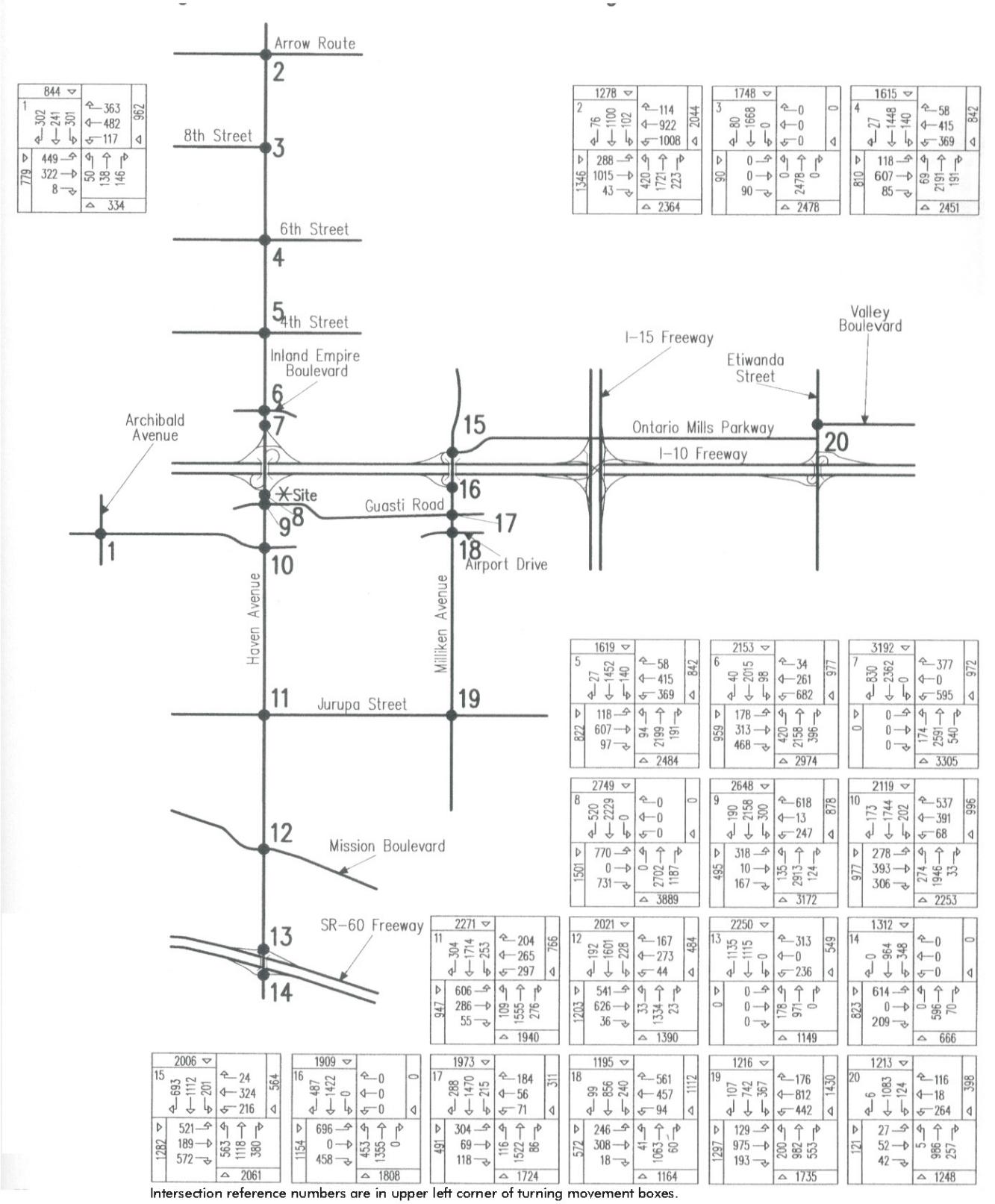

Intersection reference numbers are in upper left corner of turning movement boxes.

Source: Kunzman Assoc., 02/07.

Opening Year 2008 with Project Evening Peak Hour Intersection Turning Movement Volumes

Ontario Gateway Specific Plan
City of Ontario, California

Figure 4.11-14

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Haven Avenue (NS) at:

- Arrow Route (EW)
- 8th Street
- 4th Street
- Inland Empire Boulevard (EW)
- Guasti Road (EW)
- East Airport Drive (EW)
- Jurupa Street (EW)
- Mission Boulevard (EW)

Milliken Avenue (NS) at:

- I-10 Freeway WB Ramps/Ontario Mills Parkway (EW)
- Guasti Road (EW)
- East Airport Drive (EW)
- Jurupa Street (EW)

Etiwanda Street (NS) at:

- Valley Boulevard (EW)

Table 4.11-6
Year 2030 Without Project Intersection Delay and Level of Service

Intersection	Traffic Control[3]	Intersection Approach Lanes[1]												Peak Hour Delay-LOS[2]	
		Northbound			Southbound			Eastbound			Westbound				
		L	T	R	L	T	R	L	T	R	L	T	R	Morning	Evening
Archibald Avenue (NS) at:															
East Airport Drive (EW)	TS	2	3	0	2	2	1	2	3	0	1	3	2>	99.9-F[4]	99.9-F
Haven Avenue (NS) at:															
Arrow Route (EW)	TS	2	3	1>	2	3	0	2	2	1>	2	2	0	33.1-C	99.9-F
8th Avenue (EW)	CSS	0	3	0	0	3	0	0	0	1	0	0	0	18.1-C	73.9-F
6th Avenue (EW)	TS	2	3	0	2	3	0	1	2	1	1	2	1	22.0-C	23.5-C
4th Avenue (EW)	TS	2	3	1>>	2	3	0	2	2	0	2	2	1	35.1-D	83.9-F
Inland Empire Boulevard (EW)	TS	2	4	1>>	2	4	1>>	2	2	2>	2	2	1>>	92.1-F	76.7-E
I-10 Freeway WB Ramps (EW)	TS	0	4	1>>	0	3	2>>	0	0	0	1	0	2	38.5-D	14.7-B
I-10 Freeway EB Ramps (EW)	TS	0	4	1>>	0	4	1>>	2	0	1	0	0	0	32.0-C	45.2-D
Guasti Road (EW)	TS	2	4	0	2	4	1	2	1	1	1	1	1	31.7-C	99.9-F
East Airport Drive (EW)	TS	2	4	1	2	4	1	2	2	0	2	2	1>	36.3-D	97.0-F
Jurupa Street (EW)	TS	1	4	1	1	4	1>>	2	3	1	2	2	1>	70.6-E	78.3-E
Mission Boulevard (EW)	TS	1	3	1	1	3	1	2	3	1	2	3	1	41.9-D	99.9-F
SR-60 Freeway WB Ramps (EW)	TS	2	3	0	0	3	1	0	0	0	2	0	1>>	6.6-A	19.7-B
SR-60 Freeway EB Ramps (EW)	TS	0	2	1	2	3	0	2	0	1	0	0	0	33.8-C	14.8-B
Milliken Avenue (NS) at:															
I-10 Freeway WB Ramps/Ontario Mills Parkway (EW)	TS	2	4	1>	2	4	1>	2	1	1	2	2	1	70.7-E	79.0-E
I-10 Freeway EB Ramps (EW)	TS	2	4	0	0	4	1>	2	0	1	0	0	0	30.4-C	35.1-D
Guasti Road (EW)	TS	1	3	0	2	3	1>>	2	1	0	1	1	1>>	38.8-D	99.9-F
East Airport Drive (EW)	TS	1	3	0	1	3	1>	2	2	1	1	2	0	61.9-E	99.9-F
Jurupa Street (EW)	TS	2	3	1	2	3	1>	2	3	1>	2	3	0	34.8-C	95.7-F
Etiwanda Street (NS) at:															
Valley Boulevard (EW)	TS	0	3	1	2	3	0	0	0	0	3	0	1	16.0-B	68.7-E

1. When a right turn is designated, the lane can either be striped or unstriped. To function as a right turn lane there must be sufficient width for right turning vehicles to travel outside the through lanes. L=Left; T=Through; R=Right; >=Right Turn Overlap; >>=Free Right Turn
2. Delay and LOS calculated using the following analysis software: Traffix, Version 7.8.0115 (2006). Per the 2000 Highway Capacity Manual, overall average intersection delay and LOS are shown for intersections with traffic signal or all way stop control. For intersections with cross street stop control, the delay and LOS for the worst individual movement (or movements sharing a single lane) are shown
3. TS=Traffic Signal; CSS=Cross Street Stop
4. 99.9-F = Delay High, Intersection Unstable, Level of Service F.

Year 2030 With Project

The Year 2030 delay and LOS for the study area roadway network with the proposed project are shown in Table 4.11-7. Year 2030 with project morning and evening peak hour intersection turning movement volumes are shown on Figures 4.11-15 and 4.11-16.

For Year 2030 with project traffic conditions, the following study area intersections are projected to operate at LOS E to F during the peak hours, without improvements:

Archibald Avenue (NS) at:
- East Airport Drive (EW)

Haven Avenue (NS) at:
- Arrow Route (EW)
- 8th Street
- 4th Street
- Inland Empire Boulevard (EW)
- I-10 Freeway WB Ramps (EW)
- I-10 Freeway EB Ramps (EW)
- Guasti Road (EW)
- East Airport Drive (EW)
- Jurupa Street (EW)
- Mission Boulevard (EW)

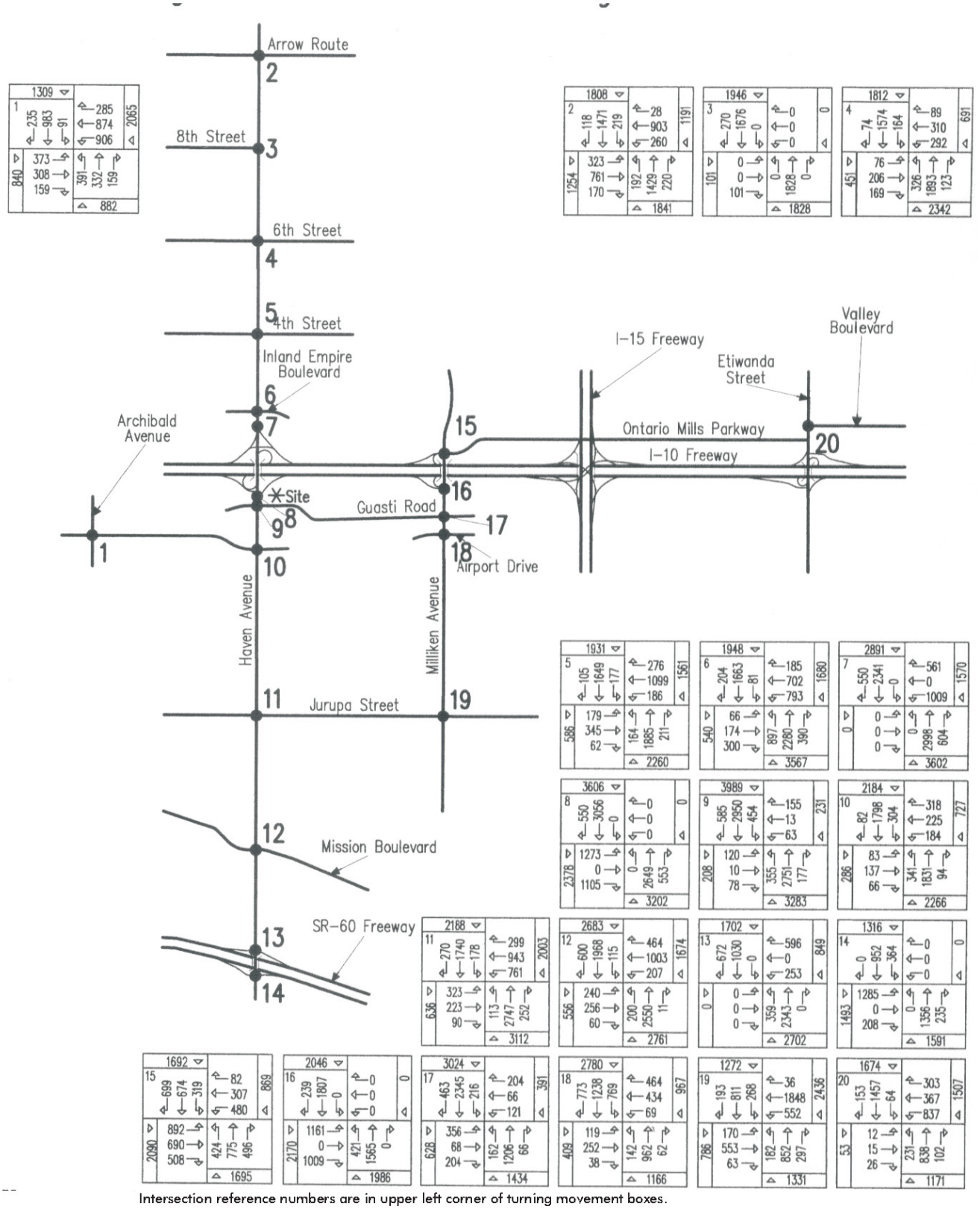
Milliken Avenue (NS) at:

- I-10 Freeway WB Ramps/Ontario Mills Parkway (EW)
- Guasti Road (EW)
- East Airport Drive (EW)
- Jurupa Street (EW)

Etiwanda Street (NS) at:
- Valley Boulevard (EW)

Congestion Management Program Freeway Evaluation

As required by the Congestion Management Program, an analysis of Horizon Year (2030) freeway level of service is required for all freeway segments that carry 100 or more project trips in the peak hour. The freeway peak hour volume forecasts have been developed using the peak period Comprehensive Transportation Plan data directly, as discussed with SANBAG. The proposed project contributes traffic greater than the Congestion Management Plan freeway threshold of 100 two-way trips to the I-10 and SR-60 Freeways.



Intersection reference numbers are in upper left corner of turning movement boxes.

Source: Kunzman Assoc., 02/07.

Year 2030 with Project Morning Peak Hour Intersection Turning Movement Volumes

Ontario Gateway Specific Plan
City of Ontario, California

Figure 4.11-15

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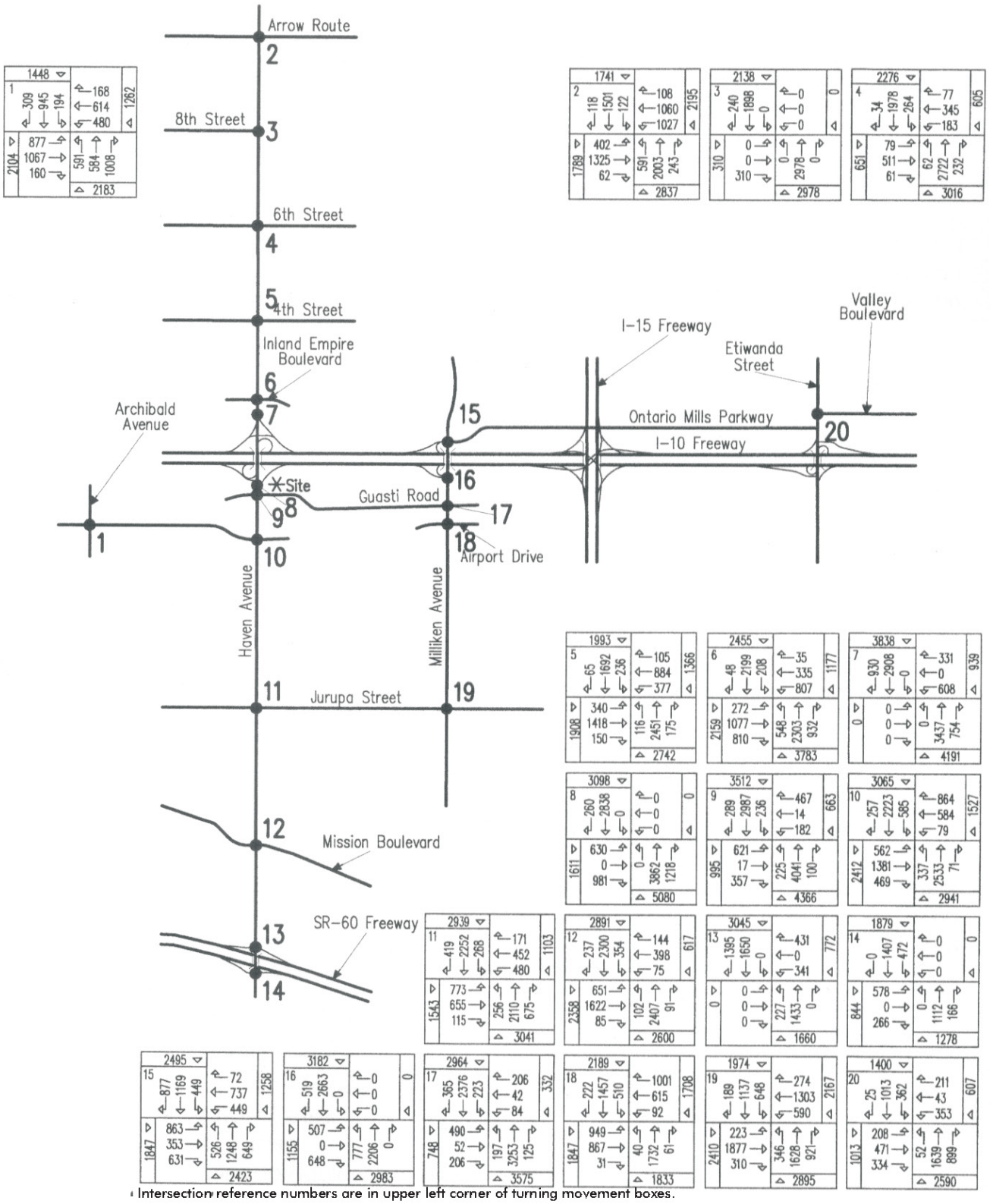

Intersection reference numbers are in upper left corner of turning movement boxes.

Source: Kunzman Assoc., 02/07.

Year 2030 with Project Evening Peak Hour Intersection Turning Movement Volumes

Ontario Gateway Specific Plan
City of Ontario, California

Figure 4.11-16

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Table 4.11-7
Year 2030 With Project Intersection Delay and Level of Service

Intersection	Traffic Control[3]	Intersection Approach Lanes[1]												Peak Hour Delay-LOS[2]	
		Northbound			Southbound			Eastbound			Westbound				
		L	T	R	L	T	R	L	T	R	L	T	R	Morning	Evening
Archibald Avenue (NS) at:															
East Airport Drive (EW)	TS	2	3	0	2	2	1	2	3	0	1	3	2>	99.9-F[4]	99.9-F
Haven Avenue (NS) at:															
Arrow Route (EW)	TS	2	3	1>	2	3	0	2	2	1>	2	2	0	33.4-C	99.9-F
8th Avenue (EW)	CSS	0	3	0	0	3	0	0	0	1	0	0	0	18.6-C	77.9-F
6th Avenue (EW)	TS	2	3	0	2	3	0	1	2	1	1	2	1	22.1-C	23.9-C
4th Avenue (EW)	TS	2	3	1>>	2	3	0	2	2	0	2	2	1	35.6-D	88.5-F
Inland Empire Boulevard (EW)	TS	2	4	1>>	2	4	1>>	2	2	2>	2	2	1>>	94.9-F	83.0-F
I-10 Freeway WB Ramps (EW)	TS	0	4	1>>	0	3	2>>	0	0	0	1	0	2	61.0-E	19.2-B
I-10 Freeway EB Ramps (EW)	TS	0	4	1>>	0	4	1>>	2	0	1	0	0	0	61.0-E	69.5-E
Guasti Road (EW)	TS	2	4	0	2	4	1	2	1	1	1	1	1	40.1-D	99.9-F
East Airport Drive (EW)	TS	2	4	1	2	4	1	2	2	0	2	2	1>	36.7-D	99.9-F
Jurupa Street (EW)	TS	1	4	1	1	4	1>>	2	3	1	2	2	1>	74.0-E	81.9-F
Mission Boulevard (EW)	TS	1	3	1	1	3	1	2	3	1	2	3	1	43.4-D	99.9-F
SR-60 Freeway WB Ramps (EW)	TS	2	3	0	0	3	1	0	0	0	2	0	1>>	6.6-A	20.0-B
SR-60 Freeway EB Ramps (EW)	TS	0	2	1	2	3	0	2	0	1	0	0	0	35.6-D	14.9-B
Milliken Avenue (NS) at:															
I-10 Freeway WB Ramps/Ontario Mills Parkway (EW)	TS	2	4	1>	2	4	1>	2	1	1	2	2	1	71.3-E	79.1-E
I-10 Freeway EB Ramps (EW)	TS	2	4	0	0	4	1>	2	0	1	0	0	0	36.7-D	43.9-D
Guasti Road (EW)	TS	1	3	0	2	3	1>>	2	1	0	1	1	1>>	47.1-D	99.9-F
East Airport Drive (EW)	TS	1	3	0	1	3	1>	2	2	1	1	2	0	62.5-E	99.9-F
Jurupa Street (EW)	TS	2	3	1	2	3	1>	2	3	1>	2	3	0	35.1-D	97.4-F
Etiwanda Street (NS) at:															
Valley Boulevard (EW)	TS	0	3	1	2	3	0	0	0	0	3	0	1	16.1-B	73.5-E

1. When a right turn is designated, the lane can either be striped or unstriped. To function as a right turn lane there must be sufficient width for right turning vehicles to travel outside the through lanes. L=Left; T=Through; R=Right; >=Right Turn Overlap; >>=Free Right Turn
2. Delay and LOS calculated using the following analysis software: Traffix, Version 7.8.0115 (2006). Per the 2000 Highway Capacity Manual, overall average intersection delay and LOS are shown for intersections with traffic signal or all way stop control. For intersections with cross street stop control, the delay and LOS for the worst individual movement (or movements sharing a single lane) are shown
3. TS=Traffic Signal; CSS=Cross Street Stop
4. 99.9-F = Delay High, Intersection Unstable, Level of Service F.

Tables 4.11-8 and Table 4.11-9 present the analysis for the Year 2030 morning and evening peak hours without project and with project traffic conditions, respectively. A total of 9 intersections are projected to operate at an unacceptable LOS for Year 2030 With Project traffic conditions during the morning peak hour and a total of 10 freeway segments are projected to operate at an unacceptable LOS during the evening peak hour. The northbound and southbound I-15 Freeway and the eastbound and westbound I-10 Freeway are expected to experience peak hour deficiencies.

Table 4.11-8
Year 2030 CMP Freeway Mainline Morning Peak Hour Operations Analysis

Freeway	Segment Limits	Lanes		Project Trips	Capacity	Year 2030 W/O Project			Year 2030 W/Project		
		Gen. Use	HOV			Trips	Vol./ Cap	LOS	Trips	Vol./ Cap	LOS
I-15 Freeway NB	I-10 Freeway to 4th Street	6	0	26	13,800	7,681	0.56	C	7,707	0.56	C
	4th Street to SR-66	4	0	26	9,200	8,105	0.88	D	8,131	0.88	D
I-15 Freeway SB	Jct. SR-66 to 4th Street	6	0	81	13,800	19,396	1.41	F	19,477	1.41	F
	4th Street to 1-10 Freeway	4	0	81	9,200	17,704	1.92	F	17,785	1.93	F
I-10 Freeway EB	4th Street Vineyard to Avenue	4	1	41	10,800	11,482	1.06	F	11,523	1.07	F
	Vineyard Avenue to Archibald Avenue	4	1	54	10,800	11,548	1.07	F	11,602	1.07	F
	Archibald Avenue to Haven Avenue	4	1	54	10,800	11,823	1.09	F	11,877	1.10	F
	Haven Avenue to Milliken Avenue	5	0	33	11,500	11,527	1.00	F	11,560	1.01	F
	Milliken Avenue to I-15 Freeway	4	0	54	9,200	10,763	1.17	F	10,817	1.18	F
	I-15 Freeway to Etiwanda Avenue	4	0	26	9,200	9,364	1.02	F	9,390	1.02	F
	Etiwanda Avenue to Cherry Avenue	4	0	23	9,200	9,608	1.04	F	9,631	1.05	F
I-10 Freeway WB	Cherry Avenue to Etiwanda Avenue	4	0	73	9,200	12,361	1.34	F	12,434	1.35	F
	Etiwanda Avenue to I-15 Freeway	4	0	81	9,200	12,293	1.34	F	12,374	1.35	F
	I-15 Freeway to Milliken Avenue	4	0	171	9,200	14,788	1.61	F	14,959	1.63	F
	Milliken Avenue to Haven Avenue	4	0	106	9,200	14,090	1.53	F	14,196	1.54	F
	Haven Avenue to Archibald Avenue	4	1	171	10,800	14,096	1.31	F	14,267	1.32	F
	Archibald Avenue to Vineyard Avenue	4	1	171	10,800	19,730	1.83	F	19,901	1.84	F
	Vineyard Avenue to 4th Street	4	1	130	10,800	13,733	1.78	F	13,863	1.28	F

LOS With Improvements (Years 2008 and 2030)

As shown in Tables 4.11-5, 4.11-7, 4.11-8 and 4.11-9, some intersections and freeway segments are projected to operate at LOS of E to F during the peak hours, without improvements. Tables 4.11-10, 4.11-11, and 4.11-12 present the delay and LOS for the study area roadway network and freeway mainline segments with improvements.

The Year 2030 number of through lanes has been obtained from the Comprehensive Transportation Plan traffic model and San Bernardino County Regional Transportation Improvement Program. No other committed sources of funding for additional improvements necessary to serve the increase in traffic are in place. The traffic analyses therefore assumed, minimal additional improvements beyond those anticipated in the Comprehensive Transportation Plan and San Bernardino County Regional Transportation Improvement Program.

Table 4.11-9
Year 2030 CMP Freeway Mainline Evening Peak Hour Operations Analysis

Freeway	Segment Limits	Lanes		Project Trips	Capacity	Year 2030 W/O Project			Year 2030 W/Project		
		Gen. Use	HOV			Trips	Vol./ Cap	LOS	Trips	Vol./ Cap	LOS
I-15 Freeway NB	I-10 Freeway to 4th Street	6	0	83	13,800	17,873	1.30	F	17,956	1.30	F
	4th Street to SR-66	4	0	83	9,200	18,141	1.97	F	18,224	1.98	F
I-15 Freeway SB	Jct. SR-66 to 4th Street	6	0	39	13,800	11,748	0.85	D	11,787	0.85	D
	4th Street to 1-10 Freeway	4	0	39	9,200	10,878	1.18	F	10,917	1.19	F
I-10 Freeway EB	4th Street Vineyard to Avenue	4	1	133	10,800	13,958	1.29	F	14,091	1.30	F
	Vineyard Avenue to Archibald Avenue	4	1	174	10,800	13,279	1.23	F	13,453	1.25	F
	Archibald Avenue to Haven Avenue	4	1	174	10,800	14,037	1.30	F	14,211	1.32	F
	Haven Avenue to Milliken Avenue	5	0	108	11,500	14,021	1.22	F	14,129	1.23	F
	Milliken Avenue to I-15 Freeway	4	0	174	9,200	15,116	1.64	F	15,290	1.66	F
	I-15 Freeway to Etiwanda Avenue	4	0	83	9,200	12,366	1.34	F	12,449	1.35	F
	Etiwanda Avenue to Cherry Avenue	4	0	75	9,200	12,845	1.40	F	12,920	1.40	F
I-10 Freeway WB	Cherry Avenue to Etiwanda Avenue	4	0	35	9,200	11,922	1.30	F	11,957	1.30	F
	Etiwanda Avenue to I-15 Freeway	4	0	39	9,200	11,400	1.24	F	11,439	1.24	F
	I-15 Freeway to Milliken Avenue	4	0	83	9,200	13,112	1.43	F	13,195	1.43	F
	Milliken Avenue to Haven Avenue	4	0	51	9,200	13,211	1.44	F	13,262	1.44	F
	Haven Avenue to Archibald Avenue	4	1	83	10,800	13,082	1.21	F	13,165	1.22	F
	Archibald Avenue to Vineyard Avenue	4	1	83	10,800	12,331	1.14	F	12,414	1.15	F
	Vineyard Avenue to 4th Street	4	1	63	10,800	13,434	1.24	F	13,497	1.25	F

Table 4.11-10
Opening Year (2008) With Project Intersection Delay and Level of Service With Improvements

Intersection	Traffic Control[3]	Intersection Approach Lanes[1]												Peak Hour Delay-LOS[2]	
		Northbound			Southbound			Eastbound			Westbound				
		L	T	R	L	T	R	L	T	R	L	T	R	Morning	Evening
Archibald Avenue (NS) at:															
East Airport Drive (EW)	TS	2	3	0	2	2	1	2	3	0	1	3	2>	29.8-C	35.7-D
Haven Avenue (NS) at:															
Arrow Route (EW)	TS	2	3	1>	2	3	**1**	2	**3**	1>	**3**	**3**	**1**	29.0-C	54.5-D
8th Avenue (EW)	CSS	0	3	0	0	3	0	0	0	1	0	0	0	15.5-C	17.8-C
6th Avenue (EW)	TS	2	3	0	2	3	0	1	2	1	1	2	1	23.7-C	28.2-C
4th Avenue (EW)	TS	2	3	1>>	2	3	0	2	2	0	2	2	1	32.4-C	49.3-D
Inland Empire Boulevard (EW)	TS	2	4	1>>	2	4	1>>	2	2	2>	3	2	1>>	41.6-D	54.5-D
I-10 Freeway WB Ramps (EW)	TS	0	4	1>>	0	3	2>>	0	0	0	1	0	2	46.0-D	19.0-B
I-10 Freeway EB Ramps (EW)	TS	0	4	1>>	0	4	1>>	2	0	1	0	0	0	31.8-C	23.2-C
Guasti Road (EW)	TS	2	**5**	0	2	4	1	2	1	1	**2**	1	1>	37.0-D	51.8-D
East Airport Drive (EW)	TS	2	4	1	2	4	1	2	2	0	2	2	1>	42.4-D	39.2-D
Jurupa Street (EW)	TS	1	4	1	1	4	1>>	2	3	1	2	2	1>	44.3-D	53.1-D
Mission Boulevard (EW)	TS	1	3	1	1	3	1	2	3	1	2	3	1	41.2-D	54.5-D
SR-60 Freeway WB Ramps (EW)	TS	2	3	0	0	3	1	0	0	0	2	0	1>>	7.7-A	19.8-B
SR-60 Freeway EB Ramps (EW)	TS	0	2	1	2	3	0	2	0	1	0	0	0	20.9-C	14.9-B
Milliken Avenue (NS) at:															
I-10 Freeway WB Ramps/Ontario Mills Parkway (EW)	TS	2	4	1>	2	4	1>	**3**	1	1>	2	2	1	39.3-D	51.6-D
I-10 Freeway EB Ramps (EW)	TS	2	4	0	0	4	1>	2	0	1	0	0	0	16.7-B	16.1-B
Guasti Road (EW)	TS	1	3	0	2	3	1>>	2	1	0	1	1	1>>	36.9-D	43.3-D
East Airport Drive (EW)	TS	1	3	0	1	3	1>	2	2	1	1	2	0	35.5-D	47.7-D
Jurupa Street (EW)	TS	2	3	1	2	3	1>	2	3	1>	2	3	0	29.9-C	41.7-D
Etiwanda Street (NS) at:															
Valley Boulevard (EW)	TS	**2**	3	0	2	3	0	**2**	**2**	**1**	2	**2**	0	15.4-B	16.7-B

1. When a right turn is designated, the lane can either be striped or unstriped. To function as a right turn lane there must be sufficient width for right turning vehicles to travel outside the through lanes. L=Left; T=Through; R=Right; >=Right Turn Overlap; >>=Free Right Turn; **1**=Improvement
2. Delay and LOS calculated using the following analysis software: Traffix, Version 7.8.0115 (2006). Per the 2000 Highway Capacity Manual, overall average intersection delay and LOS are shown for intersections with traffic signal or all way stop control.. For intersections with cross street stop control, the delay and LOS for the worst individual movement (or movements sharing a single lane) are shown
3. TS=Traffic Signal; CSS=Cross Street Stop

Table 4.11-11
Year 2030 With Project Intersection Delay and Level of Service With Improvements

Intersection	Traffic Control[3]	Intersection Approach Lanes[1]												Peak Hour Delay-LOS[2]	
		Northbound			Southbound			Eastbound			Westbound				
		L	T	R	L	T	R	L	T	R	L	T	R	Morning	Evening
Archibald Avenue (NS) at:															
East Airport Drive (EW)	TS	**3**	**1.5**	**1.5**	2	**3**	0	2	3	0	**2**	3	2>	45.2-D	53.9-D
Haven Avenue (NS) at:															
Arrow Route (EW)	TS	**3**	3	1>	2	3	**1**	2	**3**	1	**3**	**3**	**1**	31.2-C	54.7-D
8th Avenue (EW)	CSS	0	3	0	0	3	0	0	0	1>>	0	0	0	0.1-A	0.1-A
6th Avenue (EW)	TS	2	3	0	2	3	0	1	2	1	1	2	1	22.1-C	23.9-C
4th Avenue (EW)	TS	2	3	1>>	2	3	0	2	**3**	0	2	**3**	0	32.9-D	51.9-F
Inland Empire Boulevard (EW)	TS	**3**	4	1>>	2	4	1	2	2	2>	**3**	2	1>>	52.5-D	52.7-D
I-10 Freeway WB Ramps (EW)	TS	0	4	1>>	0	3	2>>	0	0	0	**1.5**	0	**1.5**	14.6-B	7.8-A
I-10 Freeway EB Ramps (EW)	TS	0	4	1>>	0	4	1>>	**1.5**	0	**1.5**	0	0	0	29.5-B	19.7-B
Guasti Road (EW)	TS	2	**5**	0	2	4	1	**3**	1	0	1	1	1	36.7-D	53.4-D
East Airport Drive (EW)	TS	2	4	1	**3**	4	1	**3**	2	**1**	2	2	**2>**	35.5-D	53.6-D
Jurupa Street (EW)	TS	**2**	4	1>	**2**	4	1	2	3	1	**3**	**3**	1	44.8-D	54.6-D
Mission Boulevard (EW)	TS	1	**4**	0	1	**4**	0	**3**	3	1	2	3	1	36.9-D	45.0-D
SR-60 Freeway WB Ramps (EW)	TS	2	3	0	0	3	1	0	0	0	2	0	1>>	6.6-A	20.0-B
SR-60 Freeway EB Ramps (EW)	TS	0	2	1	2	3	0	2	0	1	0	0	0	35.6-D	14.9-B
Milliken Avenue (NS) at:															
I-10 Freeway WB Ramps/Ontario Mills Parkway (EW)	TS	2	4	1>	2	4	**2>**	**3**	1	1>	2	2	1	51.6-D	53.4-D
I-10 Freeway EB Ramps (EW)	TS	2	4	0	0	4	1>	**1.5**	0	**1.5**	0	0	0	23.7-C	21.9-C
Guasti Road (EW)	TS	1	**4**	0	2	**4**	0	**3**	1	0	1	1	1>>	37.8-D	46.7-D
East Airport Drive (EW)	TS	1	**4**	0	**2**	**4**	0	**3**	2	1	1	2	**2**	35.1-D	50.2-D
Jurupa Street (EW)	TS	2	**4**	**2>**	2	**4**	0	2	3	1	**3**	3	0	33.3-C	51.7-D
Etiwanda Street (NS) at:															
Valley Boulevard (EW)	TS	**2**	3	0	2	3	0	**2**	**2**	**1**	2	**2**	0	48.8-D	53.2-D

1. When a right turn is designated, the lane can either be striped or unstriped. To function as a right turn lane there must be sufficient width for right turning vehicles to travel outside the through lanes. L=Left; T=Through; R=Right; >=Right Turn Overlap; >>=Free Right Turn; **1**=Improvement
2. Delay and LOS calculated using the following analysis software: Traffix, Version 7.8.0115 (2006). Per the 2000 Highway Capacity Manual, overall average intersection delay and LOS are shown for intersections with traffic signal or all way stop control. For intersections with cross street stop control, the delay and LOS for the worst individual movement (or movements sharing a single lane) are shown
3. TS=Traffic Signal; CSS=Cross Street Stop

Table 4.11-12
Year 2030 CMP Freeway Mainline Peak Hour Operations Analysis With Improvements

Freeway	Segment Limits	Improvement (Lanes Added)		Capacity	Morning			Evening		
		General	HOV		Trips	Vol./ Cap	LOS	Trips	Vol./ Cap	LOS
I-15 Freeway NB	I-10 Freeway to 4th Street	2	1	20,000	7,707	0.39	B	17,956	0.90	D
	4th Street to SR-66	4	1	20,000	8,131	0.41	B	18,224	0.91	D
I-15 Freeway SB	Jct. SR-66 to 4th Street	3	0	20,700	19,477	0.94	E	11,787	0.57	C
	4th Street to 1-10 Freeway	4	1	20,000	17,785	0.89	D	10,917	0.55	C
I-10 Freeway EB	4th Street Vineyard to Avenue	2	0	15,400	11,523	0.75	C	14,091	0.91	D
	Vineyard Avenue to Archibald Avenue	2	0	15,400	11,602	0.75	C	13,453	0.87	D
	Archibald Avenue to Haven Avenue	2	0	15,400	11,877	0.77	D	14,211	0.92	D
	Haven Avenue to Milliken Avenue	1	1	15,400	11,560	0.75	C	14,129	0.92	D
	Milliken Avenue to I-15 Freeway	2	1	15,400	10,817	0.70	C	15,290	0.99	E
	I-15 Freeway to Etiwanda Avenue	1	1	13,100	9,390	0.72	C	12,449	0.95	E
	Etiwanda Avenue to Cherry Avenue	1	1	13,100	9,631	0.74	C	12,920	0.99	E
I-10 Freeway WB	Cherry Avenue to Etiwanda Avenue	1	1	13,100	12,434	0.95	E	11,957	0.91	D
	Etiwanda Avenue to I-15 Freeway	1	1	13,100	12,374	0.94	E	11,439	0.87	D
	I-15 Freeway to Milliken Avenue	2	1	15,400	14,959	0.97	E	13,195	0.86	D
	Milliken Avenue to Haven Avenue	2	1	15,400	14,196	0.92	D	13,262	0.86	D
	Haven Avenue to Archibald Avenue	2	0	15,400	14,267	0.93	D	13,165	0.85	D
	Archibald Avenue to Vineyard Avenue	4	0	20,000	19,901	1.00	E	12,414	0.62	C
	Vineyard Avenue to 4th Street	2	0	15,400	13,863	0.90	D	13,497	0.88	D

The off-site improvements for the Years 2008 and 2030 are discussed below. The proposed project would include on-site as well as off-site improvements and the phasing of all necessary study area transportation improvements. The off-site improvements are as follows:

Opening Year (2008) With Project Improvements

Haven Avenue (NS) at:

Arrow Route (EW)

- Construct a southbound right turn lane
- Construct an additional eastbound through travel lane
- Construct an additional westbound left turn lane
- Construct an additional westbound through lane
- Construct a westbound right turn lane

Guasti Road (EW)

- Construct an additional northbound through travel lane
- Construct an additional westbound left turn lane
- Install westbound right turn overlap

Milliken Avenue (NS) at:

I-10 Freeway WB Ramps/Ontario Mills Parkway (EW)

- Construct an additional eastbound left turn lane
- Install eastbound right turn overlap

Etiwanda Street (NS) at:

Valley Boulevard (EW)

- Construct two northbound left turn lanes
- Construct two eastbound left turn lanes
- Construct two eastbound though travel lanes
- Construct a eastbound right turn lane
- Construct two westbound through travel lanes

Year 2030 With Project Improvements

Archibald Avenue (NS) at:

East Airport Drive (EW)

- Construct an additional northbound left turn lane
- Restripe northbound through travel lane to a northbound through/right turn lane
- Restripe northbound through travel lane to a northbound right turn lane
- Construct an additional southbound through travel lane
- Construct an additional westbound left turn lane

Haven Avenue (NS) at:

Arrow Route (EW)

- Construct an additional northbound left turn lane
- Construct a southbound right turn lane
- Construct an additional eastbound through travel lane
- Construct an additional westbound left turn lane
- Construct an additional westbound through travel lane
- Construct a westbound right turn lane

8th Street (EW)

- Construct a eastbound free right turn

4th Street (EW)

- Construct an additional eastbound through travel lane
- Construct an additional westbound through travel lane

Inland Empire Boulevard (EW)

- Construct an additional northbound left turn lane
- Construct an additional westbound left turn lane

I-10 Freeway WB Ramps (EW)
- Restripe westbound dual right turn lanes to a left/right turn lane and a right turn lane

I-10 Freeway EB Ramps (EW)
- Restripe eastbound dual left turn lanes to a left turn lane and a left/right turn lane

Guasti Road (EW)
- Construct an additional northbound through travel lane
- Construct an additional eastbound left turn lane

East Airport Drive (EW)
- Construct an additional southbound left turn lane
- Construct an additional eastbound left turn lane
- Construct an eastbound right turn lane
- Construct an additional westbound right turn lane

Jurupa Street (EW)
- Construct an additional northbound left turn lane
- Install northbound right turn overlap
- Construct an additional southbound left turn lane
- Construct an additional westbound left turn lane
- Construct an additional westbound through travel lane

Mission Boulevard (EW)
- Construct an additional northbound through travel lane
- Construct an additional southbound through travel lane
- Construct an additional eastbound left turn lane

Milliken Avenue (NS) at:

I-10 Freeway WB Ramps/Ontario Mills Parkway (EW)
- Construct an additional southbound right turn lane
- Construct an additional eastbound left turn lane
- Install eastbound right turn overlap

I-10 Freeway EB Ramps (EW)
- Restripe eastbound dual left turn lanes to a left turn lane and a left/right turn lane

Guasti Road (EW)
- Construct an additional northbound through travel lane
- Construct an additional southbound through travel lane
- Construct an additional eastbound left turn lane

<u>On-Site Improvements</u>

Mitigation Measure TC-1

Haven Avenue shall be constructed from the north project boundary to the south project boundary at its ultimate half-section width as a Divided Arterial (120+ foot right-of-way) including landscaping and parkway improvements in conjunction with the development.

Mitigation Measure TC-2

Guasti Road shall be constructed from Haven Avenue to its existing terminus at its ultimate cross-section width including landscaping and parkway improvements in conjunction with the development.

Mitigation Measure TC-3

On-site traffic signing and striping shall be implemented in conjunction with detailed construction plans for the project.

Off-Site Improvements

Mitigation Measure TC-4

The proposed project shall contribute towards the cost of necessary study area improvements on a fair share[1] or "pro-rata" basis as determined by the City Engineer at the time the development applications are filed.

Mitigation Measure TC-5

The City of Ontario shall periodically review traffic operations in the vicinity of the proposed project once the project is constructed to assure that the traffic operations are satisfactory.

Mitigation Measure TC-6

The project proponent shall contribute towards the cost of necessary off-site improvements as detailed in Section IV of the Traffic Impact Analysis, on a fair share or pro-rata basis as determined by the City Engineer.

Mitigation Measure TC-7

The proposed project shall contribute on a fair share basis, through an adopted traffic impact fee program, in the implementation of the recommended intersection lane improvements, or in dollars equivalent to in lieu mitigation contributions, or in the implementation of additional capacity on parallel routes to offset potential impacts to Congestion Management Program intersections and freeway segments.

Mitigation Measure TC-8

The proposed project shall include a traffic signal at the intersection of Project Central Driveway and Guasti Road, if necessary as determined by the City Engineer.

[1] Fair Share contribution is based on a fee per square foot constructed. Therefore, as the proposed project is a Specific Plan fair share contribution is assessed at the time building permits are issued.

Level of Significance After Mitigation

With the implementation of mitigation measures TC-1 through TC-8, impacts would be less than significant.

Result in inadequate parking capacity?

Impact TC-2

The proposed project could result in inadequate parking resulting in a potentially significant impact.

The project would be designed to meet parking standards established by the City of Ontario Development Code and will therefore not create an inadequate parking capacity. Implementation of the following mitigation measure would reduce any impacts to less than significant.

Mitigation Measure TC-9

The proposed project shall provide sufficient parking spaces to meet City of Ontario parking code requirements in order to service on-site parking demand.

Level of Significance After Mitigation

Impacts are anticipated to be less than significant with the implementation of Mitigation Measures TC-9.

Result in inadequate emergency access?

Impact TC-3

The proposed project could impair the implementation of, or physically interfere with, an adopted emergency response plan resulting in a potentially significant impact.

The proposed Ontario Gateway Specific Plan would be reviewed by the Police Department and Fire Department to approve emergency access. Mitigation Measures related to emergency access are discussed in detail in Section 4.6.

Level of Significance After Mitigation

Impacts are anticipated to be less than significant with the implementation of Mitigation Measures HAZ-5 through HAZ-7.

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