Response to Comments
on the
Draft Environmental Impact Report
Rich Haven Specific Plan
Ontario, California

State Clearinghouse No. 2006-051081

Prepared for:

City of Ontario
303 East B Street
Ontario, CA 91764

Contact: Scott Murphy, Principal Planner

Prepared by:

Michael Brandman Associates
220 Commerce, Suite 200
Irvine, CA 92602
714.508.4100

Contact: Kenneth J. Dalena, AICP, Project Manager

Michael Brandman Associates

November 1, 2007

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SECTION 1:
INTRODUCTION

The Draft Environmental Impact Report for the Rich Haven Specific Plan was circulated for public review and comment beginning on July 3, 2007 and ending on August 17, 2007. As required by the California Environmental Quality Act (CEQA), this document responds to comments received on the Draft EIR.

As required by Section 15132 of the State CEQA Guidelines, the Final EIR must respond to comments regarding significant environmental points raised in the review and consultation process. This document provides responses to comments on significant environmental points, describing the disposition of the issue, explaining the EIR analysis, supporting EIR conclusions, or providing new information or corrections, as appropriate.

The Response to Comments document is organized as follows:

Section 1	Provides a discussion of the relationship of this document with the Draft EIR. It also discusses the structure of this document.
Section 2	Lists the agencies/organizations/individuals that commented on the contents of the Draft EIR.
Section 3	Includes the comments received, and the responses to the comments that were received on the Draft EIR.
Section 4	Summarizes changes or additions to the Draft EIR described in Section 3.
Section 5	Indicates that a Mitigation Monitoring Program will be prepared consistent with CEQA requirements, prior to certification of the Final EIR.

This Response to Comments document is part of the Final EIR, which includes the Draft EIR and the technical appendices. These documents, and other information contained in the environmental record, constitute the Final EIR for the Rich Haven Specific Plan project.

SECTION 2:
LIST OF COMMENTORS

A list of public agencies, organizations, and individuals that provided comments on the Draft EIR is presented below. Each comment letter has been assigned a numerical designation. Each comment within each letter has been assigned an additional numerical designation so that each comment can be crossed-referenced with an individual response. Responses follow each comment letter.

Letter/Sender	Letter Date
1. Native American Heritage Commission	July 23, 2007
2. State Department of Toxic Substances Control	July 24, 2007
3. State Department of Conservation	August 6, 2007
4. County of Riverside Transportation Department	August 15, 2007
5. California State Clearinghouse	August 16, 2007
6. Southern California Edison	August 16, 2007

SECTION 3:
COMMENT LETTERS AND RESPONSES TO COMMENTS

Following are the letters received during the public review period on the Draft EIR, followed by responses to the comments in those letters. Where a comment results in a change to the Draft EIR, specific page and paragraph reference, along with the new EIR text are included in Section 4, Errata.

NATIVE AMERICAN HERITAGE COMMISSION
915 CAPITOL MALL, ROOM 364
SACRAMENTO, CA 95814
(916) 653-6251
Fax (916) 657-5390
Web Site www.nahc.ca.gov
e-mail: ds_nahc@pacbell.net

July 23, 2007

Mr. Richard Ayala, Principal Planner
CITY OF ONTARIO
303 East "B" Street
Ontario, CA 91764

Re: SCH#2006051081; CEQA Notice of Completion; draft Environmental Impact Statement (DEIR) for **Rich Haven Specific Plan Project**; City of Ontario; San Bernardino County, California

Dear Mr. Ayala:

Thank you for the opportunity to comment on the above-referenced document. The Native American Heritage Commission is the state's Trustee Agency for Native American Cultural Resources. The California Environmental Quality Act (CEQA) requires that any project that causes a substantial adverse change in the significance of an historical resource, that includes archaeological resources, is a 'significant effect' requiring the preparation of an Environmental Impact Report (EIR) per CEQA guidelines § 15064.5(b)(c). In order to comply with this provision, the lead agency is required to assess whether the project will have an adverse impact on these resources within the 'area of potential effect (APE)', and if so, to mitigate that effect. To adequately assess the project-related impacts on historical resources, the Commission recommends the following action:

√ Contact the appropriate California Historic Resources Information Center (CHRIS). Contact information for the Information Center nearest you is available from the State Office of Historic Preservation (916/653-7278)/ http://www.ohp.parks.ca.gov/1068/files/IC%20Roster.pdf The record search will determine:

- If a part or the entire APE has been previously surveyed for cultural resources.
- If any known cultural resources have already been recorded in or adjacent to the APE.
- If the probability is low, moderate, or high that cultural resources are located in the APE.
- If a survey is required to determine whether previously unrecorded cultural resources are present.

√ If an archaeological inventory survey is required, the final stage is the preparation of a professional report detailing the findings and recommendations of the records search and field survey. 1-1

- The final report containing site forms, site significance, and mitigation measurers should be submitted immediately to the planning department. All information regarding site locations, Native American human remains, and associated funerary objects should be in a separate confidential addendum, and not be made available for pubic disclosure.
- The final written report should be submitted within 3 months after work has been completed to the appropriate regional archaeological Information Center.

√ Contact the Native American Heritage Commission (NAHC) for:

* A Sacred Lands File (SLF) search of the project area and information on tribal contacts in the project vicinity that may have additional cultural resource information. Please provide this office with the following citation format to assist with the Sacred Lands File search request: USGS 7.5-minute quadrangle citation with name, township, range and section; .

- The NAHC advises the use of Native American Monitors to ensure proper identification and care given cultural resources that may be discovered. The NAHC recommends that contact be made with Native American Contacts on the attached list to get their input on potential project impact (APE).

√ Lack of surface evidence of archeological resources does not preclude their subsurface existence.

- Lead agencies should include in their mitigation plan provisions for the identification and evaluation of accidentally discovered archeological resources, per California Environmental Quality Act (CEQA) §15064.5 (f). In areas of identified archaeological sensitivity, a certified archaeologist and a culturally affiliated Native American, with knowledge in cultural resources, should monitor all ground-disturbing activities.
- Lead agencies should include in their mitigation plan provisions for the disposition of recovered artifacts, in consultation with culturally affiliated Native Americans.

√ Lead agencies should include provisions for discovery of Native American human remains or unmarked cemeteries in their mitigation plans.

* CEQA Guidelines, Section 15064.5(d) requires the lead agency to work with the Native Americans identified by this Commission if the initial Study identifies the presence or likely presence of Native American human remains within the APE. CEQA Guidelines provide for agreements with Native American, identified by the NAHC, to assure the appropriate and dignified treatment of Native American human remains and any associated grave liens.

√ Health and Safety Code §7050.5, Public Resources Code §5097.98 and Sec. §15064.5 (d) of the CEQA Guidelines mandate procedures to be followed in the event of an accidental discovery of any human remains in a location other than a dedicated cemetery.
√ Lead agencies should consider avoidance, as defined in § 15370 of the CEQA Guidelines, when significant cultural resources are discovered during the course of project planning.

1-1 CONT.

Please feel free to contact me at (916) 653-6251 if you have any questions.

Sincerely,

Dave Singleton
Program Analyst

PS: We are including the Tribal Consultation List, in addition, for compliance with California Government Code §65352.3 to avoid a delay in your project. DS

Cc: State Clearinghouse

Attachment: List of Native American Contacts

PPS: I suggest you contact those on the shorter SB18 list first. Then you need not contact them again.

Cahuilla Band of Indians
Anthony Madrigal, Jr., Interim-Chairperson
P.O. Box 391760 Cahuilla
Anza , CA 92539
tribalcouncil@cahuilla.net
(951) 763-2631

San Manuel Band of Mission Indians
Henry Duro, Chairperson
26569 Community Center Drive Serrano
Highland , CA 92346
(909) 864-8933

Soboba Band of Mission Indians
Robert J. Salgado, Chairperson
P.O. Box 487 Luiseno
San Jacinto , CA 92581
varres@soboba-nsn.gov
(951) 654-2765

Chemehuevi Reservation
Charles Wood, Chairperson
P.O. Box 1976 Chemehuevi
Chemehuevi Valley , CA 92363
chemehuevit@yahoo.com
(760) 858-4301

Gabrieleno/Tongva Tribal Council
Anthony Morales, Chairperson
PO Box 693 Gabrielino Tongva
San Gabriel , CA 91778
ChiefRBwife@aol.com
(626) 286-1632
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(626) 483--3564 cell

Morongo Band of Mission Indians
Robert Martin, Chairperson
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Banning , CA 92220 Serrano
britt_wilson@morongo.org
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(951) 755-5200

Serrano Band of Indians
Goldie Walker
6588 Valeria Drive Serrano
Highland , CA 92346
(909) 862-9883

This list is current only as of the date of this document.

Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.

This list is applicable only for consultation with Native American tribes under Government Code Section 65352.3.

Cahuilla Band of Indians
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tribalcouncil@cahuilla.net
(951) 763-2631

(951) 763-2632 Fax

Gabrielino Band of Mission Indians of CA
Ms. Susan Frank
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Beaumont , CA 92223
(951) 897-2536 Phone/Fax

Ramona Band of Mission Indians
Joseph Hamilton, vice chairman
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admin@ramonatribe.com
(951) 763-4105
(951) 763-4325 Fax

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Cabazon , CA 92230 Serrano
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(951) 755-5206
(951) 755-5200/323-0822-cell
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San Manuel Band of Mission Indians
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San Manuel Band of Mission Indians
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(909) 863-5899 EXT-4321

(909) 862-5152 Fax

Gabrieleno/Tongva Tribal Council
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This list is only applicable for contacting local Native American with regard to cultural resources for the proposed SCH#2006051081;; CEQA Notice of Completion; draft Environmental Impact Report (DEIR) for Rich Haven Specific Plan; City of Ontario; San Bernardino County, California.

Cahuilla Band of Indians
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(951) 763-2631

(951) 763-2632 Fax

This list is current only as of the date of this document.

Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native American with regard to cultural resources for the proposed SCH#2006051081;; CEQA Notice of Completion; draft Environmental Impact Report (DEIR) for Rich Haven Specific Plan; City of Ontario; San Bernardino County, California.

Letter 1. Dave Singleton, Native American Heritage Commission Letter.

Response 1-1

This letter sets forth procedures and standards for assessing the potential impacts to Native American cultural resources and provides names of tribal contacts for inquiries regarding the presence of known or suspected Native American resources in the project area. All the standards and procedures called for in this letter have been adhered to as documented in the Draft EIR's Appendix H-2, Cultural Report. Tribes will be contacted as part of the Mitigation Monitoring Program (Section 5), which also includes an onsite monitor during grading to preserve any Native American resources that may be uncovered.

Linda S. Adams
Secretary for
Environmental Protection

Department of Toxic Substances Control

Maureen F. Gorsen, Director
5796 Corporate Avenue
Cypress, California 90630

Arnold Schwarzenegger
Governor

July 24, 2007

Mr. Richard Ayala
City of Ontario
Planning Department
303 East "B" Street
Ontario, California 91764

DRAFT ENVIRONMENTAL IMPACT REPORT (EIR) FOR RICH HAVEN SPECIFIC PLAN PROJECT (SCH# 2006051081)

Dear Mr. Ayala:

The Department of Toxic Substances Control (DTSC) has received your submitted Notice of Preparation of a Supplemental EIR for the above-mentioned project. The following project description is stated in your document: "The project proposes residential development, commercial development, and includes recreational and open space amenities and permanent open space…Housing types will include 1,124 single-family detached homes on medium sized and small lots. Attached housing will include 3,132 condominium units on a variety of lot sizes and vertical configurations. The Rich Haven Project allows for development of 889.200 square feet of regional commercial retail and business uses within a 160 acre portion of the project site."

Based on the review of the submitted document DTSC has the following comments: 2-1

1) The EIR should identify the mechanism to initiate any required investigation and/or remediation for any site that may be contaminated, and the government agency to provide appropriate regulatory oversight. If necessary, DTSC would require an oversight agreement in order to review such documents. Please see comment 6 below.

2) Proper investigation, sampling and remedial actions overseen by the respective regulatory agencies, if necessary, should be conducted at the site prior to the new development or any construction. All closure, certification or remediation approval reports by these agencies should be included in the EIR.

3) The project construction may require soil excavation or filling in certain areas. Sampling may be required. If soil is contaminated, it must be properly disposed and not simply placed in another location onsite. Land Disposal Restrictions (LDRs) may be applicable to such soils. Also, if the project proposes to import soil to backfill the areas excavated, sampling should be conducted to ensure that the imported soil is free of contamination.

4) Human health and the environment of sensitive receptors should be protected during the construction or demolition activities. If it is found necessary, a study of the site and a health risk assessment overseen and approved by the appropriate government agency and a qualified health risk assessor should be conducted to determine if there are, have been, or will be, any releases of hazardous materials that may pose a risk to human health or the environment. 2-1 CONT.

5) If during construction/demolition of the project, the soil and/or groundwater contamination is suspected, construction/demolition in the area would cease and appropriate health and safety procedures should be implemented.

6) Envirostor (formerly CalSites) is a database primarily used by the California Department of Toxic Substances Control, and is accessible through DTSC's website. DTSC can provide guidance for cleanup oversight through an Environmental Oversight Agreement (EOA) for government agencies, or a Voluntary Cleanup Agreement (VCA) for private parties. For additional information on the EOA please see www.dtsc.ca.gov/SiteCleanup/Brownfields, or contact Maryam Tasnif-Abbasi, DTSC's Voluntary Cleanup Coordinator, at (714) 484-5489 for the VCA.

If you have any questions regarding this letter, please contact Ms. Eileen Khachatourians, Project Manager, at (714) 484-5349 or email at EKhachat@dtsc.ca.gov.

Sincerely,

Greg Holmes
Unit Chief
Southern California Cleanup Operations Branch - Cypress Office

cc: See next page

cc: Governor's Office of Planning and Research
State Clearinghouse
P.O. Box 3044
Sacramento, California 95812-3044

CEQA Tracking Center
Department of Toxic Substances Control
Office of Environmental Planning and Analysis
1001 I Street, 22nd Floor, M.S. 22-2
Sacramento, California 95814

CEQA# 1738

Letter 2. Greg Holmes, State Department of Toxic Substances Control

Response 2-1

The issues identified in State Department of Toxic Substances Control's (DTSC's) July 24, 2007 letter to the City of Ontario for the Rich Haven project have been responded to in the Draft EIR. The DTSC comment letter does not raise any new issues or identify environmental issues that remain to be resolved. Multiple Phase 1 Environmental Site Assessments (ESAs) for the individual properties comprising the Rich Haven project site were prepared, and were utilized in the preparation of the Draft EIR's Section 5.5, Hazards and Hazardous Materials. All of the recommendations of the Phase 1 ESAs for the project site will be fully implemented.

DEPARTMENT OF CONSERVATION

DIVISION OF LAND RESOURCE PROTECTION

801 K STREET • MS 18-01 • SACRAMENTO, CALIFORNIA 95814

PHONE 916 / 324-0850 • **FAX** 916 / 327-3430 • **TDD** 916 / 324-2555 • **WEBSITE** conservation.ca.gov

August 6, 2007

Ms. Nancy Martinez, Associate Planner
City of Ontario Planning Department
303 East B Street
Ontario, CA 91764

Subject: Cancellation of Land Conservation (Williamson Act) Contract No. 71-345
Rich Haven Specific Plan

Dear Ms. Martinez:

Thank you for submitting notices to the Department of Conservation (Department) as required by Government Code section 51284.1 for the above referenced matter.

The petition proposes to cancel 79.37 prime agricultural acres for Regional Commercial and Mixed Use development as specified in the proposed Rich Haven Specific Plan. The Specific Plan area is a portion of the approximate 8,000-acre New Model Colony that was annexed to the City of Ontario in 1999. Contract No. 71-345 is a portion of the Specific Plan's 160 acre commercial component and is located at the southwest corner of Archibald and Schaefer Streets. Contract 79-546, 30-acres, is located west and adjacent to Milliken Avenue, north and adjacent to the Edison Avenue realignment in Ontario.

Cancellation Findings

Government Code Section 51282 states that tentative approval for cancellation may be granted only if the local government makes one of the following findings: 1) cancellation is consistent with purposes of the Williamson Act or 2) cancellation is in the public interest. The Department has reviewed the petition and information provided and offers the following comments.

Cancellation is consistent with the purposes of the Williamson Act

For the cancellation to be consistent with purposes of the Williamson Act, the Ontario City Council (Council) must make findings with respect to all of the following: 1) a notice of nonrenewal has been served, 2) removal of adjacent land from agricultural use is unlikely, 3) the alternative use is consistent with the City's General Plan, 4) discontiguous patterns of urban development will not result, and 5) that there is no

proximate noncontracted land which is available and suitable for the use proposed on the contracted land or that development of the contracted land would provide more contiguous patterns of urban development than development of proximate noncontracted land.

A notice of Non-renewal of Land Conservation Contract No. 71-345 was recorded September 22, 2006. The contract is scheduled to expire January 1, 2016 through the nonrenewal process.

With the City's approval of the New Model Colony General Plan Amendment in 1999, the City designated the subject site and surrounding areas for residential and commercial uses. While parcels surrounding the proposed cancellation parcel may still be in agricultural use, the area is now transitioning from agricultural to urban use as previously planned by the City. The Department concurs that the cancellation of Contract No. 71-345 will not result in removal of adjacent land from agricultural use.

The Department concurs the proposed alternative use of commercial development is consistent with the City's General Plan.

The City is processing and implementing 11 specific plans within the New Colony area, including the Rich Haven Specific Plan. Urban development lies immediately north and east of the Rich Haven project area. The Department concurs that the cancellation of the contract will not result in discontiguous patterns of urban development and that development of the contracted land may provide more contiguous patterns of urban development than development of proximate noncontracted land.

Provided that the information presented is complete and accurate, the Department concurs that the Council has an adequate basis to support the consistency finding required to cancel the proposed parcel of contracted land.

Cancellation is in the Public Interest

For the cancellation to be in the public interest, the Council must make findings with respect to all of the following: (1) other public concerns substantially outweigh the objectives of the Williamson Act and (2) that there is no proximate noncontracted land which is available and suitable for the use proposed on the contracted land or that development of the contracted land would provide more contiguous patterns of urban development than development of proximate noncontracted land. Our comments have already addressed the second finding required under public interest finding above.

The Supreme Court of the State of California held that "any decision to cancel land preservation contracts must analyze the interest of the public as a whole in the value of land for open space and agricultural use" (Sierra Club v. City of Hayward (1981), 28 Cal. 3d 840, 856).

Nonrenewal

The State of California's Attorney General's Office has opined that cancellation is impermissible "except upon extremely stringent conditions", (62 Ops. Cal. Atty. Gen. 233, 240, (1979). The Attorney General has also opined that nonrenewal is the preferred contract termination method: "If a landowner desires to change the use of his land under contract to uses other than agricultural production and compatible uses, the proper procedure is to give notices of nonrenewal pursuant to section 51245." (54 Ops. Cal. Atty. Gen 90, 92 (1971).)

Thank you for the opportunity to provide comments on the proposed cancellation. Please provide our office with a copy of the Notice of the Public Hearing on this matter ten (10) working days before the hearing and a copy of the published notice of the Council's decision within 30 days of the tentative cancellation pursuant to section 51284. If you have any questions concerning our comments, please contact Adele Lagomarsino, Program Analyst at (916) 445-9411.

Sincerely,

Dennis J. O'Bryant
Program Manager

Letter 3. Dennis J. O'Bryant, State Department of Conservation

Response 3-1

The subject correspondence is not a comment on the Draft EIR itself, but instead addresses the cancellation of Williamson Act contracts. This subject was addressed in the Draft EIR on page 5.1-8 and the significant and unavoidable effects of the loss of farmland are addressed in the Draft EIR.

COUNTY OF RIVERSIDE
TRANSPORTATION AND LAND MANAGEMENT AGENCY
Transportation Department

George A. Johnson, P.E.
Director of Transportation

August 15, 2007

Richard Ayala, Senior Planner
Planning Department
City of Ontario
303 E "B" Street
Ontario, CA 91764-4105

Dear Mr. Ayala:

Subject: Draft Environmental Impact Report for the Rich Haven Specific Plan

Thank you for the opportunity to review and comment on the Draft Environmental Impact Report (DEIR) for the Rich Haven Specific Plan in the City of Ontario. The Transportation Department has reviewed the DEIR, focusing on the traffic study (Appendix E) prepared for the subject project. We have the following comments. Page, table and figure number references in the comments pertain to numbers in the Traffic Impact Study.

1. The City of Ontario and the County of Riverside have had extensive discussions about the traffic impacts of the New Model Colony developments on the interchange of I-15 at Cantu Galleano Ranch Road/Edison Avenue, which is in Riverside County. The traffic studies prepared by the City of Ontario for the New Model Colony indicate that at buildout of the New Model Colony, there would be severe congestion at the interchange, even if the recently completed interchange were to be widened. The traffic study for the Rich Haven Specific Plan does not contain an analysis of the interchange. Please include in the DEIR an analysis of the interchange for 2015, the planning horizon year of the Rich Haven Specific Plan. 4-1

2. The "base" 2015 intersection lane configurations, without the proposed project, (presented in Figure 12) assume more lanes than existing conditions (presented in Figure 4). Specifically, the County is concerned about the intersections along Milliken/Hamner, at the SR-60 interchange, Riverside Drive, Chino Avenue, and Edison Avenue. Please state if the improvements shown at these intersections are funded for construction and by whom. If the additional lanes are not funded, it would be more prudent to conduct the 2015 analysis starting with existing lane configurations and identify needed improvements in comparison with existing lanes. 4-2

4080 Lemon Street, 8th Floor • Riverside, California 92501 • (951) 955-6740
P.O. Box 1090 • Riverside, California 92502-1090 • FAX (951) 955-3198

3. The design features of those streets that cross the boundaries between the City of Ontario and the County of Riverside need to be coordinated between the City and the County to avoid any abrupt changes in lane configurations, right of way width, and other design aspects. The City and the County have had previous specific discussions about Edison/Cantu Galleano Ranch Road and Milliken Avenue/Hamner Avenue. We hope that the City and the County can continue to coordinate to arrive at mutually satisfactory solutions where differences exist.

   In the case of Milliken Avenue/Hamner Avenue, the City and the County have agreed that four through lanes need to be provided in each direction north of Cantu-Galleano Ranch Road and that the existing east curb should be held as fixed. The County has also provided the City the desired northbound lane widths for Milliken Avenue (12 ft for the number one lane adjacent to the median, 11 ft for the number two and number three lanes, and 16 ft for the number four lane adjacent to the east curb). We request that the City ask for sufficient right-of-way dedication to accommodate the agreed-upon lane configuration along Milliken Avenue/Hamner Avenue. 4-3

   In the case of Edison Avenue/Cantu Galleano Ranch Road, we ask that the City describe how the eight-lane cross section in the City will transition to a six-lane cross section in the County and how this would impact the interchange at I-15. As stated previously, the City's traffic analyses for buildout conditions indicate that there would be poor levels of service at the interchange even if it were to be widened to provide four through lanes in each direction. The County is not in a position to consider any improvements to the interchange that was opened to traffic less than one month ago.

4. The County would like to ensure that the lane configurations and traffic controls at the project access point along Milliken Avenue/Hamner Avenue are consistent with County guidelines. As part of the discussion on Page 37 Section 6.3 (Project Site Primary Access and Locations), please provide figures/tables/text showing the lanes, volumes, analysis, and results for Project Access E3 located on Milliken/Hamner.

   The lanes shown on the TRAFFIX analysis for Project Access E3 appear to indicate a four-leg intersection, while the volumes indicate a T-intersection. Please explain or revise. Also, there are no project volumes shown making the northbound left turn into the site or volumes shown making the eastbound right turn out of the site. It seems counterintuitive that no project trips would travel to and from the south using this driveway. Please explain. 4-4

5. Pages 37 and 53 – 6.4 and 7.4 Recommended Mitigation Measures for 2015: Please address the following issues with the recommended mitigation measures. Provide conceptual roadway/intersection sketches showing dimensions. 4-5

a) Milliken/SR-60 Westbound Ramps: Can the recommended second northbound left turn lane be accomplished through striping or would the roadway between the bridge abutments need to be widened? Will the westbound on-ramp need to be widened? If so, Please note this in the traffic study. The provision of a third lane on the westbound off-ramp will require widening; please note this in the traffic study. 4-5a

b) Milliken/SR-60 Eastbound Ramps: restriping the eastbound shared left/right turn lane as a free-flow right turn lane is not feasible without significant right-of-way acquisition and roadway improvements. There is no dedicated southbound travel lane for the free-flow rights to turn into. Due to the presence of a developed parcel immediately south of the ramp, the roadway cannot be widened to accommodate a southbound travel lane without right-of-way acquisition and removal of landscaping, parking lots, and buildings. Please develop a feasible alternative mitigation measure for this location. 4-5b

6. The County concurs with the consultant's conclusion that should land uses within the Rich-Haven Specific Plan change (specifically, the addition of a middle school or additional dwelling units in place of the analyzed park), a full revision of the traffic study will be required. 4-6

7. Recommended mitigation measures for 2015 are presented on Page 37 and thereafter. It is unclear whether these mitigation measures are in the "feasible" or "secondary" category as discussed on Page 41 under "Contribution of Project Trips to Future Traffic Volume. If these are not "feasible" improvements, they should not be presented as mitigation. Also, referring to Comment 2, we suggest that the mitigation measures include the improvements in comparison to the existing lanes, rather than in comparison to the "base" condition. 4-7

8. The County would like to discuss the fair share contributions presented in Tables 8 and 9 for County intersections. While the percentages appear to be reasonable, we would appreciate the opportunity to have input in finalizing the amounts to be contributed by the project. 4-8

We also have the following detailed comments for your consideration:

Detailed Comments on the Traffic Impact Analysis (Appendix E of the DEIR)

A. Figure 4: The lane configurations at the intersection of Milliken Avenue/Riverside Drive have been upgraded subsequent to the analysis of this intersection. Please field-verify the lanes and revise the analysis of this intersection as appropriate.

B. Existing and Future Conditions TRAFFIX analysis: Please use values consistent with County traffic study guidelines for the analysis of County intersections.

C. Page 17 – 3.2 Updated Traffic Model: Please provide an explanation of how the Eastvale Community Plan land use data was developed for use in the 2015 traffic model created for this project.

D. Figure 13: The AM peak hour southbound volumes along Milliken/ Hamner from north of Riverside Drive to south of Edison Avenue seem to be very low particularly when compared to the northbound return volumes during the PM, which are much higher. Please review the 2015 forecasts in comparison to the New Model Colony Buildout traffic model.

E. Figures 14 and 15: Please explain the relationship between the numbers (percentages?) on Figures 14 and 15. Assuming the number on Figure 14 are percentages, random checks show that applying these percentages to the inbound and outbound trip generation for the project, as shown on the last line of Table 5, does not result in the project volumes shown on Figure 15. 4-9

F. Figures 17and 19: Revise the mitigated lanes on this figure in accordance with Comment 13.

G. Pages 41 and 55 – 6.5 and 7.5 Contribution of Project Trips to Future Traffic Volumes: Please point out which potential mitigation measures are infeasible and which are secondary. It is unclear if the secondary improvements have been analyzed. If not, please provide an analysis. Infeasible improvements do not constitute mitigation for the project and should not be included in the analysis.

H. Pages 41 and 55 – 6.5.1 and 7.5.1 Study Intersection Fair-Share Cost Analysis: Please revise this analysis accordingly to incorporate the revised mitigation measures.

I. Pages 62-63 and Tables 23 and 24: Revise the summary, conclusions and tables based on the comments above.

J. Please revise the EIR traffic section to reflect any changes resulting from these comments on the traffic impact study.

Please contact Farah Khorashadi at (951) 955-2091 if you have any questions or need clarification on any of these comments.

Sincerely,

Juan C. Perez
Deputy Director

FK:rg

Cc: George Johnson, Director of Transportation
Farah Khorashadi, Engineering Division Manager
Herman Basmaciyan, Transportation and Traffic Engineering Consultant

Letter 4. Juan C. Perez, County of Riverside Transportation Department

Response 4-1

This comment requests an analysis of the intersection at I-15 and Cantu Galleano Ranch Road/Edison Avenue.

The I-15/Cantu Galleano Ranch Road (CGRR) interchange and its surrounding area were addressed as part of the EIR for the Ontario Agricultural Preserve General Plan Amendment Master EIR and the subsequent San Bernardino County Congestion Management Program (CMP) Traffic Impact Analysis (TIA). Therefore, the analysis of this interchange was outside the scope of the Rich Haven Specific Plan EIR Traffic Study. The Rich Haven Specific Plan and the New Model Colony are not solely responsible for the impacts to the I-15 interchange at the CGRR. Also, a General Plan Amendment is required for this project to allow greater residential density, but because the commercial component is being reduced, the traffic impacts from the project are the same. Thus, the prior analyses addressed this project's traffic impacts. The projected capacity deficiencies at this interchange will be due to forecast regional growth in both Riverside and San Bernardino Counties and the agencies should consider jointly addressing these projected deficiencies through more focused studies. The closest intersection, Milliken/Hamner Avenue and Edison Avenue/CGRR, was however studied as part of this EIR and was projected to operate at LOS D in 2015, with the assumed geometrics. The Sphere of Influence FEIR and CMP TIA provided information about the trip generation characteristics of the Rich Haven Specific Plan area. Typically, commercial uses have higher daily trip generation characteristics and higher PM peaks than residential uses. While there are proposed changes in land use (reduced commercial and increased residential), the overall trip generation assigned to the Rich Haven Specific Plan does not exceed the trip generation assumed under the FEIR and CMP TIA. In fact, the actual average daily trips (ADT) are slightly less than previously studied. Since these impacts were previously studied and the proposed Specific Plan falls within the previously studied ADT analyses, no further review is required.

Response 4-2

This comment indicates that the 2015 "base" conditions include lanes that do not presently exist and asks if these improvements are funded. If no funding is identified, then the comment asks that the 2015 analysis should use existing lane configurations.

The "future base" intersection conditions assume improvements to the intersections along Milliken/Hamner Avenue at the SR-60 interchange, Riverside Drive, Chino Avenue, and Edison Avenue which are beyond the current intersection configurations. These assumptions are reasonable because these additional improvements were identified as part of the broader Ontario New Model Colony Transportation Implementation Plan. They will be funded jointly through a consortium of the New Model Colony builders and therefore are assumed as "future base" conditions. The City entered

into a "Construction Agreement with the NMC Builders consortium for installation of certain improvements within the eastern portion of the NMC. There is, however, nothing to "lock in" these requirements and, given the current economy, there may be a question as to how much is actually constructed. Should the consortium not complete all the improvements, each specific plan identifies improvements to be completed to serve the development and each map is condition to install certain improvements. In the case of offsite improvements, the Development Impact Fees take into account all master plan roadways, traffic signals, and regional improvements (e.g. interchange improvements). Specific plans are still responsible for implementing roadways within and at the frontage of their properties.

Response 4-3

This comment requests additional coordination on roadways that cross the boundaries of the City and County and sets forth specific needs for additional coordination. This comment is noted, but it does not address the adequacy of the environmental analysis. The City will continue to coordinate with the County on shared roadway issues.

The City of Ontario's ultimate cross section for Milliken/Hamner Avenue shows a 26-foot wide median symmetrical on centerline. This configuration provides at least 13 additional feet on the east half of the roadway to accommodate the County's desired lane configuration without affecting the east curb line, and thus satisfies the County's concern.

Any additional pavement on Edison Avenue west of Milliken/Hamner Avenue will be transitioned through signing and striping to the roadway configuration on CGRR on the east side of the intersection. The transition removes potential impacts and does not require widening. Edison Avenue in the NMC is eight lanes. In order to match up with Cantu Galeano Road, the roadway will be striped to identify the #4 lane as a right-turn lane at Milliken/Hamner. This will result in six lanes continuing east of Milliken/Hamner, consistent with Riverside County's Master Plan, thereby eliminating the need to widen the overpass.

Response 4-4

This comment states that the analysis for Project Access E3 appears to indicate a four-leg intersection, while the volumes indicate a T-intersection. Also, the analysis for this intersection does not include northbound left turns or eastbound right turns out of the project site.

Project Access location E3 is a T-intersection. The analysis has been revised to reflect this correction. Furthermore, the turn volumes for the northbound left turns and eastbound right turns at this intersection were not shown due to an error, which has been corrected. Please refer to

Attachment A at the end of this section for the corrected analysis and the detailed intersection analysis worksheets. The results of the environmental analysis are not affected due to this omission.

Response 4-5

This comment addresses the feasibility of two mitigation measures.

Response to 4-5a. Milliken/SR-60 WB Ramps: The recommended second northbound left turn lane at this intersection can be accommodated through striping without the need for roadway widening or additional right of way. The northbound approach at that intersection is approximately 45 feet wide, and there is enough room under the bridge to make a transition. Additionally, the westbound on-ramp need not be widened. Different mitigation measures have been investigated and developed at this intersection; there will not be any need for widening the off-ramp. The new mitigation measure would only require re-striping of the existing right-turn-only lane into a shared left and right-turn lane. The analysis showed the following results at the intersection:

LOS D; Delay = 44.4 sec/veh; V/C=1.022 (PM Peak Hour).

Please refer to Attachment A at the end of this section for the detailed analysis worksheets and the revised figures and tables.

Response to 4-5b. Milliken/SR-60 EB Ramps: In response to this comment, the mitigation measure T-1 has been amended and included in Section 4, Errata. The new mitigation measure proposes re-striping the existing left turn lane into a shared left/right turn lane and re-striping the existing shared left/right turn lane into a right-turn only lane. The improvements can be accommodated within the existing right-of-way with no need for widening the off-ramp. The results are:

LOS C; Delay = 22.2 sec/veh; V/C = 0.908 (PM Peak Hour).

As explained in the Draft EIR, the City has adopted a level of service standard of D for intersections. Because this intersection will still operate at an acceptable level of service following the mitigation described above, the impact will remain less than significant. Therefore, this information is not significant new information as defined in the State CEQA Guidelines Section 15088.5, and recirculation is not required. Please refer to the Attachment A at the end of this section for the detailed analysis worksheets and the revised figures and tables. The attachment also includes conceptual sketches of the mitigation measure in its revised figures.

Response 4-6

This comment expresses agreement with a statement in the EIR related to potential significant changes to proposed land uses. This comment is noted and no response is required.

Response 4-7

This comment addresses whether mitigation measures are "feasible" or "secondary" and that mitigation should be compared to existing conditions rather than to future conditions.

All mitigation measures recommended in the Traffic Study, whether they deal with critical movements or non-critical movements at the intersections, are primary measures which are necessary to bring the overall operation of study intersections under acceptable levels of service (LOS D or better) by the horizon year of the project. They are not considered to be secondary improvements. Secondary improvements are those that may be recommended at other locations including intersections or roadway segments not projected to be operating under unacceptable conditions to mitigate an overall capacity deficiency at a projected deficient location. There are no such secondary improvements recommended in this traffic analysis. The statement related to "feasible" or "secondary" mitigation measures was an unrelated general statement that was inadvertently included in this discussion.

With respect to comparing mitigation measures to existing conditions, please refer to Response 4-2.

Response 4-8

This comment expresses a desire to meet with the City regarding fair share contributions and notes that the indicated percentages appear reasonable. The comment is noted and no response is required. The City is open to meetings and discussions on this matter.

Response 4-9

This comment relates to several specific issues in the Traffic Impact Analysis, Appendix E of the Draft EIR for the Rich Haven Specific Plan. Responses have been itemized below, 4-9A through 4-9J.

Responses to Detailed Comments

Response to 4-9A. This comment states that the lane configurations at Milliken Avenue and Riverside Drive intersection have been upgraded and asks us to revise the analysis appropriately.

The existing lane configurations at the intersection of Milliken Avenue and Riverside Drive have been updated in the analysis per Riverside County's comments. The analysis results are:

LOS C; Delay = 24.7; V/C = 0.537 (PM Peak Hour).

Thus, this intersection will perform better than originally estimated in the Draft EIR. Please refer to Attachment A at the end of this section for the detailed analysis worksheets and the revised figures and tables.

Response to 4-9B. This comment asks us to use the values consistent with the County traffic study guidelines for the analysis of County intersections.

The Ontario New Model Colony Transportation Implementation Plan calls for implementation of an Integrated Traffic System (ITS) Master Plan with components such as fiber-optics communications, interconnect, closed-circuit television (CCTV) and other measures to maximize traffic capacity and efficiency within the NMC and its adjacent peripheral areas. The traffic signals at study intersections along the City of Ontario/County of Riverside border are considered to be within this ITS Master Plan and its sphere of influence. They are expected to ultimately become part of the City of Ontario's overall interconnected traffic signal control system and are intended to be operated by the City of Ontario. This would also provide additional capacity not reflected in this study for a conservative approach. Therefore, the intersection levels of service analysis in this traffic study assumed input values prescribed by the City of Ontario.

Response to 4-9C. This comment requests an explanation of how the Eastvale Community Plan land use data was developed for use in the 2015 traffic model.

The City of Ontario's NMC Traffic Model was refined to include all known and expected developments in the surrounding areas to the NMC. This includes proposed developments in the Eastvale Community Plan, other adjacent known major developments in Riverside County by others, as well as Chino's Preserve and College Park projects. Traffic consultant Iteris contacted agencies and obtained planning/EIR documents related to these proposed/approved projects, reviewed their respective project descriptions and data related to proposed land uses including dwelling units, commercial, students, other, as well as their proposed circulation plans. That proposed development data were then incorporated into the Transportation Model's traffic analysis zone (TAZ) structure at their corresponding zonal locations and their projected peak hour and daily traffic generation was added to the model's trips. Where necessary, the model's TAZs (especially in Riverside County's Eastvale area) were disaggregated to allow for better traffic distribution and loading. In addition, care was taken to update the NMC Model's highway networks to incorporate the proposed circulation

element details (new alignments, number of lanes, etc.) from these adjacent projects including cross county roadway connections and freeway interchanges.

Response to 4-9D. This comment requests verification of the low AM peak hour southbound volumes along Milliken Avenue.

The future peak hour volumes for this traffic analysis are derived from the City of Ontario's refined NMC Model, which forecasts peak hour traffic volumes based on a capacity-restrained dynamic equilibrium traffic assignment. Milliken/Hamner Avenue is in close proximity to and within the I-15 freeway corridor. In this corridor, southbound is the AM peak direction and northbound is the PM peak direction for traffic flows. This continuous arterial and the freeway act as alternate routes in carrying local and mostly regional traffic especially in peak periods when one or the other facility experience congestion. Low southbound volumes on Milliken Avenue during AM peak hour are due to the close proximity of I-15, which in the AM peak carries a greater share of traffic in the corridor. In the PM peak, due to heavier congestion on the northbound I-15, more regional traffic is diverted to Milliken/Hamner Avenue resulting in higher volumes on the northbound direction of the arterial.

Response to 4-9E. This comment requests an explanation of relationship between the numbers in Figures 14 and 15 of the Traffic Study.

The numbers presented in Figure 14 are percentages; however, there was an error in the calculation of the percentages shown in this figure. The error has been corrected and the revised figures are in Attachment A at the end of this section.

Response to 4.9F through 4.9J. Comments 4-9F through 4-9J request revision to the tables, figures, and text so that they reflect the revised mitigation measures. The figures, tables, and text have been revised and are in this Response to Comments document's Attachment A at the end of this section.

Attachment A

Detailed Response to Comments 4-4, 4-5, 4-9, Including Changes to Appendix E, Traffic Impact Analysis, of the Draft EIR

TABLE OF CONTENTS

RESPONSE TO DETAILED COMMENT

4-9A

EXISTING TRAFFIC OPERATIONS ANALYSIS

ALL CHANGES TO THE TEXT AND TABLES FROM THE PREVIOUS REPORT ARE INDICATED IN CORRECTION FORMAT AND CHANGES TO THE FIGURES ARE INDICATED IN RED (INSIDE A CIRCLE).

PAGES OF APPENDIX B REPLACE THE CORRESPONDING PAGES IN THE APPENDIX B OF PREVIOUS TRAFFIC STUDY REPORT.

2.4 Existing Transit Services

Omnitrans, the public agency serving San Bernardino Valley, operates one line through the study area as illustrated in **Figure 6**.

Route 70 – Ontario-Creekside-Ontario Mills – Route 70 travels mainly along Campus Avenue, Walnut Avenue, Riverside Drive and Milliken Avenue. This route provides service between Montclair, Ontario and Rancho Cucamonga. Popular destinations along this route include the Ontario Civic Center and the Ontario Mills Mall. Transfers to other Omnitrans routes and public transit can be made at the Ontario Civic Center and Ontario Mills Mall (Routes 60, 61, 71, 75, and 90). This route operates seven days a week. On weekday, it operates with 60-minute headways from 7 AM to 9 PM. On Saturdays and Sundays, it operates every 60 minutes from 7:30 AM to 6:30 PM.

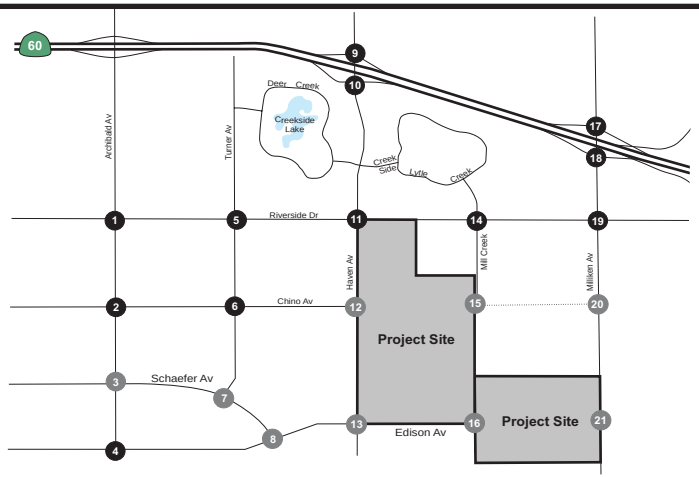
2.5 Existing Traffic Operations Analysis

The morning and evening peak hour level of service analyses were conducted at the twelve existing study intersections based on the existing traffic volume counts and the methodologies described previously. The level of service analysis was performed using TRAFFIX software for signalized intersections using the HCM 2000 Operations Methodology.

Table 3 summarizes the level of service calculations for the study intersections under existing conditions during the AM and PM peak hours (detailed HCM worksheets are included in **Appendix B**). An examination of the data in **Table 3** indicates that all twelve intersections are currently operating acceptably in the AM peak hour. One intersection is operating at LOS A, three intersections are operating LOS B, and eight intersections are operating at LOS C. In the PM peak hour, also all twelve intersections are operating acceptably. Two intersections are operating at LOS A, four at LOS B and six are operating at LOS C.

Deleted: Four intersections are operating at LOS B and eight intersections are operating at LOS C.

It should be noted that the intersection of Archibald Avenue at Schaefer Avenue exists, however it is an uncontrolled intersection with minimal conflicting volumes, therefore this location was analyzed under future conditions.



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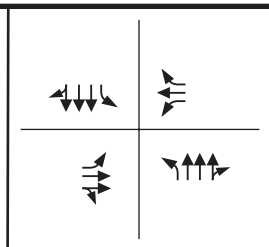

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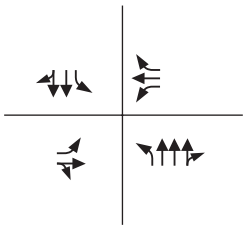

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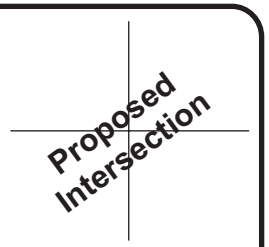

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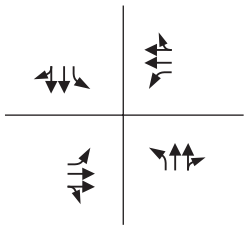

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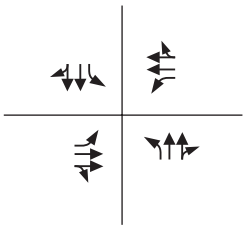

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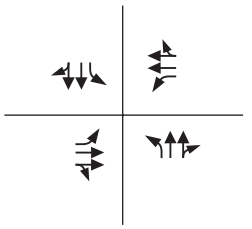

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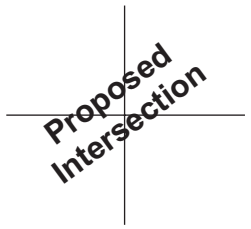

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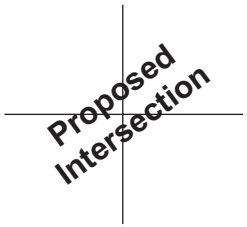

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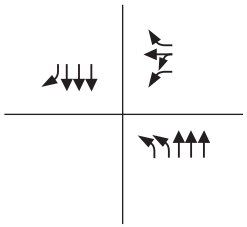

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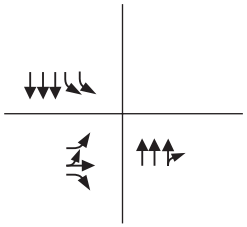

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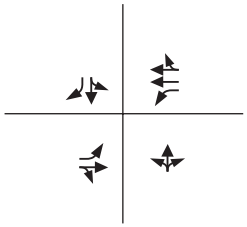

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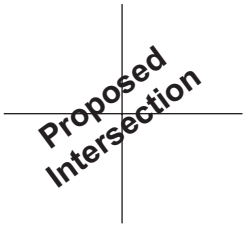

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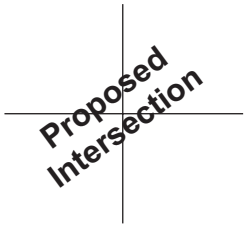

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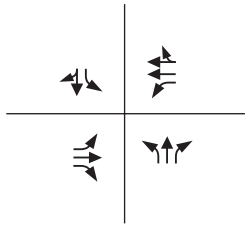

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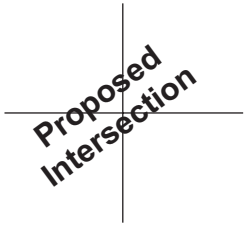

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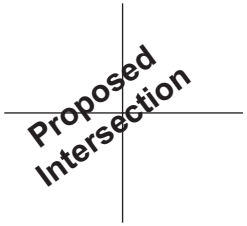

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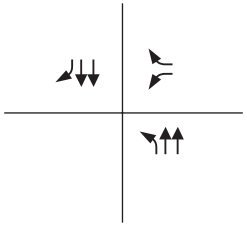

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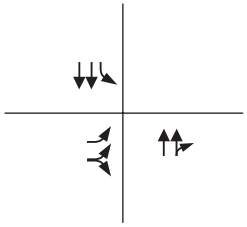

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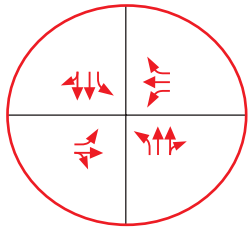

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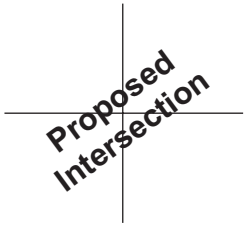

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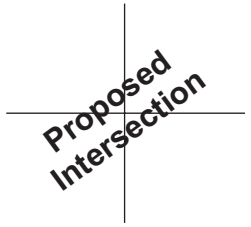

21. Milliken Av/Edison Av

Meyer, Mohaddes Associates

a business unit of Iteris, Inc.

Rich-Haven Specific Plan TIA
City of Ontario

FIGURE 4
Existing Lane Configuration

G:\USERS\2005\J05-16371 Ontario NMC Rich-Haven Specific Plan\Revised 9-25-06\GRA\Figure 4.cdr 9/26/06

TABLE 3: EXISTING CONDITIONS

Intersection	Year 2005 - Existing Conditions					
	AM Peak Hour			PM Peak Hour		
	LOS	Delay (Sec.)	V/C	LOS	Delay (Sec.)	V/C
1. Archibald Avenue at Riverside Drive	C	30.3	0.508	C	32.5	0.619
2. Archibald Avenue at Chino Avenue	C	22.4	0.318	B	18.7	0.317
3. Archibald Avenue at Schaefer Avenue*	--	--	--	--	--	--
4. Archibald Avenue at Edison Avenue	C	20.7	0.283	C	23.9	0.374
5. Turner Avenue at Riverside Drive	C	30.9	0.833	B	19.5	0.357
6. Turner Avenue at Chino Avenue [a]	A	9.0	0.245	A	8.3	0.153
7. Turner Avenue at Schaefer Avenue *	--	--	--	--	--	--
8. Edison Avenue at Schaefer Avenue *	--	--	--	--	--	--
9. Haven Avenue at SR-60 WB Ramps	B	14.0	0.443	A	7.7	0.623
10. Haven Avenue at SR-60 EB Ramps	C	28.8	0.831	C	23.2	0.684
11. Haven Avenue at Riverside Drive	C	22.6	0.287	C	21.9	0.512
12. Haven Avenue at Chino Avenue *	--	--	--	--	--	--
13. Haven Avenue at Edison Avenue *	--	--	--	--	--	--
14. Mill Creek Avenue at Riverside Drive	C	22.6	0.369	B	12.4	0.311
15. Mill Creek Avenue at Chino Avenue *	--	--	--	--	--	--
16. Mill Creek Avenue at Edison Avenue *	--	--	--	--	--	--
17. Milliken Avenue at SR-60 WB Ramps	B	19.1	0.552	B	14.4	0.589
18. Milliken Avenue at SR-60 EB Ramps	B	19.2	0.557	C	22.4	0.581
19. Milliken Avenue at Riverside Drive	C	23.6	0.439	C	24.7	0.537
20. Milliken Avenue/Hamner Avenue at Chino Avenue *	--	--	--	--	--	--
21. Milliken Avenue/Hamner Avenue at Edison Avenue *	--	--	--	--	--	--

Note: LOS = Level of Service, Delay = Average Vehicle Delay (Seconds), V/C = Volume-to-Capacity Ratio
HCM 2000 Operations Methodology
* Future Intersection

Deleted: B
Deleted: 11.1
Deleted: N/A
Deleted: 10.0
Deleted: N/A
Deleted: 29.3
Deleted: 0.840
Deleted: 23.5
Deleted: 0.698
Deleted: 4.0
Deleted: 0.625
Deleted: 26.9
Deleted: 0.667

APPENDIX
B
LOS CALCULATIONS
EXISTING CONDITIONS

Ontario New Model -Rich Haven External Intersections
AM Existing
Meyer, Mohaddes Associates

Impact Analysis Report
Level Of Service

Intersection	Base LOS	Base Del/ Veh	Base V/ C	Future LOS	Future Del/ Veh	Future V/ C	Change in
# 1 Archibald Avenue/Riverside Dri	C	30.3	0.508	C	30.3	0.508	+ 0.000 D/V
# 2 Archibald Avenue/Chino Avenue	C	22.4	0.318	C	22.4	0.318	+ 0.000 D/V
# 3 Archibald Avenue/Edison Avenue	C	20.7	0.283	C	20.7	0.283	+ 0.000 D/V
# 4 Turner Avenue/Riverside Drive	C	30.9	0.833	C	30.9	0.833	+ 0.000 D/V
# 5 Turner Avenue/Chino Avenue	B	11.1	0.000	B	11.1	0.000	+ 0.000 D/V
# 6 Turner Avenue at Schaefer Aven		0.0	0.000		0.0	0.000	+ 0.000 D/V
# 8 Edison Avenue at Schaefer Aven		0.0	0.000		0.0	0.000	+ 0.000 D/V
# 9 Haven Avenue/SR-60 WB Ramps	B	14.0	0.443	B	14.0	0.443	+ 0.000 D/V
# 10 Haven Avenue/SR-60 EB Ramps	C	28.8	0.831	C	28.8	0.831	+ 0.000 D/V
# 11 Haven Avenue/Riverside Drive	C	22.6	0.287	C	22.6	0.287	+ 0.000 D/V
# 12 Haven Avenue at Chino Avenue		0.0	0.000		0.0	0.000	+ 0.000 D/V
# 13 Haven Avenue at Edison Avenue		0.0	0.000		0.0	0.000	+ 0.000 D/V
# 14 MIll Creek Avenue/Riverside Dr	C	22.6	0.369	C	22.6	0.369	+ 0.000 D/V
# 15 Mill Creek Avenue at Chino Ave		0.0	0.000		0.0	0.000	+ 0.000 D/V
# 16 Mill Creek Avenue at Edison Av		0.0	0.000		0.0	0.000	+ 0.000 D/V
# 17 Milliken Avenue/SR-60 WB Ramps	B	19.1	0.552	B	19.1	0.552	+ 0.000 D/V
# 18 Milliken Avenue/SR-60 EB Ramps	B	19.2	0.557	B	19.2	0.557	+ 0.000 D/V
# 19 Milliken Avenue/Riverside Driv	C	23.6	0.439	C	23.6	0.439	+ 0.000 D/V
# 20 Milliken Ave / Chino Ave		0.0	0.000		0.0	0.000	+ 0.000 D/V
# 21 Milliken Avenue/Edison Avenue		0.0	0.000		0.0	0.000	+ 0.000 D/V
#550 Haven Avenue/Creekside Drive	C	26.5	0.707	C	26.5	0.707	+ 0.000 D/V

Ontario New Model -Rich Haven External Intersections
AM Existing
Meyer, Mohaddes Associates

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #1 Archibald Avenue/Riverside Drive

Cycle (sec): 100 Critical Vol./Cap.(X): 0.508
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 30.3
Optimal Cycle: 46 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	2	1 0	1 0	2	1 0	1 0	1	1 0	1 0	1	0 1
Volume Module:												
Base Vol:	147	656	41	163	291	78	102	207	54	119	240	240
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	153	682	43	170	303	81	106	215	56	124	250	250
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	153	682	43	170	303	81	106	215	56	124	250	250
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	161	718	45	178	319	85	112	227	59	130	263	263
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	161	718	45	178	319	85	112	227	59	130	263	263
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	161	718	45	178	319	85	112	227	59	130	263	263
Saturation Flow Module:												
Sat/Lane:	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Adjustment:	0.90	0.90	0.90	0.90	0.88	0.88	0.90	0.92	0.92	0.90	1.00	0.85
Lanes:	1.00	2.82	0.18	1.00	2.37	0.63	1.00	1.59	0.41	1.00	1.00	1.00
Final Sat.:	1615	4583	286	1615	3751	1005	1615	2628	686	1615	1800	1530
Capacity Analysis Module:												
Vol/Sat:	0.10	0.16	0.16	0.11	0.08	0.08	0.07	0.09	0.09	0.08	0.15	0.17
Crit Moves:		****			****			****				****
Green/Cycle:	0.28	0.31	0.31	0.22	0.24	0.24	0.14	0.24	0.24	0.23	0.34	0.34
Volume/Cap:	0.35	0.51	0.51	0.51	0.35	0.35	0.51	0.35	0.35	0.35	0.43	0.51
Delay/Veh:	28.9	28.6	28.6	35.6	31.6	31.6	42.0	31.5	31.5	32.9	26.2	27.3
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	28.9	28.6	28.6	35.6	31.6	31.6	42.0	31.5	31.5	32.9	26.2	27.3
LOS by Move:	C	C	C	D	C	C	D	C	C	C	C	C
HCM2kAvgQ:	4	7	7	6	4	4	4	4	4	4	6	7

Note: Queue reported is the number of cars per lane.

Ontario New Model -Rich Haven External Intersections
AM Existing
Meyer, Mohaddes Associates

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #19 Milliken Avenue/Riverside Drive

Cycle (sec):	100	Critical Vol./Cap.(X):	0.439
Loss Time (sec):	0 (Y+R=4.0 sec)	Average Delay (sec/veh):	23.6
Optimal Cycle:	33	Level Of Service:	C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0 1	1 0	1	0 1	1 0	1	0 0	1 0	1	0 1	0 1
Volume Module:												
Base Vol:	159	499	27	152	506	77	127	80	130	25	40	71
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	165	519	28	158	526	80	132	83	135	26	42	74
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	165	519	28	158	526	80	132	83	135	26	42	74
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	174	546	30	166	554	84	139	88	142	27	44	78
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	174	546	30	166	554	84	139	88	142	27	44	78
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	174	546	30	166	554	84	139	88	142	27	44	78
Saturation Flow Module:												
Sat/Lane:	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Adjustment:	0.90	0.94	0.94	0.90	0.93	0.93	0.65	0.91	0.91	0.40	1.00	0.85
Lanes:	1.00	1.90	0.10	1.00	1.74	0.26	1.00	0.38	0.62	1.00	1.00	1.00
Final Sat.:	1615	3218	174	1615	2909	443	1178	622	1011	712	1800	1530
Capacity Analysis Module:												
Vol/Sat:	0.11	0.17	0.17	0.10	0.19	0.19	0.12	0.14	0.14	0.04	0.02	0.05
Crit Moves:	****			****			****					
Green/Cycle:	0.25	0.42	0.42	0.26	0.43	0.43	0.32	0.32	0.32	0.32	0.32	0.32
Volume/Cap:	0.44	0.40	0.40	0.40	0.44	0.44	0.37	0.44	0.44	0.12	0.08	0.16
Delay/Veh:	32.7	20.3	20.3	31.4	20.0	20.0	26.8	27.4	27.4	24.2	23.7	24.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	32.7	20.3	20.3	31.4	20.0	20.0	26.8	27.4	27.4	24.2	23.7	24.5
LOS by Move:	C	C	C	C	C	C	C	C	C	C	C	C
HCM2kAvgQ:	5	7	7	5	7	7	4	6	6	1	1	2

Note: Queue reported is the number of cars per lane.

Ontario New Model -Rich Haven External Intersections
AM Existing
Meyer, Mohaddes Associates

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #20 Milliken Ave / Chino Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.000
Loss Time (sec):	0 (Y+R=4.0 sec)	Average Delay (sec/veh):	0.0
Optimal Cycle:	0	Level Of Service:	

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0 0	0 0	0	0 0	0 0	0	0 0	0 0	0	0 0	0 0
Volume Module:												
Base Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Growth Adj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Initial Bse:	0	0	0	0	0	0	0	0	0	0	0	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	0	0	0	0	0	0	0	0	0
User Adj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PHF Adj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PHF Volume:	0	0	0	0	0	0	0	0	0	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PCE Adj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MLF Adj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Final Vol.:	0	0	0	0	0	0	0	0	0	0	0	0
Saturation Flow Module:												
Sat/Lane:	0	0	0	0	0	0	0	0	0	0	0	0
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Final Sat.:	0	0	0	0	0	0	0	0	0	0	0	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Crit Moves:												
Green/Cycle:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Volume/Cap:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Delay/Veh:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LOS by Move:												
HCM2kAvgQ:	0	0	0	0	0	0	0	0	0	0	0	0

Note: Queue reported is the number of cars per lane.

Ontario New Model -Rich Haven External Intersections
AM Existing
Meyer, Mohaddes Associates

Lane Geometry Report

Number of approach lanes: (L) (LT) (T) (RT) (R) (LTR)

Node	Intersection	NB	SB	EB	WB
1	Archibald Avenue/Riverside Drive	102100	102100	101100	101010
2	Archibald Avenue/Chino Avenue	102100	101100	100100	101010
3	Archibald Avenue/Edison Avenue	101100	101100	101100	101100
4	Turner Avenue/Riverside Drive	101100	101100	101100	101100
5	Turner Avenue/Chino Avenue	101100	101100	101100	101100
6	Turner Avenue at Schaefer Avenue	000000	000000	000000	000000
8	Edison Avenue at Schaefer Avenue	000000	000000	000000	000000
9	Haven Avenue/SR-60 WB Ramps	203000	003010	000000	110010
10	Haven Avenue/SR-60 EB Ramps	002100	203000	110010	000000
11	Haven Avenue/Riverside Drive	000001	010010	100100	101100
12	Haven Avenue at Chino Avenue	000000	000000	000000	000000
13	Haven Avenue at Edison Avenue	000000	000000	000000	000000
14	MIll Creek Avenue/Riverside Drive	101010	100100	101010	101100
15	Mill Creek Avenue at Chino Avenue	000000	000000	000000	000000
16	Mill Creek Avenue at Edison Avenue	000000	000000	000000	000000
17	Milliken Avenue/SR-60 WB Ramps	102000	002010	000000	100010
18	Milliken Avenue/SR-60 EB Ramps	001100	102000	100001	000000
19	Milliken Avenue/Riverside Drive	101100	101100	100100	101010
20	Milliken Ave / Chino Ave	000000	000000	000000	000000
21	Milliken Avenue/Edison Avenue	000000	000000	000000	000000
550	Haven Avenue/Creekside Drive	101100	101100	101010	101010

Ontario New Model -Rich Haven External Intersections
Existing PM Peak
Meyer, Mohaddes Associates

Impact Analysis Report
Level Of Service

Intersection	Base LOS	Del/ Veh	V/ C	Future LOS	Del/ Veh	V/ C	Change in
# 1 Archibald Avenue/Riverside Dri	C	32.5	0.619	C	32.5	0.619	+ 0.000 D/V
# 2 Archibald Avenue/Chino Avenue	B	18.7	0.317	B	18.7	0.317	+ 0.000 D/V
# 3 Archibald Avenue/Edison Avenue	C	23.9	0.374	C	23.9	0.374	+ 0.000 D/V
# 4 Turner Avenue/Riverside Drive	B	19.5	0.357	B	19.5	0.357	+ 0.000 D/V
# 5 Turner Avenue/Chino Avenue	A	10.0	0.000	A	10.0	0.000	+ 0.000 D/V
# 6 Turner Avenue at Schaefer Aven		0.0	0.000		0.0	0.000	+ 0.000 D/V
# 8 Edison Avenue at Schaefer Aven		0.0	0.000		0.0	0.000	+ 0.000 D/V
# 9 Haven Avenue/SR-60 WB Ramps	A	7.7	0.623	A	7.7	0.623	+ 0.000 D/V
# 10 Haven Avenue/SR-60 EB Ramps	C	23.2	0.684	C	23.2	0.684	+ 0.000 D/V
# 11 Haven Avenue/Riverside Drive	C	21.9	0.512	C	21.9	0.512	+ 0.000 D/V
# 12 Haven Avenue at Chino Avenue		0.0	0.000		0.0	0.000	+ 0.000 D/V
# 13 Haven Avenue at Edison Avenue		0.0	0.000		0.0	0.000	+ 0.000 D/V
# 14 MIll Creek Avenue/Riverside Dr	B	12.4	0.311	B	12.4	0.311	+ 0.000 D/V
# 15 Mill Creek Avenue at Chino Ave		0.0	0.000		0.0	0.000	+ 0.000 D/V
# 16 Mill Creek Avenue at Edison Av		0.0	0.000		0.0	0.000	+ 0.000 D/V
# 17 Milliken Avenue/SR-60 WB Ramps	B	14.4	0.589	B	14.4	0.589	+ 0.000 D/V
# 18 Milliken Avenue/SR-60 EB Ramps	C	22.4	0.581	C	22.4	0.581	+ 0.000 D/V
# 19 Milliken Avenue/Riverside Driv	C	24.7	0.537	C	24.7	0.537	+ 0.000 D/V
# 20 Milliken Ave / Chino Ave		0.0	0.000		0.0	0.000	+ 0.000 D/V
# 21 Milliken Avenue/Edison Avenue		0.0	0.000		0.0	0.000	+ 0.000 D/V
#550 Haven Avenue/Creekside Drive	C	24.3	0.684	C	24.3	0.684	+ 0.000 D/V

Ontario New Model -Rich Haven External Intersections
Existing PM Peak
Meyer, Mohaddes Associates

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #1 Archibald Avenue/Riverside Drive

Cycle (sec): 100 Critical Vol./Cap.(X): 0.619
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 32.5
Optimal Cycle: 60 Level Of Service: C

Approach:	North Bound			South Bound			East Bound						West Bound					
Movement:	L	- T	- R	L	- T	- R	L	- T	- R				L	- T	- R			
Control:	Protected			Protected			Protected						Protected					
Rights:	Include			Include			Include						Include					
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0 2	1 0	1	0 2	1 0	1	0 1	1 0	1	0	1	1	0 1	0 1	1	0	1
Volume Module:																		
Base Vol:	204	484	85	322	486	79	96	449	132	116	223	145						
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04						
Initial Bse:	212	503	88	335	505	82	100	467	137	121	232	151						
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0						
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0						
Initial Fut:	212	503	88	335	505	82	100	467	137	121	232	151						
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00						
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95						
PHF Volume:	223	530	93	353	532	86	105	492	145	127	244	159						
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0						
Reduced Vol:	223	530	93	353	532	86	105	492	145	127	244	159						
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00						
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00						
Final Vol.:	223	530	93	353	532	86	105	492	145	127	244	159						
Saturation Flow Module:																		
Sat/Lane:	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800						
Adjustment:	0.90	0.89	0.89	0.90	0.89	0.89	0.90	0.92	0.92	0.90	1.00	0.85						
Lanes:	1.00	2.55	0.45	1.00	2.58	0.42	1.00	1.55	0.45	1.00	1.00	1.00						
Final Sat.:	1615	4088	718	1615	4138	673	1615	2553	751	1615	1800	1530						
Capacity Analysis Module:																		
Vol/Sat:	0.14	0.13	0.13	0.22	0.13	0.13	0.07	0.19	0.19	0.08	0.14	0.10						
Crit Moves:		****			****				****		****							
Green/Cycle:	0.29	0.21	0.21	0.35	0.27	0.27	0.14	0.31	0.31	0.13	0.30	0.30						
Volume/Cap:	0.47	0.62	0.62	0.62	0.47	0.47	0.46	0.62	0.62	0.62	0.46	0.35						
Delay/Veh:	29.9	37.1	37.1	28.9	30.8	30.8	40.8	30.6	30.6	47.0	29.3	28.1						
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00						
AdjDel/Veh:	29.9	37.1	37.1	28.9	30.8	30.8	40.8	30.6	30.6	47.0	29.3	28.1						
LOS by Move:	C	D	D	C	C	C	D	C	C	D	C	C						
HCM2kAvgQ:	6	7	7	10	6	6	4	9	9	5	6	4						

Note: Queue reported is the number of cars per lane.

Ontario New Model -Rich Haven External Intersections
Existing PM Peak
Meyer, Mohaddes Associates

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #19 Milliken Avenue/Riverside Drive

Cycle (sec): 100 Critical Vol./Cap.(X): 0.537
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 24.7
Optimal Cycle: 40 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0 1	1 0	1	0 1	1 0	1	0 0	1 0	1	0 1	0 1
Volume Module:												
Base Vol:	98	392	25	200	454	81	65	248	165	23	138	177
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	102	408	26	208	472	84	68	258	172	24	144	184
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	102	408	26	208	472	84	68	258	172	24	144	184
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	107	429	27	219	497	89	71	271	181	25	151	194
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	107	429	27	219	497	89	71	271	181	25	151	194
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	107	429	27	219	497	89	71	271	181	25	151	194
Saturation Flow Module:												
Sat/Lane:	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Adjustment:	0.90	0.94	0.94	0.90	0.93	0.93	0.56	0.94	0.94	0.31	1.00	0.85
Lanes:	1.00	1.88	0.12	1.00	1.70	0.30	1.00	0.60	0.40	1.00	1.00	1.00
Final Sat.:	1615	3186	203	1615	2835	506	1010	1016	676	561	1800	1530
Capacity Analysis Module:												
Vol/Sat:	0.07	0.13	0.13	0.14	0.18	0.18	0.07	0.27	0.27	0.04	0.08	0.13
Crit Moves:		****			****			****				
Green/Cycle:	0.14	0.25	0.25	0.25	0.36	0.36	0.50	0.50	0.50	0.50	0.50	0.50
Volume/Cap:	0.48	0.54	0.54	0.54	0.48	0.48	0.14	0.54	0.54	0.09	0.17	0.25
Delay/Veh:	41.4	33.1	33.1	33.8	24.8	24.8	13.7	17.9	17.9	13.4	13.9	14.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	41.4	33.1	33.1	33.8	24.8	24.8	13.7	17.9	17.9	13.4	13.9	14.7
LOS by Move:	D	C	C	C	C	C	B	B	B	B	B	B
HCM2kAvgQ:	4	7	7	7	8	8	1	10	10	0	3	3

Note: Queue reported is the number of cars per lane.

Ontario New Model -Rich Haven External Intersections
Existing PM Peak
Meyer, Mohaddes Associates

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #20 Milliken Ave / Chino Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.000
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 0.0
Optimal Cycle: 0 Level Of Service:

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0 0	0 0	0	0 0	0 0	0	0 0	0 0	0	0 0	0 0
Volume Module:												
Base Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Growth Adj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Initial Bse:	0	0	0	0	0	0	0	0	0	0	0	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	0	0	0	0	0	0	0	0	0
User Adj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PHF Adj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PHF Volume:	0	0	0	0	0	0	0	0	0	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PCE Adj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MLF Adj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Final Vol.:	0	0	0	0	0	0	0	0	0	0	0	0
Saturation Flow Module:												
Sat/Lane:	0	0	0	0	0	0	0	0	0	0	0	0
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Final Sat.:	0	0	0	0	0	0	0	0	0	0	0	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Crit Moves:												
Green/Cycle:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Volume/Cap:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Delay/Veh:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LOS by Move:												
HCM2kAvgQ:	0	0	0	0	0	0	0	0	0	0	0	0

Note: Queue reported is the number of cars per lane.

Ontario New Model -Rich Haven External Intersections
Existing PM Peak
Meyer, Mohaddes Associates

Lane Geometry Report

Number of approach lanes: (L) (LT) (T) (RT) (R) (LTR)

Node	Intersection	NB	SB	EB	WB
1	Archibald Avenue/Riverside Drive	102100	102100	101100	101010
2	Archibald Avenue/Chino Avenue	102100	101100	100100	101010
3	Archibald Avenue/Edison Avenue	101100	101100	101100	101100
4	Turner Avenue/Riverside Drive	101100	101100	101100	101100
5	Turner Avenue/Chino Avenue	101100	101100	101100	101100
6	Turner Avenue at Schaefer Avenue	000000	000000	000000	000000
8	Edison Avenue at Schaefer Avenue	000000	000000	000000	000000
9	Haven Avenue/SR-60 WB Ramps	203000	003010	000000	110010
10	Haven Avenue/SR-60 EB Ramps	002100	203000	110010	000000
11	Haven Avenue/Riverside Drive	000001	010010	100100	101100
12	Haven Avenue at Chino Avenue	000000	000000	000000	000000
13	Haven Avenue at Edison Avenue	000000	000000	000000	000000
14	MIll Creek Avenue/Riverside Drive	101010	100100	101010	101100
15	Mill Creek Avenue at Chino Avenue	000000	000000	000000	000000
16	Mill Creek Avenue at Edison Avenue	000000	000000	000000	000000
17	Milliken Avenue/SR-60 WB Ramps	102000	002010	000000	100010
18	Milliken Avenue/SR-60 EB Ramps	001100	102000	100001	000000
19	Milliken Avenue/Riverside Drive	101100	101100	100100	101010
20	Milliken Ave / Chino Ave	000000	000000	000000	000000
21	Milliken Avenue/Edison Avenue	000000	000000	000000	000000
550	Haven Avenue/Creekside Drive	101100	101100	101010	101010

RESPONSE TO COMMENT

#4-4

PROJECT SITE PRIMARY ACCESS AND LOCATIONS

ALL CHANGES TO THE TEXT FROM THE PREVIOUS REPORT ARE INDICATED IN CORRECTION FORMAT.

APPENDIX F REPLACES THE APPENDIX F OF THE PREVIOUS TRAFFIC STUDY REPORT

6.3 Project Site Primary Access and Locations

Figure 3 illustrates the project site access locations for the proposed Rich-Haven development. Project access points A1-7, B1-4, C1-2, and D-1 represent the primary access intersections that serve traffic volumes entering and exiting the project site for the residential component of the project. Similarly intersections D1-2 and E1-3 represent the primary access intersections that serve traffic volumes entering and exiting the project site for the mixed-use component of the project. MMA performed site specific project trip generation and distribution analyses based on the most current land use designations for the planned specific neighborhoods and areas that comprise the Rich-Haven development. Future level of service analysis and traffic signal warrants analyses were conducted at each primary access intersection. Each intersection was analyzed as a stop-controlled intersection at the minor street approach only. A signal warrants analysis identified the need for traffic signalization at Primary Access Intersection D2 and E1 along Edison Avenue, and E3 along Milliken Avenue. Both of these access points serve the planned mixed-use district. Detailed HCM worksheets and signal warrants analyses are included in **Appendix F**.

6.4 Recommended Mitigation Measures for 2015

The following mitigation measures are proposed to bring projected deficient intersections to acceptable operating conditions, (LOS D or better and V/C of less than 1.0) per City of Ontario standards. The mitigated level of service forecasts for the AM and PM peak hours are shown in **Table 7**.

The following mitigation measures are within the guidelines of the *City of Ontario Sphere of Influence General Plan Amendment (January 7, 1998).* An analysis of the traffic forecasts from the city's buildout model, the *Updated Buildout Ontario NMC Traffic Model (September 2005),* identifies that the Year 2015 mitigation measures presented in this section would satisfy the operating conditions of the intersections for buildout conditions. This is due to the subsequent redistribution of traffic expected beyond Year 2015.

Description of Study Intersection Mitigation Measures:

Intersection #4 Archibald Avenue/Edison Avenue
- provide EB free-flow-right-turn only lane

Intersection #10 Haven Avenue/SR-60 EB Ramps
- restripe EB center lane as shared left-turn/right-turn lane

Intersection #11 Haven Avenue/Riverside Drive
- provide NB and SB left turn protected phasing

Intersection #13 Haven Avenue/Edison Avenue
- provide NB and SB left turn protected phasing

Intersection #17 Milliken Avenue/SR-60 WB Ramps
- provide NB left-turn only lane
- restripe WB right-turn only lane as a shared left-turn/right-turn lane

Deleted: provide WB shared left-turn/right-turn lane

Intersection #18 Milliken Avenue/SR-60 EB Ramps
- restripe EB left-turn only lane as a shared left-turn/right-turn lane
- restripe EB shared left-turn/right-turn lane as a right-turn only lane

Deleted: shared left-turn/right-turn lane as free-flow-right-turn only lane

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APPENDIX
F
LOS CALCULATIONS PROJECT SITE PRIMARY ACCESS

Ontario New Model Colony - Rich Haven Specific Plan
2015 AM Peak - Internal Intersections
Meyer, Mohaddes Associates

Scenario Report

Scenario:	2015 AM
Command:	2015 AM
Volume:	Fut Base AM
Geometry:	Future Base
Impact Fee:	Default Impact Fee
Trip Generation:	AM Future
Trip Distribution:	AM
Paths:	Future
Routes:	Default Routes
Configuration:	2015 AM

Ontario New Model Colony - Rich Haven Specific Plan
2015 AM Peak - Internal Intersections
Meyer, Mohaddes Associates

Trip Generation Report

Forecast for AM Future

Zone #	Subzone	Amount	Units	Rate In	Rate Out	Trips In	Trips Out	Total Trips	% Of Total
1		1.00	Res	11.00	33.00	11	33	44	1.8
	Zone 1 Subtotal					11	33	44	1.8
2		1.00	Res	11.00	33.00	11	33	44	1.8
	Zone 2 Subtotal					11	33	44	1.8
3		1.00	Res	14.00	42.00	14	42	56	2.3
	Zone 3 Subtotal					14	42	56	2.3
4		1.00	Res	16.00	48.00	16	48	64	2.6
	Zone 4 Subtotal					16	48	64	2.6
5		1.00	Res	17.00	51.00	17	51	68	2.8
	Zone 5 Subtotal					17	51	68	2.8
7		1.00	Res	26.00	77.00	26	77	103	4.2
	Zone 7 Subtotal					26	77	103	4.2
8		1.00	Res	36.00	146.00	36	146	182	7.4
	Zone 8 Subtotal					36	146	182	7.4
9		1.00	Res	42.00	167.00	42	167	209	8.5
	Zone 9 Subtotal					42	167	209	8.5
10		1.00	Res	43.00	173.00	43	173	216	8.8
	Zone 10 Subtotal					43	173	216	8.8
11		1.00	Res	31.00	124.00	31	124	155	6.3
	Zone 11 Subtotal					31	124	155	6.3
12		1.00	Res	278.00	316.00	278	316	594	24.1
	Zone 12 Subtotal					278	316	594	24.1
13		1.00	Res	297.00	430.00	297	430	727	29.5
	Zone 13 Subtotal					297	430	727	29.5
TOTAL						822	1640	2462	100.0

Ontario New Model Colony - Rich Haven Specific Plan
2015 AM Peak - Internal Intersections
Meyer, Mohaddes Associates

Trip Distribution Report

Percent Of Trips AM

	To Gates										
Zone	1	2	4	5	6	7	8	9	10	11	12
1	4.0	16.0	10.0	5.0	6.0	37.0	3.0	1.0	4.0	12.0	2.0
2	4.0	16.0	10.0	5.0	6.0	37.0	3.0	1.0	4.0	12.0	2.0
3	4.0	16.0	10.0	5.0	6.0	37.0	3.0	1.0	4.0	12.0	2.0
4	4.0	16.0	10.0	5.0	6.0	37.0	3.0	1.0	4.0	12.0	2.0
5	4.0	16.0	10.0	5.0	6.0	37.0	3.0	1.0	4.0	12.0	2.0
6	4.0	16.0	10.0	5.0	6.0	37.0	3.0	1.0	4.0	12.0	2.0
7	4.0	16.0	10.0	5.0	6.0	37.0	3.0	1.0	4.0	12.0	2.0
8	4.0	16.0	10.0	5.0	6.0	37.0	3.0	1.0	4.0	12.0	2.0
9	4.0	16.0	10.0	5.0	6.0	37.0	3.0	1.0	4.0	12.0	2.0
10	4.0	16.0	10.0	5.0	6.0	37.0	3.0	1.0	4.0	12.0	2.0
11	4.0	16.0	10.0	5.0	6.0	37.0	3.0	1.0	4.0	12.0	2.0
12	4.0	16.0	10.0	5.0	6.0	37.0	3.0	1.0	4.0	12.0	2.0
13	4.0	16.0	10.0	5.0	6.0	37.0	3.0	1.0	4.0	12.0	2.0

Ontario New Model Colony - Rich Haven Specific Plan
2015 AM Peak - Internal Intersections
Meyer, Mohaddes Associates

Intersection Volume Report
Base Volume Alternative

		Northbound			Southbound			Eastbound			Westbound		
Node	Intersection	L	T	R	L	T	R	L	T	R	L	T	R
101	A1	0	0	0	0	0	0	0	1383	0	0	581	0
102	A2	0	1135	0	0	501	0	0	0	0	0	0	0
103	A3	0	1135	0	0	501	0	0	0	0	0	0	0
104	A4	0	207	0	0	189	0	0	0	0	0	0	0
105	A5	0	0	0	0	0	0	0	137	0	0	47	0
106	A6	0	0	0	0	0	0	0	137	0	0	47	0
107	A7	0	0	0	0	0	0	0	137	0	0	47	0
201	B1	0	1197	0	0	568	0	0	0	0	0	0	0
202	B2	0	32	0	0	13	0	0	0	0	0	0	0
203	B3	0	1197	0	0	568	0	0	0	0	0	0	0
204	B4	0	32	0	0	13	0	0	0	0	0	0	0
301	C1	0	1197	0	0	568	0	0	0	0	0	0	0
302	C2	0	0	0	0	0	0	0	1333	0	0	1777	0
401	D1	0	32	0	0	13	0	0	0	0	0	0	0
402	D2	0	0	0	0	0	0	0	1660	0	0	1282	0
501	E1	0	0	0	0	0	0	0	1660	0	0	1282	0
502	E2	0	122	0	0	51	0	0	0	0	0	0	0
503	E3	0	1200	0	0	310	0	0	0	0	0	0	0

Ontario New Model Colony - Rich Haven Specific Plan
2015 AM Peak - Internal Intersections
Meyer, Mohaddes Associates

Intersection Volume Report
Future Volume Alternative

Node	Intersection	Northbound L	Northbound T	Northbound R	Southbound L	Southbound T	Southbound R	Eastbound L	Eastbound T	Eastbound R	Westbound L	Westbound T	Westbound R
101	A1	8	0	25	0	0	0	0	1446	3	8	671	0
102	A2	0	1356	6	4	599	0	0	0	0	17	0	11
103	A3	0	1343	7	6	609	0	0	0	0	20	0	19
104	A4	10	424	0	0	332	10	28	0	30	0	0	0
105	A5	0	0	0	39	0	39	13	157	0	0	84	13
106	A6	0	0	0	0	0	0	0	196	0	0	97	0
107	A7	0	0	0	40	0	7	2	194	0	0	90	13
201	B1	0	1362	0	17	724	0	0	0	0	0	0	69
202	B2	0	313	0	0	276	12	47	0	0	0	0	0
203	B3	0	1362	10	0	724	0	0	0	0	40	0	0
204	B4	39	313	0	0	276	0	0	0	157	0	0	0
301	C1	0	1315	14	14	750	0	0	0	0	54	0	56
302	C2	0	0	0	64	0	34	8	1565	0	0	2010	16
401	D1	7	228	0	95	324	13	54	6	30	0	1	71
402	D2	110	0	0	58	0	82	72	2066	76	0	1438	51
501	E1	26	13	92	110	27	30	26	2078	20	64	1433	77
502	E2	0	127	3	64	63	0	0	0	0	4	0	92
503	E3	23	1202	0	0	317	64	92	0	42	0	0	0

Ontario New Model Colony - Rich Haven Specific Plan
2015 AM Peak - Internal Intersections
Meyer, Mohaddes Associates

Impact Analysis Report
Level Of Service

Intersection	Base LOS	Base Del/Veh	Base V/C	Future LOS	Future Del/Veh	Future V/C	Change in D/V
#101 A1	A	0.0	0.000	D	29.6	0.000	+29.618
#102 A2	A	0.0	0.000	E	45.2	0.000	+45.237
#103 A3	A	0.0	0.000	E	42.1	0.000	+42.055
#104 A4	A	0.0	0.000	B	13.3	0.000	+13.335
#105 A5	A	0.0	0.000	A	9.3	0.000	+ 9.340
#106 A6	A	0.0	0.000	A	0.0	0.000	+ 0.000
#107 A7	A	0.0	0.000	A	9.8	0.000	+ 9.767
#201 B1	A	0.0	0.000	C	16.8	0.000	+16.825
#202 B2	A	9.2	0.000	B	13.5	0.000	+ 4.327
#203 B3	A	0.0	0.000	F	113.5	0.000	+113.541
#204 B4	A	9.2	0.000	B	13.1	0.000	+ 3.980
#301 C1	A	0.0	0.000	F	86.9	0.000	+86.943
#302 C2	A	0.0	0.000	F	857.9	0.000	+857.924
#401 D1	A	0.0	0.000	C	19.2	0.000	+19.246
#402 D2	A	0.0	0.000	F	OVRFL	0.000	+7828.431
#501 E1	A	0.0	0.000	F	OVRFL	0.000	+ 1.1E+0308
#502 E2	A	0.0	0.000	A	9.4	0.000	+ 9.432
#503 E3	A	0.0	0.000	D	25.7	0.000	+25.707

Ontario New Model Colony - Rich Haven Specific Plan
2015 AM Peak - Internal Intersections
Meyer, Mohaddes Associates

Signal Warrant Summary Report

Intersection	Base Met [Del / Vol]	Future Met [Del / Vol]
#101 A1	??? / ???	No / No
#102 A2	??? / ???	No / No
#103 A3	??? / ???	No / No
#104 A4	??? / ???	No / No
#105 A5	??? / ???	No / No
#106 A6	??? / ???	No / No
#107 A7	??? / ???	No / No
#201 B1	??? / ???	No / No
#202 B2	??? / ???	No / No
#203 B3	??? / ???	No / No
#204 B4	??? / ???	No / No
#301 C1	??? / ???	No / No
#302 C2	??? / ???	No / No
#401 D1	??? / ???	No / No
#402 D2	??? / ???	No / No
#501 E1	??? / ???	Yes / Yes
#502 E2	??? / ???	No / No
#503 E3	??? / ???	No / No

Ontario New Model Colony - Rich Haven Specific Plan
2015 AM Peak - Internal Intersections
Meyer, Mohaddes Associates

Peak Hour Delay Signal Warrant Report

Intersection #101 A1

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	1 0	0	0 1	0	0 0	0 0	0	0 1	1 0	1 0	2	0 0
Initial Vol:	8	0	25	0	0	0	0 1446		3	8	671	0
ApproachDel:	29.6			xxxxxx			xxxxxx			xxxxxx		

Approach[northbound][lanes=2][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.3]
FAIL - Vehicle-hours less than 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=33]
FAIL - Approach volume less than 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=2161]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Ontario New Model Colony - Rich Haven Specific Plan
2015 AM Peak - Internal Intersections
Meyer, Mohaddes Associates

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #101 A1

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	- T	- R	L	- T	- R	L	- T	- R	L	- T	- R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	1	0 0	0 1	0	0 0	0 0	0	0 1	1 0	1	0 2	0 0
Initial Vol:	8	0	25	0	0	0	0	1446	3	8	671	0

Major Street Volume: 2128
Minor Approach Volume: 33
Minor Approach Volume Threshold: 49 [less than minimum of 150]

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Ontario New Model Colony - Rich Haven Specific Plan
2015 AM Peak - Internal Intersections
Meyer, Mohaddes Associates

Peak Hour Delay Signal Warrant Report

Intersection #102 A2

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	- T	- R	L	- T	- R	L	- T	- R	L	- T	- R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0	0 1	1 0	1	0 2	0 0	0	0 0	0 0	1	0 0	0 1
Initial Vol:	0	1356	6	4	599	0	0	0	0	17	0	11
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			45.2		

Approach[westbound][lanes=2][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.4]
FAIL - Vehicle-hours less than 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=28]
FAIL - Approach volume less than 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=1993]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Ontario New Model Colony - Rich Haven Specific Plan
2015 AM Peak - Internal Intersections
Meyer, Mohaddes Associates

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #102 A2

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	- T	- R	L	- T	- R	L	- T	- R	L	- T	- R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0	0 1	1 0	1	0 2	0 0	0	0 0	0 0 0	1	0 0	0 1
Initial Vol:	0	1356	6	4	599	0	0	0	0	17	0	11

Major Street Volume: 1965
Minor Approach Volume: 28
Minor Approach Volume Threshold: 84 [less than minimum of 150]

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Ontario New Model Colony - Rich Haven Specific Plan
2015 AM Peak - Internal Intersections
Meyer, Mohaddes Associates

Peak Hour Delay Signal Warrant Report

Intersection #103 A3

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	- T	- R	L	- T	- R	L	- T	- R	L	- T	- R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0	0 1	1 0	1	0 2	0 0	0	0 0	0 0 0	1	0 0	0 1
Initial Vol:	0	1343	7	6	609	0	0	0	0	20	0	19
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			42.1		

Approach[westbound][lanes=2][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.5]
FAIL - Vehicle-hours less than 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=39]
FAIL - Approach volume less than 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=2004]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Ontario New Model Colony - Rich Haven Specific Plan
2015 AM Peak - Internal Intersections
Meyer, Mohaddes Associates

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #103 A3

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	- T	- R	L	- T	- R	L	- T	- R	L	- T	- R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0	0 1	1 0	1	0 2	0 0	0	0 0	0 0	1	0 0	0 1
Initial Vol:	0	1343	7	6	609	0	0	0	0	20	0	19

Major Street Volume: 1965
Minor Approach Volume: 39
Minor Approach Volume Threshold: 84 [less than minimum of 150]

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Ontario New Model Colony - Rich Haven Specific Plan
2015 AM Peak - Internal Intersections
Meyer, Mohaddes Associates

Peak Hour Delay Signal Warrant Report

Intersection #104 A4

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	- T	- R	L	- T	- R	L	- T	- R	L	- T	- R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	1	0 1	0 0	0	0 0	1 0	1	0 0	0 1	0	0 0	0 0
Initial Vol:	10	424	0	0	332	10	28	0	30	0	0	0
ApproachDel:	xxxxxx			xxxxxx			13.3			xxxxxx		

Approach[eastbound][lanes=2][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.2]
FAIL - Vehicle-hours less than 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=58]
FAIL - Approach volume less than 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=834]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Ontario New Model Colony - Rich Haven Specific Plan
2015 AM Peak - Internal Intersections
Meyer, Mohaddes Associates

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #104 A4

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	1	0 1	0	0	0 0 1	0	1	0 0 0 1		0	0 0 0 0	
Initial Vol:	10	424	0	0	332	10	28	0	30	0	0	0

Major Street Volume: 776
Minor Approach Volume: 58
Minor Approach Volume Threshold: 483

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Ontario New Model Colony - Rich Haven Specific Plan
2015 AM Peak - Internal Intersections
Meyer, Mohaddes Associates

Peak Hour Delay Signal Warrant Report

Intersection #105 A5

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0	0 0 0 0		1	0 0 0 1		1	0 2 0	0	0	0 1 1	0
Initial Vol:	0	0	0	39	0	39	13	157	0	0	84	13
ApproachDel:	xxxxxx			9.3			xxxxxx			xxxxxx		

Approach[southbound][lanes=2][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.2]
FAIL - Vehicle-hours less than 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=78]
FAIL - Approach volume less than 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=345]
FAIL - Total volume less than 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Ontario New Model Colony - Rich Haven Specific Plan
2015 AM Peak - Internal Intersections
Meyer, Mohaddes Associates

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #105 A5

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Stop Sign					Stop Sign					Uncontrolled					Uncontrolled				
Lanes:	0	0	0	0	0	1	0	0	0	1	1	0	2	0	0	0	0	1	1	0
Initial Vol:	0		0		0	39		0		39	13		157		0	0		84		13

Major Street Volume: 267
Minor Approach Volume: 78
Minor Approach Volume Threshold: 942

SIGNAL WARRANT DISCLAIMER
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Ontario New Model Colony - Rich Haven Specific Plan
2015 AM Peak - Internal Intersections
Meyer, Mohaddes Associates

Peak Hour Delay Signal Warrant Report

Intersection #106 A6

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Stop Sign					Stop Sign					Uncontrolled					Uncontrolled				
Lanes:	0	0	0	0	0	1	0	0	0	1	1	0	2	0	0	0	0	1	1	0
Initial Vol:	0		0		0	0		0		0	0		196		0	0		97		0
ApproachDel:	xxxxxx					xxxxxx					xxxxxx					xxxxxx				

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Ontario New Model Colony - Rich Haven Specific Plan
2015 AM Peak - Internal Intersections
Meyer, Mohaddes Associates

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #106 A6

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	- T	- R	L	- T	- R	L	- T	- R	L	- T	- R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0	0 0	0 0	1	0 0	0 1	1	0 2	0 0	0	0 1	1 0
Initial Vol:	0	0	0	0	0	0	0	196	0	0	97	0

Major Street Volume: 293
Minor Approach Volume: 0
Minor Approach Volume Threshold: 708

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Ontario New Model Colony - Rich Haven Specific Plan
2015 AM Peak - Internal Intersections
Meyer, Mohaddes Associates

Peak Hour Delay Signal Warrant Report

Intersection #107 A7

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	- T	- R	L	- T	- R	L	- T	- R	L	- T	- R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0	0 0	0 0	1	0 0	0 1	1	0 2	0 0	0	0 1	1 0
Initial Vol:	0	0	0	40	0	7	2	194	0	0	90	13
ApproachDel:	xxxxxx			9.8			xxxxxx			xxxxxx		

Approach[southbound][lanes=2][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.1]
FAIL - Vehicle-hours less than 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=47]
FAIL - Approach volume less than 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=346]
FAIL - Total volume less than 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Ontario New Model Colony - Rich Haven Specific Plan
2015 AM Peak - Internal Intersections
Meyer, Mohaddes Associates

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #107 A7

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Stop Sign				Stop Sign				Uncontrolled				Uncontrolled			
Lanes:	0	0	0	0 0	1	0	0	0 1	1	0	2	0 0	0	0	1	1 0
Initial Vol:	0	0	0	40	0	7			2	194	0		0	90	13	

Major Street Volume: 299
Minor Approach Volume: 47
Minor Approach Volume Threshold: 893

SIGNAL WARRANT DISCLAIMER
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Ontario New Model Colony - Rich Haven Specific Plan
2015 AM Peak - Internal Intersections
Meyer, Mohaddes Associates

Peak Hour Delay Signal Warrant Report

Intersection #201 B1

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Uncontrolled				Uncontrolled				Stop Sign				Stop Sign			
Lanes:	0	0	1	1 0	1	0	2	0 0	0	0	0	0 0	1	0	0	0 1
Initial Vol:	0	1362	0	17	724	0	0	0	0	0	0		0	0	69	
ApproachDel:	xxxxxx			xxxxxx			xxxxxx				16.8					

Approach[westbound][lanes=2][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.3]
FAIL - Vehicle-hours less than 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=69]
FAIL - Approach volume less than 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=2172]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Ontario New Model Colony - Rich Haven Specific Plan
2015 AM Peak - Internal Intersections
Meyer, Mohaddes Associates

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #201 B1

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	- T	- R	L	- T	- R	L	- T	- R	L	- T	- R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0	0 1	1 0	1	0 2	0 0	0	0 0	0 0 0	1	0 0	0 1
Initial Vol:	0	1362	0	17	724	0	0	0	0	0	0	69

Major Street Volume: 2103
Minor Approach Volume: 69
Minor Approach Volume Threshold: 54 [less than minimum of 150]

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Ontario New Model Colony - Rich Haven Specific Plan
2015 AM Peak - Internal Intersections
Meyer, Mohaddes Associates

Peak Hour Delay Signal Warrant Report

Intersection #202 B2

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	- T	- R	L	- T	- R	L	- T	- R	L	- T	- R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	1	0 1	0 0	0	0 0	1 0	1	0 0	0 1	0	0 0	0 0
Initial Vol:	0	313	0	0	276	12	47	0	0	0	0	0
ApproachDel:	13.5			12.9			xxxxxx			xxxxxx		

Approach[northbound][lanes=2][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=1.2]
FAIL - Vehicle-hours less than 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=313]
SUCCEED - Approach volume >= 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=648]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

Approach[southbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=1.0]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=288]
SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=648]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Ontario New Model Colony - Rich Haven Specific Plan
2015 AM Peak - Internal Intersections
Meyer, Mohaddes Associates

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #202 B2

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	1	0	1	0	0	0	1	0	0	0	1	0
Initial Vol:	0	313	0	0	276	12	47	0	0	0	0	0

Major Street Volume: 47
Minor Approach Volume: 313
Minor Approach Volume Threshold: 1689

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Ontario New Model Colony - Rich Haven Specific Plan
2015 AM Peak - Internal Intersections
Meyer, Mohaddes Associates

Peak Hour Delay Signal Warrant Report

Intersection #203 B3

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0	0	1	1	0	1	0	2	0	0	0	1
Initial Vol:	0	1362	10	0	724	0	0	0	0	40	0	0
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			113.5		

Approach[westbound][lanes=2][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=1.3]
FAIL - Vehicle-hours less than 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=40]
FAIL - Approach volume less than 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=2136]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Ontario New Model Colony - Rich Haven Specific Plan
2015 AM Peak - Internal Intersections
Meyer, Mohaddes Associates

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #203 B3

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Uncontrolled	Uncontrolled	Stop Sign	Stop Sign
Lanes:	0 0 1 1 0	1 0 2 0 0	0 0 0 0 0	1 0 0 0 1
Initial Vol:	0 1362 10	0 724 0	0 0 0	40 0 0

Major Street Volume: 2096
Minor Approach Volume: 40
Minor Approach Volume Threshold: 56 [less than minimum of 150]

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Ontario New Model Colony - Rich Haven Specific Plan
2015 AM Peak - Internal Intersections
Meyer, Mohaddes Associates

Peak Hour Delay Signal Warrant Report

Intersection #204 B4

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Stop Sign	Stop Sign	Uncontrolled	Uncontrolled
Lanes:	1 0 1 0 0	0 0 1 0 0	1 0 0 0 1	0 0 0 0 0
Initial Vol:	39 313 0	0 276 0	0 0 157	0 0 0
ApproachDel:	11.3	13.1	xxxxxx	xxxxxx

Approach[northbound][lanes=2][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=1.1]
FAIL - Vehicle-hours less than 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=352]
SUCCEED - Approach volume >= 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=785]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

Approach[southbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=1.0]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=276]
SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=785]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER
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Ontario New Model Colony - Rich Haven Specific Plan
2015 AM Peak - Internal Intersections
Meyer, Mohaddes Associates

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #204 B4

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	1	0	1	0	0	0	1	0	1	0	0	0
Initial Vol:	39	313	0	0	276	0	0	0	157	0	0	0

Major Street Volume: 157
Minor Approach Volume: 352
Minor Approach Volume Threshold: 1170

SIGNAL WARRANT DISCLAIMER
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Ontario New Model Colony - Rich Haven Specific Plan
2015 AM Peak - Internal Intersections
Meyer, Mohaddes Associates

Peak Hour Delay Signal Warrant Report

Intersection #301 C1

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0	0	1	1	0	1	0	2	0	0	0	0	0	0	1	0	0	0	1
Initial Vol:	0	1315	14	14	750	0	0	0	0	54	0	56
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			86.9		

Approach[westbound][lanes=2][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=2.7]
FAIL - Vehicle-hours less than 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=110]
FAIL - Approach volume less than 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=2203]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER
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Ontario New Model Colony - Rich Haven Specific Plan
2015 AM Peak - Internal Intersections
Meyer, Mohaddes Associates

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #301 C1

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0	0 1	1 0	1	0 2	0 0	0	0 0	0 0 0	1	0 0	0 1
Initial Vol:	0	1315	14	14	750	0	0	0	0	54	0	56

Major Street Volume: 2093
Minor Approach Volume: 110
Minor Approach Volume Threshold: 56 [less than minimum of 150]

SIGNAL WARRANT DISCLAIMER
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Ontario New Model Colony - Rich Haven Specific Plan
2015 AM Peak - Internal Intersections
Meyer, Mohaddes Associates

Peak Hour Delay Signal Warrant Report

Intersection #302 C2

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0	0 0	0 0	1	0 0	0 1	1	0 4	0 0	0	0 3	1 0
Initial Vol:	0	0	0	64	0	34	8	1565	0	0	2010	16
ApproachDel:	xxxxxx			857.9			xxxxxx			xxxxxx		

Approach[southbound][lanes=2][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=23.4]
SUCCEED - Vehicle-hours >= 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=98]
FAIL - Approach volume less than 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=3697]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER
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Ontario New Model Colony - Rich Haven Specific Plan
2015 AM Peak - Internal Intersections
Meyer, Mohaddes Associates

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #302 C2

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Stop Sign	Stop Sign	Uncontrolled	Uncontrolled
Lanes:	0 0 0 0 0	1 0 0 0 1	1 0 4 0 0	0 0 3 1 0
Initial Vol:	0 0 0	64 0 34	8 1565 0	0 2010 16

Major Street Volume: 3599
Minor Approach Volume: 98
Minor Approach Volume Threshold: -177 [less than minimum of 150]

SIGNAL WARRANT DISCLAIMER
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Ontario New Model Colony - Rich Haven Specific Plan
2015 AM Peak - Internal Intersections
Meyer, Mohaddes Associates

Peak Hour Delay Signal Warrant Report

Intersection #401 D1

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Uncontrolled	Uncontrolled	Stop Sign	Stop Sign
Lanes:	1 0 0 1 0	1 0 0 1 0	1 0 0 1 0	1 0 0 1 0
Initial Vol:	7 228 0	95 324 13	54 6 30	0 1 71
ApproachDel:	xxxxxx	xxxxxx	19.2	10.1

Approach[eastbound][lanes=2][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.5]
FAIL - Vehicle-hours less than 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=90]
FAIL - Approach volume less than 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=829]
SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

Approach[westbound][lanes=2][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.2]
FAIL - Vehicle-hours less than 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=72]
FAIL - Approach volume less than 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=829]
SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

SIGNAL WARRANT DISCLAIMER
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Ontario New Model Colony - Rich Haven Specific Plan
2015 AM Peak - Internal Intersections
Meyer, Mohaddes Associates

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #401 D1

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	1	0	0 1	0	1	0	0 1	0	1	0	0 1	0
Initial Vol:	7	228	0	95	324	13	54	6	30	0	1	71

Major Street Volume: 667
Minor Approach Volume: 90
Minor Approach Volume Threshold: 548

SIGNAL WARRANT DISCLAIMER
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Ontario New Model Colony - Rich Haven Specific Plan
2015 AM Peak - Internal Intersections
Meyer, Mohaddes Associates

Peak Hour Delay Signal Warrant Report

Intersection #402 D2

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound				West Bound			
Movement:	L	T	R	L	T	R	L	T	R		L	T	R	
Control:	Stop Sign			Stop Sign			Uncontrolled				Uncontrolled			
Lanes:	1	0	0 1	0	1	0	0 1	0	3	1	0	1	0	3 1 0
Initial Vol:	110	0	0	58	0	82	72	2066	76		0	1438	51	
ApproachDel:	7828.4			533.5			xxxxxx				xxxxxx			

Approach[northbound][lanes=2][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=239.2]
SUCCEED - Vehicle-hours >= 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=110]
FAIL - Approach volume less than 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=3953]
SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

Approach[southbound][lanes=2][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=20.7]
SUCCEED - Vehicle-hours >= 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=140]
FAIL - Approach volume less than 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=3953]
SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

SIGNAL WARRANT DISCLAIMER
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Ontario New Model Colony - Rich Haven Specific Plan
2015 AM Peak - Internal Intersections
Meyer, Mohaddes Associates

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #402 D2

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	1	0	0	1	0	1	0	0	1	0	1	0	3	1	0	1	0	3	1	0
Initial Vol:	110	0	0	58	0	82	72	2066	76	0	1438	51

Major Street Volume: 3703
Minor Approach Volume: 140
Minor Approach Volume Threshold: -189 [less than minimum of 150]

SIGNAL WARRANT DISCLAIMER
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Ontario New Model Colony - Rich Haven Specific Plan
2015 AM Peak - Internal Intersections
Meyer, Mohaddes Associates

Peak Hour Delay Signal Warrant Report

Intersection #501 E1

Future Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	1	0	0	1	0	1	0	0	1	0	1	0	3	1	0	1	0	3	1	0
Initial Vol:	26	13	92	110	27	30	26	2078	20	64	1433	77
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			xxxxxx		

Approach[northbound][lanes=2][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=OVERFLOW]
SUCCEED - Vehicle-hours >= 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=131]
FAIL - Approach volume less than 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=3996]
SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

Approach[southbound][lanes=2][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=OVERFLOW]
SUCCEED - Vehicle-hours >= 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=167]
SUCCEED - Approach volume >= 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=3996]
SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

SIGNAL WARRANT DISCLAIMER
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Ontario New Model Colony - Rich Haven Specific Plan
2015 AM Peak - Internal Intersections
Meyer, Mohaddes Associates

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #501 E1

Future Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	1	0	0 1	0	1	0 0 1	0	1	0 3 1	0	1	0 3 1 0
Initial Vol:	26	13	92	110	27	30	26	2078	20	64	1433	77

Major Street Volume: 3698
Minor Approach Volume: 167
Minor Approach Volume Threshold: -188 [less than minimum of 150]

SIGNAL WARRANT DISCLAIMER
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Ontario New Model Colony - Rich Haven Specific Plan
2015 AM Peak - Internal Intersections
Meyer, Mohaddes Associates

Peak Hour Delay Signal Warrant Report

Intersection #502 E2

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0	0	0 1	0	1	0 0	0	0	0 0 0	1	0	0 0 1
Initial Vol:	0	127	3	64	63	0	0	0	0	4	0	92
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			9.4		

Approach[westbound][lanes=2][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.3]
FAIL - Vehicle-hours less than 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=96]
FAIL - Approach volume less than 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=353]
FAIL - Total volume less than 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER
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Ontario New Model Colony - Rich Haven Specific Plan
2015 AM Peak - Internal Intersections
Meyer, Mohaddes Associates

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #502 E2

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	- T	- R	L	- T	- R	L	- T	- R	L	- T	- R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0	0 0	1 0	1	0 1	0 0	0	0 0	0 0	1	0 0	0 1
Initial Vol:	0	127	3	64	63	0	0	0	0	4	0	92

Major Street Volume: 257
Minor Approach Volume: 96
Minor Approach Volume Threshold: 958

SIGNAL WARRANT DISCLAIMER
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Ontario New Model Colony - Rich Haven Specific Plan
2015 AM Peak - Internal Intersections
Meyer, Mohaddes Associates

Peak Hour Delay Signal Warrant Report

Intersection #503 E3

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	- T	- R	L	- T	- R	L	- T	- R	L	- T	- R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	1	0 2	0 0	0	0 1	1 0	1	0 0	0 1	0	0 0	0 0
Initial Vol:	23	1202	0	0	317	64	92	0	42	0	0	0
ApproachDel:	xxxxxx			xxxxxx			25.7			xxxxxx		

Approach[eastbound][lanes=2][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=1.0]
FAIL - Vehicle-hours less than 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=134]
FAIL - Approach volume less than 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=1740]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER
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Ontario New Model Colony - Rich Haven Specific Plan
2015 AM Peak - Internal Intersections
Meyer, Mohaddes Associates

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #503 E3

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	1	0 2	0 0	0	0 1	1 0	1	0 0	0 1	0	0 0	0 0
Initial Vol:	23	1202	0	0	317	64	92	0	42	0	0	0

Major Street Volume: 1606
Minor Approach Volume: 134
Minor Approach Volume Threshold: 170

SIGNAL WARRANT DISCLAIMER
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Ontario New Model Colony - Rich Haven Specific Plan
2015 AM Peak - Internal Intersections
Meyer, Mohaddes Associates

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #101 A1

Average Delay (sec/veh): 0.5 Worst Case Level Of Service: D[29.6]

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	1	0 0	0 1	0	0 0	0 0	0	0 1	1 0	1	0 2	0 0
Volume Module:												
Base Vol:	0	0	0	0	0	0	0	1383	0	0	581	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	0	0	0	0	1383	0	0	581	0
Added Vol:	8	0	25	0	0	0	0	63	3	8	90	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	8	0	25	0	0	0	0	1446	3	8	671	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	8	0	26	0	0	0	0	1522	3	8	706	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Vol.:	8	0	26	0	0	0	0	1522	3	8	706	0
Critical Gap Module:												
Critical Gp:	6.8	xxxx	6.9	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	xxxx	3.3	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	1894	xxxx	763	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	1525	xxxx	xxxxx
Potent Cap.:	63	xxxx	352	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	443	xxxx	xxxxx
Move Cap.:	62	xxxx	352	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	443	xxxx	xxxxx
Volume/Cap:	0.14	xxxx	0.07	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0.02	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	0.4	xxxx	0.2	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.1	xxxx	xxxxx
Control Del:	72.0	xxxx	16.1	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	13.3	xxxx	xxxxx
LOS by Move:	F	*	C	*	*	*	*	*	*	B	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	29.6			xxxxxx			xxxxxx			xxxxxx		
ApproachLOS:	D			*			*			*		

Note: Queue reported is the number of cars per lane.

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2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #102 A2

Average Delay (sec/veh): 0.7 Worst Case Level Of Service: E[45.2]

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Uncontrolled				Uncontrolled				Stop Sign				Stop Sign			
Rights:	Include				Include				Include				Include			
Lanes:	0	0	1	1 0	1	0	2	0 0	0	0	0	0 0	1	0	0	0 1
Volume Module:																
Base Vol:	0	1135		0	0	501		0	0		0	0	0		0	0
Growth Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00	1.00
Initial Bse:	0	1135		0	0	501		0	0		0	0	0		0	0
Added Vol:	0	221		6	4	98		0	0		0	0	17		0	11
PasserByVol:	0	0		0	0	0		0	0		0	0	0		0	0
Initial Fut:	0	1356		6	4	599		0	0		0	0	17		0	11
User Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00	1.00
PHF Adj:	0.95	0.95		0.95	0.95	0.95		0.95	0.95		0.95	0.95	0.95		0.95	0.95
PHF Volume:	0	1427		6	4	631		0	0		0	0	18		0	12
Reduct Vol:	0	0		0	0	0		0	0		0	0	0		0	0
Final Vol.:	0	1427		6	4	631		0	0		0	0	18		0	12
Critical Gap Module:																
Critical Gp:	xxxxx	xxxx	xxxxx		4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx			6.8	xxxx		6.9
FollowUpTim:	xxxxx	xxxx	xxxxx		2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx			3.5	xxxx		3.3
Capacity Module:																
Cnflict Vol:	xxxx	xxxx	xxxxx		1434	xxxx	xxxxx		xxxx	xxxx	xxxxx		1754	xxxx		717
Potent Cap.:	xxxx	xxxx	xxxxx		480	xxxx	xxxxx		xxxx	xxxx	xxxxx		78	xxxx		377
Move Cap.:	xxxx	xxxx	xxxxx		480	xxxx	xxxxx		xxxx	xxxx	xxxxx		77	xxxx		377
Volume/Cap:	xxxx	xxxx	xxxx		0.01	xxxx	xxxx		xxxx	xxxx	xxxx		0.23	xxxx		0.03
Level Of Service Module:																
2Way95thQ:	xxxx	xxxx	xxxxx		0.0	xxxx	xxxxx		xxxx	xxxx	xxxxx		0.8	xxxx		0.1
Control Del:	xxxxx	xxxx	xxxxx		12.6	xxxx	xxxxx		xxxxx	xxxx	xxxxx		64.9	xxxx		14.9
LOS by Move:	*	*	*		B	*	*		*	*	*		F	*		B
Movement:	LT -	LTR -	RT		LT -	LTR -	RT		LT -	LTR -	RT		LT -	LTR -	RT	
Shared Cap.:	xxxx	xxxx	xxxxx		xxxx	xxxx	xxxxx		xxxx	xxxx	xxxxx		xxxx	xxxx	xxxxx	
SharedQueue:	xxxxx	xxxx	xxxxx		xxxxx	xxxx	xxxxx		xxxxx	xxxx	xxxxx		xxxxx	xxxx	xxxxx	
Shrd ConDel:	xxxxx	xxxx	xxxxx		xxxxx	xxxx	xxxxx		xxxxx	xxxx	xxxxx		xxxxx	xxxx	xxxxx	
Shared LOS:	*	*	*		*	*	*		*	*	*		*	*	*	
ApproachDel:	xxxxxx				xxxxxx				xxxxxx				45.2			
ApproachLOS:	*				*				*				E			

Note: Queue reported is the number of cars per lane.

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2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #103 A3

Average Delay (sec/veh): 0.9 Worst Case Level Of Service: E[42.1]

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Uncontrolled				Uncontrolled				Stop Sign				Stop Sign			
Rights:	Include				Include				Include				Include			
Lanes:	0	0	1	1 0	1	0	2	0 0	0	0	0	0 0	1	0	0	0 1
Volume Module:																
Base Vol:	0	1135		0	0	501		0	0		0	0	0		0	0
Growth Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00	1.00
Initial Bse:	0	1135		0	0	501		0	0		0	0	0		0	0
Added Vol:	0	208		7	6	108		0	0		0	0	20		0	19
PasserByVol:	0	0		0	0	0		0	0		0	0	0		0	0
Initial Fut:	0	1343		7	6	609		0	0		0	0	20		0	19
User Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00	1.00
PHF Adj:	0.95	0.95		0.95	0.95	0.95		0.95	0.95		0.95	0.95	0.95		0.95	0.95
PHF Volume:	0	1414		7	6	641		0	0		0	0	21		0	20
Reduct Vol:	0	0		0	0	0		0	0		0	0	0		0	0
Final Vol.:	0	1414		7	6	641		0	0		0	0	21		0	20
Critical Gap Module:																
Critical Gp:	xxxxx	xxxx	xxxxx		4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx			6.8	xxxx		6.9
FollowUpTim:	xxxxx	xxxx	xxxxx		2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx			3.5	xxxx		3.3
Capacity Module:																
Cnflict Vol:	xxxx	xxxx	xxxxx		1421	xxxx	xxxxx		xxxx	xxxx	xxxxx		1751	xxxx		711
Potent Cap.:	xxxx	xxxx	xxxxx		485	xxxx	xxxxx		xxxx	xxxx	xxxxx		78	xxxx		380
Move Cap.:	xxxx	xxxx	xxxxx		485	xxxx	xxxxx		xxxx	xxxx	xxxxx		78	xxxx		380
Volume/Cap:	xxxx	xxxx	xxxx		0.01	xxxx	xxxx		xxxx	xxxx	xxxx		0.27	xxxx		0.05
Level Of Service Module:																
2Way95thQ:	xxxx	xxxx	xxxxx		0.0	xxxx	xxxxx		xxxx	xxxx	xxxxx		1.0	xxxx		0.2
Control Del:	xxxxx	xxxx	xxxxx		12.5	xxxx	xxxxx		xxxxx	xxxx	xxxxx		67.8	xxxx		15.0
LOS by Move:	*	*	*		B	*	*		*	*	*		F	*		B
Movement:	LT -	LTR -	RT		LT -	LTR -	RT		LT -	LTR -	RT		LT -	LTR -	RT	
Shared Cap.:	xxxx	xxxx	xxxxx		xxxx	xxxx	xxxxx		xxxx	xxxx	xxxxx		xxxx	xxxx	xxxxx	
SharedQueue:	xxxxx	xxxx	xxxxx		xxxxx	xxxx	xxxxx		xxxxx	xxxx	xxxxx		xxxxx	xxxx	xxxxx	
Shrd ConDel:	xxxxx	xxxx	xxxxx		xxxxx	xxxx	xxxxx		xxxxx	xxxx	xxxxx		xxxxx	xxxx	xxxxx	
Shared LOS:	*	*	*		*	*	*		*	*	*		*	*	*	
ApproachDel:	xxxxxx				xxxxxx				xxxxxx				42.1			
ApproachLOS:	*				*				*				E			

Note: Queue reported is the number of cars per lane.

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Intersection #104 A4

Average Delay (sec/veh): 1.0 Worst Case Level Of Service: B[13.3]

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Uncontrolled				Uncontrolled				Stop Sign				Stop Sign			
Rights:	Include				Include				Include				Include			
Lanes:	1	0	1	0 0	0	0	0	1 0	1	0	0	0 1	0	0	0	0 0
Volume Module:																
Base Vol:	0	207		0 0	189		0	0	0		0	0	0		0	0
Growth Adj:	1.00	1.00		1.00 1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00
Initial Bse:	0	207		0 0	189		0	0	0		0	0	0		0	0
Added Vol:	10	217		0 0	143		10	28	0		30	0	0		0	0
PasserByVol:	0	0		0 0	0		0	0	0		0	0	0		0	0
Initial Fut:	10	424		0 0	332		10	28	0		30	0	0		0	0
User Adj:	1.00	1.00		1.00 1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00
PHF Adj:	0.95	0.95		0.95 0.95	0.95		0.95	0.95	0.95		0.95	0.95	0.95		0.95	0.95
PHF Volume:	11	446		0 0	349		11	29	0		32	0	0		0	0
Reduct Vol:	0	0		0 0	0		0	0	0		0	0	0		0	0
Final Vol.:	11	446		0 0	349		11	29	0		32	0	0		0	0
Critical Gap Module:																
Critical Gp:	4.1	xxxx	xxxxx	xxxxx xxxx	xxxxx			6.4	xxxx		6.2	xxxxx xxxx	xxxxx			
FollowUpTim:	2.2	xxxx	xxxxx	xxxxx xxxx	xxxxx			3.5	xxxx		3.3	xxxxx xxxx	xxxxx			
Capacity Module:																
Cnflict Vol:	360	xxxx	xxxxx	xxxx xxxx	xxxxx			822	xxxx		355	xxxx xxxx	xxxxx			
Potent Cap.:	1210	xxxx	xxxxx	xxxx xxxx	xxxxx			346	xxxx		694	xxxx xxxx	xxxxx			
Move Cap.:	1210	xxxx	xxxxx	xxxx xxxx	xxxxx			344	xxxx		694	xxxx xxxx	xxxxx			
Volume/Cap:	0.01	xxxx	xxxx	xxxx xxxx	xxxx			0.09	xxxx		0.05	xxxx xxxx	xxxx			
Level Of Service Module:																
2Way95thQ:	0.0	xxxx	xxxxx	xxxx xxxx	xxxxx			0.3	xxxx		0.1	xxxx xxxx	xxxxx			
Control Del:	8.0	xxxx	xxxxx	xxxxx xxxx	xxxxx			16.4	xxxx		10.4	xxxxx xxxx	xxxxx			
LOS by Move:	A	*	*	* *	*			C	*		B	* *	*			
Movement:	LT - LTR - RT				LT - LTR - RT				LT - LTR - RT				LT - LTR - RT			
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx xxxx	xxxxx			xxxx	xxxx		xxxxx	xxxx xxxx	xxxxx			
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx xxxx	xxxxx			xxxxx	xxxx		xxxxx	xxxxx xxxx	xxxxx			
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx xxxx	xxxxx			xxxxx	xxxx		xxxxx	xxxxx xxxx	xxxxx			
Shared LOS:	*	*	*	* *	*			*	*		*	* *	*			
ApproachDel:	xxxxxx			xxxxxx				13.3				xxxxxx				
ApproachLOS:	*			*				B				*				

Note: Queue reported is the number of cars per lane.

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Intersection #105 A5

Average Delay (sec/veh): 2.4 Worst Case Level Of Service: A[9.3]

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Stop Sign				Stop Sign				Uncontrolled				Uncontrolled			
Rights:	Include				Include				Include				Include			
Lanes:	0	0	0	0 0	1	0	0	0 1	1	0	2	0 0	0	0	1	1 0
Volume Module:																
Base Vol:	0	0		0 0	0		0	0	0		137	0	0		47	0
Growth Adj:	1.00	1.00		1.00 1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00
Initial Bse:	0	0		0 0	0		0	0	0		137	0	0		47	0
Added Vol:	0	0		0 0	39		0	39	13		20	0	0		37	13
PasserByVol:	0	0		0 0	0		0	0	0		0	0	0		0	0
Initial Fut:	0	0		0 0	39		0	39	13		157	0	0		84	13
User Adj:	1.00	1.00		1.00 1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00
PHF Adj:	0.95	0.95		0.95 0.95	0.95		0.95	0.95	0.95		0.95	0.95	0.95		0.95	0.95
PHF Volume:	0	0		0 0	41		0	41	14		165	0	0		88	14
Reduct Vol:	0	0		0 0	0		0	0	0		0	0	0		0	0
Final Vol.:	0	0		0 0	41		0	41	14		165	0	0		88	14
Critical Gap Module:																
Critical Gp:	xxxxx	xxxx	xxxxx		6.8	xxxx		6.9	4.1	xxxx	xxxxx	xxxxx xxxx	xxxxx			
FollowUpTim:	xxxxx	xxxx	xxxxx		3.5	xxxx		3.3	2.2	xxxx	xxxxx	xxxxx xxxx	xxxxx			
Capacity Module:																
Cnflict Vol:	xxxx	xxxx	xxxxx		205	xxxx		51	102	xxxx	xxxxx	xxxx xxxx	xxxxx			
Potent Cap.:	xxxx	xxxx	xxxxx		770	xxxx		1013	1503	xxxx	xxxxx	xxxx xxxx	xxxxx			
Move Cap.:	xxxx	xxxx	xxxxx		765	xxxx		1013	1503	xxxx	xxxxx	xxxx xxxx	xxxxx			
Volume/Cap:	xxxx	xxxx	xxxx	0.05	xxxx		0.04	0.01	xxxx	xxxx	xxxx	xxxx xxxx	xxxx			
Level Of Service Module:																
2Way95thQ:	xxxx	xxxx	xxxxx		0.2	xxxx		0.1	0.0	xxxx	xxxxx	xxxx xxxx	xxxxx			
Control Del:	xxxxx	xxxx	xxxxx		10.0	xxxx		8.7	7.4	xxxx	xxxxx	xxxxx xxxx	xxxxx			
LOS by Move:	*	*	*		A	*		A	A	*	*	* *	*			
Movement:	LT - LTR - RT				LT - LTR - RT				LT - LTR - RT				LT - LTR - RT			
Shared Cap.:	xxxx	xxxx	xxxxx		xxxx	xxxx	xxxxx		xxxx	xxxx	xxxxx		xxxx	xxxx	xxxxx	
SharedQueue:	xxxxx	xxxx	xxxxx		xxxxx	xxxx	xxxxx		xxxxx	xxxx	xxxxx		xxxxx	xxxx	xxxxx	
Shrd ConDel:	xxxxx	xxxx	xxxxx		xxxxx	xxxx	xxxxx		xxxxx	xxxx	xxxxx		xxxxx	xxxx	xxxxx	
Shared LOS:	*	*	*		*	*	*		*	*	*		*	*	*	
ApproachDel:	xxxxxx				9.3				xxxxxx				xxxxxx			
ApproachLOS:	*				A				*				*			

Note: Queue reported is the number of cars per lane.

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Intersection #106 A6

Average Delay (sec/veh): 0.0 Worst Case Level Of Service: A[0.0]

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Stop Sign				Stop Sign				Uncontrolled				Uncontrolled			
Rights:	Include				Include				Include				Include			
Lanes:	0	0	0	0	1	0	0	1	1	0	2	0	0	0	1	0
Volume Module:																
Base Vol:	0	0	0	0	0	0	0	137	0	0	47	0				
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Initial Bse:	0	0	0	0	0	0	0	137	0	0	47	0				
Added Vol:	0	0	0	0	0	0	0	59	0	0	50	0				
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0				
Initial Fut:	0	0	0	0	0	0	0	196	0	0	97	0				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95				
PHF Volume:	0	0	0	0	0	0	0	206	0	0	102	0				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Final Vol.:	0	0	0	0	0	0	0	206	0	0	102	0				
Critical Gap Module:																
Critical Gp:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
FollowUpTim:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
Capacity Module:																
Cnflict Vol:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx				
Potent Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx				
Move Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx				
Volume/Cap:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx				
Level Of Service Module:																
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx				
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
LOS by Move:	*	*	*	*	*	*	*	*	*	*	*	*				
Movement:	LT - LTR - RT				LT - LTR - RT				LT - LTR - RT				LT - LTR - RT			
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx				
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*				
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			xxxxxx						
ApproachLOS:	*			*			*			*						

Note: Queue reported is the number of cars per lane.

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Intersection #107 A7

Average Delay (sec/veh): 1.4 Worst Case Level Of Service: A[9.8]

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Stop Sign				Stop Sign				Uncontrolled				Uncontrolled			
Rights:	Include				Include				Include				Include			
Lanes:	0	0	0	0	1	0	0	1	1	0	2	0	0	0	1	0
Volume Module:																
Base Vol:	0	0	0	0	0	0	0	137	0	0	47	0				
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Initial Bse:	0	0	0	0	0	0	0	137	0	0	47	0				
Added Vol:	0	0	0	40	0	7	2	57	0	0	43	13				
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0				
Initial Fut:	0	0	0	40	0	7	2	194	0	0	90	13				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95				
PHF Volume:	0	0	0	42	0	7	2	204	0	0	95	14				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Final Vol.:	0	0	0	42	0	7	2	204	0	0	95	14				
Critical Gap Module:																
Critical Gp:	xxxxx	xxxx	xxxxx	6.8	xxxx	6.9	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
FollowUpTim:	xxxxx	xxxx	xxxxx	3.5	xxxx	3.3	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
Capacity Module:																
Cnflict Vol:	xxxx	xxxx	xxxxx	208	xxxx	54	108	xxxx	xxxxx	xxxx	xxxx	xxxxx				
Potent Cap.:	xxxx	xxxx	xxxxx	767	xxxx	1008	1495	xxxx	xxxxx	xxxx	xxxx	xxxxx				
Move Cap.:	xxxx	xxxx	xxxxx	766	xxxx	1008	1495	xxxx	xxxxx	xxxx	xxxx	xxxxx				
Volume/Cap:	xxxx	xxxx	xxxx	0.05	xxxx	0.01	0.00	xxxx	xxxx	xxxx	xxxx	xxxx				
Level Of Service Module:																
2Way95thQ:	xxxx	xxxx	xxxxx	0.2	xxxx	0.0	0.0	xxxx	xxxxx	xxxx	xxxx	xxxxx				
Control Del:	xxxxx	xxxx	xxxxx	10.0	xxxx	8.6	7.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
LOS by Move:	*	*	*	A	*	A	A	*	*	*	*	*				
Movement:	LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			LT - LTR - RT						
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx				
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*				
ApproachDel:	xxxxxx			9.8			xxxxxx			xxxxxx						
ApproachLOS:	*			A			*			*						

Note: Queue reported is the number of cars per lane.

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Intersection #201 B1

Average Delay (sec/veh): 0.6 Worst Case Level Of Service: C[16.8]

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Uncontrolled				Uncontrolled				Stop Sign				Stop Sign			
Rights:	Include				Include				Include				Include			
Lanes:	0	0	1	1 0	1	0	2	0 0	0	0	0	0 0	1	0	0	0 1
Volume Module:																
Base Vol:	0	1197		0	0	568		0	0		0	0	0		0	0
Growth Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00	1.00
Initial Bse:	0	1197		0	0	568		0	0		0	0	0		0	0
Added Vol:	0	165		0	17	156		0	0		0	0	0		0	69
PasserByVol:	0	0		0	0	0		0	0		0	0	0		0	0
Initial Fut:	0	1362		0	17	724		0	0		0	0	0		0	69
User Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00	1.00
PHF Adj:	0.95	0.95		0.95	0.95	0.95		0.95	0.95		0.95	0.95	0.95		0.95	0.95
PHF Volume:	0	1434		0	18	762		0	0		0	0	0		0	73
Reduct Vol:	0	0		0	0	0		0	0		0	0	0		0	0
Final Vol.:	0	1434		0	18	762		0	0		0	0	0		0	73
Critical Gap Module:																
Critical Gp:	xxxxx	xxxx		xxxxx	4.1	xxxx		xxxxx	xxxxx	xxxx		xxxxx	xxxxx	xxxx		6.9
FollowUpTim:	xxxxx	xxxx		xxxxx	2.2	xxxx		xxxxx	xxxxx	xxxx		xxxxx	xxxxx	xxxx		3.3
Capacity Module:																
Cnflict Vol:	xxxx	xxxx		xxxxx	1434	xxxx		xxxxx	xxxx	xxxx		xxxxx	xxxx	xxxx		717
Potent Cap.:	xxxx	xxxx		xxxxx	480	xxxx		xxxxx	xxxx	xxxx		xxxxx	xxxx	xxxx		377
Move Cap.:	xxxx	xxxx		xxxxx	480	xxxx		xxxxx	xxxx	xxxx		xxxxx	xxxx	xxxx		377
Volume/Cap:	xxxx	xxxx		xxxx	0.04	xxxx		xxxx	xxxx	xxxx		xxxx	xxxx	xxxx		0.19
Level Of Service Module:																
2Way95thQ:	xxxx	xxxx		xxxxx	0.1	xxxx		xxxxx	xxxx	xxxx		xxxxx	xxxx	xxxx		0.7
Control Del:	xxxxx	xxxx		xxxxx	12.8	xxxx		xxxxx	xxxxx	xxxx		xxxxx	xxxxx	xxxx		16.8
LOS by Move:	*	*		*	B	*		*	*	*		*	*	*		C
Movement:	LT -	LTR -		RT	LT -	LTR -		RT	LT -	LTR -		RT	LT -	LTR -		RT
Shared Cap.:	xxxx	xxxx		xxxxx	xxxx	xxxx		xxxxx	xxxx	xxxx		xxxxx	xxxx	xxxx		xxxxx
SharedQueue:	xxxxx	xxxx		xxxxx	xxxxx	xxxx		xxxxx	xxxxx	xxxx		xxxxx	xxxxx	xxxx		xxxxx
Shrd ConDel:	xxxxx	xxxx		xxxxx	xxxxx	xxxx		xxxxx	xxxxx	xxxx		xxxxx	xxxxx	xxxx		xxxxx
Shared LOS:	*	*		*	*	*		*	*	*		*	*	*		*
ApproachDel:	xxxxxx				xxxxxx				xxxxxx				16.8			
ApproachLOS:	*				*				*				C			

Note: Queue reported is the number of cars per lane.

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2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #202 B2

Average Delay (sec/veh): 12.9 Worst Case Level Of Service: B[13.5]

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Stop Sign				Stop Sign				Uncontrolled				Uncontrolled			
Rights:	Include				Include				Include				Include			
Lanes:	1	0	1	0 0	0	0	0	1 0	1	0	0	0 1	0	0	0	0 0
Volume Module:																
Base Vol:	0	32		0	0	13		0	0		0	0	0		0	0
Growth Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00	1.00
Initial Bse:	0	32		0	0	13		0	0		0	0	0		0	0
Added Vol:	0	281		0	0	263		12	47		0	0	0		0	0
PasserByVol:	0	0		0	0	0		0	0		0	0	0		0	0
Initial Fut:	0	313		0	0	276		12	47		0	0	0		0	0
User Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00	1.00
PHF Adj:	0.95	0.95		0.95	0.95	0.95		0.95	0.95		0.95	0.95	0.95		0.95	0.95
PHF Volume:	0	329		0	0	291		13	49		0	0	0		0	0
Reduct Vol:	0	0		0	0	0		0	0		0	0	0		0	0
Final Vol.:	0	329		0	0	291		13	49		0	0	0		0	0
Critical Gap Module:																
Critical Gp:	xxxxx	6.5		xxxxx	xxxxx	6.5		6.2	4.1	xxxx		xxxxx	xxxxx	xxxx		xxxxx
FollowUpTim:	xxxxx	4.0		xxxxx	xxxxx	4.0		3.3	2.2	xxxx		xxxxx	xxxxx	xxxx		xxxxx
Capacity Module:																
Cnflict Vol:	xxxx	99		xxxxx	xxxx	99		0	0	xxxx		xxxxx	xxxx	xxxx		xxxxx
Potent Cap.:	xxxx	795		xxxxx	xxxx	795		900	900	xxxx		xxxxx	xxxx	xxxx		xxxxx
Move Cap.:	xxxx	751		xxxxx	xxxx	751		900	900	xxxx		xxxxx	xxxx	xxxx		xxxxx
Volume/Cap:	xxxx	0.44		xxxx	xxxx	0.39		0.01	0.05	xxxx		xxxx	xxxx	xxxx		xxxx
Level Of Service Module:																
2Way95thQ:	xxxx	2.2		xxxxx	xxxx	xxxx		xxxxx	0.2	xxxx		xxxxx	xxxx	xxxx		xxxxx
Control Del:	xxxxx	13.5		xxxxx	xxxxx	xxxx		xxxxx	9.2	xxxx		xxxxx	xxxxx	xxxx		xxxxx
LOS by Move:	*	B		*	*	*		*	A	*		*	*	*		*
Movement:	LT -	LTR -		RT	LT -	LTR -		RT	LT -	LTR -		RT	LT -	LTR -		RT
Shared Cap.:	xxxx	xxxx		xxxxx	xxxx	xxxx		756	xxxx	xxxx		xxxxx	xxxx	xxxx		xxxxx
SharedQueue:	xxxxx	xxxx		xxxxx	xxxxx	xxxx		1.9	xxxxx	xxxx		xxxxx	xxxxx	xxxx		xxxxx
Shrd ConDel:	xxxxx	xxxx		xxxxx	xxxxx	xxxx		12.9	xxxxx	xxxx		xxxxx	xxxxx	xxxx		xxxxx
Shared LOS:	*	*		*	*	*		B	*	*		*	*	*		*
ApproachDel:	13.5				12.9				xxxxxx				xxxxxx			
ApproachLOS:	B				B				*				*			

Note: Queue reported is the number of cars per lane.

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2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #203 B3

Average Delay (sec/veh): 2.1 Worst Case Level Of Service: F[113.5]

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Uncontrolled				Uncontrolled				Stop Sign				Stop Sign			
Rights:	Include				Include				Include				Include			
Lanes:	0	0	1	1 0	1	0	2	0 0	0	0	0	0 0	1	0	0	0 1
Volume Module:																
Base Vol:	0	1197		0	0	568		0	0		0	0	0		0	0
Growth Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00	1.00
Initial Bse:	0	1197		0	0	568		0	0		0	0	0		0	0
Added Vol:	0	165		10	0	156		0	0		0	0	40		0	0
PasserByVol:	0	0		0	0	0		0	0		0	0	0		0	0
Initial Fut:	0	1362		10	0	724		0	0		0	0	40		0	0
User Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00	1.00
PHF Adj:	0.95	0.95		0.95	0.95	0.95		0.95	0.95		0.95	0.95	0.95		0.95	0.95
PHF Volume:	0	1434		11	0	762		0	0		0	0	42		0	0
Reduct Vol:	0	0		0	0	0		0	0		0	0	0		0	0
Final Vol.:	0	1434		11	0	762		0	0		0	0	42		0	0
Critical Gap Module:																
Critical Gp:	xxxxx	xxxx		xxxxx	xxxxx	xxxx		xxxxx	xxxxx	xxxx		xxxxx	6.8	xxxx		xxxxx
FollowUpTim:	xxxxx	xxxx		xxxxx	xxxxx	xxxx		xxxxx	xxxxx	xxxx		xxxxx	3.5	xxxx		xxxxx
Capacity Module:																
Cnflict Vol:	xxxx	xxxx		xxxxx	xxxx	xxxx		xxxxx	xxxx	xxxx		xxxxx	1820	xxxx		xxxxx
Potent Cap.:	xxxx	xxxx		xxxxx	xxxx	xxxx		xxxxx	xxxx	xxxx		xxxxx	71	xxxx		xxxxx
Move Cap.:	xxxx	xxxx		xxxxx	xxxx	xxxx		xxxxx	xxxx	xxxx		xxxxx	71	xxxx		xxxxx
Volume/Cap:	xxxx	xxxx		xxxx	xxxx	xxxx		xxxx	xxxx	xxxx		xxxx	0.60	xxxx		xxxx
Level Of Service Module:																
2Way95thQ:	xxxx	xxxx		xxxxx	xxxx	xxxx		xxxxx	xxxx	xxxx		xxxxx	2.6	xxxx		xxxxx
Control Del:	xxxxx	xxxx		xxxxx	xxxxx	xxxx		xxxxx	xxxxx	xxxx		xxxxx	113.5	xxxx		xxxxx
LOS by Move:	*	*		*	*	*		*	*	*		*	F	*		*
Movement:	LT -	LTR -		RT	LT -	LTR -		RT	LT -	LTR -		RT	LT -	LTR -		RT
Shared Cap.:	xxxx	xxxx		xxxxx	xxxx	xxxx		xxxxx	xxxx	xxxx		xxxxx	xxxx	xxxx		xxxxx
SharedQueue:	xxxxx	xxxx		xxxxx	xxxxx	xxxx		xxxxx	xxxxx	xxxx		xxxxx	xxxxx	xxxx		xxxxx
Shrd ConDel:	xxxxx	xxxx		xxxxx	xxxxx	xxxx		xxxxx	xxxxx	xxxx		xxxxx	xxxxx	xxxx		xxxxx
Shared LOS:	*	*		*	*	*		*	*	*		*	*	*		*
ApproachDel:	xxxxxx				xxxxxx				xxxxxx				113.5			
ApproachLOS:	*				*				*				F			

Note: Queue reported is the number of cars per lane.

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2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #204 B4

Average Delay (sec/veh): 9.7 Worst Case Level Of Service: B[13.1]

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Stop Sign				Stop Sign				Uncontrolled				Uncontrolled			
Rights:	Include				Include				Include				Include			
Lanes:	1	0	1	0 0	0	0	1	0 0	1	0	0	0 1	0	0	0	0 0
Volume Module:																
Base Vol:	0	32		0	0	13		0	0		0	0	0		0	0
Growth Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00	1.00
Initial Bse:	0	32		0	0	13		0	0		0	0	0		0	0
Added Vol:	39	281		0	0	263		0	0		0	0	157		0	0
PasserByVol:	0	0		0	0	0		0	0		0	0	0		0	0
Initial Fut:	39	313		0	0	276		0	0		0	0	157		0	0
User Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00	1.00
PHF Adj:	0.95	0.95		0.95	0.95	0.95		0.95	0.95		0.95	0.95	0.95		0.95	0.95
PHF Volume:	41	329		0	0	291		0	0		0	0	165		0	0
Reduct Vol:	0	0		0	0	0		0	0		0	0	0		0	0
Final Vol.:	41	329		0	0	291		0	0		0	0	165		0	0
Critical Gap Module:																
Critical Gp:	7.1	6.5		xxxxx	xxxxx	6.5		xxxxx	xxxxx	xxxx		xxxxx	xxxxx	xxxx		xxxxx
FollowUpTim:	3.5	4.0		xxxxx	xxxxx	4.0		xxxxx	xxxxx	xxxx		xxxxx	xxxxx	xxxx		xxxxx
Capacity Module:																
Cnflict Vol:	145	0		xxxxx	xxxx	165		xxxxx	xxxx	xxxx		xxxxx	xxxx	xxxx		xxxxx
Potent Cap.:	828	900		xxxxx	xxxx	731		xxxxx	xxxx	xxxx		xxxxx	xxxx	xxxx		xxxxx
Move Cap.:	572	900		xxxxx	xxxx	731		xxxxx	xxxx	xxxx		xxxxx	xxxx	xxxx		xxxxx
Volume/Cap:	0.07	0.37		xxxx	xxxx	0.40		xxxx	xxxx	xxxx		xxxx	xxxx	xxxx		xxxx
Level Of Service Module:																
2Way95thQ:	0.2	1.7		xxxxx	xxxx	1.9		xxxxx	xxxx	xxxx		xxxxx	xxxx	xxxx		xxxxx
Control Del:	11.8	11.3		xxxxx	xxxxx	13.1		xxxxx	xxxxx	xxxx		xxxxx	xxxxx	xxxx		xxxxx
LOS by Move:	B	B		*	*	B		*	*	*		*	*	*		*
Movement:	LT -	LTR -		RT	LT -	LTR -		RT	LT -	LTR -		RT	LT -	LTR -		RT
Shared Cap.:	xxxx	xxxx		xxxxx	xxxx	xxxx		xxxxx	xxxx	xxxx		xxxxx	xxxx	xxxx		xxxxx
SharedQueue:	xxxxx	xxxx		xxxxx	xxxxx	xxxx		xxxxx	xxxxx	xxxx		xxxxx	xxxxx	xxxx		xxxxx
Shrd ConDel:	xxxxx	xxxx		xxxxx	xxxxx	xxxx		xxxxx	xxxxx	xxxx		xxxxx	xxxxx	xxxx		xxxxx
Shared LOS:	*	*		*	*	*		*	*	*		*	*	*		*
ApproachDel:	11.3				13.1				xxxxxx				xxxxxx			
ApproachLOS:	B				B				*				*			

Note: Queue reported is the number of cars per lane.

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2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #301 C1

Average Delay (sec/veh): 4.4 Worst Case Level Of Service: F[86.9]

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Uncontrolled				Uncontrolled				Stop Sign				Stop Sign			
Rights:	Include				Include				Include				Include			
Lanes:	0	0	1	1 0	1	0	2	0 0	0	0	0	0 0	1	0	0	0 1
Volume Module:																
Base Vol:	0	1197		0	0	568		0	0		0	0	0		0	0
Growth Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00	1.00
Initial Bse:	0	1197		0	0	568		0	0		0	0	0		0	0
Added Vol:	0	118		14	14	182		0	0		0	0	54		0	56
PasserByVol:	0	0		0	0	0		0	0		0	0	0		0	0
Initial Fut:	0	1315		14	14	750		0	0		0	0	54		0	56
User Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00	1.00
PHF Adj:	0.95	0.95		0.95	0.95	0.95		0.95	0.95		0.95	0.95	0.95		0.95	0.95
PHF Volume:	0	1384		15	15	789		0	0		0	0	57		0	59
Reduct Vol:	0	0		0	0	0		0	0		0	0	0		0	0
Final Vol.:	0	1384		15	15	789		0	0		0	0	57		0	59
Critical Gap Module:																
Critical Gp:	xxxxx	xxxx	xxxxx		4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx		6.8	xxxx		6.9	
FollowUpTim:	xxxxx	xxxx	xxxxx		2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx		3.5	xxxx		3.3	
Capacity Module:																
Cnflict Vol:	xxxx	xxxx	xxxxx		1399	xxxx	xxxxx		xxxx	xxxx	xxxxx		1816	xxxx		699
Potent Cap.:	xxxx	xxxx	xxxxx		495	xxxx	xxxxx		xxxx	xxxx	xxxxx		71	xxxx		387
Move Cap.:	xxxx	xxxx	xxxxx		495	xxxx	xxxxx		xxxx	xxxx	xxxxx		69	xxxx		387
Volume/Cap:	xxxx	xxxx	xxxx		0.03	xxxx	xxxx		xxxx	xxxx	xxxx		0.82	xxxx		0.15
Level Of Service Module:																
2Way95thQ:	xxxx	xxxx	xxxxx		0.1	xxxx	xxxxx		xxxx	xxxx	xxxxx		3.9	xxxx		0.5
Control Del:	xxxxx	xxxx	xxxxx		12.5	xxxx	xxxxx		xxxxx	xxxx	xxxxx		160.5	xxxx		16.0
LOS by Move:	*	*	*		B	*	*		*	*	*		F	*		C
Movement:	LT -	LTR -	RT		LT -	LTR -	RT		LT -	LTR -	RT		LT -	LTR -	RT	
Shared Cap.:	xxxx	xxxx	xxxxx		xxxx	xxxx	xxxxx		xxxx	xxxx	xxxxx		xxxx	xxxx	xxxxx	
SharedQueue:	xxxxx	xxxx	xxxxx		xxxxx	xxxx	xxxxx		xxxxx	xxxx	xxxxx		xxxxx	xxxx	xxxxx	
Shrd ConDel:	xxxxx	xxxx	xxxxx		xxxxx	xxxx	xxxxx		xxxxx	xxxx	xxxxx		xxxxx	xxxx	xxxxx	
Shared LOS:	*	*	*		*	*	*		*	*	*		*	*	*	
ApproachDel:	xxxxxx				xxxxxx				xxxxxx				86.9			
ApproachLOS:	*				*				*				F			

Note: Queue reported is the number of cars per lane.

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2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #302 C2

Average Delay (sec/veh): 22.8 Worst Case Level Of Service: F[857.9]

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Stop Sign				Stop Sign				Uncontrolled				Uncontrolled			
Rights:	Include				Include				Include				Include			
Lanes:	0	0	0	0 0	1	0	0	0 1	1	0	4	0 0	0	0	3	1 0
Volume Module:																
Base Vol:	0	0		0	0	0		0	0	1333		0	0	1777		0
Growth Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
Initial Bse:	0	0		0	0	0		0	0	1333		0	0	1777		0
Added Vol:	0	0		0	64	0		34	8	232		0	0	233		16
PasserByVol:	0	0		0	0	0		0	0	0		0	0	0		0
Initial Fut:	0	0		0	64	0		34	8	1565		0	0	2010		16
User Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
PHF Adj:	0.95	0.95		0.95	0.95	0.95		0.95	0.95	0.95		0.95	0.95	0.95		0.95
PHF Volume:	0	0		0	67	0		36	8	1647		0	0	2116		17
Reduct Vol:	0	0		0	0	0		0	0	0		0	0	0		0
Final Vol.:	0	0		0	67	0		36	8	1647		0	0	2116		17
Critical Gap Module:																
Critical Gp:	xxxxx	xxxx	xxxxx		6.8	xxxx		6.9	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx		
FollowUpTim:	xxxxx	xxxx	xxxxx		3.5	xxxx		3.3	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx		
Capacity Module:																
Cnflict Vol:	xxxx	xxxx	xxxxx		2553	xxxx		537	2133	xxxx	xxxxx		xxxx	xxxx	xxxxx	
Potent Cap.:	xxxx	xxxx	xxxxx		22	xxxx		493	258	xxxx	xxxxx		xxxx	xxxx	xxxxx	
Move Cap.:	xxxx	xxxx	xxxxx		22	xxxx		493	258	xxxx	xxxxx		xxxx	xxxx	xxxxx	
Volume/Cap:	xxxx	xxxx	xxxx		3.08	xxxx		0.07	0.03	xxxx	xxxx		xxxx	xxxx	xxxx	
Level Of Service Module:																
2Way95thQ:	xxxx	xxxx	xxxxx		8.6	xxxx		0.2	0.1	xxxx	xxxxx		xxxx	xxxx	xxxxx	
Control Del:	xxxxx	xxxx	xxxxx		1307	xxxx		12.9	19.4	xxxx	xxxxx		xxxxx	xxxx	xxxxx	
LOS by Move:	*	*	*		F	*		B	C	*	*		*	*	*	
Movement:	LT -	LTR -	RT		LT -	LTR -	RT		LT -	LTR -	RT		LT -	LTR -	RT	
Shared Cap.:	xxxx	xxxx	xxxxx		xxxx	xxxx	xxxxx		xxxx	xxxx	xxxxx		xxxx	xxxx	xxxxx	
SharedQueue:	xxxxx	xxxx	xxxxx		xxxxx	xxxx	xxxxx		xxxxx	xxxx	xxxxx		xxxxx	xxxx	xxxxx	
Shrd ConDel:	xxxxx	xxxx	xxxxx		xxxxx	xxxx	xxxxx		xxxxx	xxxx	xxxxx		xxxxx	xxxx	xxxxx	
Shared LOS:	*	*	*		*	*	*		*	*	*		*	*	*	
ApproachDel:	xxxxxx				857.9				xxxxxx				xxxxxx			
ApproachLOS:	*				F				*				*			

Note: Queue reported is the number of cars per lane.

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Intersection #401 D1

Average Delay (sec/veh): 3.9 Worst Case Level Of Service: C[19.2]

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Uncontrolled				Uncontrolled				Stop Sign				Stop Sign			
Rights:	Include				Include				Include				Include			
Lanes:	1	0	0	1 0	1	0	0	1 0	1	0	0	1 0	1	0	0	1 0
Volume Module:																
Base Vol:	0	32		0 0	13		0	0	0		0	0	0		0	0
Growth Adj:	1.00	1.00		1.00 1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00
Initial Bse:	0	32		0 0	13		0	0	0		0	0	0		0	0
Added Vol:	7	196		0 95	311		13	54	6		30	0	1		71	
PasserByVol:	0	0		0 0	0		0	0	0		0	0	0		0	0
Initial Fut:	7	228		0 95	324		13	54	6		30	0	1		71	
User Adj:	1.00	1.00		1.00 1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00
PHF Adj:	0.95	0.95		0.95 0.95	0.95		0.95	0.95	0.95		0.95	0.95	0.95		0.95	0.95
PHF Volume:	7	240		0 100	341		14	57	6		32	0	1		75	
Reduct Vol:	0	0		0 0	0		0	0	0		0	0	0		0	0
Final Vol.:	7	240		0 100	341		14	57	6		32	0	1		75	
Critical Gap Module:																
Critical Gp:	4.1	xxxx	xxxxx	4.1 xxxx	xxxxx		7.1	6.5	6.2	xxxxx	6.5	6.2				
FollowUpTim:	2.2	xxxx	xxxxx	2.2 xxxx	xxxxx		3.5	4.0	3.3	xxxxx	4.0	3.3				
Capacity Module:																
Cnflict Vol:	355	xxxx	xxxxx	240 xxxx	xxxxx		841	803	348	xxxx	809	240				
Potent Cap.:	1215	xxxx	xxxxx	1339 xxxx	xxxxx		287	319	700	xxxx	316	804				
Move Cap.:	1215	xxxx	xxxxx	1339 xxxx	xxxxx		244	294	700	xxxx	291	804				
Volume/Cap:	0.01	xxxx	xxxx	0.07 xxxx	xxxx		0.23	0.02	0.05	xxxx	0.00	0.09				
Level Of Service Module:																
2Way95thQ:	0.0	xxxx	xxxxx	0.2 xxxx	xxxxx		0.9	xxxx	xxxxx	xxxx	xxxx	xxxxx				
Control Del:	8.0	xxxx	xxxxx	7.9 xxxx	xxxxx		24.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
LOS by Move:	A	*	*	A	*	*	C	*	*	*	*	*				
Movement:	LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			LT - LTR - RT						
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	569	xxxx	xxxx	785				
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	0.2	xxxxx	xxxx	0.3				
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	11.8	xxxxx	xxxx	10.1				
Shared LOS:	*	*	*	*	*	*	*	*	B	*	*	B				
ApproachDel:	xxxxxx			xxxxxx			19.2			10.1						
ApproachLOS:	*			*			C			B						

Note: Queue reported is the number of cars per lane.

Ontario New Model Colony - Rich Haven Specific Plan
2015 AM Peak - Internal Intersections
Meyer, Mohaddes Associates

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #402 D2

Average Delay (sec/veh): 237.0 Worst Case Level Of Service: F[7828.4]

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Stop Sign				Stop Sign				Uncontrolled				Uncontrolled			
Rights:	Include				Include				Include				Include			
Lanes:	1	0	0	1 0	1	0	0	1 0	1	0	3	1 0	1	0	3	1 0
Volume Module:																
Base Vol:	0	0		0 0	0		0	0	0	1660		0 0	1282		0	
Growth Adj:	1.00	1.00		1.00 1.00	1.00		1.00	1.00	1.00	1.00		1.00 1.00	1.00		1.00	
Initial Bse:	0	0		0 0	0		0	0	0	1660		0 0	1282		0	
Added Vol:	110	0		0 58	0		82	72	406		76	0 156			51	
PasserByVol:	0	0		0 0	0		0	0	0		0	0 0			0	
Initial Fut:	110	0		0 58	0		82	72	2066		76	0 1438			51	
User Adj:	1.00	1.00		1.00 1.00	1.00		1.00	1.00	1.00		1.00	1.00 1.00			1.00	
PHF Adj:	0.95	0.95		0.95 0.95	0.95		0.95	0.95	0.95		0.95	0.95 0.95			0.95	
PHF Volume:	116	0		0 61	0		86	76	2175		80	0 1514			54	
Reduct Vol:	0	0		0 0	0		0	0	0		0	0 0			0	
Final Vol.:	116	0		0 61	0		86	76	2175		80	0 1514			54	
Critical Gap Module:																
Critical Gp:	7.5	xxxx	xxxxx	7.5 xxxx			6.9	4.1	xxxx	xxxxx	xxxxx	xxxx xxxxx				
FollowUpTim:	3.5	xxxx	xxxxx	3.5 xxxx			3.3	2.2	xxxx	xxxxx	xxxxx	xxxx xxxxx				
Capacity Module:																
Cnflict Vol:	2745	xxxx	xxxxx	2236 xxxx			405	1567	xxxx	xxxxx	xxxx	xxxx xxxxx				
Potent Cap.:	10	xxxx	xxxxx	24 xxxx			601	427	xxxx	xxxxx	xxxx	xxxx xxxxx				
Move Cap.:	7	xxxx	xxxxx	21 xxxx			601	427	xxxx	xxxxx	xxxx	xxxx xxxxx				
Volume/Cap:	16.16	xxxx	xxxx	2.95 xxxx			0.14	0.18	xxxx	xxxx	xxxx	xxxx xxxx				
Level Of Service Module:																
2Way95thQ:	16.3	xxxx	xxxxx	7.9 xxxx	xxxxx		0.6	xxxx	xxxxx	xxxx	xxxx	xxxxx				
Control Del:	7828	xxxx	xxxxx	1271 xxxx	xxxxx		15.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
LOS by Move:	F	*	*	F	*	*	C	*	*	*	*	*				
Movement:	LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			LT - LTR - RT						
Shared Cap.:	xxxx	xxxx	0	xxxx	xxxx	601	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx				
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	0.5	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	12.0	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
Shared LOS:	*	*	*	*	*	B	*	*	*	*	*	*				
ApproachDel:	7828.4			533.5			xxxxxx			xxxxxx						
ApproachLOS:	F			F			*			*						

Note: Queue reported is the number of cars per lane.

Ontario New Model Colony - Rich Haven Specific Plan
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Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #501 E1

Average Delay (sec/veh): OVERFLOW Worst Case Level Of Service: F[xxxxx]

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Stop Sign				Stop Sign				Uncontrolled				Uncontrolled			
Rights:	Include				Include				Include				Include			
Lanes:	1	0	0	1 0	1	0	0	1 0	1	0	3	1 0	1	0	3	1 0
Volume Module:																
Base Vol:	0	0	0	0	0	0	0	0	1660	0	0	0	1282	0		
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
Initial Bse:	0	0	0	0	0	0	0	0	1660	0	0	0	1282	0		
Added Vol:	26	13	92	110	27	30	26	418	20	64	151	77				
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0				
Initial Fut:	26	13	92	110	27	30	26	2078	20	64	1433	77				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95				
PHF Volume:	27	14	97	116	28	32	27	2187	21	67	1508	81				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Final Vol.:	27	14	97	116	28	32	27	2187	21	67	1508	81				
Critical Gap Module:																
Critical Gp:	7.5	6.5	6.9	7.5	6.5	6.9	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx				
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx				
Capacity Module:																
Cnflict Vol:	2779	3977	557	2292	3947	418	1589	xxxx	xxxxx	2208	xxxx	xxxxx				
Potent Cap.:	9	3	479	22	3	590	418	xxxx	xxxxx	241	xxxx	xxxxx				
Move Cap.:	0	2	479	0	2	590	418	xxxx	xxxxx	241	xxxx	xxxxx				
Volume/Cap:	xxxx	6.63	0.20	xxxx	13.14	0.05	0.07	xxxx	xxxx	0.28	xxxx	xxxx				
Level Of Service Module:																
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.2	xxxx	xxxxx	1.1	xxxx	xxxxx				
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	14.2	xxxx	xxxxx	25.6	xxxx	xxxxx				
LOS by Move:	*	*	*	*	*	*	B	*	*	D	*	*				
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT				
Shared Cap.:	xxxx	xxxx	16	xxxx	xxxx	5	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx				
SharedQueue:	xxxxx	xxxx	14.6	xxxxx	xxxx	9.3	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
Shrd ConDel:	xxxxx	xxxx	3091	xxxxx	xxxx	7036	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
Shared LOS:	*	*	F	*	*	F	*	*	*	*	*	*				
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			xxxxxx						
ApproachLOS:	F			F			*			*						

Note: Queue reported is the number of cars per lane.

Ontario New Model Colony - Rich Haven Specific Plan
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Meyer, Mohaddes Associates

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #502 E2

Average Delay (sec/veh): 3.9 Worst Case Level Of Service: A[9.4]

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Uncontrolled				Uncontrolled				Stop Sign				Stop Sign			
Rights:	Include				Include				Include				Include			
Lanes:	0	0	0	1 0	1	0	1	0 0	0	0	0	0 0	1	0	0	0 1
Volume Module:																
Base Vol:	0	122	0	0	51	0	0	0	0	0	0	0				
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Initial Bse:	0	122	0	0	51	0	0	0	0	0	0	0				
Added Vol:	0	5	3	64	12	0	0	0	0	4	0	92				
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0				
Initial Fut:	0	127	3	64	63	0	0	0	0	4	0	92				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95				
PHF Volume:	0	134	3	67	66	0	0	0	0	4	0	97				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Final Vol.:	0	134	3	67	66	0	0	0	0	4	0	97				
Critical Gap Module:																
Critical Gp:	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.4	xxxx	6.2				
FollowUpTim:	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	xxxx	3.3				
Capacity Module:																
Cnflict Vol:	xxxx	xxxx	xxxxx	137	xxxx	xxxxx	xxxx	xxxx	xxxxx	336	xxxx	135				
Potent Cap.:	xxxx	xxxx	xxxxx	1460	xxxx	xxxxx	xxxx	xxxx	xxxxx	663	xxxx	919				
Move Cap.:	xxxx	xxxx	xxxxx	1460	xxxx	xxxxx	xxxx	xxxx	xxxxx	640	xxxx	919				
Volume/Cap:	xxxx	xxxx	xxxx	0.05	xxxx	xxxx	xxxx	xxxx	xxxx	0.01	xxxx	0.11				
Level Of Service Module:																
2Way95thQ:	xxxx	xxxx	xxxxx	0.1	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.0	xxxx	0.4				
Control Del:	xxxxx	xxxx	xxxxx	7.6	xxxx	xxxxx	xxxxx	xxxx	xxxxx	10.7	xxxx	9.4				
LOS by Move:	*	*	*	A	*	*	*	*	*	B	*	A				
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT				
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx				
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*				
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			9.4						
ApproachLOS:	*			*			*			A						

Note: Queue reported is the number of cars per lane.

Ontario New Model Colony - Rich Haven Specific Plan
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Meyer, Mohaddes Associates

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #503 E3

Average Delay (sec/veh): 2.1 Worst Case Level Of Service: D[25.7]

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Uncontrolled				Uncontrolled				Stop Sign				Stop Sign			
Rights:	Include				Include				Include				Include			
Lanes:	1	0	2	0 0	0	0	1	1 0	1	0	0	0 1	0	0	0	0 0
Volume Module:																
Base Vol:	0	1200		0 0	310		0	0	0		0	0	0		0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	1200		0 0	310		0	0	0		0	0	0		0	0
Added Vol:	23	2		0 0	7		64	92	0		42	0	0		0	0
PasserByVol:	0	0		0 0	0		0	0	0		0	0	0		0	0
Initial Fut:	23	1202		0 0	317		64	92	0		42	0	0		0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	24	1265		0 0	334		67	97	0		44	0	0		0	0
Reduct Vol:	0	0		0 0	0		0	0	0		0	0	0		0	0
Final Vol.:	24	1265		0 0	334		67	97	0		44	0	0		0	0
Critical Gap Module:																
Critical Gp:	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx		6.8	xxxx		6.9	xxxxx	xxxx	xxxxx		
FollowUpTim:	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx		3.5	xxxx		3.3	xxxxx	xxxx	xxxxx		
Capacity Module:																
Cnflict Vol:	401	xxxx	xxxxx	xxxx	xxxx	xxxxx	1048	xxxx		201	xxxx	xxxx	xxxxx			
Potent Cap.:	1169	xxxx	xxxxx	xxxx	xxxx	xxxxx	226	xxxx		813	xxxx	xxxx	xxxxx			
Move Cap.:	1169	xxxx	xxxxx	xxxx	xxxx	xxxxx	223	xxxx		813	xxxx	xxxx	xxxxx			
Volume/Cap:	0.02	xxxx	xxxx	xxxx	xxxx	xxxx	0.43	xxxx	0.05	xxxx	xxxx	xxxx				
Level Of Service Module:																
2Way95thQ:	0.1	xxxx	xxxxx	xxxx	xxxx	xxxxx	2.0	xxxx		0.2	xxxx	xxxx	xxxxx			
Control Del:	8.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	33.0	xxxx		9.7	xxxxx	xxxx	xxxxx			
LOS by Move:	A	*	*	*	*	*	D	*		A	*	*	*			
Movement:	LT - LTR - RT				LT - LTR - RT				LT - LTR - RT				LT - LTR - RT			
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx				
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*				
ApproachDel:	xxxxxx			xxxxxx			25.7			xxxxxx						
ApproachLOS:	*			*			D			*						

Note: Queue reported is the number of cars per lane.

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Lane Geometry Report

Number of approach lanes: (L) (LT) (T) (RT) (R) (LTR)

Node	Intersection	NB	SB	EB	WB
101	A1	100010	000000	001100	102000
102	A2	001100	102000	000000	100010
103	A3	001100	102000	000000	100010
104	A4	101000	000100	100010	000000
105	A5	000000	100010	102000	001100
106	A6	000000	100010	102000	001100
107	A7	000000	100010	102000	001100
201	B1	001100	102000	000000	100010
202	B2	101000	000100	100010	000000
203	B3	001100	102000	000000	100010
204	B4	101000	001000	100010	000000
301	C1	001100	102000	000000	100010
302	C2	000000	100010	104000	003100
401	D1	100100	100100	100100	100100
402	D2	100100	100100	103100	103100
501	E1	100100	100100	103100	103100
502	E2	000100	101000	000000	100010
503	E3	102000	001100	100010	000000

Ontario New Model Colony - Rich Haven Specific Plan
2015 PM Peak - Internal Intersections
Meyer, Mohaddes Associates

Scenario Report

Scenario:	2015 PM
Command:	2015 PM
Volume:	Fut Base PM
Geometry:	Future Base
Impact Fee:	Default Impact Fee
Trip Generation:	PM Future
Trip Distribution:	PM
Paths:	Future
Routes:	Default Routes
Configuration:	2015 PM

Ontario New Model Colony - Rich Haven Specific Plan
2015 PM Peak - Internal Intersections
Meyer, Mohaddes Associates

Trip Generation Report

Forecast for PM Future

Zone #	Subzone	Amount	Units	Rate In	Rate Out	Trips In	Trips Out	Total Trips	% Of Total
1		1.00	Res	38.00	21.00	38	21	59	1.6
	Zone 1 Subtotal					38	21	59	1.6
2		1.00	Res	38.00	21.00	38	21	59	1.6
	Zone 2 Subtotal					38	21	59	1.6
3		1.00	Res	49.00	27.00	49	27	76	2.0
	Zone 3 Subtotal					49	27	76	2.0
4		1.00	Res	56.00	31.00	56	31	87	2.3
	Zone 4 Subtotal					56	31	87	2.3
5		1.00	Res	59.00	33.00	59	33	92	2.5
	Zone 5 Subtotal					59	33	92	2.5
6	Park 1	1.00	Res	0.00	1.00	0	1	1	0.0
	Zone 6 Subtotal					0	1	1	0.0
7		1.00	Res	89.00	50.00	89	50	139	3.7
	Zone 7 Subtotal					89	50	139	3.7
8		1.00	Res	145.00	79.00	145	79	224	6.0
	Zone 8 Subtotal					145	79	224	6.0
9		1.00	Res	166.00	89.00	166	89	255	6.8
	Zone 9 Subtotal					166	89	255	6.8
10		1.00	Res	172.00	93.00	172	93	265	7.1
	Zone 10 Subtotal					172	93	265	7.1
11		1.00	Res	123.00	66.00	123	66	189	5.1
	Zone 11 Subtotal					123	66	189	5.1
12		1.00	Res	585.00	532.00	585	532	1117	29.9
	Zone 12 Subtotal					585	532	1117	29.9
13		1.00	Res	619.00	553.00	619	553	1172	31.4
	Zone 13 Subtotal					619	553	1172	31.4
TOTAL						2139	1596	3735	100.0

Ontario New Model Colony - Rich Haven Specific Plan
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Trip Distribution Report

Percent Of Trips PM

	To Gates										
Zone	1	2	4	5	6	7	8	9	10	11	12
1	4.0	17.0	5.0	5.0	6.0	41.0	5.0	1.0	3.0	12.0	1.0
2	4.0	17.0	5.0	5.0	6.0	41.0	5.0	1.0	3.0	12.0	1.0
3	4.0	17.0	5.0	5.0	6.0	41.0	5.0	1.0	3.0	12.0	1.0
4	4.0	17.0	5.0	5.0	6.0	41.0	5.0	1.0	3.0	12.0	1.0
5	4.0	17.0	5.0	5.0	6.0	41.0	5.0	1.0	3.0	12.0	1.0
6	4.0	17.0	5.0	5.0	6.0	41.0	5.0	1.0	3.0	12.0	1.0
7	4.0	17.0	5.0	5.0	6.0	41.0	5.0	1.0	3.0	12.0	1.0
8	4.0	17.0	5.0	5.0	6.0	41.0	5.0	1.0	3.0	12.0	1.0
9	4.0	17.0	5.0	5.0	6.0	41.0	5.0	1.0	3.0	12.0	1.0
10	4.0	17.0	5.0	5.0	6.0	41.0	5.0	1.0	3.0	12.0	1.0
11	4.0	17.0	5.0	5.0	6.0	41.0	5.0	1.0	3.0	12.0	1.0
12	4.0	17.0	5.0	5.0	6.0	41.0	5.0	1.0	3.0	12.0	1.0
13	4.0	17.0	5.0	5.0	6.0	41.0	5.0	1.0	3.0	12.0	1.0

Ontario New Model Colony - Rich Haven Specific Plan
2015 PM Peak - Internal Intersections
Meyer, Mohaddes Associates

Intersection Volume Report
Base Volume Alternative

		Northbound			Southbound			Eastbound			Westbound		
Node	Intersection	L	T	R	L	T	R	L	T	R	L	T	R
101	A1	0	0	0	0	0	0	0	1085	0	0	1339	0
102	A2	0	873	0	0	1367	0	0	0	0	0	0	0
103	A3	0	873	0	0	1367	0	0	0	0	0	0	0
104	A4	0	92	0	0	121	0	0	0	0	0	0	0
105	A5	0	0	0	0	0	0	0	84	0	0	162	0
106	A6	0	0	0	0	0	0	0	84	0	0	162	0
107	A7	0	0	0	0	0	0	0	84	0	0	162	0
201	B1	0	904	0	0	1414	0	0	0	0	0	0	0
202	B2	0	18	0	0	24	0	0	0	0	0	0	0
203	B3	0	904	0	0	1414	0	0	0	0	0	0	0
204	B4	0	18	0	0	24	0	0	0	0	0	0	0
301	C1	0	904	0	0	1414	0	0	0	0	0	0	0
302	C2	0	0	0	0	0	0	0	2125	0	0	2098	0
401	D1	0	18	0	0	24	0	0	0	0	0	0	0
402	D2	0	0	0	0	0	0	0	2008	0	0	1924	0
501	E1	0	0	0	0	0	0	0	2008	0	0	1924	0
502	E2	0	96	0	0	199	0	0	0	0	0	0	0
503	E3	0	642	0	0	1792	0	0	0	0	0	0	0

Ontario New Model Colony - Rich Haven Specific Plan
2015 PM Peak - Internal Intersections
Meyer, Mohaddes Associates

Intersection Volume Report
Future Volume Alternative

Node	Intersection	Northbound L	Northbound T	Northbound R	Southbound L	Southbound T	Southbound R	Eastbound L	Eastbound T	Eastbound R	Westbound L	Westbound T	Westbound R
101	A1	6	0	13	0	0	0	0	1230	10	23	1463	0
102	A2	0	1074	20	13	1651	0	0	0	0	11	0	7
103	A3	0	1081	23	23	1639	0	0	0	0	13	0	13
104	A4	38	293	0	0	348	26	15	0	21	0	0	0
105	A5	0	0	0	27	0	25	44	121	0	0	189	49
106	A6	0	0	0	1	0	0	0	148	0	0	238	0
107	A7	0	0	0	29	0	4	7	142	0	0	234	52
201	B1	0	1147	0	68	1654	0	0	0	0	0	0	37
202	B2	0	397	0	0	389	31	17	0	0	0	0	0
203	B3	0	1147	37	0	1654	0	0	0	0	20	0	0
204	B4	175	397	0	0	389	0	0	0	94	0	0	0
301	C1	0	1153	58	56	1618	0	0	0	0	32	0	30
302	C2	0	0	0	38	0	17	31	2497	0	0	2475	71
401	D1	33	409	0	125	320	39	21	4	18	0	7	142
402	D2	124	0	0	109	0	125	137	2327	139	0	2426	120
501	E1	39	59	130	159	43	45	50	2345	41	145	2462	189
502	E2	0	111	6	113	209	0	0	0	0	6	0	101
503	E3	95	654	0	0	1799	145	130	0	73	0	0	0

Ontario New Model Colony - Rich Haven Specific Plan
2015 PM Peak - Internal Intersections
Meyer, Mohaddes Associates

Impact Analysis Report
Level Of Service

Intersection	Base LOS	Base Del/Veh	Base V/C	Future LOS	Future Del/Veh	Future V/C	Change in
#101 A1	A	0.0	0.000	E	42.1	0.000	+42.072 D/V
#102 A2	A	0.0	0.000	F	65.3	0.000	+65.265 D/V
#103 A3	A	0.0	0.000	F	61.6	0.000	+61.621 D/V
#104 A4	A	0.0	0.000	B	12.6	0.000	+12.556 D/V
#105 A5	A	0.0	0.000	B	10.3	0.000	+10.331 D/V
#106 A6	A	0.0	0.000	B	10.6	0.000	+10.581 D/V
#107 A7	A	0.0	0.000	B	10.9	0.000	+10.941 D/V
#201 B1	A	0.0	0.000	B	13.8	0.000	+13.830 D/V
#202 B2	A	9.1	0.000	B	13.8	0.000	+ 4.672 D/V
#203 B3	A	0.0	0.000	F	137.8	0.000	+137.825 D/V
#204 B4	A	9.1	0.000	B	14.3	0.000	+ 5.146 D/V
#301 C1	A	0.0	0.000	F	166.1	0.000	+166.146 D/V
#302 C2	A	0.0	0.000	F	OVRFL	0.000	+3081.436 D/
#401 D1	A	0.0	0.000	D	29.7	0.000	+29.696 D/V
#402 D2	A	0.0	0.000	F	OVRFL	0.000	+184620.035
#501 E1	A	0.0	0.000	F	OVRFL	0.000	+ 1.1E+0308
#502 E2	A	0.0	0.000	A	9.5	0.000	+ 9.544 D/V
#503 E3	A	0.0	0.000	F	OVRFL	0.000	+2295.278 D/

Ontario New Model Colony - Rich Haven Specific Plan
2015 PM Peak - Internal Intersections
Meyer, Mohaddes Associates

Signal Warrant Summary Report

Intersection	Base Met [Del / Vol]	Future Met [Del / Vol]
#101 A1	??? / ???	No / No
#102 A2	??? / ???	No / No
#103 A3	??? / ???	No / No
#104 A4	??? / ???	No / No
#105 A5	??? / ???	No / No
#106 A6	??? / ???	No / No
#107 A7	??? / ???	No / No
#201 B1	??? / ???	No / No
#202 B2	??? / ???	No / No
#203 B3	??? / ???	No / No
#204 B4	??? / ???	No / No
#301 C1	??? / ???	No / No
#302 C2	??? / ???	No / No
#401 D1	??? / ???	No / No
#402 D2	??? / ???	Yes / Yes
#501 E1	??? / ???	Yes / Yes
#502 E2	??? / ???	No / No
#503 E3	??? / ???	Yes / Yes

Ontario New Model Colony - Rich Haven Specific Plan
2015 PM Peak - Internal Intersections
Meyer, Mohaddes Associates

Peak Hour Delay Signal Warrant Report

Intersection #101 A1

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	1 0 0	0 1		0 0	0 0	0	0 0	1 1	0	1 0	2 0	0
Initial Vol:	6	0	13	0	0	0	0	1230	10	23	1463	0
ApproachDel:	42.1			xxxxxx			xxxxxx			xxxxxx		

Approach[northbound][lanes=2][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.2]
FAIL - Vehicle-hours less than 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=19]
FAIL - Approach volume less than 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=2745]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER

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The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Ontario New Model Colony - Rich Haven Specific Plan
2015 PM Peak - Internal Intersections
Meyer, Mohaddes Associates

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #101 A1

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	- T	- R	L	- T	- R	L	- T	- R	L	- T	- R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	1	0 0	0 1	0	0 0	0 0	0	0 1	1 0	1	0 2	0 0
Initial Vol:	6	0	13	0	0	0	0	1230	10	23	1463	0

Major Street Volume: 2726
Minor Approach Volume: 19
Minor Approach Volume Threshold: -57 [less than minimum of 150]

SIGNAL WARRANT DISCLAIMER
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Ontario New Model Colony - Rich Haven Specific Plan
2015 PM Peak - Internal Intersections
Meyer, Mohaddes Associates

Peak Hour Delay Signal Warrant Report

Intersection #102 A2

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	- T	- R	L	- T	- R	L	- T	- R	L	- T	- R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0	0 1	1 0	1	0 2	0 0	0	0 0	0 0	1	0 0	0 1
Initial Vol:	0	1074	20	13	1651	0	0	0	0	11	0	7
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			65.3		

Approach[westbound][lanes=2][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.3]
FAIL - Vehicle-hours less than 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=18]
FAIL - Approach volume less than 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=2776]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER
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Ontario New Model Colony - Rich Haven Specific Plan
2015 PM Peak - Internal Intersections
Meyer, Mohaddes Associates

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #102 A2

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0	0 1	1 0	1	0 2	0 0	0	0 0	0 0 0	1	0 0	0 1
Initial Vol:	0	1074	20	13	1651	0	0	0	0	11	0	7

Major Street Volume: 2758
Minor Approach Volume: 18
Minor Approach Volume Threshold: -62 [less than minimum of 150]

SIGNAL WARRANT DISCLAIMER
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Ontario New Model Colony - Rich Haven Specific Plan
2015 PM Peak - Internal Intersections
Meyer, Mohaddes Associates

Peak Hour Delay Signal Warrant Report

Intersection #103 A3

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0	0 1	1 0	1	0 2	0 0	0	0 0	0 0 0	1	0 0	0 1
Initial Vol:	0	1081	23	23	1639	0	0	0	0	13	0	13
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			61.6		

Approach[westbound][lanes=2][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.4]
FAIL - Vehicle-hours less than 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=26]
FAIL - Approach volume less than 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=2792]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER
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Ontario New Model Colony - Rich Haven Specific Plan
2015 PM Peak - Internal Intersections
Meyer, Mohaddes Associates

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #103 A3

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	- T	- R	L	- T	- R	L	- T	- R	L	- T	- R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0	0 1	1 0	1	0 2	0 0	0	0 0	0 0	1	0 0	0 1
Initial Vol:	0	1081	23	23	1639	0	0	0	0	13	0	13

Major Street Volume: 2766
Minor Approach Volume: 26
Minor Approach Volume Threshold: -63 [less than minimum of 150]

SIGNAL WARRANT DISCLAIMER
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Ontario New Model Colony - Rich Haven Specific Plan
2015 PM Peak - Internal Intersections
Meyer, Mohaddes Associates

Peak Hour Delay Signal Warrant Report

Intersection #104 A4

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	- T	- R	L	- T	- R	L	- T	- R	L	- T	- R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	1	0 1	0 0	0	0 0	1 0	1	0 0	0 1	0	0 0	0 0
Initial Vol:	38	293	0	0	348	26	15	0	21	0	0	0
ApproachDel:	xxxxxx			xxxxxx			12.6			xxxxxx		

Approach[eastbound][lanes=2][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.1]
FAIL - Vehicle-hours less than 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=36]
FAIL - Approach volume less than 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=741]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Ontario New Model Colony - Rich Haven Specific Plan
2015 PM Peak - Internal Intersections
Meyer, Mohaddes Associates

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #104 A4

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	1	0 1	0	0	0 0	1 0	1	0 0	0 1	0	0 0	0 0
Initial Vol:	38	293	0	0	348	26	15	0	21	0	0	0

Major Street Volume: 705
Minor Approach Volume: 36
Minor Approach Volume Threshold: 524

SIGNAL WARRANT DISCLAIMER
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Ontario New Model Colony - Rich Haven Specific Plan
2015 PM Peak - Internal Intersections
Meyer, Mohaddes Associates

Peak Hour Delay Signal Warrant Report

Intersection #105 A5

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0	0 0	0	1	0 0	0 1	1	0 2	0 0	0	0 1	1 0
Initial Vol:	0	0	0	27	0	25	44	121	0	0	189	49
ApproachDel:	xxxxxx			10.3			xxxxxx			xxxxxx		

Approach[southbound][lanes=2][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.1]
FAIL - Vehicle-hours less than 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=52]
FAIL - Approach volume less than 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=455]
FAIL - Total volume less than 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Ontario New Model Colony - Rich Haven Specific Plan
2015 PM Peak - Internal Intersections
Meyer, Mohaddes Associates

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #105 A5

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	- T	- R	L	- T	- R	L	- T	- R	L	- T	- R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0	0 0	0	1	0 0	1	1	0 2	0	0	0 1	1 0
Initial Vol:	0	0	0	27	0	25	44	121	0	0	189	49

Major Street Volume: 403
Minor Approach Volume: 52
Minor Approach Volume Threshold: 765

SIGNAL WARRANT DISCLAIMER
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Ontario New Model Colony - Rich Haven Specific Plan
2015 PM Peak - Internal Intersections
Meyer, Mohaddes Associates

Peak Hour Delay Signal Warrant Report

Intersection #106 A6

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	- T	- R	L	- T	- R	L	- T	- R	L	- T	- R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0	0 0	0	1	0 0	1	1	0 2	0	0	0 1	1 0
Initial Vol:	0	0	0	1	0	0	0	148	0	0	238	0
ApproachDel:	xxxxxx			10.6			xxxxxx			xxxxxx		

Approach[southbound][lanes=2][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.0]
FAIL - Vehicle-hours less than 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=1]
FAIL - Approach volume less than 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=387]
FAIL - Total volume less than 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Ontario New Model Colony - Rich Haven Specific Plan
2015 PM Peak - Internal Intersections
Meyer, Mohaddes Associates

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #106 A6

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	- T	- R	L	- T	- R	L	- T	- R	L	- T	- R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0	0 0	0	1	0 0	1	1	0 2	0	0	0 1	1 0
Initial Vol:	0	0	0	1	0	0	0	148	0	0	238	0

Major Street Volume: 386
Minor Approach Volume: 1
Minor Approach Volume Threshold: 783

SIGNAL WARRANT DISCLAIMER
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Ontario New Model Colony - Rich Haven Specific Plan
2015 PM Peak - Internal Intersections
Meyer, Mohaddes Associates

Peak Hour Delay Signal Warrant Report

Intersection #107 A7

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	- T	- R	L	- T	- R	L	- T	- R	L	- T	- R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0	0 0	0	1	0 0	1	1	0 2	0	0	0 1	1 0
Initial Vol:	0	0	0	29	0	4	7	142	0	0	234	52
ApproachDel:	xxxxxx			10.9			xxxxxx			xxxxxx		

Approach[southbound][lanes=2][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.1]
FAIL - Vehicle-hours less than 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=33]
FAIL - Approach volume less than 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=468]
FAIL - Total volume less than 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER
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Ontario New Model Colony - Rich Haven Specific Plan
2015 PM Peak - Internal Intersections
Meyer, Mohaddes Associates

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #107 A7

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Stop Sign				Stop Sign				Uncontrolled				Uncontrolled			
Lanes:	0	0	0	0 0	1	0	0	0 1	1	0	2	0 0	0	0	1	1 0
Initial Vol:	0	0	0		29	0	4		7	142	0		0	234	52	

Major Street Volume: 435
Minor Approach Volume: 33
Minor Approach Volume Threshold: 732

SIGNAL WARRANT DISCLAIMER
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Ontario New Model Colony - Rich Haven Specific Plan
2015 PM Peak - Internal Intersections
Meyer, Mohaddes Associates

Peak Hour Delay Signal Warrant Report

Intersection #201 B1

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Uncontrolled				Uncontrolled				Stop Sign				Stop Sign			
Lanes:	0	0	1	1 0	1	0	2	0 0	0	0	0	0 0	1	0	0	0 1
Initial Vol:	0	1147	0		68	1654	0		0	0	0		0	0	37	
ApproachDel:	xxxxxx				xxxxxx				xxxxxx				13.8			

Approach[westbound][lanes=2][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.1]
FAIL - Vehicle-hours less than 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=37]
FAIL - Approach volume less than 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=2906]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER
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Ontario New Model Colony - Rich Haven Specific Plan
2015 PM Peak - Internal Intersections
Meyer, Mohaddes Associates

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #201 B1

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0	0 1	1 0	1	0 2	0 0	0	0 0	0 0 0	1	0 0	0 1
Initial Vol:	0	1147	0	68	1654	0	0	0	0	0	0	37

Major Street Volume: 2869
Minor Approach Volume: 37
Minor Approach Volume Threshold: -79 [less than minimum of 150]

SIGNAL WARRANT DISCLAIMER
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Ontario New Model Colony - Rich Haven Specific Plan
2015 PM Peak - Internal Intersections
Meyer, Mohaddes Associates

Peak Hour Delay Signal Warrant Report

Intersection #202 B2

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	1	0 1	0 0	0	0 0	1 0	1	0 0	0 1	0	0 0	0 0
Initial Vol:	0	397	0	0	389	31	17	0	0	0	0	0
ApproachDel:	13.4			13.8			xxxxxx			xxxxxx		

Approach[northbound][lanes=2][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=1.5]
FAIL - Vehicle-hours less than 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=397]
SUCCEED - Approach volume >= 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=834]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

Approach[southbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=1.6]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=420]
SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=834]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER
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Ontario New Model Colony - Rich Haven Specific Plan
2015 PM Peak - Internal Intersections
Meyer, Mohaddes Associates

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #202 B2

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	1	0	1	0	0	0	1	0	0	0	1	0
Initial Vol:	0	397	0	0	389	31	17	0	0	0	0	0

Major Street Volume: 17
Minor Approach Volume: 420
Minor Approach Volume Threshold: 1689

SIGNAL WARRANT DISCLAIMER
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Ontario New Model Colony - Rich Haven Specific Plan
2015 PM Peak - Internal Intersections
Meyer, Mohaddes Associates

Peak Hour Delay Signal Warrant Report

Intersection #203 B3

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0	0	1	1	0	1	0	2	0	0	0	1
Initial Vol:	0	1147	37	0	1654	0	0	0	0	20	0	0
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			137.8		

Approach[westbound][lanes=2][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.8]
FAIL - Vehicle-hours less than 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=20]
FAIL - Approach volume less than 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=2858]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER
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Ontario New Model Colony - Rich Haven Specific Plan
2015 PM Peak - Internal Intersections
Meyer, Mohaddes Associates

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #203 B3

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	- T	- R	L	- T	- R	L	- T	- R	L	- T	- R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0	0 1	1 0	1	0 2	0 0	0	0 0	0 0 0	1	0 0	0 1
Initial Vol:	0	1147	37	0	1654	0	0	0	0	20	0	0

Major Street Volume: 2838
Minor Approach Volume: 20
Minor Approach Volume Threshold: -74 [less than minimum of 150]

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Ontario New Model Colony - Rich Haven Specific Plan
2015 PM Peak - Internal Intersections
Meyer, Mohaddes Associates

Peak Hour Delay Signal Warrant Report

Intersection #204 B4

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	- T	- R	L	- T	- R	L	- T	- R	L	- T	- R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	1	0 1	0 0	0	0 1	0 0	1	0 0	0 1	0	0 0	0 0
Initial Vol:	175	397	0	0	389	0	0	0	94	0	0	0
ApproachDel:	14.3			14.2			xxxxxx			xxxxxx		

Approach[northbound][lanes=2][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=2.3]
FAIL - Vehicle-hours less than 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=572]
SUCCEED - Approach volume >= 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=1055]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

Approach[southbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=1.5]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=389]
SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=1055]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Ontario New Model Colony - Rich Haven Specific Plan
2015 PM Peak - Internal Intersections
Meyer, Mohaddes Associates

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #204 B4

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	1	0 1	0	0	0 1	0	1	0 0	1	0	0 0	0
Initial Vol:	175	397	0	0	389	0	0	0	94	0	0	0

Major Street Volume: 94
Minor Approach Volume: 572
Minor Approach Volume Threshold: 1391

SIGNAL WARRANT DISCLAIMER
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Ontario New Model Colony - Rich Haven Specific Plan
2015 PM Peak - Internal Intersections
Meyer, Mohaddes Associates

Peak Hour Delay Signal Warrant Report

Intersection #301 C1

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 0	1	1 0	1	0 2	0 0	0	0 0	0 0	1	0 0	1
Initial Vol:	0	1153	58	56	1618	0	0	0	0	32	0	30
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			166.1		

Approach[westbound][lanes=2][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=2.9]
FAIL - Vehicle-hours less than 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=62]
FAIL - Approach volume less than 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=2947]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER
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Ontario New Model Colony - Rich Haven Specific Plan
2015 PM Peak - Internal Intersections
Meyer, Mohaddes Associates

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #301 C1

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	- T	- R	L	- T	- R	L	- T	- R	L	- T	- R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0	0 1	1 0	1	0 2	0 0	0	0 0	0 0 0	1	0 0	0 1
Initial Vol:	0	1153	58	56	1618	0	0	0	0	32	0	30

Major Street Volume: 2885
Minor Approach Volume: 62
Minor Approach Volume Threshold: -82 [less than minimum of 150]

SIGNAL WARRANT DISCLAIMER
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Ontario New Model Colony - Rich Haven Specific Plan
2015 PM Peak - Internal Intersections
Meyer, Mohaddes Associates

Peak Hour Delay Signal Warrant Report

Intersection #302 C2

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	- T	- R	L	- T	- R	L	- T	- R	L	- T	- R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0	0 0	0 0	1	0 0	0 1	1	0 4	0 0	0	0 3	1 0
Initial Vol:	0	0	0	38	0	17	31	2497	0	0	2475	71
ApproachDel:	xxxxxx			3081.4			xxxxxx			xxxxxx		

Approach[southbound][lanes=2][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=47.1]
SUCCEED - Vehicle-hours >= 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=55]
FAIL - Approach volume less than 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=5129]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER
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Ontario New Model Colony - Rich Haven Specific Plan
2015 PM Peak - Internal Intersections
Meyer, Mohaddes Associates

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #302 C2

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Stop Sign	Stop Sign	Uncontrolled	Uncontrolled
Lanes:	0 0 0 0 0	1 0 0 0 1	1 0 4 0 0	0 0 3 1 0
Initial Vol:	0 0 0	38 0 17	31 2497 0	0 2475 71

Major Street Volume: 5074
Minor Approach Volume: 55
Minor Approach Volume Threshold: -324 [less than minimum of 150]

SIGNAL WARRANT DISCLAIMER
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Ontario New Model Colony - Rich Haven Specific Plan
2015 PM Peak - Internal Intersections
Meyer, Mohaddes Associates

Peak Hour Delay Signal Warrant Report

Intersection #401 D1

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Uncontrolled	Uncontrolled	Stop Sign	Stop Sign
Lanes:	1 0 0 1 0	1 0 0 1 0	1 0 0 1 0	1 0 0 1 0
Initial Vol:	33 409 0	125 320 39	21 4 18	0 7 142
ApproachDel:	xxxxxx	xxxxxx	29.7	13.9

Approach[eastbound][lanes=2][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.4]
FAIL - Vehicle-hours less than 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=43]
FAIL - Approach volume less than 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=1118]
SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

Approach[westbound][lanes=2][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.6]
FAIL - Vehicle-hours less than 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=149]
FAIL - Approach volume less than 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=1118]
SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Ontario New Model Colony - Rich Haven Specific Plan
2015 PM Peak - Internal Intersections
Meyer, Mohaddes Associates

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #401 D1

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Uncontrolled					Uncontrolled					Stop Sign					Stop Sign				
Lanes:	1	0	0	1	0	1	0	0	1	0	1	0	0	1	0	1	0	0	1	0
Initial Vol:	33	409		0		125	320		39		21		4		18	0		7		142

Major Street Volume: 926
Minor Approach Volume: 149
Minor Approach Volume Threshold: 407

SIGNAL WARRANT DISCLAIMER
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Ontario New Model Colony - Rich Haven Specific Plan
2015 PM Peak - Internal Intersections
Meyer, Mohaddes Associates

Peak Hour Delay Signal Warrant Report

Intersection #402 D2

Future Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Stop Sign					Stop Sign					Uncontrolled					Uncontrolled				
Lanes:	1	0	0	1	0	1	0	0	1	0	1	0	3	1	0	1	0	3	1	0
Initial Vol:	124	0		0		109	0		125		137	2327		139		0	2426		120	
ApproachDel:	xxxxxx					xxxxxx					xxxxxx					xxxxxx				

Approach[northbound][lanes=2][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=6359.1]
SUCCEED - Vehicle-hours >= 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=124]
FAIL - Approach volume less than 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=5507]
SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

Approach[southbound][lanes=2][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=3715.1]
SUCCEED - Vehicle-hours >= 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=234]
SUCCEED - Approach volume >= 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=5507]
SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

SIGNAL WARRANT DISCLAIMER
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Ontario New Model Colony - Rich Haven Specific Plan
2015 PM Peak - Internal Intersections
Meyer, Mohaddes Associates

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #402 D2

Future Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	1	0	0	1	0	1	0	0	1	0	1	0
Initial Vol:	124	0	0	109	0	125	137	2327	139	0	2426	120

Major Street Volume: 5149
Minor Approach Volume: 234
Minor Approach Volume Threshold: -331 [less than minimum of 150]

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Ontario New Model Colony - Rich Haven Specific Plan
2015 PM Peak - Internal Intersections
Meyer, Mohaddes Associates

Peak Hour Delay Signal Warrant Report

Intersection #501 E1

Future Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound			South Bound			East Bound				West Bound			
Movement:	L	T	R	L	T	R	L	T	R		L	T	R	
Control:	Stop Sign			Stop Sign			Uncontrolled				Uncontrolled			
Lanes:	1	0	0	1	0	1	0	0	1	0	1	0	3	1	0
Initial Vol:	39	59	130	159	43	45	50	2345	41		145	2462	189	
ApproachDel:	xxxxxx			xxxxxx			xxxxxx				xxxxxx			

Approach[northbound][lanes=2][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=OVERFLOW]
SUCCEED - Vehicle-hours >= 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=228]
SUCCEED - Approach volume >= 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=5707]
SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

Approach[southbound][lanes=2][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=OVERFLOW]
SUCCEED - Vehicle-hours >= 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=247]
SUCCEED - Approach volume >= 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=5707]
SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

SIGNAL WARRANT DISCLAIMER
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Ontario New Model Colony - Rich Haven Specific Plan
2015 PM Peak - Internal Intersections
Meyer, Mohaddes Associates

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #501 E1

Future Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Stop Sign				Stop Sign				Uncontrolled				Uncontrolled			
Lanes:	1	0	0	1 0	1	0	0	1 0	1	0	3	1 0	1	0	3	1 0
Initial Vol:	39		59	130	159		43	45	50		2345	41	145		2462	189

Major Street Volume: 5232
Minor Approach Volume: 247
Minor Approach Volume Threshold: -338 [less than minimum of 150]

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Ontario New Model Colony - Rich Haven Specific Plan
2015 PM Peak - Internal Intersections
Meyer, Mohaddes Associates

Peak Hour Delay Signal Warrant Report

Intersection #502 E2

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Uncontrolled				Uncontrolled				Stop Sign				Stop Sign			
Lanes:	0	0	0	1 0	1	0	1	0 0	0	0	0	0 0	1	0	0	0 1
Initial Vol:	0		111	6	113		209	0	0		0	0	6		0	101
ApproachDel:	xxxxxx				xxxxxx				xxxxxx				9.5			

Approach[westbound][lanes=2][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.3]
FAIL - Vehicle-hours less than 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=107]
FAIL - Approach volume less than 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=546]
FAIL - Total volume less than 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Ontario New Model Colony - Rich Haven Specific Plan
2015 PM Peak - Internal Intersections
Meyer, Mohaddes Associates

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #502 E2

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	- T	- R	L	- T	- R	L	- T	- R	L	- T	- R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0	0 0	1 0	1	0 1	0 0	0	0 0	0 0	1	0 0	0 1
Initial Vol:	0	111	6	113	209	0	0	0	0	6	0	101

Major Street Volume: 439
Minor Approach Volume: 107
Minor Approach Volume Threshold: 728

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Ontario New Model Colony - Rich Haven Specific Plan
2015 PM Peak - Internal Intersections
Meyer, Mohaddes Associates

Peak Hour Delay Signal Warrant Report

Intersection #503 E3

Future Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	- T	- R	L	- T	- R	L	- T	- R	L	- T	- R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	1	0 2	0 0	0	0 1	1 0	1	0 0	0 1	0	0 0	0 0
Initial Vol:	95	654	0	0	1799	145	130	0	73	0	0	0
ApproachDel:	xxxxxx			xxxxxx			2295.3			xxxxxx		

Approach[eastbound][lanes=2][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=129.4]
SUCCEED - Vehicle-hours >= 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=203]
SUCCEED - Approach volume >= 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=2896]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Ontario New Model Colony - Rich Haven Specific Plan
2015 PM Peak - Internal Intersections
Meyer, Mohaddes Associates

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #503 E3

Future Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	1	0 2	0	0	0 1	1 0	1	0 0	0 1	0	0 0	0 0
Initial Vol:	95	654	0	0	1799	145	130	0	73	0	0	0

Major Street Volume: 2693
Minor Approach Volume: 203
Minor Approach Volume Threshold: -52 [less than minimum of 150]

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Ontario New Model Colony - Rich Haven Specific Plan
2015 PM Peak - Internal Intersections
Meyer, Mohaddes Associates

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #101 A1

Average Delay (sec/veh): 0.4 Worst Case Level Of Service: E[42.1]

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Stop Sign				Stop Sign				Uncontrolled				Uncontrolled			
Rights:	Include				Include				Include				Include			
Lanes:	1	0 0	0	1	0	0 0	0	0	0	0 1	1	0	1	0 2	0	0
Volume Module:																
Base Vol:	0	0	0	0	0	0	0	0	0	1085	0	0	0	1339	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	0	0	0	0	0	0	1085	0	0	0	1339	0	0
Added Vol:	6	0	13	0	0	0	0	0	145	10	23	124	0			
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0	0			
Initial Fut:	6	0	13	0	0	0	0	1230	10	23	1463	0				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95				
PHF Volume:	6	0	14	0	0	0	0	1295	11	24	1540	0				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Final Vol.:	6	0	14	0	0	0	0	1295	11	24	1540	0				
Critical Gap Module:																
Critical Gp:	6.8	xxxx		6.9	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx		4.1	xxxx	xxxxx		
FollowUpTim:	3.5	xxxx		3.3	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx		2.2	xxxx	xxxxx		
Capacity Module:																
Cnflict Vol:	2118	xxxx		653	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	1305	xxxx	xxxxx			
Potent Cap.:	44	xxxx		415	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	537	xxxx	xxxxx			
Move Cap.:	43	xxxx		415	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	537	xxxx	xxxxx			
Volume/Cap:	0.15	xxxx	0.03	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0.05	xxxx	xxxx				
Level Of Service Module:																
2Way95thQ:	0.5	xxxx		0.1	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.1	xxxx	xxxxx			
Control Del:	103.0	xxxx		14.0	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	12.0	xxxx	xxxxx			
LOS by Move:	F	*		B	*	*	*	*	*	*	B	*	*			
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT				
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx				
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*				
ApproachDel:	42.1			xxxxxx			xxxxxx			xxxxxx						
ApproachLOS:	E			*			*			*						

Note: Queue reported is the number of cars per lane.

Ontario New Model Colony - Rich Haven Specific Plan
2015 PM Peak - Internal Intersections
Meyer, Mohaddes Associates

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #102 A2

Average Delay (sec/veh): 0.5 Worst Case Level Of Service: F[65.3]

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Uncontrolled				Uncontrolled				Stop Sign				Stop Sign			
Rights:	Include				Include				Include				Include			
Lanes:	0	0	1	1 0	1	0	2	0 0	0	0	0	0 0	1	0	0	0 1
Volume Module:																
Base Vol:	0	873		0 0	1367		0	0	0		0	0	0		0	0
Growth Adj:	1.00	1.00		1.00 1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00
Initial Bse:	0	873		0 0	1367		0	0	0		0	0	0		0	0
Added Vol:	0	201		20 13	284		0	0	0		0	0	11		0	7
PasserByVol:	0	0		0 0	0		0	0	0		0	0	0		0	0
Initial Fut:	0	1074		20 13	1651		0	0	0		0	0	11		0	7
User Adj:	1.00	1.00		1.00 1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00
PHF Adj:	0.95	0.95		0.95 0.95	0.95		0.95	0.95	0.95		0.95	0.95	0.95		0.95	0.95
PHF Volume:	0	1131		21 14	1738		0	0	0		0	0	12		0	7
Reduct Vol:	0	0		0 0	0		0	0	0		0	0	0		0	0
Final Vol.:	0	1131		21 14	1738		0	0	0		0	0	12		0	7
Critical Gap Module:																
Critical Gp:	xxxxx	xxxx		xxxxx 4.1	xxxx		xxxxx	xxxxx	xxxx		xxxxx	6.8	xxxx		6.9	
FollowUpTim:	xxxxx	xxxx		xxxxx 2.2	xxxx		xxxxx	xxxxx	xxxx		xxxxx	3.5	xxxx		3.3	
Capacity Module:																
Cnflict Vol:	xxxx	xxxx		xxxxx 1152	xxxx		xxxxx	xxxx	xxxx		xxxxx	2037	xxxx		576	
Potent Cap.:	xxxx	xxxx		xxxxx 614	xxxx		xxxxx	xxxx	xxxx		xxxxx	50	xxxx		466	
Move Cap.:	xxxx	xxxx		xxxxx 614	xxxx		xxxxx	xxxx	xxxx		xxxxx	50	xxxx		466	
Volume/Cap:	xxxx	xxxx		xxxx 0.02	xxxx		xxxx	xxxx	xxxx		xxxx	0.23	xxxx		0.02	
Level Of Service Module:																
2Way95thQ:	xxxx	xxxx		xxxxx 0.1	xxxx		xxxxx	xxxx	xxxx		xxxxx	0.8	xxxx		0.0	
Control Del:	xxxxx	xxxx		xxxxx 11.0	xxxx		xxxxx	xxxxx	xxxx		xxxxx	98.6	xxxx		12.9	
LOS by Move:	*	*		* B	*		*	*	*		*	F	*		B	
Movement:	LT -	LTR -		RT	LT -	LTR -		RT	LT -	LTR -		RT	LT -	LTR -		RT
Shared Cap.:	xxxx	xxxx		xxxxx	xxxx	xxxx		xxxxx	xxxx	xxxx		xxxxx	xxxx	xxxx		xxxxx
SharedQueue:	xxxxx	xxxx		xxxxx	xxxxx	xxxx		xxxxx	xxxxx	xxxx		xxxxx	xxxxx	xxxx		xxxxx
Shrd ConDel:	xxxxx	xxxx		xxxxx	xxxxx	xxxx		xxxxx	xxxxx	xxxx		xxxxx	xxxxx	xxxx		xxxxx
Shared LOS:	*	*		*	*	*		*	*	*		*	*	*		*
ApproachDel:	xxxxxx				xxxxxx				xxxxxx				65.3			
ApproachLOS:	*				*				*				F			

Note: Queue reported is the number of cars per lane.

Ontario New Model Colony - Rich Haven Specific Plan
2015 PM Peak - Internal Intersections
Meyer, Mohaddes Associates

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #103 A3

Average Delay (sec/veh): 0.7 Worst Case Level Of Service: F[61.6]

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Uncontrolled				Uncontrolled				Stop Sign				Stop Sign			
Rights:	Include				Include				Include				Include			
Lanes:	0	0	1	1 0	1	0	2	0 0	0	0	0	0 0	1	0	0	0 1
Volume Module:																
Base Vol:	0	873		0 0	1367		0	0	0		0	0	0		0	0
Growth Adj:	1.00	1.00		1.00 1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00
Initial Bse:	0	873		0 0	1367		0	0	0		0	0	0		0	0
Added Vol:	0	208		23 23	272		0	0	0		0	0	13		0	13
PasserByVol:	0	0		0 0	0		0	0	0		0	0	0		0	0
Initial Fut:	0	1081		23 23	1639		0	0	0		0	0	13		0	13
User Adj:	1.00	1.00		1.00 1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00
PHF Adj:	0.95	0.95		0.95 0.95	0.95		0.95	0.95	0.95		0.95	0.95	0.95		0.95	0.95
PHF Volume:	0	1138		24 24	1725		0	0	0		0	0	14		0	14
Reduct Vol:	0	0		0 0	0		0	0	0		0	0	0		0	0
Final Vol.:	0	1138		24 24	1725		0	0	0		0	0	14		0	14
Critical Gap Module:																
Critical Gp:	xxxxx	xxxx		xxxxx 4.1	xxxx		xxxxx	xxxxx	xxxx		xxxxx	6.8	xxxx		6.9	
FollowUpTim:	xxxxx	xxxx		xxxxx 2.2	xxxx		xxxxx	xxxxx	xxxx		xxxxx	3.5	xxxx		3.3	
Capacity Module:																
Cnflict Vol:	xxxx	xxxx		xxxxx 1162	xxxx		xxxxx	xxxx	xxxx		xxxxx	2061	xxxx		581	
Potent Cap.:	xxxx	xxxx		xxxxx 608	xxxx		xxxxx	xxxx	xxxx		xxxxx	49	xxxx		462	
Move Cap.:	xxxx	xxxx		xxxxx 608	xxxx		xxxxx	xxxx	xxxx		xxxxx	47	xxxx		462	
Volume/Cap:	xxxx	xxxx		xxxx 0.04	xxxx		xxxx	xxxx	xxxx		xxxx	0.29	xxxx		0.03	
Level Of Service Module:																
2Way95thQ:	xxxx	xxxx		xxxxx 0.1	xxxx		xxxxx	xxxx	xxxx		xxxxx	1.0	xxxx		0.1	
Control Del:	xxxxx	xxxx		xxxxx 11.2	xxxx		xxxxx	xxxxx	xxxx		xxxxx	110.2	xxxx		13.0	
LOS by Move:	*	*		* B	*		*	*	*		*	F	*		B	
Movement:	LT -	LTR -		RT	LT -	LTR -		RT	LT -	LTR -		RT	LT -	LTR -		RT
Shared Cap.:	xxxx	xxxx		xxxxx	xxxx	xxxx		xxxxx	xxxx	xxxx		xxxxx	xxxx	xxxx		xxxxx
SharedQueue:	xxxxx	xxxx		xxxxx	xxxxx	xxxx		xxxxx	xxxxx	xxxx		xxxxx	xxxxx	xxxx		xxxxx
Shrd ConDel:	xxxxx	xxxx		xxxxx	xxxxx	xxxx		xxxxx	xxxxx	xxxx		xxxxx	xxxxx	xxxx		xxxxx
Shared LOS:	*	*		*	*	*		*	*	*		*	*	*		*
ApproachDel:	xxxxxx				xxxxxx				xxxxxx				61.6			
ApproachLOS:	*				*				*				F			

Note: Queue reported is the number of cars per lane.

Ontario New Model Colony - Rich Haven Specific Plan
2015 PM Peak - Internal Intersections
Meyer, Mohaddes Associates

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #104 A4

Average Delay (sec/veh): 1.0 Worst Case Level Of Service: B[12.6]

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Uncontrolled				Uncontrolled				Stop Sign				Stop Sign			
Rights:	Include				Include				Include				Include			
Lanes:	1	0	1	0 0	0	0	0	1 0	1	0	0	0 1	0	0	0	0 0
Volume Module:																
Base Vol:	0	92		0 0	121		0	0	0		0	0	0		0	0
Growth Adj:	1.00	1.00		1.00 1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00
Initial Bse:	0	92		0 0	121		0	0	0		0	0	0		0	0
Added Vol:	38	201		0 0	227		26	15	0		21	0	0		0	0
PasserByVol:	0	0		0 0	0		0	0	0		0	0	0		0	0
Initial Fut:	38	293		0 0	348		26	15	0		21	0	0		0	0
User Adj:	1.00	1.00		1.00 1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00
PHF Adj:	0.95	0.95		0.95 0.95	0.95		0.95	0.95	0.95		0.95	0.95	0.95		0.95	0.95
PHF Volume:	40	308		0 0	366		27	16	0		22	0	0		0	0
Reduct Vol:	0	0		0 0	0		0	0	0		0	0	0		0	0
Final Vol.:	40	308		0 0	366		27	16	0		22	0	0		0	0
Critical Gap Module:																
Critical Gp:	4.1	xxxx	xxxxx	xxxxx xxxx	xxxxx			6.4	xxxx		6.2	xxxxx	xxxx	xxxxx		
FollowUpTim:	2.2	xxxx	xxxxx	xxxxx xxxx	xxxxx			3.5	xxxx		3.3	xxxxx	xxxx	xxxxx		
Capacity Module:																
Cnflict Vol:	394	xxxx	xxxxx	xxxx xxxx	xxxxx			768	xxxx		380	xxxx	xxxx	xxxxx		
Potent Cap.:	1176	xxxx	xxxxx	xxxx xxxx	xxxxx			372	xxxx		671	xxxx	xxxx	xxxxx		
Move Cap.:	1176	xxxx	xxxxx	xxxx xxxx	xxxxx			363	xxxx		671	xxxx	xxxx	xxxxx		
Volume/Cap:	0.03	xxxx	xxxx	xxxx xxxx	xxxx		0.04	xxxx	0.03		xxxx	xxxx	xxxx			
Level Of Service Module:																
2Way95thQ:	0.1	xxxx	xxxxx	xxxx xxxx	xxxxx			0.1	xxxx		0.1	xxxx	xxxx	xxxxx		
Control Del:	8.2	xxxx	xxxxx	xxxxx xxxx	xxxxx			15.4	xxxx		10.5	xxxxx	xxxx	xxxxx		
LOS by Move:	A	*	*	* *	*			C	*		B	*	*	*		
Movement:	LT - LTR - RT				LT - LTR - RT				LT - LTR - RT				LT - LTR - RT			
Shared Cap.:	xxxx	xxxx	xxxxx		xxxx	xxxx	xxxxx		xxxx	xxxx	xxxxx		xxxx	xxxx	xxxxx	
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*				
ApproachDel:	xxxxxx			xxxxxx				12.6				xxxxxx				
ApproachLOS:	*			*				B				*				

Note: Queue reported is the number of cars per lane.

Ontario New Model Colony - Rich Haven Specific Plan
2015 PM Peak - Internal Intersections
Meyer, Mohaddes Associates

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #105 A5

Average Delay (sec/veh): 1.9 Worst Case Level Of Service: B[10.3]

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Stop Sign				Stop Sign				Uncontrolled				Uncontrolled			
Rights:	Include				Include				Include				Include			
Lanes:	0	0	0	0 0	1	0	0	0 1	1	0	2	0 0	0	0	1	1 0
Volume Module:																
Base Vol:	0	0		0 0	0		0	0	0		84	0	0		162	0
Growth Adj:	1.00	1.00		1.00 1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00
Initial Bse:	0	0		0 0	0		0	0	0		84	0	0		162	0
Added Vol:	0	0		0 27	0		25	44	37		0	0	27		49	
PasserByVol:	0	0		0 0	0		0	0	0		0	0	0		0	0
Initial Fut:	0	0		0 27	0		25	44	121		0	0	189		49	
User Adj:	1.00	1.00		1.00 1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00
PHF Adj:	0.95	0.95		0.95 0.95	0.95		0.95	0.95	0.95		0.95	0.95	0.95		0.95	0.95
PHF Volume:	0	0		0 28	0		26	46	127		0	0	199		52	
Reduct Vol:	0	0		0 0	0		0	0	0		0	0	0		0	0
Final Vol.:	0	0		0 28	0		26	46	127		0	0	199		52	
Critical Gap Module:																
Critical Gp:	xxxxx	xxxx	xxxxx	6.8	xxxx		6.9	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
FollowUpTim:	xxxxx	xxxx	xxxxx	3.5	xxxx		3.3	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
Capacity Module:																
Cnflict Vol:	xxxx	xxxx	xxxxx	381	xxxx		125	251	xxxx	xxxxx	xxxx	xxxx	xxxxx			
Potent Cap.:	xxxx	xxxx	xxxxx	599	xxxx		908	1327	xxxx	xxxxx	xxxx	xxxx	xxxxx			
Move Cap.:	xxxx	xxxx	xxxxx	583	xxxx		908	1327	xxxx	xxxxx	xxxx	xxxx	xxxxx			
Volume/Cap:	xxxx	xxxx	xxxx	0.05	xxxx		0.03	0.03	xxxx	xxxx	xxxx	xxxx	xxxx			
Level Of Service Module:																
2Way95thQ:	xxxx	xxxx	xxxxx	0.2	xxxx		0.1	0.1	xxxx	xxxxx	xxxx	xxxx	xxxxx			
Control Del:	xxxxx	xxxx	xxxxx	11.5	xxxx		9.1	7.8	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
LOS by Move:	*	*	*	B	*		A	A	*	*	*	*	*			
Movement:	LT - LTR - RT			LT - LTR - RT				LT - LTR - RT				LT - LTR - RT				
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx				
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*				
ApproachDel:	xxxxxx			10.3				xxxxxx				xxxxxx				
ApproachLOS:	*			B				*				*				

Note: Queue reported is the number of cars per lane.

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Intersection #106 A6

Average Delay (sec/veh): 0.0 Worst Case Level Of Service: B[10.6]

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Stop Sign				Stop Sign				Uncontrolled				Uncontrolled			
Rights:	Include				Include				Include				Include			
Lanes:	0	0	0	0 0	1	0	0	0 1	1	0	2	0 0	0	0	1	1 0
Volume Module:																
Base Vol:	0	0	0	0	0	0	0	84	0	0	162	0				
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Initial Bse:	0	0	0	0	0	0	0	84	0	0	162	0				
Added Vol:	0	0	0	1	0	0	0	64	0	0	76	0				
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0				
Initial Fut:	0	0	0	1	0	0	0	148	0	0	238	0				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95				
PHF Volume:	0	0	0	1	0	0	0	156	0	0	251	0				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Final Vol.:	0	0	0	1	0	0	0	156	0	0	251	0				
Critical Gap Module:																
Critical Gp:	xxxxx	xxxx	xxxxx	6.8	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
FollowUpTim:	xxxxx	xxxx	xxxxx	3.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
Capacity Module:																
Cnflict Vol:	xxxx	xxxx	xxxxx	328	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx				
Potent Cap.:	xxxx	xxxx	xxxxx	646	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx				
Move Cap.:	xxxx	xxxx	xxxxx	646	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx				
Volume/Cap:	xxxx	xxxx	xxxx	0.00	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx				
Level Of Service Module:																
2Way95thQ:	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx				
Control Del:	xxxxx	xxxx	xxxxx	10.6	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
LOS by Move:	*	*	*	B	*	*	*	*	*	*	*	*				
Movement:	LT - LTR - RT				LT - LTR - RT				LT - LTR - RT				LT - LTR - RT			
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx				
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*				
ApproachDel:	xxxxxx			10.6			xxxxxx				xxxxxx					
ApproachLOS:	*			B			*				*					

Note: Queue reported is the number of cars per lane.

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Intersection #107 A7

Average Delay (sec/veh): 0.9 Worst Case Level Of Service: B[10.9]

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Stop Sign				Stop Sign				Uncontrolled				Uncontrolled			
Rights:	Include				Include				Include				Include			
Lanes:	0	0	0	0 0	1	0	0	0 1	1	0	2	0 0	0	0	1	1 0
Volume Module:																
Base Vol:	0	0	0	0	0	0	0	84	0	0	162	0				
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Initial Bse:	0	0	0	0	0	0	0	84	0	0	162	0				
Added Vol:	0	0	0	29	0	4	7	58	0	0	72	52				
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0				
Initial Fut:	0	0	0	29	0	4	7	142	0	0	234	52				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95				
PHF Volume:	0	0	0	31	0	4	7	149	0	0	246	55				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Final Vol.:	0	0	0	31	0	4	7	149	0	0	246	55				
Critical Gap Module:																
Critical Gp:	xxxxx	xxxx	xxxxx	6.8	xxxx	6.9	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
FollowUpTim:	xxxxx	xxxx	xxxxx	3.5	xxxx	3.3	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
Capacity Module:																
Cnflict Vol:	xxxx	xxxx	xxxxx	363	xxxx	151	301	xxxx	xxxxx	xxxx	xxxx	xxxxx				
Potent Cap.:	xxxx	xxxx	xxxxx	615	xxxx	875	1271	xxxx	xxxxx	xxxx	xxxx	xxxxx				
Move Cap.:	xxxx	xxxx	xxxxx	612	xxxx	875	1271	xxxx	xxxxx	xxxx	xxxx	xxxxx				
Volume/Cap:	xxxx	xxxx	xxxx	0.05	xxxx	0.00	0.01	xxxx	xxxx	xxxx	xxxx	xxxx				
Level Of Service Module:																
2Way95thQ:	xxxx	xxxx	xxxxx	0.2	xxxx	0.0	0.0	xxxx	xxxxx	xxxx	xxxx	xxxxx				
Control Del:	xxxxx	xxxx	xxxxx	11.2	xxxx	9.1	7.8	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
LOS by Move:	*	*	*	B	*	A	A	*	*	*	*	*				
Movement:	LT - LTR - RT				LT - LTR - RT				LT - LTR - RT				LT - LTR - RT			
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx				
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*				
ApproachDel:	xxxxxx			10.9			xxxxxx				xxxxxx					
ApproachLOS:	*			B			*				*					

Note: Queue reported is the number of cars per lane.

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Intersection #201 B1

Average Delay (sec/veh): 0.5 Worst Case Level Of Service: B[13.8]

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Uncontrolled				Uncontrolled				Stop Sign				Stop Sign			
Rights:	Include				Include				Include				Include			
Lanes:	0	0	1	1 0	1	0	2	0 0	0	0	0	0 0	1	0	0	0 1
Volume Module:																
Base Vol:	0	904		0 0	1414		0	0	0		0	0	0		0	0
Growth Adj:	1.00	1.00		1.00 1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00
Initial Bse:	0	904		0 0	1414		0	0	0		0	0	0		0	0
Added Vol:	0	243		0 68	240		0	0	0		0	0	0		0	37
PasserByVol:	0	0		0 0	0		0	0	0		0	0	0		0	0
Initial Fut:	0	1147		0 68	1654		0	0	0		0	0	0		0	37
User Adj:	1.00	1.00		1.00 1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00
PHF Adj:	0.95	0.95		0.95 0.95	0.95		0.95	0.95	0.95		0.95	0.95	0.95		0.95	0.95
PHF Volume:	0	1207		0 72	1741		0	0	0		0	0	0		0	39
Reduct Vol:	0	0		0 0	0		0	0	0		0	0	0		0	0
Final Vol.:	0	1207		0 72	1741		0	0	0		0	0	0		0	39
Critical Gap Module:																
Critical Gp:	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	6.9				
FollowUpTim:	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	3.3				
Capacity Module:																
Cnflict Vol:	xxxx	xxxx	xxxxx	1207	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	604				
Potent Cap.:	xxxx	xxxx	xxxxx	585	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	447				
Move Cap.:	xxxx	xxxx	xxxxx	585	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	447				
Volume/Cap:	xxxx	xxxx	xxxx	0.12	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0.09				
Level Of Service Module:																
2Way95thQ:	xxxx	xxxx	xxxxx	0.4	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	0.3				
Control Del:	xxxxx	xxxx	xxxxx	12.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	13.8				
LOS by Move:	*	*	*	B	*	*	*	*	*	*	*	B				
Movement:	LT - LTR - RT				LT - LTR - RT				LT - LTR - RT				LT - LTR - RT			
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx				
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*				
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			13.8						
ApproachLOS:	*			*			*			B						

Note: Queue reported is the number of cars per lane.

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Intersection #202 B2

Average Delay (sec/veh): 13.5 Worst Case Level Of Service: B[13.8]

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Stop Sign				Stop Sign				Uncontrolled				Uncontrolled			
Rights:	Include				Include				Include				Include			
Lanes:	1	0	1	0 0	0	0	0	1 0	1	0	0	0 1	0	0	0	0 0
Volume Module:																
Base Vol:	0	18		0 0	24		0	0	0		0	0	0		0	0
Growth Adj:	1.00	1.00		1.00 1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00
Initial Bse:	0	18		0 0	24		0	0	0		0	0	0		0	0
Added Vol:	0	379		0 0	365		31	17	0		0	0	0		0	0
PasserByVol:	0	0		0 0	0		0	0	0		0	0	0		0	0
Initial Fut:	0	397		0 0	389		31	17	0		0	0	0		0	0
User Adj:	1.00	1.00		1.00 1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00
PHF Adj:	0.95	0.95		0.95 0.95	0.95		0.95	0.95	0.95		0.95	0.95	0.95		0.95	0.95
PHF Volume:	0	418		0 0	409		33	18	0		0	0	0		0	0
Reduct Vol:	0	0		0 0	0		0	0	0		0	0	0		0	0
Final Vol.:	0	418		0 0	409		33	18	0		0	0	0		0	0
Critical Gap Module:																
Critical Gp:	xxxxx	6.5	xxxxx	xxxxx	6.5		6.2	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
FollowUpTim:	xxxxx	4.0	xxxxx	xxxxx	4.0		3.3	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
Capacity Module:																
Cnflict Vol:	xxxx	36	xxxxx	xxxx	36		0	0	xxxx	xxxxx	xxxx	xxxx	xxxxx			
Potent Cap.:	xxxx	861	xxxxx	xxxx	861		900	900	xxxx	xxxxx	xxxx	xxxx	xxxxx			
Move Cap.:	xxxx	843	xxxxx	xxxx	843		900	900	xxxx	xxxxx	xxxx	xxxx	xxxxx			
Volume/Cap:	xxxx	0.50	xxxx	xxxx	0.49		0.04	0.02	xxxx	xxxx	xxxx	xxxx	xxxx			
Level Of Service Module:																
2Way95thQ:	xxxx	2.8	xxxxx	xxxx	xxxx	xxxxx		0.1	xxxx	xxxxx	xxxx	xxxx	xxxxx			
Control Del:	xxxxx	13.4	xxxxx	xxxxx	xxxx	xxxxx		9.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
LOS by Move:	*	B	*	*	*	*		A	*	*	*	*	*			
Movement:	LT - LTR - RT			LT - LTR - RT				LT - LTR - RT				LT - LTR - RT				
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	847		xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx			
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	3.1		xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	13.8		xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
Shared LOS:	*	*	*	*	*	B		*	*	*	*	*	*			
ApproachDel:	13.4			13.8				xxxxxx			xxxxxx					
ApproachLOS:	B			B				*			*					

Note: Queue reported is the number of cars per lane.

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Intersection #203 B3

Average Delay (sec/veh): 1.0 Worst Case Level Of Service: F[137.8]

Approach:	North Bound						South Bound						East Bound						West Bound					
Movement:	L	-	T	-	R		L	-	T	-	R		L	-	T	-	R		L	-	T	-	R	
Control:	Uncontrolled						Uncontrolled						Stop Sign						Stop Sign					
Rights:	Include						Include						Include						Include					
Lanes:	0	0	1	1	0		1	0	2	0	0		0	0	0	0	0		1	0	0	0	0	1
Volume Module:																								
Base Vol:	0	904		0	0	1414		0	0		0	0		0	0		0	0		0	0		0	0
Growth Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00
Initial Bse:	0	904		0	0	1414		0	0		0	0		0	0		0	0		0	0		0	0
Added Vol:	0	243		37	0	240		0	0		0	0		0	0		0	20		0	0		0	0
PasserByVol:	0	0		0	0	0		0	0		0	0		0	0		0	0		0	0		0	0
Initial Fut:	0	1147		37	0	1654		0	0		0	0		0	0		0	20		0	0		0	0
User Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00
PHF Adj:	0.95	0.95		0.95	0.95	0.95		0.95	0.95		0.95	0.95		0.95	0.95		0.95	0.95		0.95	0.95		0.95	0.95
PHF Volume:	0	1207		39	0	1741		0	0		0	0		0	0		0	21		0	0		0	0
Reduct Vol:	0	0		0	0	0		0	0		0	0		0	0		0	0		0	0		0	0
Final Vol.:	0	1207		39	0	1741		0	0		0	0		0	0		0	21		0	0		0	0
Critical Gap Module:																								
Critical Gp:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			6.8	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			3.5	xxxx	xxxxx
Capacity Module:																								
Cnflict Vol:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx			2097	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx			46	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx			46	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx			0.46	xxxx	xxxx
Level Of Service Module:																								
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx			1.7	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			137.8	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	*	*	*			F	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT			LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx			xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*			*	*	*
ApproachDel:	xxxxxx			xxxxxx			xxxxxx					137.8		
ApproachLOS:	*			*			*					F		

Note: Queue reported is the number of cars per lane.

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Intersection #204 B4

Average Delay (sec/veh): 13.0 Worst Case Level Of Service: B[14.3]

Approach:	North Bound						South Bound						East Bound						West Bound					
Movement:	L	-	T	-	R		L	-	T	-	R		L	-	T	-	R		L	-	T	-	R	
Control:	Stop Sign						Stop Sign						Uncontrolled						Uncontrolled					
Rights:	Include						Include						Include						Include					
Lanes:	1	0	1	0	0		0	0	1	0	0		1	0	0	0	1		0	0	0	0	0	
Volume Module:																								
Base Vol:	0	18		0	0	24		0	0		0	0		0	0		0	0		0	0		0	0
Growth Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00
Initial Bse:	0	18		0	0	24		0	0		0	0		0	0		0	0		0	0		0	0
Added Vol:	175	379		0	0	365		0	0		0	0		0	0		0	94		0	0		0	0
PasserByVol:	0	0		0	0	0		0	0		0	0		0	0		0	0		0	0		0	0
Initial Fut:	175	397		0	0	389		0	0		0	0		0	0		0	94		0	0		0	0
User Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00
PHF Adj:	0.95	0.95		0.95	0.95	0.95		0.95	0.95		0.95	0.95		0.95	0.95		0.95	0.95		0.95	0.95		0.95	0.95
PHF Volume:	184	418		0	0	409		0	0		0	0		0	0		0	99		0	0		0	0
Reduct Vol:	0	0		0	0	0		0	0		0	0		0	0		0	0		0	0		0	0
Final Vol.:	184	418		0	0	409		0	0		0	0		0	0		0	99		0	0		0	0
Critical Gap Module:																								
Critical Gp:	7.1	6.5	xxxxx	xxxxx		6.5	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	
FollowUpTim:	3.5	4.0	xxxxx	xxxxx		4.0	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	
Capacity Module:																								
Cnflict Vol:	205		0	xxxxx	xxxx		99	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	757	900	xxxxx	xxxx		795	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	
Move Cap.:	450	900	xxxxx	xxxx		795	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	
Volume/Cap:	0.41	0.46	xxxx	xxxx		0.52	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	
Level Of Service Module:																								
2Way95thQ:	2.0	2.5	xxxxx	xxxx		3.0	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	
Control Del:	18.4	12.4	xxxxx	xxxxx		14.2	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	
LOS by Move:	C	B	*	*		B	*	*	*	*	*	*	*	
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	14.3			14.2			xxxxxx			xxxxxx					
ApproachLOS:	B			B			*			*					

Note: Queue reported is the number of cars per lane.

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Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #301 C1

Average Delay (sec/veh): 3.7 Worst Case Level Of Service: F[166.1]

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Uncontrolled				Uncontrolled				Stop Sign				Stop Sign			
Rights:	Include				Include				Include				Include			
Lanes:	0	0	1	1 0	1	0	2	0 0	0	0	0	0 0	1	0	0	0 1
Volume Module:																
Base Vol:	0	904		0 0	1414			0	0			0	0			0
Growth Adj:	1.00	1.00		1.00 1.00	1.00			1.00	1.00			1.00	1.00			1.00
Initial Bse:	0	904		0 0	1414			0	0			0	0			0
Added Vol:	0	249		58 56	204			0	0			0	32			30
PasserByVol:	0	0		0 0	0			0	0			0	0			0
Initial Fut:	0	1153		58 56	1618			0	0			0	32			30
User Adj:	1.00	1.00		1.00 1.00	1.00			1.00	1.00			1.00	1.00			1.00
PHF Adj:	0.95	0.95		0.95 0.95	0.95			0.95	0.95			0.95	0.95			0.95
PHF Volume:	0	1214		61 59	1703			0	0			0	34			32
Reduct Vol:	0	0		0 0	0			0	0			0	0			0
Final Vol.:	0	1214		61 59	1703			0	0			0	34			32
Critical Gap Module:																
Critical Gp:	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.8	xxxx	6.9				
FollowUpTim:	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	xxxx	3.3				
Capacity Module:																
Cnflict Vol:	xxxx	xxxx	xxxxx	1275	xxxx	xxxxx	xxxx	xxxx	xxxxx	2214	xxxx	637				
Potent Cap.:	xxxx	xxxx	xxxxx	552	xxxx	xxxxx	xxxx	xxxx	xxxxx	38	xxxx	425				
Move Cap.:	xxxx	xxxx	xxxxx	552	xxxx	xxxxx	xxxx	xxxx	xxxxx	35	xxxx	425				
Volume/Cap:	xxxx	xxxx	xxxx	0.11	xxxx	xxxx	xxxx	xxxx	xxxx	0.96	xxxx	0.07				
Level Of Service Module:																
2Way95thQ:	xxxx	xxxx	xxxxx	0.4	xxxx	xxxxx	xxxx	xxxx	xxxxx	3.5	xxxx	0.2				
Control Del:	xxxxx	xxxx	xxxxx	12.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx	308.6	xxxx	14.2				
LOS by Move:	*	*	*	B	*	*	*	*	*	F	*	B				
Movement:	LT - LTR - RT				LT - LTR - RT				LT - LTR - RT				LT - LTR - RT			
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx				
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*				
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			166.1						
ApproachLOS:	*			*			*			F						

Note: Queue reported is the number of cars per lane.

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Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #302 C2

Average Delay (sec/veh): 33.2 Worst Case Level Of Service: F[3081.4]

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Stop Sign				Stop Sign				Uncontrolled				Uncontrolled			
Rights:	Include				Include				Include				Include			
Lanes:	0	0	0	0 0	1	0	0	0 1	1	0	4	0 0	0	0	3	1 0
Volume Module:																
Base Vol:	0	0		0 0	0			0	2125			0	0			2098 0
Growth Adj:	1.00	1.00		1.00 1.00	1.00			1.00	1.00			1.00	1.00			1.00 1.00
Initial Bse:	0	0		0 0	0			0	2125			0	0			2098 0
Added Vol:	0	0		0 38	0			17	31	372		0	0			377 71
PasserByVol:	0	0		0 0	0			0	0	0		0	0			0 0
Initial Fut:	0	0		0 38	0			17	31	2497		0	0			2475 71
User Adj:	1.00	1.00		1.00 1.00	1.00			1.00	1.00	1.00		1.00	1.00			1.00 1.00
PHF Adj:	0.95	0.95		0.95 0.95	0.95			0.95	0.95	0.95		0.95	0.95			0.95 0.95
PHF Volume:	0	0		0 40	0			18	33	2628		0	0			2605 75
Reduct Vol:	0	0		0 0	0			0	0	0		0	0			0 0
Final Vol.:	0	0		0 40	0			18	33	2628		0	0			2605 75
Critical Gap Module:																
Critical Gp:	xxxxx	xxxx	xxxxx	6.8	xxxx	6.9		4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
FollowUpTim:	xxxxx	xxxx	xxxxx	3.5	xxxx	3.3		2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
Capacity Module:																
Cnflict Vol:	xxxx	xxxx	xxxxx	3365	xxxx	689		2680	xxxx	xxxxx	xxxx	xxxx	xxxxx			
Potent Cap.:	xxxx	xxxx	xxxxx	6	xxxx	393		157	xxxx	xxxxx	xxxx	xxxx	xxxxx			
Move Cap.:	xxxx	xxxx	xxxxx	5	xxxx	393		157	xxxx	xxxxx	xxxx	xxxx	xxxxx			
Volume/Cap:	xxxx	xxxx	xxxx	7.84	xxxx	0.05		0.21	xxxx	xxxx	xxxx	xxxx	xxxx			
Level Of Service Module:																
2Way95thQ:	xxxx	xxxx	xxxxx	6.6	xxxx	0.1		0.7	xxxx	xxxxx	xxxx	xxxx	xxxxx			
Control Del:	xxxxx	xxxx	xxxxx	4453	xxxx	14.6		33.8	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
LOS by Move:	*	*	*	F	*	B		D	*	*	*	*	*			
Movement:	LT - LTR - RT				LT - LTR - RT				LT - LTR - RT				LT - LTR - RT			
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx				
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*				
ApproachDel:	xxxxxx			3081.4			xxxxxx			xxxxxx						
ApproachLOS:	*			F			*			*						

Note: Queue reported is the number of cars per lane.

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Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #401 D1

Average Delay (sec/veh): 4.2 Worst Case Level Of Service: D[29.7]

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Uncontrolled				Uncontrolled				Stop Sign				Stop Sign			
Rights:	Include				Include				Include				Include			
Lanes:	1	0	0	1 0	1	0	0	1 0	1	0	0	1 0	1	0	0	1 0
Volume Module:																
Base Vol:	0	18		0 0	24			0 0	0			0 0	0			0 0
Growth Adj:	1.00	1.00		1.00 1.00	1.00			1.00 1.00	1.00			1.00 1.00	1.00			1.00 1.00
Initial Bse:	0	18		0 0	24			0 0	0			0 0	0			0 0
Added Vol:	33	391		0 125	296			39 21	4			18 0	7			142
PasserByVol:	0	0		0 0	0			0 0	0			0 0	0			0 0
Initial Fut:	33	409		0 125	320			39 21	4			18 0	7			142
User Adj:	1.00	1.00		1.00 1.00	1.00			1.00 1.00	1.00			1.00 1.00	1.00			1.00 1.00
PHF Adj:	0.95	0.95		0.95 0.95	0.95			0.95 0.95	0.95			0.95 0.95	0.95			0.95 0.95
PHF Volume:	35	431		0 132	337			41 22	4			19 0	7			149
Reduct Vol:	0	0		0 0	0			0 0	0			0 0	0			0 0
Final Vol.:	35	431		0 132	337			41 22	4			19 0	7			149
Critical Gap Module:																
Critical Gp:	4.1	xxxx	xxxxx		4.1	xxxx	xxxxx		7.1	6.5		6.2 xxxxx	6.5			6.2
FollowUpTim:	2.2	xxxx	xxxxx		2.2	xxxx	xxxxx		3.5	4.0		3.3 xxxxx	4.0			3.3
Capacity Module:																
Cnflict Vol:	378	xxxx	xxxxx		431	xxxx	xxxxx		1199	1121		357 xxxx	1141			431
Potent Cap.:	1192	xxxx	xxxxx		1140	xxxx	xxxxx		164	208		691 xxxx	202			629
Move Cap.:	1192	xxxx	xxxxx		1140	xxxx	xxxxx		108	179		691 xxxx	174			629
Volume/Cap:	0.03	xxxx	xxxx		0.12	xxxx	xxxx		0.21	0.02		0.03 xxxx	0.04			0.24
Level Of Service Module:																
2Way95thQ:	0.1	xxxx	xxxxx		0.4	xxxx	xxxxx		0.7	xxxx	xxxxx	xxxx	xxxx	xxxxx		
Control Del:	8.1	xxxx	xxxxx		8.6	xxxx	xxxxx		46.8	xxxx	xxxxx	xxxxx	xxxx	xxxxx		
LOS by Move:	A	*	*		A	*	*		E	*	*	*	*	*		
Movement:	LT -	LTR -	RT		LT -	LTR -	RT		LT -	LTR -	RT		LT -	LTR -	RT	
Shared Cap.:	xxxx	xxxx	xxxxx		xxxx	xxxx	xxxxx		xxxx	xxxx		454 xxxx	xxxx			560
SharedQueue:	xxxxx	xxxx	xxxxx		xxxxx	xxxx	xxxxx		xxxxx	xxxx		0.2 xxxxx	xxxx			1.1
Shrd ConDel:	xxxxx	xxxx	xxxxx		xxxxx	xxxx	xxxxx		xxxxx	xxxx		13.3 xxxxx	xxxx			13.9
Shared LOS:	*	*	*		*	*	*		*	*		B *	*			B
ApproachDel:	xxxxxx				xxxxxx				29.7			13.9				
ApproachLOS:	*				*				D			B				

Note: Queue reported is the number of cars per lane.

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Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #402 D2

Average Delay (sec/veh): 6588.4 Worst Case Level Of Service: F[184620.0]

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Stop Sign				Stop Sign				Uncontrolled				Uncontrolled			
Rights:	Include				Include				Include				Include			
Lanes:	1	0	0	1 0	1	0	0	1 0	1	0	3	1 0	1	0	3	1 0
Volume Module:																
Base Vol:	0	0		0 0	0			0 0	0	2008		0 0	0	1924		0
Growth Adj:	1.00	1.00		1.00 1.00	1.00			1.00 1.00	1.00	1.00		1.00 1.00	1.00	1.00		1.00
Initial Bse:	0	0		0 0	0			0 0	0	2008		0 0	0	1924		0
Added Vol:	124	0		0 109	0			125 137	319			139 0	502			120
PasserByVol:	0	0		0 0	0			0 0	0			0 0	0			0
Initial Fut:	124	0		0 109	0			125 137	2327			139 0	2426			120
User Adj:	1.00	1.00		1.00 1.00	1.00			1.00 1.00	1.00	1.00		1.00 1.00	1.00	1.00		1.00
PHF Adj:	0.95	0.95		0.95 0.95	0.95			0.95 0.95	0.95	0.95		0.95 0.95	0.95	0.95		0.95
PHF Volume:	131	0		0 115	0			132 144	2449			146 0	2554			126
Reduct Vol:	0	0		0 0	0			0 0	0			0 0	0			0
Final Vol.:	131	0		0 115	0			132 144	2449			146 0	2554			126
Critical Gap Module:																
Critical Gp:	7.5	xxxx	xxxxx		7.5	xxxx		6.9 4.1	xxxx	xxxxx	xxxxx	xxxx xxxxx				
FollowUpTim:	3.5	xxxx	xxxxx		3.5	xxxx		3.3 2.2	xxxx	xxxxx	xxxxx	xxxx xxxxx				
Capacity Module:																
Cnflict Vol:	3449	xxxx	xxxxx		3518	xxxx		702 2680	xxxx	xxxxx		xxxx xxxx xxxxx				
Potent Cap.:	3	xxxx	xxxxx		2	xxxx		385 157	xxxx	xxxxx		xxxx xxxx xxxxx				
Move Cap.:	0	xxxx	xxxxx		0	xxxx		385 157	xxxx	xxxxx		xxxx xxxx xxxxx				
Volume/Cap:	xxxx	xxxx	xxxx		xxxx	xxxx		0.34 0.92	xxxx	xxxx		xxxx xxxx xxxx				
Level Of Service Module:																
2Way95thQ:	18.9	xxxx	xxxxx		16.8	xxxx	xxxxx	6.6	xxxx	xxxxx		xxxx xxxx xxxxx				
Control Del:	xxxxx	xxxx	xxxxx		xxxxx	xxxx	xxxxx	108.3	xxxx	xxxxx		xxxxx xxxx xxxxx				
LOS by Move:	F	*	*		F	*	*	F	*	*		* * *				
Movement:	LT -	LTR -	RT		LT -	LTR -	RT	LT -	LTR -	RT		LT - LTR - RT				
Shared Cap.:	xxxx	xxxx	0		xxxx	xxxx	385	xxxx	xxxx	xxxxx		xxxx xxxx xxxxx				
SharedQueue:	xxxxx	xxxx	xxxxx		xxxxx	xxxx	1.5	xxxxx	xxxx	xxxxx		xxxxx xxxx xxxxx				
Shrd ConDel:	xxxxx	xxxx	xxxxx		xxxxx	xxxx	19.1	xxxxx	xxxx	xxxxx		xxxxx xxxx xxxxx				
Shared LOS:	*	*	*		*	*	C	*	*	*		* * *				
ApproachDel:	xxxxxx				xxxxxx			xxxxxx				xxxxxx				
ApproachLOS:	F				F			*				*				

Note: Queue reported is the number of cars per lane.

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Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #501 E1

Average Delay (sec/veh): OVERFLOW Worst Case Level Of Service: F[xxxxx]

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Stop Sign				Stop Sign				Uncontrolled				Uncontrolled			
Rights:	Include				Include				Include				Include			
Lanes:	1	0	0	1 0	1	0	0	1 0	1	0	3	1 0	1	0	3	1 0
Volume Module:																
Base Vol:	0	0	0	0	0	0	0	0	2008	0	0	1924	0			
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Initial Bse:	0	0	0	0	0	0	0	2008	0	0	1924	0				
Added Vol:	39	59	130	159	43	45	50	337	41	145	538	189				
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0				
Initial Fut:	39	59	130	159	43	45	50	2345	41	145	2462	189				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95				
PHF Volume:	41	62	137	167	45	47	53	2468	43	153	2592	199				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Final Vol.:	41	62	137	167	45	47	53	2468	43	153	2592	199				
Critical Gap Module:																
Critical Gp:	7.5	6.5	6.9	7.5	6.5	6.9	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx				
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx				
Capacity Module:																
Cnflict Vol:	3571	5691	639	3750	5613	747	2791	xxxx	xxxxx	2512	xxxx	xxxxx				
Potent Cap.:	2	0	424	2	0	360	142	xxxx	xxxxx	183	xxxx	xxxxx				
Move Cap.:	0	0	424	0	0	360	142	xxxx	xxxxx	183	xxxx	xxxxx				
Volume/Cap:	xxxx	xxxx	0.32	xxxx	xxxx	0.13	0.37	xxxx	xxxx	0.83	xxxx	xxxx				
Level Of Service Module:																
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	1.6	xxxx	xxxxx	5.9	xxxx	xxxxx				
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	44.5	xxxx	xxxxx	80.7	xxxx	xxxxx				
LOS by Move:	*	*	*	*	*	*	E	*	*	F	*	*				
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT				
Shared Cap.:	xxxx	xxxx	0	xxxx	xxxx	0	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx				
SharedQueue:	xxxxx	xxxx	27.6	xxxxx	xxxx	14.0	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
Shared LOS:	*	*	F	*	*	F	*	*	*	*	*	*				
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			xxxxxx						
ApproachLOS:	F			F			*			*						

Note: Queue reported is the number of cars per lane.

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Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #502 E2

Average Delay (sec/veh): 3.5 Worst Case Level Of Service: A[9.5]

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Uncontrolled				Uncontrolled				Stop Sign				Stop Sign			
Rights:	Include				Include				Include				Include			
Lanes:	0	0	0	1 0	1	0	1	0 0	0	0	0	0 0	1	0	0	0 1
Volume Module:																
Base Vol:	0	96	0	0	199	0	0	0	0	0	0	0				
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Initial Bse:	0	96	0	0	199	0	0	0	0	0	0	0				
Added Vol:	0	15	6	113	10	0	0	0	0	6	0	101				
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0				
Initial Fut:	0	111	6	113	209	0	0	0	0	6	0	101				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95				
PHF Volume:	0	117	6	119	220	0	0	0	0	6	0	106				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Final Vol.:	0	117	6	119	220	0	0	0	0	6	0	106				
Critical Gap Module:																
Critical Gp:	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.4	xxxx	6.2				
FollowUpTim:	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	xxxx	3.3				
Capacity Module:																
Cnflict Vol:	xxxx	xxxx	xxxxx	123	xxxx	xxxxx	xxxx	xxxx	xxxxx	578	xxxx	120				
Potent Cap.:	xxxx	xxxx	xxxxx	1476	xxxx	xxxxx	xxxx	xxxx	xxxxx	481	xxxx	937				
Move Cap.:	xxxx	xxxx	xxxxx	1476	xxxx	xxxxx	xxxx	xxxx	xxxxx	452	xxxx	937				
Volume/Cap:	xxxx	xxxx	xxxx	0.08	xxxx	xxxx	xxxx	xxxx	xxxx	0.01	xxxx	0.11				
Level Of Service Module:																
2Way95thQ:	xxxx	xxxx	xxxxx	0.3	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.0	xxxx	0.4				
Control Del:	xxxxx	xxxx	xxxxx	7.7	xxxx	xxxxx	xxxxx	xxxx	xxxxx	13.1	xxxx	9.3				
LOS by Move:	*	*	*	A	*	*	*	*	*	B	*	A				
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT				
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx				
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*				
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			9.5						
ApproachLOS:	*			*			*			A						

Note: Queue reported is the number of cars per lane.

Ontario New Model Colony - Rich Haven Specific Plan
2015 PM Peak - Internal Intersections
Meyer, Mohaddes Associates

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #503 E3

Average Delay (sec/veh): 161.7 Worst Case Level Of Service: F[2295.3]

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Uncontrolled				Uncontrolled				Stop Sign				Stop Sign			
Rights:	Include				Include				Include				Include			
Lanes:	1	0	2	0 0	0	0	1	1 0	1	0	0	0 1	0	0	0	0 0
Volume Module:																
Base Vol:	0	642		0 0	1792		0	0	0		0	0	0		0	0
Growth Adj:	1.00	1.00		1.00 1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00
Initial Bse:	0	642		0 0	1792		0	0	0		0	0	0		0	0
Added Vol:	95	12		0 0	7		145	130	0		73	0	0		0	0
PasserByVol:	0	0		0 0	0		0	0	0		0	0	0		0	0
Initial Fut:	95	654		0 0	1799		145	130	0		73	0	0		0	0
User Adj:	1.00	1.00		1.00 1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00
PHF Adj:	0.95	0.95		0.95 0.95	0.95		0.95	0.95	0.95		0.95	0.95	0.95		0.95	0.95
PHF Volume:	100	688		0 0	1894		153	137	0		77	0	0		0	0
Reduct Vol:	0	0		0 0	0		0	0	0		0	0	0		0	0
Final Vol.:	100	688		0 0	1894		153	137	0		77	0	0		0	0
Critical Gap Module:																
Critical Gp:	4.1	xxxx	xxxxx	xxxxx xxxx	xxxxx			6.8	xxxx		6.9	xxxxx	xxxx	xxxxx		
FollowUpTim:	2.2	xxxx	xxxxx	xxxxx xxxx	xxxxx			3.5	xxxx		3.3	xxxxx	xxxx	xxxxx		
Capacity Module:																
Cnflict Vol:	2046	xxxx	xxxxx	xxxx xxxx	xxxxx			2514	xxxx		1023	xxxx	xxxx	xxxxx		
Potent Cap.:	279	xxxx	xxxxx	xxxx xxxx	xxxxx			24	xxxx		237	xxxx	xxxx	xxxxx		
Move Cap.:	279	xxxx	xxxxx	xxxx xxxx	xxxxx			17	xxxx		237	xxxx	xxxx	xxxxx		
Volume/Cap:	0.36	xxxx	xxxx	xxxx xxxx	xxxx			7.96	xxxx		0.32	xxxx	xxxx	xxxx		
Level Of Service Module:																
2Way95thQ:	1.6	xxxx	xxxxx	xxxx xxxx	xxxxx			17.8	xxxx		1.4	xxxx	xxxx	xxxxx		
Control Del:	25.0	xxxx	xxxxx	xxxxx xxxx	xxxxx			3569	xxxx		27.4	xxxxx	xxxx	xxxxx		
LOS by Move:	C	*	*	* *	*			F	*		D	*	*	*		
Movement:	LT - LTR - RT				LT - LTR - RT				LT - LTR - RT				LT - LTR - RT			
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx xxxx	xxxxx			xxxx	xxxx	xxxxx		xxxx	xxxx	xxxxx		
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx xxxx	xxxxx			xxxxx	xxxx	xxxxx		xxxxx	xxxx	xxxxx		
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx xxxx	xxxxx			xxxxx	xxxx	xxxxx		xxxxx	xxxx	xxxxx		
Shared LOS:	*	*	*	* *	*			*	*	*		*	*	*		
ApproachDel:	xxxxxx			xxxxxx				2295.3				xxxxxx				
ApproachLOS:	*			*				F				*				

Note: Queue reported is the number of cars per lane.

Ontario New Model Colony - Rich Haven Specific Plan
2015 PM Peak - Internal Intersections
Meyer, Mohaddes Associates

Lane Geometry Report

Number of approach lanes: (L) (LT) (T) (RT) (R) (LTR)

Node	Intersection	NB	SB	EB	WB
101	A1	100010	000000	001100	102000
102	A2	001100	102000	000000	100010
103	A3	001100	102000	000000	100010
104	A4	101000	000100	100010	000000
105	A5	000000	100010	102000	001100
106	A6	000000	100010	102000	001100
107	A7	000000	100010	102000	001100
201	B1	001100	102000	000000	100010
202	B2	101000	000100	100010	000000
203	B3	001100	102000	000000	100010
204	B4	101000	001000	100010	000000
301	C1	001100	102000	000000	100010
302	C2	000000	100010	104000	003100
401	D1	100100	100100	100100	100100
402	D2	100100	100100	103100	103100
501	E1	100100	100100	103100	103100
502	E2	000100	101000	000000	100010
503	E3	102000	001100	100010	000000

RESPONSE TO

COMMENT #4-5 AND

DETAILED COMMENTS #4-9F-J

RECOMMENDED MITIGATION MEASURES FOR 2015

RECOMMENDED MITIGATION MEASURES FOR 2015 – BASELINE CONDITIONS

ALL CHANGES TO THE TEXT AND TABLES FROM THE PREVIOUS REPORT ARE INDICATED IN CORRECTION FORMAT AND CHANGES TO THE FIGURES ARE INDICATED IN RED (INSIDE A CIRCLE).

TABLES 10 AND 19, AND PAGES OF APPENDIX G AND APPENDIX I REPLACE THE TABLES 10 AND 19, AND THE CORRESPONDING PAGES OF APPENDIX G AND APPENDIX I OF THE PREVIOUS TRAFFIC STUDY REPORT.

6.3 Project Site Primary Access and Locations

Figure 3 illustrates the project site access locations for the proposed Rich-Haven development. Project access points A1-7, B1-4, C1-2, and D-1 represent the primary access intersections that serve traffic volumes entering and exiting the project site for the residential component of the project. Similarly intersections D1-2 and E1-3 represent the primary access intersections that serve traffic volumes entering and exiting the project site for the mixed-use component of the project. MMA performed site specific project trip generation and distribution analyses based on the most current land use designations for the planned specific neighborhoods and areas that comprise the Rich-Haven development. Future level of service analysis and traffic signal warrants analyses were conducted at each primary access intersection. Each intersection was analyzed as a stop-controlled intersection at the minor street approach only. A signal warrants analysis identified the need for traffic signalization at Primary Access Intersection D2 and E1 along Edison Avenue, and E3 along Milliken Avenue. Both of these access points serve the planned mixed-use district. Detailed HCM worksheets and signal warrants analyses are included in **Appendix F**.

6.4 Recommended Mitigation Measures for 2015

The following mitigation measures are proposed to bring projected deficient intersections to acceptable operating conditions, (LOS D or better and V/C of less than 1.0) per City of Ontario standards. The mitigated level of service forecasts for the AM and PM peak hours are shown in **Table 7**.

The following mitigation measures are within the guidelines of the *City of Ontario Sphere of Influence General Plan Amendment (January 7, 1998).* An analysis of the traffic forecasts from the city's buildout model, the *Updated Buildout Ontario NMC Traffic Model (September 2005),* identifies that the Year 2015 mitigation measures presented in this section would satisfy the operating conditions of the intersections for buildout conditions. This is due to the subsequent redistribution of traffic expected beyond Year 2015.

Description of Study Intersection Mitigation Measures:

Intersection #4 Archibald Avenue/Edison Avenue
- provide EB free-flow-right-turn only lane

Intersection #10 Haven Avenue/SR-60 EB Ramps
- restripe EB center lane as shared left-turn/right-turn lane

Intersection #11 Haven Avenue/Riverside Drive
- provide NB and SB left turn protected phasing

Intersection #13 Haven Avenue/Edison Avenue
- provide NB and SB left turn protected phasing

Intersection #17 Milliken Avenue/SR-60 WB Ramps
- provide NB left-turn only lane
- restripe WB right-turn only lane as a shared left-turn/right-turn lane

Deleted: provide WB shared left-turn/right-turn lane

Intersection #18 Milliken Avenue/SR-60 EB Ramps
- restripe EB left-turn only lane as a shared left-turn/right-turn lane
- restripe EB shared left-turn/right-turn lane as a right-turn only lane

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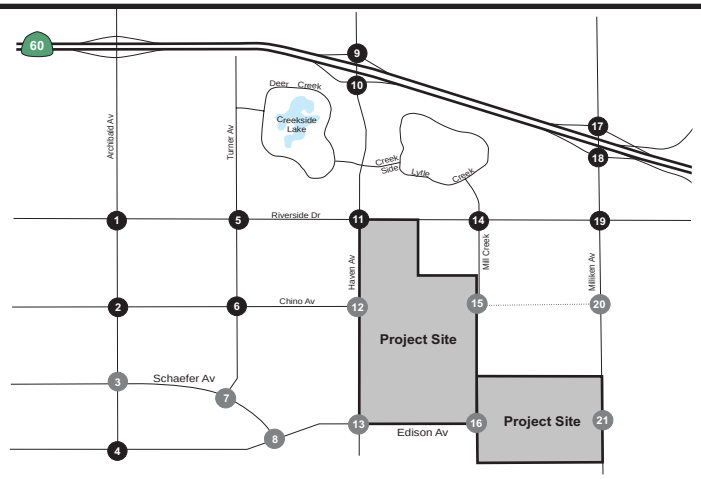

NOT TO SCALE

Legend

- Project Site
- # Study Intersection
- # Prop. Intersection
- * Mitigations
- PRO Protected Phase

1. Archibald Av/Riverside Dr

2. Archibald Av/Chino Av

3. Archibald Av/Schaefer Av

4. Archibald Av/Edison Av

5. Turner Av/Riverside Dr

6.Turner Av/Chino Av

7.Turner Av/Schaefer Av

8. Edison Av/Scaefer Av

9. Haven Av/SR-60 WB Ramps

10. Haven Av/SR-60 EB Ramps

11. Haven Av/Riverside Dr

12. Haven Av/Chino Av

13. Haven Av/Edison Av

14. Mill Creek Av/Riverside Dr

15. Mil Creek Av/Chino Av

16. Mill Creek Av/Edison Av

17. Milliken Av/SR-60 WB Ramps

18. Milliken Av/SR-60 EB Ramps

19. Milliken Av/Riverside Dr

20. Milliken Av/Chino Av

21. Milliken Av/Edison Av

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Rich-Haven Specific Plan TIA
City of Ontario

FIGURE 17
2015 Future With Mitigation Lane Configuration

G:\USERS\2005\J05-1637 Ontario NMC Rich-Haven Specific Plan\Revised Report 6-02-2006\GRA\Figure 17.cdr 9/27/06

TABLE 7: 2015 FUTURE PROJECT CONDITIONS WITH MITIGATIONS

Intersection	2015 Future Project With Mitigations					
	AM Peak Hour			PM Peak Hour		
	LOS	Delay (Sec.)	V/C	LOS	Delay (Sec.)	V/C
1. Archibald Avenue at Riverside Drive	C	23.9	0.591	C	26.7	0.752
2. Archibald Avenue at Chino Avenue	B	12.0	0.501	B	13.0	0.534
3. Archibald Avenue at Schaefer Avenue	B	16.5	0.521	B	19.2	0.633
4. Archibald Avenue at Edison Avenue	C	29.4	0.684	**C**	**32.7**	**0.787**
5. Turner Avenue at Riverside Drive	B	14.1	0.292	B	14.5	0.332
6. Turner Avenue at Chino Avenue [a]	A	8.1	0.084	A	8.3	0.103
7. Turner Avenue at Schaefer Avenue	A	2.3	0.099	A	1.9	0.117
8. Edison Avenue at Schaefer Avenue	A	2.9	0.347	A	7.4	0.440
9. Haven Avenue at SR-60 WB Ramps	A	9.4	0.322	B	11.3	0.563
10. Haven Avenue at SR-60 EB Ramps	A	8.6	0.624	**C**	**23.1**	**0.776**
11. Haven Avenue at Riverside Drive	**C**	**31.1**	**0.815**	**D**	**36.2**	**0.883**
12. Haven Avenue at Chino Avenue	A	8.4	0.521	A	8.8	0.677
13. Haven Avenue at Edison Avenue	C	30.7	0.745	**D**	**42.8**	**0.932**
14. Mill Creek Avenue at Riverside Drive	B	18.4	0.589	B	19.5	0.697
15. Mill Creek Avenue at Chino Avenue	B	14.3	0.164	B	14.5	0.282
16. Mill Creek Avenue at Edison Avenue	A	5.7	0.374	A	4.0	0.489
17. Milliken Avenue at SR-60 WB Ramps	C	22.2	0.584	**D**	**44.4**	**1.022**
18. Milliken Avenue at SR-60 EB Ramps	B	12.4	0.759	**C**	**22.2**	**0.908**
19. Milliken Avenue at Riverside Drive	**C**	**29.6**	**0.739**	**C**	**34.0**	**0.886**
20. Milliken Avenue/Hamner Avenue at Chino Avenue	B	14.0	0.335	A	6.5	0.384
21. Milliken Avenue/Hamner Avenue at Edison Avenue	C	30.8	0.828	**D**	**41.4**	**0.980**

Note: LOS = Level of Service, Delay = Average Vehicle Delay (Seconds), V/C = Volume-to-Capacity Ratio
HCM 2000 Operations Methodology
BOLD indicates mitigated operating conditions.

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Deleted: 18.0
Deleted: 0.448
Deleted: C
Deleted: 31.1
Deleted: 0.944
Deleted: A
Deleted: 1.3
Deleted: 0.595
Deleted: A
Deleted: 1.9
Deleted: 0.659

TABLE 10
INTERSECTION LANE NEEDS AND MITIGATION COSTS

Intersection	Additional Lane Needs															Signal Phasing	Intersection Signalization	Restripe Lanes Only	Free Right Turn	Improvement Costs					Worst Peak Hour	Project Contribution	Project Share $
	NORTHBOUND			EASTBOUND			SOUTHBOUND			WESTBOUND			INTERSECTION TOT							Lump Sum	Left-Turn Lanes	Through Lanes	Right-Turn Lanes	Total			
	L	T	R	L	T	R	L	T	R	L	T	R	L	T	R												
4. Archibald Avenue at Edison Avenue													0	0	0				**	$106,800				$106,800	AM	9.32%	$9,954
10. Haven Avenue and SR 60 EB Ramps													0	0	0			*		$500				$500	PM	239.92%	$1,200
11. Haven Avenue at Riverside Drive													0	0	0	*				$25,000				$25,000	PM	34.88%	$8,721
13. Haven Avenue at Edison Avenue													0	0	0	*				$25,000				$25,000	PM	13.39%	$3,348
17. Milliken Avenue at SR 60 Freeway westbound ramps	1												1	0	0			*		$500	$53,400			$53,900	AM	39.52%	$21,299
18. Milliken Avenue at SR 60 Freeway eastbound ramps													0	0	0			*		$500				$500	AM	26.12%	$131
19. Milliken Avenue at Riverside Drive				1								1	1	0	1	*				$25,000	$53,400		$53,400	$131,800	AM	23.29%	$30,693
21. Milliken Avenue/Hamner Avenue at Edison Avenue (proposed new alignment)								1	0	1			1	1	0			*		$500	$53,400	$289,720		$343,620	PM	26.74%	$91,899
															Preliminary Estimated Costs					**$183,800**	**$160,200**	**$289,720**	**$53,400**	**$687,120**		**24.34%**	**$167,244**

Itemized Tool Box for Intersection Mitigation

Ramp Intersection Improvements

Widen existing OC structure	$ 110	sq. ft	
Widen OC structure - 1 through lane	$ 1,584,000	(600x2)x12x$110=**$1,584,000**	assumes 12' wide lane, 600' on one side of intersection
Widen OC structure - 1LT/RT lane	$ 330,000	250x12x$110=**$330,000**	250' of roadwork included
Widen ramps - 1 Lane	$ 350,000		
Widen Ramps - 2 Lanes	$ 700,000		
Signalize Ramp Intersection (no roadwork)	$ 90,000	per location	

Street Intersection Improvements

Left-Turn Lane	$ 53,400	
Through Lane	$ 289,720	$15.78 per square foot to construct a through lane for a length of 600' before and after intersection with a transition lane of 55:1 (Transition Lane = 600/2)
Right-Turn Lane	$ 53,400	
Free Right Turn (with existing RT pocket)	$ 53,400	
Free Right Turn (no existing RT pocket)	$ 106,800	
Restripe lanes Only	$ 500	
Signalization of intersection (with roadwork)	$ 250,000	per location
Signalization of intersection (no roadwork)	$ 90,000	per location
Upgrade existing signal (new pole,signal head,camera,etc)	$ 75,000	per intersection
Add signal heads (ex. Permitted to Protected LT, Overlap RT)	$ 25,000	per intersection
Adjustment to signal phasing (2 phase to 4 phase, new signal heads)	$ 25,000	same as adding signal heads

APPENDIX
G
LOS CALCULATIONS
2015 FUTURE PROJECT
WITH MITIGATIONS

Ontario New Model - Rich Haven External Intersections
2015 AM Peak - Mitigations (Base Scenario Trip Generation)
Meyer, Mohaddes Associates

Impact Analysis Report
Level Of Service

Intersection	Base LOS	Base Del/ Veh	Base V/ C	Future LOS	Future Del/ Veh	Future V/ C	Change in
# 1 Archibald Avenue/Riverside Dri	C	23.4	0.581	C	23.4	0.581	+ 0.000 D/V
# 2 Archibald Avenue/Chino Avenue	B	11.2	0.489	B	11.2	0.489	+ 0.000 D/V
# 3 Archibald Avenue/Schaefer Aven	B	15.9	0.509	B	15.9	0.509	+ 0.000 D/V
# 4 Archibald Avenue/Edison Avenue	C	29.0	0.668	C	29.0	0.668	+ 0.000 D/V
# 5 Turner Avenue/Riverside Drive	B	14.1	0.294	B	14.1	0.294	+ 0.000 D/V
# 6 Turner Avenue/Chino Avenue	A	8.0	0.078	A	8.0	0.078	+ 0.000 V/C
# 7 Turner Avenue at Schaefer Aven	A	2.5	0.093	A	2.5	0.093	+ 0.000 D/V
# 8 Edison Avenue at Schaefer Aven	A	3.0	0.327	A	3.0	0.327	+ 0.000 D/V
# 9 Haven Avenue/SR-60 WB Ramps	A	9.6	0.301	A	9.6	0.301	+ 0.000 D/V
# 10 Haven Avenue/SR-60 EB Ramps	B	11.2	0.567	B	11.2	0.567	+ 0.000 D/V
# 11 Haven Avenue/Riverside Drive	C	30.0	0.777	C	30.0	0.777	+ 0.000 D/V
# 12 Haven Avenue at Chino Avenue	A	4.7	0.450	A	4.7	0.450	+ 0.000 D/V
# 13 Haven Avenue at Edison Avenue	C	30.1	0.720	C	30.1	0.720	+ 0.000 D/V
# 14 MIll Creek Avenue/Riverside Dr	B	17.9	0.579	B	17.9	0.579	+ 0.000 D/V
# 15 Mill Creek Avenue at Chino Ave	B	13.3	0.126	B	13.3	0.126	+ 0.000 D/V
# 16 Mill Creek Avenue at Edison Av	A	5.9	0.356	A	5.9	0.356	+ 0.000 D/V
# 17 Milliken Avenue/SR-60 WB Ramps	C	22.2	0.567	C	22.2	0.567	+ 0.000 D/V
# 18 Milliken Avenue/SR-60 EB Ramps	B	11.9	0.718	B	11.9	0.718	+ 0.000 D/V
# 19 Milliken Avenue/Riverside Driv	C	28.8	0.713	C	28.8	0.713	+ 0.000 D/V
# 20 Milliken Ave / Chino Ave	B	12.6	0.308	B	12.6	0.308	+ 0.000 D/V
# 21 Milliken Avenue/Edison Avenue	C	28.6	0.771	C	28.6	0.771	+ 0.000 D/V
#550 Haven Avenue/Creekside Drive		0.0	0.000		0.0	0.000	+ 0.000 D/V

Ontario New Model - Rich Haven External Intersections
2015 AM Peak - Mitigations (Base Scenario Trip Generation)
Meyer, Mohaddes Associates

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #1 Archibald Avenue/Riverside Drive

Cycle (sec): 100 Critical Vol./Cap.(X): 0.581
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 23.4
Optimal Cycle: 54 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	2	1 0	1 0	2	1 0	1 0	1	1 0	1 0	1	1 0
Volume Module:												
Base Vol:	177	1573	81	62	486	65	154	440	66	52	239	119
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	177	1573	81	62	486	65	154	440	66	52	239	119
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	177	1573	81	62	486	65	154	440	66	52	239	119
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	186	1656	85	65	512	68	162	463	69	55	252	125
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	186	1656	85	65	512	68	162	463	69	55	252	125
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	186	1656	85	65	512	68	162	463	69	55	252	125
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.90	0.90	0.90	0.90	0.89	0.89	0.90	0.93	0.93	0.90	0.90	0.90
Lanes:	1.00	2.85	0.15	1.00	2.65	0.35	1.00	1.74	0.26	1.00	1.34	0.66
Final Sat.:	1710	4898	252	1710	4493	601	1710	3079	462	1710	2290	1140
Capacity Analysis Module:												
Vol/Sat:	0.11	0.34	0.34	0.04	0.11	0.11	0.09	0.15	0.15	0.03	0.11	0.11
Crit Moves:		****			****			****				****
Green/Cycle:	0.32	0.58	0.58	0.07	0.33	0.33	0.16	0.29	0.29	0.06	0.19	0.19
Volume/Cap:	0.34	0.58	0.58	0.58	0.34	0.34	0.58	0.52	0.52	0.52	0.58	0.58
Delay/Veh:	26.6	13.5	13.5	52.8	25.4	25.4	41.8	30.1	30.1	49.9	38.3	38.3
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	26.6	13.5	13.5	52.8	25.4	25.4	41.8	30.1	30.1	49.9	38.3	38.3
LOS by Move:	C	B	B	D	C	C	D	C	C	D	D	D
HCM2kAvgQ:	5	13	13	3	5	5	6	8	8	2	6	6

Note: Queue reported is the number of cars per lane.

Ontario New Model - Rich Haven External Intersections
2015 AM Peak with Project - Mitigations
Meyer, Mohaddes Associates

Impact Analysis Report
Level Of Service

Intersection	Base LOS	Base Del/ Veh	Base V/ C	Future LOS	Future Del/ Veh	Future V/ C	Change in
# 1 Archibald Avenue/Riverside Dri	C	23.9	0.591	C	23.9	0.591	+ 0.000 D/V
# 2 Archibald Avenue/Chino Avenue	B	12.0	0.501	B	12.0	0.501	+ 0.000 D/V
# 3 Archibald Avenue/Schaefer Aven	B	16.5	0.521	B	16.5	0.521	+ 0.000 D/V
# 4 Archibald Avenue/Edison Avenue	C	29.4	0.684	C	29.4	0.684	+ 0.000 D/V
# 5 Turner Avenue/Riverside Drive	B	14.1	0.292	B	14.1	0.292	+ 0.000 D/V
# 6 Turner Avenue/Chino Avenue	A	8.1	0.084	A	8.1	0.084	+ 0.000 V/C
# 7 Turner Avenue at Schaefer Aven	A	2.3	0.099	A	2.3	0.099	+ 0.000 D/V
# 8 Edison Avenue at Schaefer Aven	A	2.9	0.347	A	2.9	0.347	+ 0.000 D/V
# 9 Haven Avenue/SR-60 WB Ramps	A	9.4	0.322	A	9.4	0.322	+ 0.000 D/V
# 10 Haven Avenue/SR-60 EB Ramps	A	8.6	0.624	A	8.6	0.624	+ 0.000 D/V
# 11 Haven Avenue/Riverside Drive	C	31.1	0.815	C	31.1	0.815	+ 0.000 D/V
# 12 Haven Avenue at Chino Avenue	A	8.4	0.521	A	8.4	0.521	+ 0.000 D/V
# 13 Haven Avenue at Edison Avenue	C	30.7	0.745	C	30.7	0.745	+ 0.000 D/V
# 14 MIll Creek Avenue/Riverside Dr	B	18.4	0.589	B	18.4	0.589	+ 0.000 D/V
# 15 Mill Creek Avenue at Chino Ave	B	14.3	0.164	B	14.3	0.164	+ 0.000 D/V
# 16 Mill Creek Avenue at Edison Av	A	5.7	0.374	A	5.7	0.374	+ 0.000 D/V
# 17 Milliken Avenue/SR-60 WB Ramps	C	22.2	0.584	C	22.2	0.584	+ 0.000 D/V
# 18 Milliken Avenue/SR-60 EB Ramps	B	12.4	0.759	B	12.4	0.759	+ 0.000 D/V
# 19 Milliken Avenue/Riverside Driv	C	29.6	0.739	C	29.6	0.739	+ 0.000 D/V
# 20 Milliken Ave / Chino Ave	B	14.0	0.335	B	14.0	0.335	+ 0.000 D/V
# 21 Milliken Avenue/Edison Avenue	C	30.8	0.828	C	30.8	0.828	+ 0.000 D/V
#550 Haven Avenue/Creekside Drive		0.0	0.000		0.0	0.000	+ 0.000 D/V

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Meyer, Mohaddes Associates

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #1 Archibald Avenue/Riverside Drive

Cycle (sec): 100 Critical Vol./Cap.(X): 0.591
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 23.9
Optimal Cycle: 56 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	2	1 0	1 0	2	1 0	1 0	1	1 0	1 0	1	1 0
Volume Module:												
Base Vol:	184	1580	75	65	507	76	158	440	68	55	249	126
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	184	1580	75	65	507	76	158	440	68	55	249	126
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	184	1580	75	65	507	76	158	440	68	55	249	126
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	194	1663	79	68	534	80	166	463	72	58	262	133
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	194	1663	79	68	534	80	166	463	72	58	262	133
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	194	1663	79	68	534	80	166	463	72	58	262	133
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.90	0.90	0.90	0.90	0.89	0.89	0.90	0.93	0.93	0.90	0.90	0.90
Lanes:	1.00	2.86	0.14	1.00	2.61	0.39	1.00	1.73	0.27	1.00	1.33	0.67
Final Sat.:	1710	4917	233	1710	4425	663	1710	3064	474	1710	2277	1152
Capacity Analysis Module:												
Vol/Sat:	0.11	0.34	0.34	0.04	0.12	0.12	0.10	0.15	0.15	0.03	0.12	0.12
Crit Moves:		****			****			****			****	
Green/Cycle:	0.31	0.57	0.57	0.07	0.33	0.33	0.16	0.29	0.29	0.07	0.19	0.19
Volume/Cap:	0.37	0.59	0.59	0.59	0.37	0.37	0.59	0.51	0.51	0.51	0.59	0.59
Delay/Veh:	27.3	14.1	14.1	53.1	25.6	25.6	42.0	29.8	29.8	49.2	38.0	38.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	27.3	14.1	14.1	53.1	25.6	25.6	42.0	29.8	29.8	49.2	38.0	38.0
LOS by Move:	C	B	B	D	C	C	D	C	C	D	D	D
HCM2kAvgQ:	5	13	13	3	5	5	6	8	8	3	7	7

Note: Queue reported is the number of cars per lane.

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Intersection #16 Mill Creek Avenue at Edison Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.374
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 5.7
Optimal Cycle: 23 Level Of Service: A

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	0 1	0	1	0 0 1	0	1	0 3 1	0	1	0 3 1 0
Volume Module:												
Base Vol:	117	22	6	40	9	8	10	1549	48	5	1800	38
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	117	22	6	40	9	8	10	1549	48	5	1800	38
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	117	22	6	40	9	8	10	1549	48	5	1800	38
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	123	23	6	42	9	8	11	1631	51	5	1895	40
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	123	23	6	42	9	8	11	1631	51	5	1895	40
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	123	23	6	42	9	8	11	1631	51	5	1895	40
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.69	0.97	0.97	0.67	0.93	0.93	0.08	0.91	0.91	0.11	0.91	0.91
Lanes:	1.00	0.79	0.21	1.00	0.53	0.47	1.00	3.88	0.12	1.00	3.92	0.08
Final Sat.:	1316	1445	394	1274	934	831	157	6681	207	212	6753	143
Capacity Analysis Module:												
Vol/Sat:	0.09	0.02	0.02	0.03	0.01	0.01	0.07	0.24	0.24	0.02	0.28	0.28
Crit Moves:	****										****	
Green/Cycle:	0.25	0.25	0.25	0.25	0.25	0.25	0.75	0.75	0.75	0.75	0.75	0.75
Volume/Cap:	0.37	0.06	0.06	0.13	0.04	0.04	0.09	0.33	0.33	0.03	0.37	0.37
Delay/Veh:	31.7	28.6	28.6	29.3	28.4	28.4	3.7	4.2	4.2	3.3	4.4	4.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	31.7	28.6	28.6	29.3	28.4	28.4	3.7	4.2	4.2	3.3	4.4	4.4
LOS by Move:	C	C	C	C	C	C	A	A	A	A	A	A
HCM2kAvgQ:	4	1	1	1	0	0	0	5	5	0	6	6

Note: Queue reported is the number of cars per lane.

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Intersection #17 Milliken Avenue/SR-60 WB Ramps

Cycle (sec): 100 Critical Vol./Cap.(X): 0.584
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 22.2
Optimal Cycle: 45 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Permitted			Split Phase			Split Phase		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	2	0	2 0 0	0	0	2 0 1	0	0	0 0 0	1	0	1! 0 0
Volume Module:												
Base Vol:	493	986	0	0	605	2	0	0	0	245	0	272
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	493	986	0	0	605	2	0	0	0	245	0	272
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	493	986	0	0	605	2	0	0	0	245	0	272
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	519	1038	0	0	637	2	0	0	0	258	0	286
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	519	1038	0	0	637	2	0	0	0	258	0	286
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	519	1038	0	0	637	2	0	0	0	258	0	286
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.85	0.95	1.00	0.95	0.95	0.85	0.95	1.00	1.00	0.85	1.00	0.90
Lanes:	2.00	2.00	0.00	0.00	2.00	1.00	0.00	0.00	0.00	1.32	0.00	0.68
Final Sat.:	3230	3610	0	0	3610	1615	0	0	0	2142	0	1159
Capacity Analysis Module:												
Vol/Sat:	0.16	0.29	0.00	0.00	0.18	0.00	0.00	0.00	0.00	0.12	0.00	0.25
Crit Moves:	****				****							****
Green/Cycle:	0.28	0.58	0.00	0.00	0.30	0.30	0.00	0.00	0.00	0.42	0.00	0.42
Volume/Cap:	0.58	0.50	0.00	0.00	0.58	0.00	0.00	0.00	0.00	0.28	0.00	0.58
Delay/Veh:	32.3	12.7	0.0	0.0	30.4	24.4	0.0	0.0	0.0	19.0	0.0	23.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	32.3	12.7	0.0	0.0	30.4	24.4	0.0	0.0	0.0	19.0	0.0	23.1
LOS by Move:	C	B	A	A	C	C	A	A	A	B	A	C
HCM2kAvgQ:	8	10	0	0	9	0	0	0	0	4	0	10

Note: Queue reported is the number of cars per lane.

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Intersection #18 Milliken Avenue/SR-60 EB Ramps

Cycle (sec): 100 Critical Vol./Cap.(X): 0.759
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 12.4
Optimal Cycle: 95 Level Of Service: B

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Split Phase			Split Phase		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0 1	1 0	1	0 2	0 0	0	0 1!	0 1	0	0 0	0 0
Volume Module:												
Base Vol:	0	1445	446	4	846	0	34	0	502	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	1445	446	4	846	0	34	0	502	0	0	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	1445	446	4	846	0	34	0	502	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	0	1521	469	4	891	0	36	0	528	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	1521	469	4	891	0	36	0	528	0	0	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	0	1521	469	4	891	0	36	0	528	0	0	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.92	0.92	0.90	0.95	1.00	0.81	1.00	0.86	0.95	1.00	1.00
Lanes:	0.00	1.53	0.47	1.00	2.00	0.00	0.13	0.00	1.87	0.00	0.00	0.00
Final Sat.:	0	2662	822	1710	3610	0	193	0	3051	0	0	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.57	0.57	0.00	0.25	0.00	0.19	0.00	0.17	0.00	0.00	0.00
Crit Moves:		****			****			****				
Green/Cycle:	0.00	0.75	0.75	0.00	0.76	0.00	0.24	0.00	0.24	0.00	0.00	0.00
Volume/Cap:	0.00	0.76	0.76	0.76	0.33	0.00	0.76	0.00	0.71	0.00	0.00	0.00
Delay/Veh:	0.0	8.5	8.5	264.1	4.0	0.0	39.6	0.0	37.5	0.0	0.0	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	8.5	8.5	264.1	4.0	0.0	39.6	0.0	37.5	0.0	0.0	0.0
LOS by Move:	A	A	A	F	A	A	D	A	D	A	A	A
HCM2kAvgQ:	0	20	20	1	5	0	10	0	9	0	0	0

Note: Queue reported is the number of cars per lane.

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Intersection #19 Milliken Avenue/Riverside Drive

Cycle (sec): 100 Critical Vol./Cap.(X): 0.739
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 29.6
Optimal Cycle: 87 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	2	0 3	0 1	2	0 3	0 1	2	0 1	1 0	1	0 2	0 1
Volume Module:												
Base Vol:	42	812	51	726	151	471	782	809	35	3	285	296
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	42	812	51	726	151	471	782	809	35	3	285	296
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	42	812	51	726	151	471	782	809	35	3	285	296
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	44	855	54	764	159	496	823	852	37	3	300	312
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	44	855	54	764	159	496	823	852	37	3	300	312
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	44	855	54	764	159	496	823	852	37	3	300	312
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.85	0.91	0.85	0.85	0.91	0.85	0.85	0.94	0.94	0.90	0.95	0.85
Lanes:	2.00	3.00	1.00	2.00	3.00	1.00	2.00	1.92	0.08	1.00	2.00	1.00
Final Sat.:	3230	5187	1615	3230	5187	1615	3230	3440	149	1710	3610	1615
Capacity Analysis Module:												
Vol/Sat:	0.01	0.16	0.03	0.24	0.03	0.31	0.25	0.25	0.25	0.00	0.08	0.19
Crit Moves:		****			****			****				****
Green/Cycle:	0.02	0.22	0.22	0.32	0.52	0.52	0.34	0.45	0.45	0.00	0.11	0.43
Volume/Cap:	0.59	0.74	0.15	0.74	0.06	0.59	0.74	0.55	0.55	0.55	0.74	0.45
Delay/Veh:	60.3	38.7	31.4	33.2	11.9	17.8	31.5	20.2	20.2	128.7	50.0	20.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	60.3	38.7	31.4	33.2	11.9	17.8	31.5	20.2	20.2	128.7	50.0	20.4
LOS by Move:	E	D	C	C	B	B	C	C	C	F	D	C
HCM2kAvgQ:	2	11	1	13	1	11	14	11	11	1	6	7

Note: Queue reported is the number of cars per lane.

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Intersection #550 Haven Avenue/Creekside Drive

Cycle (sec):	100			Critical Vol./Cap.(X):					0.000								
Loss Time (sec):	0 (Y+R=4.0 sec)			Average Delay (sec/veh):					0.0								
Optimal Cycle:	0			Level Of Service:													
Approach:	North Bound			South Bound			East Bound			West Bound							
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Protected			Protected			Prot+Permit			Prot+Permit							
Rights:	Include			Include			Include			Include							
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	1	1	0	1	0	1	1	0	1	0	1	0	1	1	0	1	0	1
Volume Module:																	
Base Vol:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Growth Adj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Initial Bse:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
User Adj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PHF Adj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PHF Volume:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PCE Adj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MLF Adj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Final Vol.:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Saturation Flow Module:																	
Sat/Lane:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Final Sat.:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Capacity Analysis Module:																	
Vol/Sat:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Crit Moves:																	
Green/Cycle:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Volume/Cap:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Delay/Veh:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LOS by Move:																	
HCM2kAvgQ:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Note: Queue reported is the number of cars per lane.

Ontario New Model - Rich Haven External Intersections
2015 AM Peak with Project - Mitigations
Meyer, Mohaddes Associates

Lane Geometry Report

Number of approach lanes: (L) (LT) (T) (RT) (R) (LTR)

Node	Intersection	NB	SB	EB	WB
1	Archibald Avenue/Riverside Drive	102100	102100	101100	101100
2	Archibald Avenue/Chino Avenue	102100	102100	100100	101010
3	Archibald Avenue/Schaefer Avenue	102100	102100	101100	101100
4	Archibald Avenue/Edison Avenue	202100	202100	204010	203100
5	Turner Avenue/Riverside Drive	101100	101100	101100	101100
6	Turner Avenue/Chino Avenue	101100	101100	101100	101100
7	Turner Avenue at Schaefer Avenue	000000	100001	102000	001100
8	Edison Avenue at Schaefer Avenue	000000	100001	104000	003100
9	Haven Avenue/SR-60 WB Ramps	203000	003010	000000	110010
10	Haven Avenue/SR-60 EB Ramps	002010	203000	100011	000000
11	Haven Avenue/Riverside Drive	101100	101100	101100	101100
12	Haven Avenue at Chino Avenue	101100	101100	101100	101100
13	Haven Avenue at Edison Avenue	101100	101100	103100	103100
14	MIll Creek Avenue/Riverside Drive	101010	100100	101100	101100
15	Mill Creek Avenue at Chino Avenue	101100	100100	101100	101100
16	Mill Creek Avenue at Edison Avenue	100100	100100	103100	103100
17	Milliken Avenue/SR-60 WB Ramps	202000	002010	000000	100001
18	Milliken Avenue/SR-60 EB Ramps	001100	102000	000011	000000
19	Milliken Avenue/Riverside Drive	203010	203010	201100	102010
20	Milliken Ave / Chino Ave	102000	003100	100010	000000
21	Milliken Avenue/Edison Avenue	101100	102100	103100	203100
550	Haven Avenue/Creekside Drive	101100	101100	101010	101010

Ontario New Model - Rich Haven External Intersections
2015 PM Peak with Project- Mitigations
Meyer, Mohaddes Associates

Impact Analysis Report
Level Of Service

Intersection	Base LOS	Base Del/Veh	Base V/C	Future LOS	Future Del/Veh	Future V/C	Change in
# 1 Archibald Avenue/Riverside Dri	C	26.7	0.752	C	26.7	0.752	+ 0.000 D/V
# 2 Archibald Avenue/Chino Avenue	B	13.0	0.534	B	13.0	0.534	+ 0.000 D/V
# 3 Archibald Avenue/Schaefer Aven	B	19.2	0.633	B	19.2	0.633	+ 0.000 D/V
# 4 Archibald Avenue/Edison Avenue	C	32.7	0.787	C	32.7	0.787	+ 0.000 D/V
# 5 Turner Avenue/Riverside Drive	B	14.5	0.332	B	14.5	0.332	+ 0.000 D/V
# 6 Turner Avenue/Chino Avenue	A	8.3	0.103	A	8.3	0.103	+ 0.000 V/C
# 7 Turner Avenue at Schaefer Aven	A	1.9	0.117	A	1.9	0.117	+ 0.000 D/V
# 8 Edison Avenue at Schaefer Aven	A	7.4	0.440	A	7.4	0.440	+ 0.000 D/V
# 9 Haven Avenue/SR-60 WB Ramps	B	11.3	0.563	B	11.3	0.563	+ 0.000 D/V
# 10 Haven Avenue/SR-60 EB Ramps	C	23.1	0.776	C	23.1	0.776	+ 0.000 D/V
# 11 Haven Avenue/Riverside Drive	D	36.2	0.883	D	36.2	0.883	+ 0.000 D/V
# 12 Haven Avenue at Chino Avenue	A	8.8	0.677	A	8.8	0.677	+ 0.000 D/V
# 13 Haven Avenue at Edison Avenue	D	42.8	0.932	D	42.8	0.932	+ 0.000 D/V
# 14 MIll Creek Avenue/Riverside Dr	B	19.5	0.697	B	19.5	0.697	+ 0.000 D/V
# 15 Mill Creek Avenue at Chino Ave	B	14.5	0.282	B	14.5	0.282	+ 0.000 D/V
# 16 Mill Creek Avenue at Edison Av	A	4.0	0.489	A	4.0	0.489	+ 0.000 D/V
# 17 Milliken Avenue/SR-60 WB Ramps	D	44.4	1.022	D	44.4	1.022	+ 0.000 D/V
# 18 Milliken Avenue/SR-60 EB Ramps	C	22.2	0.908	C	22.2	0.908	+ 0.000 D/V
# 19 Milliken Avenue/Riverside Driv	C	34.0	0.886	C	34.0	0.886	+ 0.000 D/V
# 20 Milliken Ave / Chino Ave	A	6.5	0.384	A	6.5	0.384	+ 0.000 D/V
# 21 Milliken Avenue/Edison Avenue	D	41.4	0.980	D	41.4	0.980	+ 0.000 D/V
#550 Haven Avenue/Creekside Drive		0.0	0.000		0.0	0.000	+ 0.000 D/V

Ontario New Model - Rich Haven External Intersections
2015 PM Peak with Project- Mitigations
Meyer, Mohaddes Associates

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #1 Archibald Avenue/Riverside Drive

Cycle (sec): 100 Critical Vol./Cap.(X): 0.752
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 26.7
Optimal Cycle: 92 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	2	1 0	1 0	2	1 0	1 0	1	1 0	1 0	1	1 0
Volume Module:												
Base Vol:	196	1074	77	108	1712	184	109	373	249	62	453	124
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	196	1074	77	108	1712	184	109	373	249	62	453	124
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	196	1074	77	108	1712	184	109	373	249	62	453	124
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	206	1131	81	114	1802	194	115	393	262	65	477	131
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	206	1131	81	114	1802	194	115	393	262	65	477	131
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	206	1131	81	114	1802	194	115	393	262	65	477	131
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.89	0.89	0.90	0.92	0.92
Lanes:	1.00	2.80	0.20	1.00	2.71	0.29	1.00	1.20	0.80	1.00	1.57	0.43
Final Sat.:	1710	4792	344	1710	4613	496	1710	2035	1358	1710	2743	751
Capacity Analysis Module:												
Vol/Sat:	0.12	0.24	0.24	0.07	0.39	0.39	0.07	0.19	0.19	0.04	0.17	0.17
Crit Moves:	****				****		****				****	
Green/Cycle:	0.16	0.53	0.53	0.15	0.52	0.52	0.09	0.27	0.27	0.05	0.23	0.23
Volume/Cap:	0.75	0.44	0.44	0.44	0.75	0.75	0.75	0.72	0.72	0.72	0.75	0.75
Delay/Veh:	51.2	14.6	14.6	40.0	20.2	20.2	63.3	36.1	36.1	71.2	39.8	39.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	51.2	14.6	14.6	40.0	20.2	20.2	63.3	36.1	36.1	71.2	39.8	39.8
LOS by Move:	D	B	B	D	C	C	E	D	D	E	D	D
HCM2kAvgQ:	8	8	8	4	19	19	5	11	11	4	11	11

Note: Queue reported is the number of cars per lane.

Ontario New Model - Rich Haven External Intersections
2015 PM Peak with Project- Mitigations
Meyer, Mohaddes Associates

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #16 Mill Creek Avenue at Edison Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.489
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 4.0
Optimal Cycle: 28 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Permitted				Permitted				Permitted				Permitted			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	0	1 0	1	0	0	1 0	1	0	3	1 0	1	0	3	1 0
Volume Module:																
Base Vol:	92	23	15		69	26	12		11	2319	196		12	2580	78	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	92	23	15		69	26	12		11	2319	196		12	2580	78	
Added Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
PasserByVol:	0	0	0		0	0	0		0	0	0		0	0	0	
Initial Fut:	92	23	15		69	26	12		11	2319	196		12	2580	78	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	0.95	0.95	0.95		0.95	0.95	0.95		0.95	0.95	0.95		0.95	0.95	0.95	
PHF Volume:	97	24	16		73	27	13		12	2441	206		13	2716	82	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	97	24	16		73	27	13		12	2441	206		13	2716	82	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Final Vol.:	97	24	16		73	27	13		12	2441	206		13	2716	82	
Saturation Flow Module:																
Sat/Lane:	1900	1900	1900		1900	1900	1900		1900	1900	1900		1900	1900	1900	
Adjustment:	0.62	0.94	0.94		0.62	0.95	0.95		0.05	0.90	0.90		0.05	0.91	0.91	
Lanes:	1.00	0.61	0.39		1.00	0.68	0.32		1.00	3.69	0.31		1.00	3.88	0.12	
Final Sat.:	1175	1082	706		1175	1239	572		86	6300	533		86	6686	202	
Capacity Analysis Module:																
Vol/Sat:	0.08	0.02	0.02		0.06	0.02	0.02		0.13	0.39	0.39		0.15	0.41	0.41	
Crit Moves:	****													****		
Green/Cycle:	0.17	0.17	0.17		0.17	0.17	0.17		0.83	0.83	0.83		0.83	0.83	0.83	
Volume/Cap:	0.49	0.13	0.13		0.37	0.13	0.13		0.16	0.47	0.47		0.18	0.49	0.49	
Delay/Veh:	39.6	35.5	35.5		38.0	35.5	35.5		2.7	2.4	2.4		2.8	2.5	2.5	
User DelAdj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
AdjDel/Veh:	39.6	35.5	35.5		38.0	35.5	35.5		2.7	2.4	2.4		2.8	2.5	2.5	
LOS by Move:	D	D	D		D	D	D		A	A	A		A	A	A	
HCM2kAvgQ:	3	1	1		2	1	1		0	6	6		0	7	7	

Note: Queue reported is the number of cars per lane.

Ontario New Model - Rich Haven External Intersections
2015 PM Peak with Project- Mitigations
Meyer, Mohaddes Associates

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #17 Milliken Avenue/SR-60 WB Ramps

Cycle (sec): 100 Critical Vol./Cap.(X): 1.022
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 44.4
Optimal Cycle: 180 Level Of Service: D

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Permitted				Split Phase				Split Phase			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	2	0	2	0 0	0	0	2	0 1	0	0	0	0 0	1	0	1!	0 0
Volume Module:																
Base Vol:	734	742	0		0	1967	114		0	0	0		351	0	162	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	734	742	0		0	1967	114		0	0	0		351	0	162	
Added Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
PasserByVol:	0	0	0		0	0	0		0	0	0		0	0	0	
Initial Fut:	734	742	0		0	1967	114		0	0	0		351	0	162	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	0.95	0.95	0.95		0.95	0.95	0.95		0.95	0.95	0.95		0.95	0.95	0.95	
PHF Volume:	773	781	0		0	2071	120		0	0	0		369	0	171	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	773	781	0		0	2071	120		0	0	0		369	0	171	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Final Vol.:	773	781	0		0	2071	120		0	0	0		369	0	171	
Saturation Flow Module:																
Sat/Lane:	1900	1900	1900		1900	1900	1900		1900	1900	1900		1900	1900	1900	
Adjustment:	0.85	0.95	1.00		0.95	0.95	0.85		0.95	1.00	1.00		0.87	1.00	0.92	
Lanes:	2.00	2.00	0.00		0.00	2.00	1.00		0.00	0.00	0.00		1.53	0.00	0.47	
Final Sat.:	3230	3610	0		0	3610	1615		0	0	0		2544	0	817	
Capacity Analysis Module:																
Vol/Sat:	0.24	0.22	0.00		0.00	0.57	0.07		0.00	0.00	0.00		0.15	0.00	0.21	
Crit Moves:	****					****										****
Green/Cycle:	0.23	0.80	0.00		0.00	0.56	0.56		0.00	0.00	0.00		0.20	0.00	0.20	
Volume/Cap:	1.02	0.27	0.00		0.00	1.02	0.13		0.00	0.00	0.00		0.71	0.00	1.02	
Delay/Veh:	76.5	2.7	0.0		0.0	47.5	10.5		0.0	0.0	0.0		40.2	0.0	84.4	
User DelAdj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
AdjDel/Veh:	76.5	2.7	0.0		0.0	47.5	10.5		0.0	0.0	0.0		40.2	0.0	84.4	
LOS by Move:	E	A	A		A	D	B		A	A	A		D	A	F	
HCM2kAvgQ:	20	3	0		0	43	2		0	0	0		9	0	17	

Note: Queue reported is the number of cars per lane.

Ontario New Model - Rich Haven External Intersections
2015 PM Peak with Project- Mitigations
Meyer, Mohaddes Associates

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #18 Milliken Avenue/SR-60 EB Ramps

Cycle (sec): 100 Critical Vol./Cap.(X): 0.908
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 22.2
Optimal Cycle: 180 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Split Phase			Split Phase		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0 1	1 0	1	0 2	0 0	0	0 1!	0 1	0	0 0	0 0
Volume Module:												
Base Vol:	0	1471	434	73	2249	0	6	0	761	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	1471	434	73	2249	0	6	0	761	0	0	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	1471	434	73	2249	0	6	0	761	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	0	1548	457	77	2367	0	6	0	801	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	1548	457	77	2367	0	6	0	801	0	0	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	0	1548	457	77	2367	0	6	0	801	0	0	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.92	0.92	0.90	0.95	1.00	0.81	1.00	0.85	0.95	1.00	1.00
Lanes:	0.00	1.54	0.46	1.00	2.00	0.00	0.02	0.00	1.98	0.00	0.00	0.00
Final Sat.:	0	2693	794	1710	3610	0	25	0	3207	0	0	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.58	0.58	0.04	0.66	0.00	0.25	0.00	0.25	0.00	0.00	0.00
Crit Moves:	****				****		****					
Green/Cycle:	0.00	0.67	0.67	0.05	0.72	0.00	0.28	0.00	0.28	0.00	0.00	0.00
Volume/Cap:	0.00	0.86	0.86	0.86	0.91	0.00	0.91	0.00	0.90	0.00	0.00	0.00
Delay/Veh:	0.0	16.2	16.2	98.8	16.3	0.0	47.8	0.0	46.8	0.0	0.0	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	16.2	16.2	98.8	16.3	0.0	47.8	0.0	46.8	0.0	0.0	0.0
LOS by Move:	A	B	B	F	B	A	D	A	D	A	A	A
HCM2kAvgQ:	0	28	28	5	35	0	16	0	16	0	0	0

Note: Queue reported is the number of cars per lane.

Ontario New Model - Rich Haven External Intersections
2015 PM Peak with Project- Mitigations
Meyer, Mohaddes Associates

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #19 Milliken Avenue/Riverside Drive

Cycle (sec): 100 Critical Vol./Cap.(X): 0.886
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 34.0
Optimal Cycle: 180 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	2	0 3	0 1	2	0 3	0 1	2	0 1	1 0	1	0 2	0 1
Volume Module:												
Base Vol:	43	425	9	789	1625	596	783	364	67	128	784	696
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	43	425	9	789	1625	596	783	364	67	128	784	696
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	43	425	9	789	1625	596	783	364	67	128	784	696
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	45	447	9	831	1711	627	824	383	71	135	825	733
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	45	447	9	831	1711	627	824	383	71	135	825	733
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	45	447	9	831	1711	627	824	383	71	135	825	733
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.85	0.91	0.85	0.85	0.91	0.85	0.85	0.93	0.93	0.90	0.95	0.85
Lanes:	2.00	3.00	1.00	2.00	3.00	1.00	2.00	1.69	0.31	1.00	2.00	1.00
Final Sat.:	3230	5187	1615	3230	5187	1615	3230	2979	548	1710	3610	1615
Capacity Analysis Module:												
Vol/Sat:	0.01	0.09	0.01	0.26	0.33	0.39	0.26	0.13	0.13	0.08	0.23	0.45
Crit Moves:	****					****	****				****	
Green/Cycle:	0.02	0.11	0.11	0.34	0.44	0.44	0.29	0.34	0.34	0.21	0.26	0.60
Volume/Cap:	0.89	0.76	0.05	0.76	0.75	0.89	0.89	0.38	0.38	0.38	0.89	0.76
Delay/Veh:	133.8	48.5	39.6	32.4	25.0	38.7	44.3	25.3	25.3	34.8	46.0	18.3
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	133.8	48.5	39.6	32.4	25.0	38.7	44.3	25.3	25.3	34.8	46.0	18.3
LOS by Move:	F	D	D	C	C	D	D	C	C	C	D	B
HCM2kAvgQ:	2	7	0	14	17	21	17	6	6	4	16	18

Note: Queue reported is the number of cars per lane.

Intersection #13 Haven Avenue/Edison Avenue
- provide NB and SB left turn protected phasing

Intersection #17 Milliken Avenue/SR-60 WB Ramps
- provide NB left-turn only lane
- restripe WB right-turn only lane as a shared left-turn/right-turn lane

Deleted: provide WB shared left-turn/right-turn lane

Intersection #18 Milliken Avenue/SR-60 EB Ramps
- restripe EB left-turn only lane as a shared left-turn/right-turn lane
- restripe EB shared left-turn/right-turn lane as a right-turn only lane

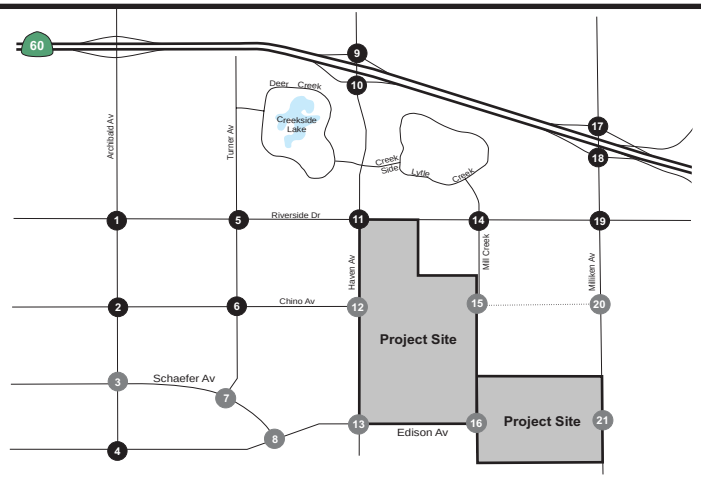
Deleted: shared left-turn/right-turn lane as free-flow-right-turn only lane

Formatted: Bullets and Numbering

Intersection #19 Milliken Avenue/Riverside Drive
- provide EB and WB left turn protected phasing
- provide WB right-turn only lane with overlap phasing
- provide EB left-turn only lane

Intersection #21 Milliken Avenue/Edison Avenue
- provide SB right-turn only lane
- provide SB through only lane
- provide WB left-turn only lane

The above proposed intersection improvement measures are graphically illustrated in **Figure 19** at the end of this section. Detailed HCM worksheets are included in **Appendix I**.



NOT TO SCALE

Legend

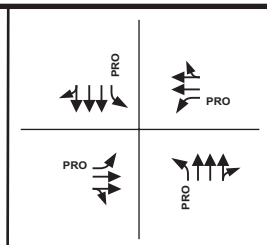
Project Site

Study Intersection

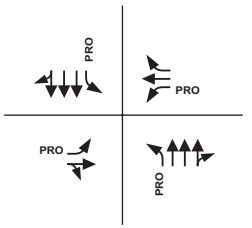
Prop. Intersection

* Mitigations

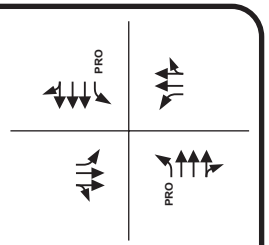
PRO Protected Phase



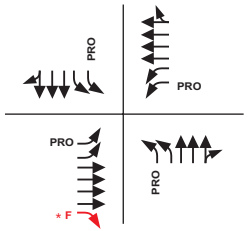
1. Archibald Av/Riverside Dr



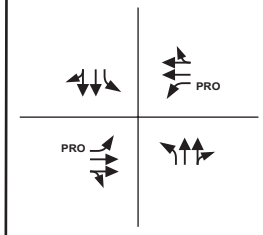
2. Archibald Av/Chino Av



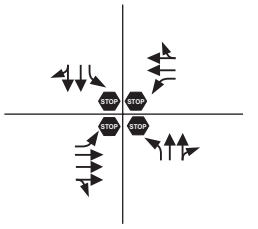
3. Archibald Av/Schaefer Av



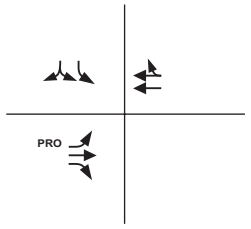
4. Archibald Av/Edison Av



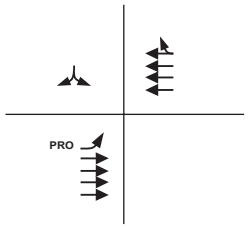
5. Turner Av/Riverside Dr



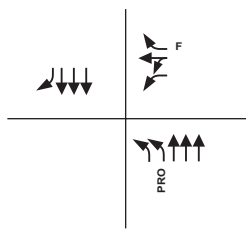
6.Turner Av/Chino Av



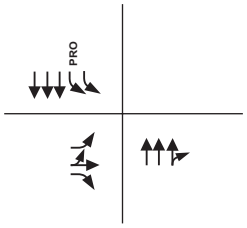
7.Turner Av/Schaefer Av



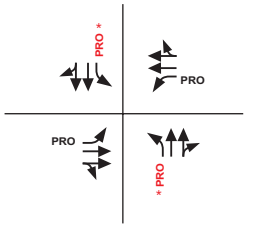
8. Edison Av/Scaefer Av



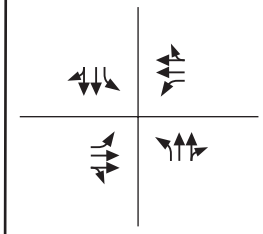
9. Haven Av/SR-60 WB Ramps



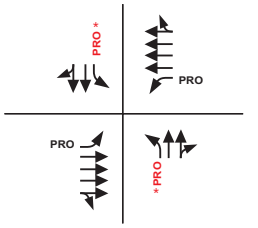
10. Haven Av/SR-60 EB Ramps



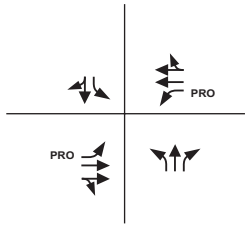
11. Haven Av/Riverside Dr



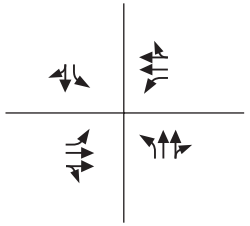
12. Haven Av/Chino Av



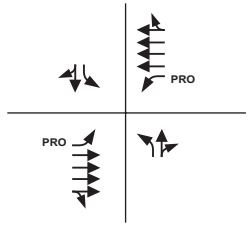
13. Haven Av/Edison Av



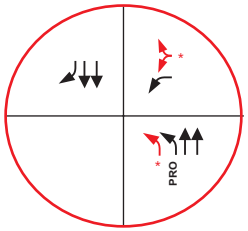
14. Mill Creek Av/Riverside Dr



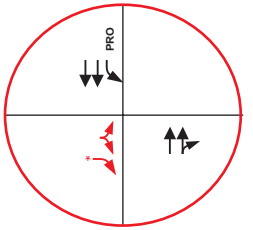
15. Mil Creek Av/Chino Av



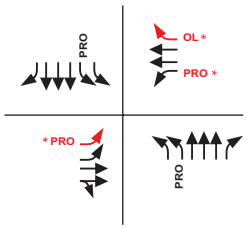
16. Mill Creek Av/Edison Av



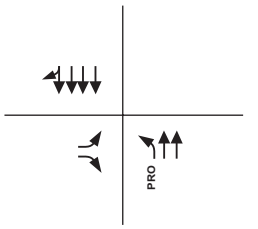
17. Milliken Av/SR-60 WB Ramps



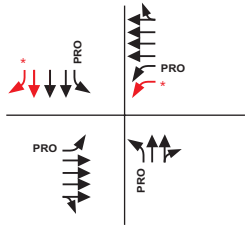
18. Milliken Av/SR-60 EB Ramps



19. Milliken Av/Riverside Dr



20. Milliken Av/Chino Av



21. Milliken Av/Edison Av

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a business unit of Iteris, Inc.

Rich-Haven Specific Plan TIA
City of Ontario

FIGURE 19
2015 Future With Mitigation Lane Configuration
(Baseline Conditions)

G:\USERS\2005\J05-16371 Ontario NMC Rich-Haven Specific Plan\GRA\Figure 19.cdr 9/27/06

TABLE 16: 2015 FUTURE BASELINE CONDITIONS WITH MITIGATIONS

Intersection	2015 Future Baseline With Mitigations					
	AM Peak Hour			PM Peak Hour		
	LOS	Delay (Sec.)	V/C	LOS	Delay (Sec.)	V/C
1. Archibald Avenue at Riverside Drive	C	23.4	0.581	C	26.6	0.752
2. Archibald Avenue at Chino Avenue	B	11.2	0.489	B	12.9	0.530
3. Archibald Avenue at Schaefer Avenue	B	15.9	0.509	B	19.0	0.627
4. Archibald Avenue at Edison Avenue	C	29.0	0.668	**C**	**32.6**	**0.774**
5. Turner Avenue at Riverside Drive	B	14.1	0.294	B	14.3	0.330
6. Turner Avenue at Chino Avenue [a]	A	8.0	0.078	A	8.2	0.099
7. Turner Avenue at Schaefer Avenue	A	2.5	0.093	A	1.8	0.116
8. Edison Avenue at Schaefer Avenue	A	3.0	0.327	A	7.2	0.434
9. Haven Avenue at SR-60 WB Ramps	A	9.6	0.301	B	11.8	0.532
10. Haven Avenue at SR-60 EB Ramps	B	11.2	0.567	D	38.1	0.941
11. Haven Avenue at Riverside Drive	C	30.0	0.777	**C**	**33.4**	**0.815**
12. Haven Avenue at Chino Avenue	A	4.7	0.450	A	7.0	0.548
13. Haven Avenue at Edison Avenue	C	30.1	0.720	**D**	**41.3**	**0.917**
14. Mill Creek Avenue at Riverside Drive	B	17.9	0.579	B	18.9	0.692
15. Mill Creek Avenue at Chino Avenue	B	13.3	0.126	B	13.5	0.242
16. Mill Creek Avenue at Edison Avenue	A	5.9	0.356	A	4.0	0.454
17. Milliken Avenue at SR-60 WB Ramps	C	22.2	0.567	**D**	**42.7**	**1.012**
18. Milliken Avenue at SR-60 EB Ramps	B	11.9	0.718	**C**	**21.2**	**0.894**
19. Milliken Avenue at Riverside Drive	**C**	**28.8**	**0.713**	**C**	**32.7**	**0.859**
20. Milliken Avenue/Hamner Avenue at Chino Avenue	B	12.6	0.308	A	5.0	0.352
21. Milliken Avenue/Hamner Avenue at Edison Avenue	C	28.6	0.771	**D**	**40.5**	**0.992**

Note: LOS = Level of Service, Delay = Average Vehicle Delay (Seconds), V/C = Volume-to-Capacity Ratio
HCM 2000 Operations Methodology
BOLD indicates mitigated operating conditions.

Deleted: B
Deleted: 18.1
Deleted: 0.431
Deleted: C
Deleted: 30.0
Deleted: 0.933
Deleted: A
Deleted: 1.2
Deleted: 0.558
Deleted: A
Deleted: 1.8
Deleted: 0.648

TABLE 19
INTERSECTION LANE NEEDS AND MITIGATION COSTS
(BASELINE CONDITIONS)

Intersection	Additional Lane Needs															Signal Phasing	Intersection Signalization	Restripe Lanes Only	Free Right Turn	Improvement Costs					Worst Peak Hour	Project Contribution	Project Share $
	NORTHBOUND			EASTBOUND			SOUTHBOUND			WESTBOUND			INTERSECTION TOT							Lump Sum	Left-Turn Lanes	Through Lanes	Right-Turn Lanes	Total			
	L	T	R	L	T	R	L	T	R	L	T	R	L	T	R												
4. Archibald Avenue at Edison Avenue													0	0	0				**	$106,800				$106,800	PM	6.30%	$6,732
11. Haven Avenue at Riverside Drive													0	0	0	*				$25,000				$25,000	PM	26.74%	$6,685
13. Haven Avenue at Edison Avenue													0	0	0	*				$25,000				$25,000	PM	10.93%	$2,734
17. Milliken Avenue at SR 60 Freeway westbound ramps	1												1	0	0			*		$500	$53,400			$53,900	AM	22.93%	$12,362
18. Milliken Avenue at SR 60 Freeway eastbound ramps													0	0	0			*		$500				$500	AM	15.50%	$77
19. Milliken Avenue at Riverside Drive				1								1	1	0	1	*				$25,000	$53,400		$53,400	$131,800	AM	14.28%	$18,823
21. Milliken Avenue/Hamner Avenue at Edison Avenue (proposed new alignment)								1	1	1			1	1	1						$53,400	$289,720	$53,400	$396,520	PM	25.31%	$100,348
																			Preliminary Estimated Costs	**$182,800**	**$160,200**	**$289,720**	**$106,800**	**$739,520**		**19.98%**	**$147,761**

Itemized Tool Box for Intersection Mitigation

Ramp Intersection Improvements

Widen existing OC structure	$	110	sq. ft	
Widen OC structure - 1 through lane	$	1,584,000	(600x2)x12x$110=**$1,584,000**	assumes 12' wide lane, 600' on one side of intersection
Widen OC structure - 1LT/RT lane	$	330,000	250x12x$110=**$330,000**	250' of roadwork included
Widen ramps - 1 Lane	$	350,000		
Widen Ramps - 2 Lanes	$	700,000		
Signalize Ramp Intersection (no roadwork)	$	90,000	per location	

Street Intersection Improvements

Left-Turn Lane	$	53,400	
Through Lane	$	289,720	$15.78 per square foot to construct a through lane for a length of 600' before and after intersection with a transition lane of 55:1 (Transition Lane = 600/2)
Right-Turn Lane	$	53,400	
Free Right Turn (with existing RT pocket)	$	53,400	
Free Right Turn (no existing RT pocket)	$	106,800	
Restripe lanes Only	$	500	
Signalization of intersection (with roadwork)	$	250,000	per location
Signalization of intersection (no roadwork)	$	90,000	per location
Upgrade existing signal (new pole,signal head,camera,etc)	$	75,000	per intersection
Add signal heads (ex. Permitted to Protected LT, Overlap RT)	$	25,000	per intersection
Adjustment to signal phasing (2 phase to 4 phase, new signal heads)	$	25,000	same as adding signal heads

TABLE 24: COMPARISON OF SPECIFIC PLAN SCENARIO AND BASELINE CONDITIONS (WITH MITIGATIONS)

INTERSECTION		SPECIFIC PLAN SCENARIO (MITIGATED)			BASELINE CONDITIONS (MITIGATED)		
		LOS	DELAY	V/C	LOS	DELAY	V/C
1. Archibald Avenue at Riverside Drive	AM	C	23.9	0.591	C	23.4	0.581
	PM	C	26.7	0.752	C	26.6	0.752
2. Archibald Avenue at Chino Avenue	AM	B	12.0	0.501	B	11.2	0.489
	PM	B	13.0	0.534	B	12.9	0.530
3. Archibald Avenue at Schaefer Avenue	AM	B	16.5	0.521	B	15.9	0.509
	PM	B	19.2	0.633	B	19.0	0.627
4. Archibald Avenue at Edison Avenue	AM	C	29.4	0.684	C	29.0	0.668
	PM	C	32.7	0.787	C	32.6	0.774
5. Turner Avenue at Riverside	AM	B	14.1	0.292	B	14.1	0.294
	PM	B	14.5	0.332	B	14.3	0.330
6. Turner Avenue at Chino Avenue [a]	AM	A	8.1	0.084	A	8.0	0.078
	PM	A	8.3	0.103	A	8.2	0.099
7. Turner Avenue at Schaefer Avenue	AM	A	2.3	0.099	A	2.5	0.093
	PM	A	1.9	0.117	A	1.8	0.116
8. Edison Avenue at Schaefer Avenue	AM	A	2.9	0.347	A	3.0	0.327
	PM	A	7.4	0.440	A	7.2	0.434
9. Haven Avenue at SR 60 WB Ramps	AM	A	9.4	0.322	A	9.6	0.301
	PM	B	11.3	0.563	B	11.8	0.532
10. Haven Avenue at SR 60 EB Ramps	AM	A	8.6	0.624	B	11.2	0.567
	PM	C	23.1	0.776	D	38.1	0.941
11. Haven Avenue at Riverside Drive	AM	C	31.1	0.815	C	30.0	0.777
	PM	D	36.2	0.883	C	33.4	0.815
12. Haven Avenue at Chino Avenue	AM	A	8.4	0.521	A	4.7	0.450
	PM	A	8.8	0.677	A	7.0	0.548
13. Haven Avenue at Edison Avenue	AM	C	30.7	0.745	C	30.1	0.720
	PM	D	42.8	0.932	D	41.3	0.917
14. Mill Creeek Avenue at Riverside Avenue	AM	B	18.4	0.589	B	17.9	0.579
	PM	B	19.5	0.697	B	18.9	0.692
15. Mill Creek Avenue at Chino Avenue	AM	B	14.3	0.164	B	13.3	0.126
	PM	B	14.5	0.282	B	13.5	0.242
16. Mill Creek Avenue at Edison Avenue	AM	A	5.7	0.374	A	5.9	0.356
	PM	A	4.0	0.489	A	4.0	0.454
17. Milliken Avenue at SR 60 WB Ramps	AM	C	22.2	0.584	C	22.2	0.567
	PM	D	44.4	1.022	D	42.7	1.012
18. Milliken Avenue at SR 60 EB Ramps	AM	B	12.4	0.759	B	11.9	0.718
	PM	C	22.2	0.908	C	21.2	0.894
19. Milliken Avenue at Riverside Drive	AM	C	29.6	0.739	C	28.8	0.713
	PM	C	34.0	0.886	C	32.7	0.859
20. Milliken Avenue/Hamner Avenue at Chino Avenue	AM	B	14.0	0.335	B	12.6	0.308
	PM	A	6.5	0.384	A	5.0	0.352
21. Milliken Avenue/Hamner Avenue at Edison Avenue	AM	C	30.8	0.828	C	28.6	0.771
	PM	D	41.4	0.980	D	40.5	0.992

APPENDIX
I
LOS CALCULATIONS
2015 FUTURE PROJECT
WITH MITIGATIONS
(BASELINE CONDITIONS)

Ontario New Model - Rich Haven External Intersections
2015 PM Peak with Project- Mitigations
Meyer, Mohaddes Associates

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #550 Haven Avenue/Creekside Drive

Cycle (sec): 100 Critical Vol./Cap.(X): 0.000
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 0.0
Optimal Cycle: 0 Level Of Service:

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Prot+Permit			Prot+Permit		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0 1	1 0	1	0 1	1 0	1	0 1	0 1	1	0 1	0 1
Volume Module:												
Base Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Growth Adj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Initial Bse:	0	0	0	0	0	0	0	0	0	0	0	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	0	0	0	0	0	0	0	0	0
User Adj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PHF Adj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PHF Volume:	0	0	0	0	0	0	0	0	0	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PCE Adj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MLF Adj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Final Vol.:	0	0	0	0	0	0	0	0	0	0	0	0
Saturation Flow Module:												
Sat/Lane:	0	0	0	0	0	0	0	0	0	0	0	0
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Final Sat.:	0	0	0	0	0	0	0	0	0	0	0	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Crit Moves:												
Green/Cycle:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Volume/Cap:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Delay/Veh:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LOS by Move:												
HCM2kAvgQ:	0	0	0	0	0	0	0	0	0	0	0	0

Note: Queue reported is the number of cars per lane.

Ontario New Model - Rich Haven External Intersections
2015 PM Peak with Project- Mitigations
Meyer, Mohaddes Associates

Lane Geometry Report

Number of approach lanes: (L) (LT) (T) (RT) (R) (LTR)

Node	Intersection	NB	SB	EB	WB
1	Archibald Avenue/Riverside Drive	102100	102100	101100	101100
2	Archibald Avenue/Chino Avenue	102100	102100	100100	101010
3	Archibald Avenue/Schaefer Avenue	102100	102100	101100	101100
4	Archibald Avenue/Edison Avenue	202100	202100	204010	203100
5	Turner Avenue/Riverside Drive	101100	101100	101100	101100
6	Turner Avenue/Chino Avenue	101100	101100	101100	101100
7	Turner Avenue at Schaefer Avenue	000000	100001	102000	001100
8	Edison Avenue at Schaefer Avenue	000000	100001	104000	003100
9	Haven Avenue/SR-60 WB Ramps	203000	003010	000000	110010
10	Haven Avenue/SR-60 EB Ramps	002010	203000	100011	000000
11	Haven Avenue/Riverside Drive	101100	101100	101100	101100
12	Haven Avenue at Chino Avenue	101100	101100	101100	101100
13	Haven Avenue at Edison Avenue	101100	101100	103100	103100
14	MIll Creek Avenue/Riverside Drive	101010	100100	101100	101100
15	Mill Creek Avenue at Chino Avenue	101100	100100	101100	101100
16	Mill Creek Avenue at Edison Avenue	100100	100100	103100	103100
17	Milliken Avenue/SR-60 WB Ramps	202000	002010	000000	100001
18	Milliken Avenue/SR-60 EB Ramps	001100	102000	000011	000000
19	Milliken Avenue/Riverside Drive	203010	203010	201100	102010
20	Milliken Ave / Chino Ave	102000	003100	100010	000000
21	Milliken Avenue/Edison Avenue	101100	102100	103100	203100
550	Haven Avenue/Creekside Drive	101100	101100	101010	101010

Ontario New Model - Rich Haven External Intersections
2015 AM Peak - Mitigations (Base Scenario Trip Generation)
Meyer, Mohaddes Associates

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #16 Mill Creek Avenue at Edison Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.356
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 5.9
Optimal Cycle: 22 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Permitted				Permitted				Permitted				Permitted			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	0	1 0	1	0	0	1 0	1	0	3	1 0	1	0	3	1 0
Volume Module:																
Base Vol:	115	22		8	36	9		8	10	1442		43	3	1685		42
Growth Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
Initial Bse:	115	22		8	36	9		8	10	1442		43	3	1685		42
Added Vol:	0	0		0	0	0		0	0	0		0	0	0		0
PasserByVol:	0	0		0	0	0		0	0	0		0	0	0		0
Initial Fut:	115	22		8	36	9		8	10	1442		43	3	1685		42
User Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
PHF Adj:	0.95	0.95		0.95	0.95	0.95		0.95	0.95	0.95		0.95	0.95	0.95		0.95
PHF Volume:	121	23		8	38	9		8	11	1518		45	3	1774		44
Reduct Vol:	0	0		0	0	0		0	0	0		0	0	0		0
Reduced Vol:	121	23		8	38	9		8	11	1518		45	3	1774		44
PCE Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
MLF Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
Final Vol.:	121	23		8	38	9		8	11	1518		45	3	1774		44
Saturation Flow Module:																
Sat/Lane:	1900	1900		1900	1900	1900		1900	1900	1900		1900	1900	1900		1900
Adjustment:	0.69	0.96		0.96	0.67	0.93		0.93	0.09	0.91		0.91	0.13	0.91		0.91
Lanes:	1.00	0.73		0.27	1.00	0.53		0.47	1.00	3.88		0.12	1.00	3.90		0.10
Final Sat.:	1318	1338		486	1265	934		831	180	6689		199	243	6721		168
Capacity Analysis Module:																
Vol/Sat:	0.09	0.02		0.02	0.03	0.01		0.01	0.06	0.23		0.23	0.01	0.26		0.26
Crit Moves:	****													****		
Green/Cycle:	0.26	0.26		0.26	0.26	0.26		0.26	0.74	0.74		0.74	0.74	0.74		0.74
Volume/Cap:	0.36	0.07		0.07	0.12	0.04		0.04	0.08	0.31		0.31	0.02	0.36		0.36
Delay/Veh:	30.9	28.1		28.1	28.5	27.8		27.8	3.8	4.3		4.3	3.4	4.6		4.6
User DelAdj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
AdjDel/Veh:	30.9	28.1		28.1	28.5	27.8		27.8	3.8	4.3		4.3	3.4	4.6		4.6
LOS by Move:	C	C		C	C	C		C	A	A		A	A	A		A
HCM2kAvgQ:	3	1		1	1	0		0	0	4		4	0	5		5

Note: Queue reported is the number of cars per lane.

Ontario New Model - Rich Haven External Intersections
2015 AM Peak - Mitigations (Base Scenario Trip Generation)
Meyer, Mohaddes Associates

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #17 Milliken Avenue/SR-60 WB Ramps

Cycle (sec): 100 Critical Vol./Cap.(X): 0.567
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 22.2
Optimal Cycle: 43 Level Of Service: C

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Permitted				Split Phase				Split Phase			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	2	0	2	0 0	0	0	2	0 1	0	0	0	0 0	1	0	1!	0 0
Volume Module:																
Base Vol:	466	923		0	0	579		2	0	0		0	244	0		271
Growth Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
Initial Bse:	466	923		0	0	579		2	0	0		0	244	0		271
Added Vol:	0	0		0	0	0		0	0	0		0	0	0		0
PasserByVol:	0	0		0	0	0		0	0	0		0	0	0		0
Initial Fut:	466	923		0	0	579		2	0	0		0	244	0		271
User Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
PHF Adj:	0.95	0.95		0.95	0.95	0.95		0.95	0.95	0.95		0.95	0.95	0.95		0.95
PHF Volume:	491	972		0	0	609		2	0	0		0	257	0		285
Reduct Vol:	0	0		0	0	0		0	0	0		0	0	0		0
Reduced Vol:	491	972		0	0	609		2	0	0		0	257	0		285
PCE Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
MLF Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
Final Vol.:	491	972		0	0	609		2	0	0		0	257	0		285
Saturation Flow Module:																
Sat/Lane:	1900	1900		1900	1900	1900		1900	1900	1900		1900	1900	1900		1900
Adjustment:	0.85	0.95		1.00	0.95	0.95		0.85	0.95	1.00		1.00	0.85	1.00		0.90
Lanes:	2.00	2.00		0.00	0.00	2.00		1.00	0.00	0.00		0.00	1.32	0.00		0.68
Final Sat.:	3230	3610		0	0	3610		1615	0	0		0	2141	0		1159
Capacity Analysis Module:																
Vol/Sat:	0.15	0.27		0.00	0.00	0.17		0.00	0.00	0.00		0.00	0.12	0.00		0.25
Crit Moves:	****					****										****
Green/Cycle:	0.27	0.57		0.00	0.00	0.30		0.30	0.00	0.00		0.00	0.43	0.00		0.43
Volume/Cap:	0.57	0.48		0.00	0.00	0.57		0.00	0.00	0.00		0.00	0.28	0.00		0.57
Delay/Veh:	32.5	13.1		0.0	0.0	30.4		24.7	0.0	0.0		0.0	18.3	0.0		22.0
User DelAdj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
AdjDel/Veh:	32.5	13.1		0.0	0.0	30.4		24.7	0.0	0.0		0.0	18.3	0.0		22.0
LOS by Move:	C	B		A	A	C		C	A	A		A	B	A		C
HCM2kAvgQ:	8	9		0	0	9		0	0	0		0	4	0		10

Note: Queue reported is the number of cars per lane.

Ontario New Model - Rich Haven External Intersections
2015 AM Peak - Mitigations (Base Scenario Trip Generation)
Meyer, Mohaddes Associates

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #18 Milliken Avenue/SR-60 EB Ramps

Cycle (sec): 100 Critical Vol./Cap.(X): 0.718
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 11.9
Optimal Cycle: 81 Level Of Service: B

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Split Phase				Split Phase			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	1	1 0	1	0	2	0 0	0	0	1!	0 1	0	0	0	0 0
Volume Module:																
Base Vol:	0	1356	416		3	820		0	33		0	489	0	0		0
Growth Adj:	1.00	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00		1.00
Initial Bse:	0	1356	416		3	820		0	33		0	489	0	0		0
Added Vol:	0	0	0		0	0		0	0		0	0	0	0		0
PasserByVol:	0	0	0		0	0		0	0		0	0	0	0		0
Initial Fut:	0	1356	416		3	820		0	33		0	489	0	0		0
User Adj:	1.00	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00		1.00
PHF Adj:	0.95	0.95	0.95		0.95	0.95		0.95	0.95		0.95	0.95	0.95	0.95		0.95
PHF Volume:	0	1427	438		3	863		0	35		0	515	0	0		0
Reduct Vol:	0	0	0		0	0		0	0		0	0	0	0		0
Reduced Vol:	0	1427	438		3	863		0	35		0	515	0	0		0
PCE Adj:	1.00	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00		1.00
MLF Adj:	1.00	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00		1.00
Final Vol.:	0	1427	438		3	863		0	35		0	515	0	0		0
Saturation Flow Module:																
Sat/Lane:	1900	1900	1900		1900	1900		1900	1900		1900	1900	1900	1900		1900
Adjustment:	0.95	0.92	0.92		0.90	0.95		1.00	0.81		1.00	0.86	0.95	1.00		1.00
Lanes:	0.00	1.53	0.47		1.00	2.00		0.00	0.12		0.00	1.88	0.00	0.00		0.00
Final Sat.:	0	2666	818		1710	3610		0	192		0	3051	0	0		0
Capacity Analysis Module:																
Vol/Sat:	0.00	0.54	0.54		0.00	0.24		0.00	0.18		0.00	0.17	0.00	0.00		0.00
Crit Moves:		****				****				****						
Green/Cycle:	0.00	0.75	0.75		0.00	0.75		0.00	0.25		0.00	0.25	0.00	0.00		0.00
Volume/Cap:	0.00	0.72	0.72		0.72	0.32		0.00	0.72		0.00	0.67	0.00	0.00		0.00
Delay/Veh:	0.0	7.9	7.9		267.0	4.2		0.0	37.5		0.0	35.8	0.0	0.0		0.0
User DelAdj:	1.00	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00		1.00
AdjDel/Veh:	0.0	7.9	7.9		267.0	4.2		0.0	37.5		0.0	35.8	0.0	0.0		0.0
LOS by Move:	A	A	A		F	A		A	D		A	D	A	A		A
HCM2kAvgQ:	0	17	17		1	5		0	10		0	9	0	0		0

Note: Queue reported is the number of cars per lane.

Ontario New Model - Rich Haven External Intersections
2015 AM Peak - Mitigations (Base Scenario Trip Generation)
Meyer, Mohaddes Associates

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #19 Milliken Avenue/Riverside Drive

Cycle (sec): 100 Critical Vol./Cap.(X): 0.713
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 28.8
Optimal Cycle: 80 Level Of Service: C

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Ovl			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	2	0	3	0 1	2	0	3	0 1	2	0	1	1 0	1	0	2	0 1
Volume Module:																
Base Vol:	41	697	14		722	127	458		783	796	37		3	279	293	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	41	697	14		722	127	458		783	796	37		3	279	293	
Added Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
PasserByVol:	0	0	0		0	0	0		0	0	0		0	0	0	
Initial Fut:	41	697	14		722	127	458		783	796	37		3	279	293	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	0.95	0.95	0.95		0.95	0.95	0.95		0.95	0.95	0.95		0.95	0.95	0.95	
PHF Volume:	43	734	15		760	134	482		824	838	39		3	294	308	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	43	734	15		760	134	482		824	838	39		3	294	308	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Final Vol.:	43	734	15		760	134	482		824	838	39		3	294	308	
Saturation Flow Module:																
Sat/Lane:	1900	1900	1900		1900	1900	1900		1900	1900	1900		1900	1900	1900	
Adjustment:	0.85	0.91	0.85		0.85	0.91	0.85		0.85	0.94	0.94		0.90	0.95	0.85	
Lanes:	2.00	3.00	1.00		2.00	3.00	1.00		2.00	1.91	0.09		1.00	2.00	1.00	
Final Sat.:	3230	5187	1615		3230	5187	1615		3230	3426	159		1710	3610	1615	
Capacity Analysis Module:																
Vol/Sat:	0.01	0.14	0.01		0.24	0.03	0.30		0.26	0.24	0.24		0.00	0.08	0.19	
Crit Moves:		****				****				****					****	
Green/Cycle:	0.02	0.20	0.20		0.33	0.51	0.51		0.36	0.47	0.47		0.00	0.11	0.44	
Volume/Cap:	0.59	0.71	0.05		0.71	0.05	0.59		0.71	0.52	0.52		0.52	0.71	0.43	
Delay/Veh:	60.6	39.8	32.5		31.7	12.6	18.6		29.8	19.0	19.0		113.9	48.5	19.5	
User DelAdj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
AdjDel/Veh:	60.6	39.8	32.5		31.7	12.6	18.6		29.8	19.0	19.0		113.9	48.5	19.5	
LOS by Move:	E	D	C		C	B	B		C	B	B		F	D	B	
HCM2kAvgQ:	2	9	0		13	1	11		13	10	10		1	6	7	

Note: Queue reported is the number of cars per lane.

Ontario New Model - Rich Haven External Intersections
2015 AM Peak - Mitigations (Base Scenario Trip Generation)
Meyer, Mohaddes Associates

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #550 Haven Avenue/Creekside Drive

Cycle (sec): 100 Critical Vol./Cap.(X): 0.000
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 0.0
Optimal Cycle: 0 Level Of Service:

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Prot+Permit			Prot+Permit		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0 1	1 0	1	0 1	1 0	1	0 1	0 1	1	0 1	0 1
Volume Module:												
Base Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Growth Adj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Initial Bse:	0	0	0	0	0	0	0	0	0	0	0	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	0	0	0	0	0	0	0	0	0
User Adj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PHF Adj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PHF Volume:	0	0	0	0	0	0	0	0	0	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PCE Adj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MLF Adj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Final Vol.:	0	0	0	0	0	0	0	0	0	0	0	0
Saturation Flow Module:												
Sat/Lane:	0	0	0	0	0	0	0	0	0	0	0	0
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Final Sat.:	0	0	0	0	0	0	0	0	0	0	0	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Crit Moves:												
Green/Cycle:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Volume/Cap:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Delay/Veh:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LOS by Move:												
HCM2kAvgQ:	0	0	0	0	0	0	0	0	0	0	0	0

Note: Queue reported is the number of cars per lane.

Ontario New Model - Rich Haven External Intersections
2015 AM Peak - Mitigations (Base Scenario Trip Generation)
Meyer, Mohaddes Associates

Lane Geometry Report

Number of approach lanes: (L) (LT) (T) (RT) (R) (LTR)

Node	Intersection	NB	SB	EB	WB
1	Archibald Avenue/Riverside Drive	102100	102100	101100	101100
2	Archibald Avenue/Chino Avenue	102100	102100	100100	101010
3	Archibald Avenue/Schaefer Avenue	102100	102100	101100	101100
4	Archibald Avenue/Edison Avenue	202100	202100	204010	203100
5	Turner Avenue/Riverside Drive	101100	101100	101100	101100
6	Turner Avenue/Chino Avenue	101100	101100	101100	101100
7	Turner Avenue at Schaefer Avenue	000000	100001	102000	001100
8	Edison Avenue at Schaefer Avenue	000000	100001	104000	003100
9	Haven Avenue/SR-60 WB Ramps	203000	003010	000000	110010
10	Haven Avenue/SR-60 EB Ramps	002100	203000	110010	000000
11	Haven Avenue/Riverside Drive	101100	101100	101100	101100
12	Haven Avenue at Chino Avenue	101100	101100	101100	101100
13	Haven Avenue at Edison Avenue	101100	101100	103100	103100
14	MIll Creek Avenue/Riverside Drive	101010	100100	101100	101100
15	Mill Creek Avenue at Chino Avenue	101100	100100	101100	101100
16	Mill Creek Avenue at Edison Avenue	100100	100100	103100	103100
17	Milliken Avenue/SR-60 WB Ramps	202000	002010	000000	100001
18	Milliken Avenue/SR-60 EB Ramps	001100	102000	000011	000000
19	Milliken Avenue/Riverside Drive	203010	203010	201100	102010
20	Milliken Ave / Chino Ave	102000	003100	100010	000000
21	Milliken Avenue/Edison Avenue	101100	103010	103100	203100
550	Haven Avenue/Creekside Drive	101100	101100	101010	101010

Ontario New Model - Rich Haven External Intersections
2015 PM Peak - Mitigations (Base Scenario Trip Generation)
Meyer, Mohaddes Associates

Impact Analysis Report
Level Of Service

Intersection	Base LOS	Base Del/Veh	Base V/C	Future LOS	Future Del/Veh	Future V/C	Change in V/C
# 1 Archibald Avenue/Riverside Dri	C	26.6	0.752	C	26.6	0.752	+ 0.000 D/V
# 2 Archibald Avenue/Chino Avenue	B	12.9	0.530	B	12.9	0.530	+ 0.000 D/V
# 3 Archibald Avenue/Schaefer Aven	B	19.0	0.627	B	19.0	0.627	+ 0.000 D/V
# 4 Archibald Avenue/Edison Avenue	C	32.6	0.774	C	32.6	0.774	+ 0.000 D/V
# 5 Turner Avenue/Riverside Drive	B	14.3	0.330	B	14.3	0.330	+ 0.000 D/V
# 6 Turner Avenue/Chino Avenue	A	8.2	0.099	A	8.2	0.099	+ 0.000 V/C
# 7 Turner Avenue at Schaefer Aven	A	1.8	0.116	A	1.8	0.116	+ 0.000 D/V
# 8 Edison Avenue at Schaefer Aven	A	7.2	0.434	A	7.2	0.434	+ 0.000 D/V
# 9 Haven Avenue/SR-60 WB Ramps	B	11.8	0.532	B	11.8	0.532	+ 0.000 D/V
# 10 Haven Avenue/SR-60 EB Ramps	D	38.1	0.941	D	38.1	0.941	+ 0.000 D/V
# 11 Haven Avenue/Riverside Drive	C	33.4	0.815	C	33.4	0.815	+ 0.000 D/V
# 12 Haven Avenue at Chino Avenue	A	7.0	0.548	A	7.0	0.548	+ 0.000 D/V
# 13 Haven Avenue at Edison Avenue	D	41.3	0.917	D	41.3	0.917	+ 0.000 D/V
# 14 MIll Creek Avenue/Riverside Dr	B	18.9	0.692	B	18.9	0.692	+ 0.000 D/V
# 15 Mill Creek Avenue at Chino Ave	B	13.5	0.242	B	13.5	0.242	+ 0.000 D/V
# 16 Mill Creek Avenue at Edison Av	A	4.0	0.454	A	4.0	0.454	+ 0.000 D/V
# 17 Milliken Avenue/SR-60 WB Ramps	D	42.7	1.012	D	42.7	1.012	+ 0.000 D/V
# 18 Milliken Avenue/SR-60 EB Ramps	C	21.2	0.894	C	21.2	0.894	+ 0.000 D/V
# 19 Milliken Avenue/Riverside Driv	C	32.7	0.859	C	32.7	0.859	+ 0.000 D/V
# 20 Milliken Ave / Chino Ave	A	5.0	0.352	A	5.0	0.352	+ 0.000 D/V
# 21 Milliken Avenue/Edison Avenue	D	40.5	0.992	D	40.5	0.992	+ 0.000 D/V
#550 Haven Avenue/Creekside Drive		0.0	0.000		0.0	0.000	+ 0.000 D/V

Ontario New Model - Rich Haven External Intersections
2015 PM Peak - Mitigations (Base Scenario Trip Generation)
Meyer, Mohaddes Associates

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #1 Archibald Avenue/Riverside Drive

Cycle (sec): 100 Critical Vol./Cap.(X): 0.752
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 26.6
Optimal Cycle: 92 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	2	1 0	1 0	2	1 0	1 0	1	1 0	1 0	1	1 0
Volume Module:												
Base Vol:	199	1072	80	100	1700	176	116	359	245	63	453	119
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	199	1072	80	100	1700	176	116	359	245	63	453	119
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	199	1072	80	100	1700	176	116	359	245	63	453	119
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	209	1128	84	105	1789	185	122	378	258	66	477	125
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	209	1128	84	105	1789	185	122	378	258	66	477	125
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	209	1128	84	105	1789	185	122	378	258	66	477	125
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.89	0.89	0.90	0.92	0.92
Lanes:	1.00	2.79	0.21	1.00	2.72	0.28	1.00	1.19	0.81	1.00	1.58	0.42
Final Sat.:	1710	4779	357	1710	4635	480	1710	2015	1375	1710	2770	728
Capacity Analysis Module:												
Vol/Sat:	0.12	0.24	0.24	0.06	0.39	0.39	0.07	0.19	0.19	0.04	0.17	0.17
Crit Moves:	****				****		****				****	
Green/Cycle:	0.16	0.54	0.54	0.14	0.51	0.51	0.09	0.27	0.27	0.06	0.23	0.23
Volume/Cap:	0.75	0.44	0.44	0.44	0.75	0.75	0.75	0.70	0.70	0.70	0.75	0.75
Delay/Veh:	50.9	14.2	14.2	40.7	20.6	20.6	61.9	35.4	35.4	67.0	40.0	40.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	50.9	14.2	14.2	40.7	20.6	20.6	61.9	35.4	35.4	67.0	40.0	40.0
LOS by Move:	D	B	B	D	C	C	E	D	D	E	D	D
HCM2kAvgQ:	8	8	8	4	19	19	6	10	10	4	11	11

Note: Queue reported is the number of cars per lane.

Ontario New Model - Rich Haven External Intersections
2015 PM Peak - Mitigations (Base Scenario Trip Generation)
Meyer, Mohaddes Associates

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #16 Mill Creek Avenue at Edison Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.454
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 4.0
Optimal Cycle: 26 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Permitted				Permitted				Permitted				Permitted			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	0	1 0	1	0	0	1 0	1	0	3	1 0	1	0	3	1 0
Volume Module:																
Base Vol:	88	21	17		73	25	12		11	2225	186		16	2388	72	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	88	21	17		73	25	12		11	2225	186		16	2388	72	
Added Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
PasserByVol:	0	0	0		0	0	0		0	0	0		0	0	0	
Initial Fut:	88	21	17		73	25	12		11	2225	186		16	2388	72	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	0.95	0.95	0.95		0.95	0.95	0.95		0.95	0.95	0.95		0.95	0.95	0.95	
PHF Volume:	93	22	18		77	26	13		12	2342	196		17	2514	76	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	93	22	18		77	26	13		12	2342	196		17	2514	76	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Final Vol.:	93	22	18		77	26	13		12	2342	196		17	2514	76	
Saturation Flow Module:																
Sat/Lane:	1900	1900	1900		1900	1900	1900		1900	1900	1900		1900	1900	1900	
Adjustment:	0.62	0.93	0.93		0.62	0.95	0.95		0.05	0.90	0.90		0.05	0.91	0.91	
Lanes:	1.00	0.55	0.45		1.00	0.68	0.32		1.00	3.69	0.31		1.00	3.88	0.12	
Final Sat.:	1184	980	793		1179	1221	586		86	6306	527		86	6687	202	
Capacity Analysis Module:																
Vol/Sat:	0.08	0.02	0.02		0.07	0.02	0.02		0.13	0.37	0.37		0.19	0.38	0.38	
Crit Moves:	****													****		
Green/Cycle:	0.17	0.17	0.17		0.17	0.17	0.17		0.83	0.83	0.83		0.83	0.83	0.83	
Volume/Cap:	0.45	0.13	0.13		0.38	0.13	0.13		0.16	0.45	0.45		0.23	0.45	0.45	
Delay/Veh:	38.8	35.2	35.2		37.8	35.2	35.2		2.8	2.4	2.4		3.5	2.4	2.4	
User DelAdj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
AdjDel/Veh:	38.8	35.2	35.2		37.8	35.2	35.2		2.8	2.4	2.4		3.5	2.4	2.4	
LOS by Move:	D	D	D		D	D	D		A	A	A		A	A	A	
HCM2kAvgQ:	3	1	1		3	1	1		0	6	6		0	6	6	

Note: Queue reported is the number of cars per lane.

Ontario New Model - Rich Haven External Intersections
2015 PM Peak - Mitigations (Base Scenario Trip Generation)
Meyer, Mohaddes Associates

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #17 Milliken Avenue/SR-60 WB Ramps

Cycle (sec): 100 Critical Vol./Cap.(X): 1.012
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 42.7
Optimal Cycle: 180 Level Of Service: D

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Permitted				Split Phase				Split Phase			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	2	0	2	0 0	0	0	2	0 1	0	0	0	0 0	1	0	1!	0 0
Volume Module:																
Base Vol:	735	732	0		0	1936	116		0	0	0		344	0	164	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	735	732	0		0	1936	116		0	0	0		344	0	164	
Added Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
PasserByVol:	0	0	0		0	0	0		0	0	0		0	0	0	
Initial Fut:	735	732	0		0	1936	116		0	0	0		344	0	164	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	0.95	0.95	0.95		0.95	0.95	0.95		0.95	0.95	0.95		0.95	0.95	0.95	
PHF Volume:	774	771	0		0	2038	122		0	0	0		362	0	173	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	774	771	0		0	2038	122		0	0	0		362	0	173	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Final Vol.:	774	771	0		0	2038	122		0	0	0		362	0	173	
Saturation Flow Module:																
Sat/Lane:	1900	1900	1900		1900	1900	1900		1900	1900	1900		1900	1900	1900	
Adjustment:	0.85	0.95	1.00		0.95	0.95	0.85		0.95	1.00	1.00		0.87	1.00	0.92	
Lanes:	2.00	2.00	0.00		0.00	2.00	1.00		0.00	0.00	0.00		1.53	0.00	0.47	
Final Sat.:	3230	3610	0		0	3610	1615		0	0	0		2528	0	830	
Capacity Analysis Module:																
Vol/Sat:	0.24	0.21	0.00		0.00	0.56	0.08		0.00	0.00	0.00		0.14	0.00	0.21	
Crit Moves:	****					****										****
Green/Cycle:	0.24	0.79	0.00		0.00	0.56	0.56		0.00	0.00	0.00		0.21	0.00	0.21	
Volume/Cap:	1.01	0.27	0.00		0.00	1.01	0.14		0.00	0.00	0.00		0.70	0.00	1.01	
Delay/Veh:	73.7	2.7	0.0		0.0	45.2	10.6		0.0	0.0	0.0		39.7	0.0	81.9	
User DelAdj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
AdjDel/Veh:	73.7	2.7	0.0		0.0	45.2	10.6		0.0	0.0	0.0		39.7	0.0	81.9	
LOS by Move:	E	A	A		A	D	B		A	A	A		D	A	F	
HCM2kAvgQ:	20	3	0		0	42	2		0	0	0		8	0	17	

Note: Queue reported is the number of cars per lane.

Ontario New Model - Rich Haven External Intersections
2015 PM Peak - Mitigations (Base Scenario Trip Generation)
Meyer, Mohaddes Associates

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #18 Milliken Avenue/SR-60 EB Ramps

Cycle (sec): 100 Critical Vol./Cap.(X): 0.894
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 21.2
Optimal Cycle: 180 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Split Phase			Split Phase		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0 1	1 0	1	0 2	0 0	0	0 1!	0 1	0	0 0	0 0
Volume Module:												
Base Vol:	0	1462	409	71	2209	0	6	0	754	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	1462	409	71	2209	0	6	0	754	0	0	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	1462	409	71	2209	0	6	0	754	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	0	1539	431	75	2325	0	6	0	794	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	1539	431	75	2325	0	6	0	794	0	0	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	0	1539	431	75	2325	0	6	0	794	0	0	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.92	0.92	0.90	0.95	1.00	0.81	1.00	0.85	0.95	1.00	1.00
Lanes:	0.00	1.56	0.44	1.00	2.00	0.00	0.02	0.00	1.98	0.00	0.00	0.00
Final Sat.:	0	2728	763	1710	3610	0	25	0	3207	0	0	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.56	0.56	0.04	0.64	0.00	0.25	0.00	0.25	0.00	0.00	0.00
Crit Moves:	****				****		****					
Green/Cycle:	0.00	0.67	0.67	0.05	0.72	0.00	0.28	0.00	0.28	0.00	0.00	0.00
Volume/Cap:	0.00	0.84	0.84	0.84	0.89	0.00	0.89	0.00	0.89	0.00	0.00	0.00
Delay/Veh:	0.0	15.6	15.6	95.6	15.4	0.0	46.0	0.0	45.1	0.0	0.0	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	15.6	15.6	95.6	15.4	0.0	46.0	0.0	45.1	0.0	0.0	0.0
LOS by Move:	A	B	B	F	B	A	D	A	D	A	A	A
HCM2kAvgQ:	0	26	26	5	33	0	15	0	15	0	0	0

Note: Queue reported is the number of cars per lane.

Ontario New Model - Rich Haven External Intersections
2015 PM Peak - Mitigations (Base Scenario Trip Generation)
Meyer, Mohaddes Associates

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #19 Milliken Avenue/Riverside Drive

Cycle (sec): 100 Critical Vol./Cap.(X): 0.859
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 32.7
Optimal Cycle: 161 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Ovl		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	2	0 3	0 1	2	0 3	0 1	2	0 1	1 0	1	0 2	0 1
Volume Module:												
Base Vol:	43	430	5	773	1614	576	747	353	65	81	774	693
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	43	430	5	773	1614	576	747	353	65	81	774	693
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	43	430	5	773	1614	576	747	353	65	81	774	693
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	45	453	5	814	1699	606	786	372	68	85	815	729
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	45	453	5	814	1699	606	786	372	68	85	815	729
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	45	453	5	814	1699	606	786	372	68	85	815	729
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.85	0.91	0.85	0.85	0.91	0.85	0.85	0.93	0.93	0.90	0.95	0.85
Lanes:	2.00	3.00	1.00	2.00	3.00	1.00	2.00	1.69	0.31	1.00	2.00	1.00
Final Sat.:	3230	5187	1615	3230	5187	1615	3230	2979	548	1710	3610	1615
Capacity Analysis Module:												
Vol/Sat:	0.01	0.09	0.00	0.25	0.33	0.38	0.24	0.12	0.12	0.05	0.23	0.45
Crit Moves:	****					****	****				****	
Green/Cycle:	0.02	0.12	0.12	0.34	0.44	0.44	0.28	0.39	0.39	0.16	0.26	0.60
Volume/Cap:	0.86	0.75	0.03	0.75	0.75	0.86	0.86	0.32	0.32	0.32	0.86	0.75
Delay/Veh:	123.2	47.9	39.2	32.3	25.0	35.7	42.1	21.4	21.4	38.2	43.0	18.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	123.2	47.9	39.2	32.3	25.0	35.7	42.1	21.4	21.4	38.2	43.0	18.0
LOS by Move:	F	D	D	C	C	D	D	C	C	D	D	B
HCM2kAvgQ:	2	7	0	14	17	20	16	5	5	3	15	18

Note: Queue reported is the number of cars per lane.

Ontario New Model - Rich Haven External Intersections
2015 PM Peak - Mitigations (Base Scenario Trip Generation)
Meyer, Mohaddes Associates

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #550 Haven Avenue/Creekside Drive

Cycle (sec): 100 Critical Vol./Cap.(X): 0.000
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 0.0
Optimal Cycle: 0 Level Of Service:

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Prot+Permit			Prot+Permit		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0 1	1 0	1	0 1	1 0	1	0 1	0 1	1	0 1	0 1
Volume Module:												
Base Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Growth Adj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Initial Bse:	0	0	0	0	0	0	0	0	0	0	0	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	0	0	0	0	0	0	0	0	0
User Adj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PHF Adj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PHF Volume:	0	0	0	0	0	0	0	0	0	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PCE Adj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MLF Adj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Final Vol.:	0	0	0	0	0	0	0	0	0	0	0	0
Saturation Flow Module:												
Sat/Lane:	0	0	0	0	0	0	0	0	0	0	0	0
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Final Sat.:	0	0	0	0	0	0	0	0	0	0	0	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Crit Moves:												
Green/Cycle:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Volume/Cap:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Delay/Veh:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LOS by Move:												
HCM2kAvgQ:	0	0	0	0	0	0	0	0	0	0	0	0

Note: Queue reported is the number of cars per lane.

Ontario New Model - Rich Haven External Intersections
2015 PM Peak - Mitigations (Base Scenario Trip Generation)
Meyer, Mohaddes Associates

Lane Geometry Report

Number of approach lanes: (L) (LT) (T) (RT) (R) (LTR)

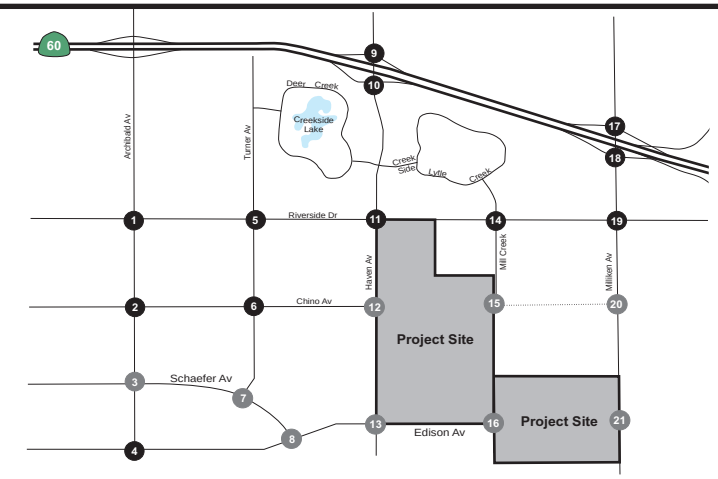
Node	Intersection	NB	SB	EB	WB
1	Archibald Avenue/Riverside Drive	102100	102100	101100	101100
2	Archibald Avenue/Chino Avenue	102100	102100	100100	101010
3	Archibald Avenue/Schaefer Avenue	102100	102100	101100	101100
4	Archibald Avenue/Edison Avenue	202100	202100	204010	203100
5	Turner Avenue/Riverside Drive	101100	101100	101100	101100
6	Turner Avenue/Chino Avenue	101100	101100	101100	101100
7	Turner Avenue at Schaefer Avenue	000000	100001	102000	001100
8	Edison Avenue at Schaefer Avenue	000000	100001	104000	003100
9	Haven Avenue/SR-60 WB Ramps	203000	003010	000000	110010
10	Haven Avenue/SR-60 EB Ramps	002100	203000	110010	000000
11	Haven Avenue/Riverside Drive	101100	101100	101100	101100
12	Haven Avenue at Chino Avenue	101100	101100	101100	101100
13	Haven Avenue at Edison Avenue	101100	101100	103100	103100
14	MIll Creek Avenue/Riverside Drive	101010	100100	101100	101100
15	Mill Creek Avenue at Chino Avenue	101100	100100	101100	101100
16	Mill Creek Avenue at Edison Avenue	100100	100100	103100	103100
17	Milliken Avenue/SR-60 WB Ramps	202000	002010	000000	100001
18	Milliken Avenue/SR-60 EB Ramps	001100	102000	000011	000000
19	Milliken Avenue/Riverside Drive	203010	203010	201100	102010
20	Milliken Ave / Chino Ave	102000	003100	100010	000000
21	Milliken Avenue/Edison Avenue	101100	103010	103100	203100
550	Haven Avenue/Creekside Drive	101100	101100	101010	101010

RESPONSE TO DETAILED COMMENT

#4-9D

PROJECT ONLY PERCENTAGE TRIP DISTRIBUTION

FIGURE 14 REPLACES THE FIGURE 14 OF THE PREVIOUS TRAFFIC STUDY REPORT.



Legend

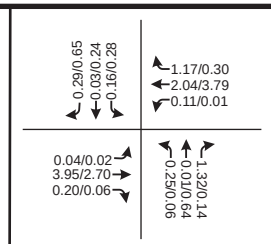
Project Site

Study Intersection

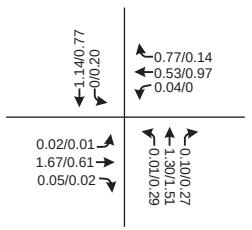
Prop. Intersection

AM/PM

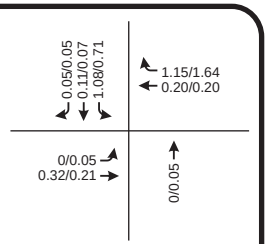
NOT TO SCALE



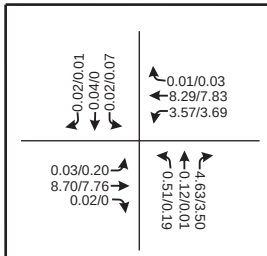
1. Archibald Av/Riverside Dr



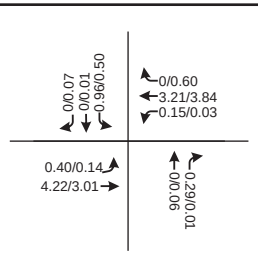
2. Archibald Av/Chino Av



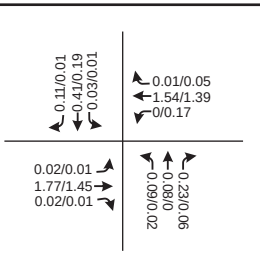
3. Archibald Av/Schaefer Av



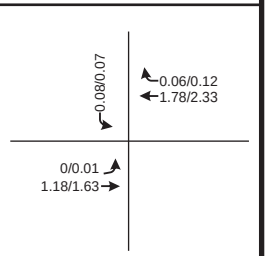
4. Archibald Av/Edison Av



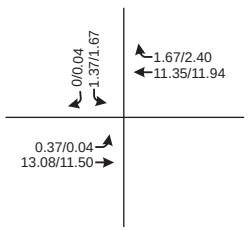
5. Turner Av/Riverside Dr



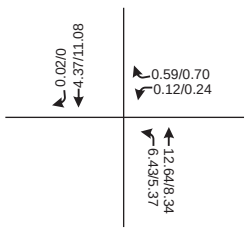
6.Turner Av/Chino Av



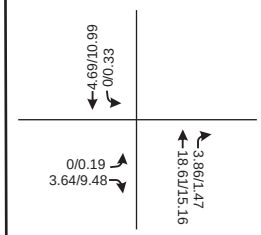
7.Turner Av/Schaefer Av



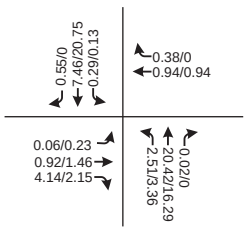
8. Edison Av/Scaefer Av



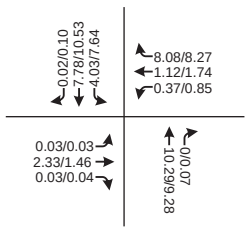
9. Haven Av/SR-60 WB Ramps



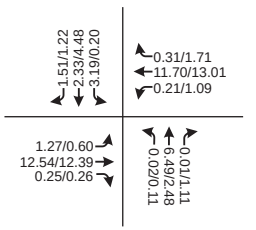
10. Haven Av/SR-60 EB Ramps



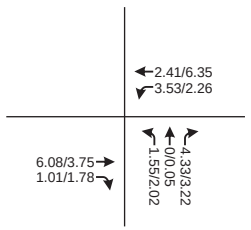
11. Haven Av/Riverside Dr



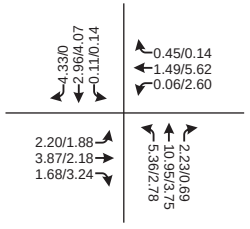
12. Haven Av/Chino Av



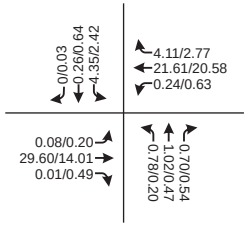
13. Haven Av/Edison Av



14. Mill Creek Av/Riverside Dr



15. Mil Creek Av/Chino Av



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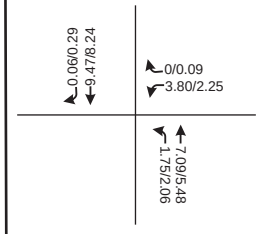
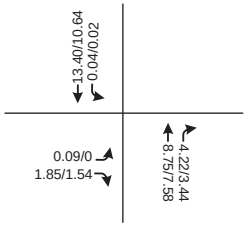
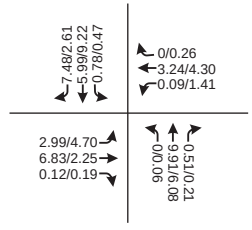


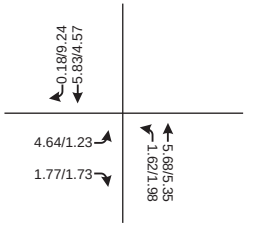
17. Milliken Av/SR-60 WB Ramps



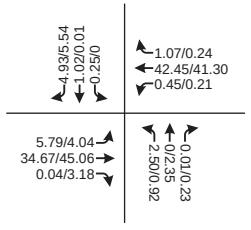
18. Milliken Av/SR-60 EB Ramps



19. Milliken Av/Riverside Dr



20. Milliken Av/Chino Av



21. Milliken Av/Edison Av

Meyer, Mohaddes Associates

a business unit of Iteris, Inc.

Rich-Haven Specific Plan TIA
City of Ontario

FIGURE 14
Project Only Percentage Trip Distribution

G:\USERS\2005\J05-1637 Ontario NMC Rich-Haven Specific Plan\Revised Report 6-02-2006\GRA\Figure 14.cdr 09/27/06

End of Attachment A

STATE OF CALIFORNIA

GOVERNOR'S OFFICE *of* PLANNING AND RESEARCH

STATE CLEARINGHOUSE AND PLANNING UNIT

ARNOLD SCHWARZENEGGER
GOVERNOR

CYNTHIA BRYANT
DIRECTOR

August 16, 2007

Richard Ayala
City of Ontario
303 East B Street
Ontario, CA 91764

Subject: Rich Haven Specific Plan, File No. PSP05-004
SCH#: 2006051081

Dear Richard Ayala:

The State Clearinghouse submitted the above named Draft EIR to selected state agencies for review. On the enclosed Document Details Report please note that the Clearinghouse has listed the state agencies that reviewed your document. The review period closed on August 15, 2007, and the comments from the responding agency (ies) is (are) enclosed. If this comment package is not in order, please notify the State Clearinghouse immediately. Please refer to the project's ten-digit State Clearinghouse number in future correspondence so that we may respond promptly.

Please note that Section 21104(c) of the California Public Resources Code states that:

> "A responsible or other public agency shall only make substantive comments regarding those activities involved in a project which are within an area of expertise of the agency or which are required to be carried out or approved by the agency. Those comments shall be supported by specific documentation."

These comments are forwarded for use in preparing your final environmental document. Should you need more information or clarification of the enclosed comments, we recommend that you contact the commenting agency directly.

This letter acknowledges that you have complied with the State Clearinghouse review requirements for draft environmental documents, pursuant to the California Environmental Quality Act. Please contact the State Clearinghouse at (916) 445-0613 if you have any questions regarding the environmental review process.

Sincerely,

Terry Roberts

Terry Roberts
Director, State Clearinghouse

Enclosures
cc: Resources Agency

SCH# 2006051081
Project Title Rich Haven Specific Plan, File No. PSP05-004
Lead Agency Ontario, City of

Type EIR Draft EIR

Description The Rich-Haven Specific Plan encompasses approximately 510 gross acres with a maximum development capacity of 4,259 dwelling units and 889,200 square feet of regional commercial/office. The Land Use Plan for the Specific Plan includes a Residential District and Commercial District comprised of twenty-one Planning Areas (PAs). The Residential District includes nineteen PAs providing a mixture of low-, medium-, and high-density residential uses with a maximum of 4,259 dwelling units and a Regional Commercial District that includes three PAs. The Regional Commercial District includes three PAs (20, 21A, and 21B) planned for a mixture of a variety of uses including commercial, office, vertical residential, medical office, and research, as well as a "Stand Alone Residential Only Overlay" allowing for stand alone residential neighborhoods. The Regional Commercial District includes PA 20 incorporating 725 residential units and 440,800 square feet of commercial/office uses, while PA 21 (21A and 21B) will include a total of 448,400 square feet of commercial uses and 1,052 residential units. The public facilities within the Specific Plan include 20.1-acre Southern California Edison easements, and a 24.8-acre Middle School. Final plans for the project would include an allowance for a transfer of residential density from the Regional Commercial District within Planning Areas 20 and/or 21 to Residential PAs within the Residential District (PAs 8 to 19).

Lead Agency Contact

Name Richard Ayala
Agency City of Ontario
Phone (909) 395-2036 **Fax**
email
Address 303 East B Street
City Ontario **State** CA **Zip** 91764

Project Location

County San Bernardino
City Ontario
Region
Cross Streets South of Riverside Drive, west of Milliken Avenue, east of Haven Avenue
Parcel No. 218-161-01, 04, 05, 09-11, 13, 14; 218-211-02, 05, 08, 12, 15, 17, 21, 23-26
Township **Range** **Section** **Base**

Proximity to:

Highways 15
Airports Ontario
Railways SPRR
Waterways
Schools Colony High School
Land Use GP: Residential - Low Density Residential (4.6 du/ac average) and Regional Commercial
Z: "SP/AG" (Specific Plan/Ag Overlay)
Land Use: Dairies (5), agricultural fields, residence, SCE electrical transmission lines

Project Issues Agricultural Land; Air Quality; Archaeologic-Historic; Cumulative Effects; Drainage/Absorption; Geologic/Seismic; Landuse; Noise; Population/Housing Balance; Public Services; Schools/Universities; Soil Erosion/Compaction/Grading; Solid Waste; Toxic/Hazardous; Traffic/Circulation; Water Quality; Water Supply; Wildlife

Note: Blanks in data fields result from insufficient information provided by lead agency.

Reviewing Agencies	Resources Agency; Regional Water Quality Control Board, Region 8; Department of Parks and Recreation; Native American Heritage Commission; Office of Historic Preservation; Department of Forestry and Fire Protection; Department of Housing and Community Development; Department of Food and Agriculture; Department of Fish and Game, Region 6; Department of Water Resources; California Highway Patrol; Caltrans, District 8; Department of Toxic Substances Control

Date Received 07/02/2007 ***Start of Review*** 07/02/2007 ***End of Review*** 08/15/2007

Note: Blanks in data fields result from insufficient information provided by lead agency.

STATE OF CALIFORNIA Arnold Schwarzenegger, Governor

NATIVE AMERICAN HERITAGE COMMISSION
915 CAPITOL MALL, ROOM 364
SACRAMENTO, CA 95814
(916) 653-6251
Fax (916) 657-5390
Web Site www.nahc.ca.gov
e-mail: ds_nahc@pacbell.net

July 23, 2007

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Mr. Richard Ayala, Principal Planner
CITY OF ONTARIO
303 East "B" Street
Ontario, CA 91764

Re: SCH#2006051081; CEQA Notice of Completion; draft Environmental Impact Statement (DEIR) for **Rich Haven Specific Plan Project**; City of Ontario; San Bernardino County, California

Dear Mr. Ayala:

Thank you for the opportunity to comment on the above-referenced document. The Native American Heritage Commission is the state's Trustee Agency for Native American Cultural Resources. The California Environmental Quality Act (CEQA) requires that any project that causes a substantial adverse change in the significance of an historical resource, that includes archaeological resources, is a 'significant effect' requiring the preparation of an Environmental Impact Report (EIR) per CEQA guidelines § 15064.5(b)(c). In order to comply with this provision, the lead agency is required to assess whether the project will have an adverse impact on these resources within the 'area of potential effect (APE)', and if so, to mitigate that effect. To adequately assess the project-related impacts on historical resources, the Commission recommends the following action:

√ Contact the appropriate California Historic Resources Information Center (CHRIS). Contact information for the Information Center nearest you is available from the State Office of Historic Preservation (916/653-7278)/ http://www.ohp.parks.ca.gov/1068/files/IC%20Roster.pdf The record search will determine:

- If a part or the entire APE has been previously surveyed for cultural resources.
- If any known cultural resources have already been recorded in or adjacent to the APE.
- If the probability is low, moderate, or high that cultural resources are located in the APE.
- If a survey is required to determine whether previously unrecorded cultural resources are present.

√ If an archaeological inventory survey is required, the final stage is the preparation of a professional report detailing the findings and recommendations of the records search and field survey.

- The final report containing site forms, site significance, and mitigation measurers should be submitted immediately to the planning department. All information regarding site locations, Native American human remains, and associated funerary objects should be in a separate confidential addendum, and not be made available for pubic disclosure.
- The final written report should be submitted within 3 months after work has been completed to the appropriate regional archaeological Information Center.

√ Contact the Native American Heritage Commission (NAHC) for:

* A Sacred Lands File (SLF) search of the project area and information on tribal contacts in the project vicinity that may have additional cultural resource information. Please provide this office with the following citation format to assist with the Sacred Lands File search request: USGS 7.5-minute quadrangle citation with name, township, range and section; .

- The NAHC advises the use of Native American Monitors to ensure proper identification and care given cultural resources that may be discovered. The NAHC recommends that contact be made with Native American Contacts on the attached list to get their input on potential project impact (APE).

√ Lack of surface evidence of archeological resources does not preclude their subsurface existence.

- Lead agencies should include in their mitigation plan provisions for the identification and evaluation of accidentally discovered archeological resources, per California Environmental Quality Act (CEQA) §15064.5 (f). In areas of identified archaeological sensitivity, a certified archaeologist and a culturally affiliated Native American, with knowledge in cultural resources, should monitor all ground-disturbing activities.
- Lead agencies should include in their mitigation plan provisions for the disposition of recovered artifacts, in consultation with culturally affiliated Native Americans.

√ Lead agencies should include provisions for discovery of Native American human remains or unmarked cemeteries in their mitigation plans.

* CEQA Guidelines, Section 15064.5(d) requires the lead agency to work with the Native Americans identified by this Commission if the initial Study identifies the presence or likely presence of Native American human remains within the APE. CEQA Guidelines provide for agreements with Native American, identified by the NAHC, to assure the appropriate and dignified treatment of Native American human remains and any associated grave liens.

√ Health and Safety Code §7050.5, Public Resources Code §5097.98 and Sec. §15064.5 (d) of the CEQA Guidelines mandate procedures to be followed in the event of an accidental discovery of any human remains in a location other than a dedicated cemetery.
√ Lead agencies should consider avoidance, as defined in § 15370 of the CEQA Guidelines, when significant cultural resources are discovered during the course of project planning.

Please feel free to contact me at (916) 653-6251 if you have any questions.

Sincerely,

Dave Singleton
Program Analyst

PS: We are including the Tribal Consultation List, in addition, for compliance with California Government Code §65352.3 to avoid a delay in your project. DS

Cc: State Clearinghouse

Attachment: List of Native American Contacts

PPS: I suggest you contact those on the shorter SB18 list first. Then you need not contact them again.

Linda S. Adams
Secretary for
Environmental Protection

Department of Toxic Substances Control

Maureen F. Gorsen, Director
5796 Corporate Avenue
Cypress, California 90630

Arnold Schwarzenegger
Governor

July 24, 2007

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Mr. Richard Ayala
City of Ontario
Planning Department
303 East "B" Street
Ontario, California 91764

DRAFT ENVIRONMENTAL IMPACT REPORT (EIR) FOR RICH HAVEN SPECIFIC PLAN PROJECT (SCH# 2006051081)

Dear Mr. Ayala:

The Department of Toxic Substances Control (DTSC) has received your submitted Notice of Preparation of a Supplemental EIR for the above-mentioned project. The following project description is stated in your document: "The project proposes residential development, commercial development, and includes recreational and open space amenities and permanent open space...Housing types will include 1,124 single-family detached homes on medium sized and small lots. Attached housing will include 3,132 condominium units on a variety of lot sizes and vertical configurations. The Rich Haven Project allows for development of 889.200 square feet of regional commercial retail and business uses within a 160 acre portion of the project site."

Based on the review of the submitted document DTSC has the following comments:

1) The EIR should identify the mechanism to initiate any required investigation and/or remediation for any site that may be contaminated, and the government agency to provide appropriate regulatory oversight. If necessary, DTSC would require an oversight agreement in order to review such documents. Please see comment 6 below.

2) Proper investigation, sampling and remedial actions overseen by the respective regulatory agencies, if necessary, should be conducted at the site prior to the new development or any construction. All closure, certification or remediation approval reports by these agencies should be included in the EIR.

3) The project construction may require soil excavation or filling in certain areas. Sampling may be required. If soil is contaminated, it must be properly disposed and not simply placed in another location onsite. Land Disposal Restrictions (LDRs) may be applicable to such soils. Also, if the project proposes to import soil to backfill the areas excavated, sampling should be conducted to ensure that the imported soil is free of contamination.

4) Human health and the environment of sensitive receptors should be protected during the construction or demolition activities. If it is found necessary, a study of the site and a health risk assessment overseen and approved by the appropriate government agency and a qualified health risk assessor should be conducted to determine if there are, have been, or will be, any releases of hazardous materials that may pose a risk to human health or the environment.

5) If during construction/demolition of the project, the soil and/or groundwater contamination is suspected, construction/demolition in the area would cease and appropriate health and safety procedures should be implemented.

6) Envirostor (formerly CalSites) is a database primarily used by the California Department of Toxic Substances Control, and is accessible through DTSC's website. DTSC can provide guidance for cleanup oversight through an Environmental Oversight Agreement (EOA) for government agencies, or a Voluntary Cleanup Agreement (VCA) for private parties. For additional information on the EOA please see www.dtsc.ca.gov/SiteCleanup/Brownfields, or contact Maryam Tasnif-Abbasi, DTSC's Voluntary Cleanup Coordinator, at (714) 484-5489 for the VCA.

If you have any questions regarding this letter, please contact Ms. Eileen Khachatourians, Project Manager, at (714) 484-5349 or email at EKhachat@dtsc.ca.gov.

Sincerely,

Greg Holmes
Unit Chief
Southern California Cleanup Operations Branch - Cypress Office

cc: See next page

cc: Governor's Office of Planning and Research
State Clearinghouse
P.O. Box 3044
Sacramento, California 95812-3044

CEQA Tracking Center
Department of Toxic Substances Control
Office of Environmental Planning and Analysis
1001 I Street, 22nd Floor, M.S. 22-2
Sacramento, California 95814

CEQA# 1738

Letter 5. Terry Roberts, California State Clearinghouse and Planning Unit

Response 5-1

This letter confirms that the Draft EIR was received and circulated and each of the letters attached to the Clearinghouse letter are addressed within this Response to Comments document.

SOUTHERN CALIFORNIA
EDISON
An *EDISON INTERNATIONAL* Company

Neiland Derry
Region Manager

August 16, 2007

Richard Ayala, Senior Planner
City of Ontario
303 E. B Street
Ontario, CA 91764

RE: Draft Environmental Impact Report for the Rich Haven Specific Plan (SCH # 2006051081)

Dear Mr. Ayala:

Thank you for the opportunity to review and provide comments on the Draft Environmental Impact Report (DEIR) for the Rich Haven Specific Plan. The Rich Haven Plan is located in the New Model Colony Area of the City of Ontario and includes residential and commercial districts on approximately 510 gross acres. The Rich Haven Specific Plan is separated into several Residential District Planning Areas and a Regional Commercial/Mixed-Use District Area. Rich-Haven's Residential District Planning Areas include detached single-family, detached and attached condominiums, townhomes, and live/work units. The Commercial/Mixed-Use District is to contain residential dwelling units and a variety of commercial uses, including retail, office, medical, entertainment and other comparable uses. In total, the Land Use Plan proposes a maximum of 4,259 dwelling units 889,200 square feet of commercial/office space, 25.5 acres of parkland, and a 24.8-acre middle school. A pedestrian and bicycle trail system linking the residential neighborhoods to one another and to the parks and commercial areas is planned. A major component of this trail system is proposed to be provided through the improvement of a portion of the Southern California Edison (SCE) high-voltage transmission corridors within the project site.

Our review of the DEIR found some discrepancies related to the existing SCE facilities within the Rich Haven Specific Plan area. Specifically, the Existing Project Ownership Map (Ex. 3-5) does not show the SCE easement located at the south west corner of the Mira Loma substation which extends in a south west direction across Planning Area 20 and 17b. Another easement also exists on the east side of the future Mill Creek Avenue extending south from the above mentioned easement to the limits of the Rich Haven Specific Plan. These easements are correctly depicted on the Land Use Plan (Exhibit 3-8). 6-1

The description of the SCE facilities within and adjacent to the project site also needs to be corrected. The easement south of Chino Avenue contains one 66kV transmission line and one 500kV transmission line. The transmission lines that transverse the easement located perpendicular to Mill Creek Avenue at the southern boundary of the SCE Mira Loma substation consist of three 220kV lines. The easement that connects to the substation at an angle along the southern Mira Loma substation boundary contains three transmission lines: a 66kV transmission line, a 220kV transmission line, and a 500 kV transmission line. 6-2

The project description references undergrounding 66kV lines along Edison Avenue and Haven Avenue. It is essential that the EIR adequately address the relocation of these existing facilities as any project-related modification or relocation of electrical infrastructure that operates at or above 50kV may be subject to additional CEQA analysis. To be sure that the DEIR analysis fully complies with California Public Utilities Commission (CPUC) environmental requirements, the following should be addressed in the document: 6-3

1. Identify the location and length of any existing SCE transmission or subtransmission facilities which need to be relocated to accommodate the proposed development, or any new SCE transmission or subtransmission facilities required to serve the development;

2. Describe the existing setting of the new or relocated transmission line route, including identification of any biological, archaeological, aesthetic or other sensitivities on the route;

3. Discuss the specific environmental impacts (if any) that would result from the construction or undergrounding of power lines including the number and location of new poles;

4. Identify any mitigation measures that could reduce the level of environmental impacts to less than significant or finding that the relocation or new construction would not cause significant impacts.

6-3 CONT.

Furthermore, the project proposes to use the SCE's easements that transverse portions of the project site for the construction of trails to be used by pedestrians and bicycle riders.
SCE rights-of-ways are purchased for the exclusive use of SCE to operate and maintain its present and future facilities. SCE does not allow project proponents to create impediments to the use of the rights-of-way and SCE's essential mission of keeping the existing lines in good working order to maintain the delivery of electrical power to our customers. Any proposed use of the SCE rights-of-way will be reviewed on a case by case basis by SCE's Operating Department. Approvals would be based on no conflicts with the land rights secured by SCE, or SCE's operation and maintenance criteria. Five sets of project trail and bicycle plans with the contact information provided need to be forwarded to the following address:

Debra Holley, Right of Ways Agent
Real Estate Operations
9500 Cleveland Avenue, Suite 100
Rancho Cucamonga, CA 91730.

6-4

Within 30 days after receiving the plans, the developer or their agent will be contacted by a representative from SCE's Real Estate Operations. Approvals or denials of the plan will be based on no conflicts with the land rights secured by SCE, or SCE's operation and maintenance criteria.

Regarding the Biological Resources Section of the DEIR, references are made to an Implementation Program policy from the New Model Colonies which recommends incorporating habitat (biological resource) into utility corridors among other places. SCE does not use rights-of-way for habitat mitigation. SCE must maintain existing facilities in the easements and is not in the practice of converting utility easements to conservation easements or restoring habitat within easements.

6-5

Under Section 5.10.3 – Electricity, the DEIR states that information contained in that section is based on the FEIR for the New Model Colonies (NMC). SCE is unable to verify the source material and offers a few comments and corrections to the statements in the Rich Haven Specific Plan DEIR related to energy and energy facilities in the NMC area. The opening paragraph in the section discusses the buildout demand for the NMC however, no information is provided as to the method used to evaluate the increase in demand. In addition, the demand value is given in Megawatt (MW) hours-per-year. Electrical power systems are designed based on peak MW demand value and not on Megawatt hours-per-year. Then again, the total demand estimate in the NMC of approximately 28% residential appears to be very low. How were the residential land use value and the 24% commercial and industrial land use value calculated?

6-6

The statement regarding the substations is incorrect. There are four electrical substations surrounding the New Model Colonies and they will have to be expanded and a new substation(s) may be needed to serve the NMC. Also, although with the substation expansion, there may be sufficient generation in the bulk electrical system, the electrical distribution system must be significantly upgraded in order to serve the NMC. Furthermore, electrical power would be delivered to the NMC from various substations and not just from the substation located south of the NMC in the City of Chino. SCE is unsure of the DEIR's definition of a "bulk power station" however, the Mira Loma substation is connected to the bulk power system as well as to the distribution system.

6-7

Related to cumulative projects in the area, the City is aware that there are two regional SCE projects within or adjacent to the proposed Rich Haven Specific Plan. SCE is near completion on the construction of a new small electricity generating unit commonly referred to as a "peaker" that will be capable of producing up to 45 net Megawatts (MW) of electricity. The unit will be operated primarily during periods of peak power demand and when the electrical grid system needs additional usable electric power capacity. The unit can be started on short notice to respond to demand peaks. The project is located on the southeast portion of the existing Mira Loma Substation property. The project site is bordered to the east by Milliken Avenue, to the north and west by the existing Mira Loma Substation, and to the south by the proposed regional commercial, mixed-use area of the Rich Haven Specific Plan.

6-8

SCE filed an Application for a Certificate of Public Convenience and Necessity in June 2007 with the California Public Utilities Commission (CPUC) for the Tehachapi Renewable Transmission Project (TRTP), which includes a series of new and upgraded high-voltage electric transmission lines and substations to deliver electricity from new wind farms in eastern Kern County, California, to the Los Angeles Basin. The proposed TRTP consists of eight segments that will involve upgrading and expanding SCE's transmission systems, building a new substation in Kern County, expanding two existing substations in the Antelope Valley area and upgrading three substations in Los Angeles County. As part of the TRTP, a new 500kV transmission line on three new structures will be erected in the SCE easement south of Chino Avenue. In addition the existing 220kV transmission lines in SCE's easement located parallel to the extension of Schaeffer Street will be upgraded on new circuit structures.

SCE looks forward to working with the City of Ontario and the developer of the Rich Haven Specific Plan to facilitate the project's electrical needs.

Sincerely,

Neil Derry
Public Affairs Region Manager
Southern California Edison Company

1351 East Francis Street
Ontario, CA 91761
909-930-8501/PAX 16501
FAX 909-930-8407
neil.derry@sce.com

Letter 6. Neil Derry, Southern California Edison Letter

Response 6-1

This comment notes that a Southern California Edison (SCE) Easement appears on one exhibit, but not on another. This comment is noted; however, the project and the EIR address the correct location of the easement.

Response 6-2

This comment notes that the type of transmission lines in one easement are not correctly described in the project description of the EIR. The project description portion of the Draft EIR has been amended to reflect this change as shown in Section 4, Errata; however, neither this comment nor this change address the adequacy of the environmental analysis.

Response 6-3

This comment makes note of the requirement for additional CEQA analysis for the relocation of any transmission line. This is noted; however, relocation of transmission lines is not a part of this project.

Response 6-4

This comment notes the requirements for use of SCE easements for pedestrian and bicycle trails. The project proponent is aware of these requirements and is meeting with the appropriate SCE personnel. This comment has no relationship to the adequacy of the environmental analysis.

Response 6-5

This comment notes the recommendations from the New Model Colony (NMC) documents regarding the use of SCE easements for habitat conservation and states that this is not SCE policy. This comment is noted; however, neither the project nor the EIR relies on the use of SCE easements for the mitigation of lost habitat.

Response 6-6

This comment addresses the basis for the calculation of electricity use by the proposed project and questions the use of certain terms and figures in the NMC EIR. The text in the EIR regarding the NMC EIR is provided as background, and is not used for calculations in the Rich Haven Specific Plan EIR. The NMC EIR was published, reviewed, and adopted in 1997. This comment does not address the electrical demand analysis in the Rich Haven Specific Plan EIR.

Response 6-7

This comment addresses the description of the electrical facilities in the area. This comment is noted, and the project description portion of the Draft EIR has been amended accordingly. However, the precise location and type of electrical facilities in the area is not relevant to the adequacy of the analysis of electrical demand.

Response 6-8

This comment addresses the various new electrical facilities that are planned or under construction. This comment is noted; however, it does not address the adequacy of the analysis of the EIR and in fact supports the comment in the EIR which reads: "The existing and planned facilities owned and operated by SCE are projected to adequately serve planned growth in the area."

SECTION 4:
SUMMARY OF CHANGES AND ADDITIONS TO DRAFT EIR

The following changes and additions to the Draft EIR are made in response to comments received during the public comment period. These revisions do not change the significance of any of the environmental issue conclusions within the Draft EIR. The revisions are listed by page number. All additions to the text are underlined and all deletions from the text are stricken.

Page 3-41

In response to the comments made by Southern California Edison, the project description is amended so that the second paragraph on page 3-41 under the Electricity heading now reads as follows:

> ~~SCE facilities located within and adjacent to the project area consist of 115kV, 66kV, 12kV, and communications. Facilities less than 34.5kV will be located underground in the event that they are located adjacent to any streets proposed to be improved in conjunction with site improvements. See the Specific Plan's Figure 2-5, Existing On-Site Facilities.~~ SCE facilities located within and adjacent to the project site consist of one 66kV transmission line and one 500kV transmission line. The transmission lines that transverse the easement located perpendicular to Mill Creek Avenue at the southern boundary of the SCE Mira Loma substation consist of three 220kV lines. The easement that connects to the substation at an angle along the southern Mira Loma substation boundary contains three transmission lines: a 66kV transmission line, a 220kV transmission line, and a 500 kV transmission line.

Page 5.8-39

An error was made in the placement of the words "Photovoltaic cells (solar panels)." Mitigation Measure GCC-2 is amended to read as follows:

> **GCC-2** To increase energy efficiency, the following measures shall be implemented to the satisfaction of the City of Ontario: a) there shall be a 20 percent reduction in all buildings' combined space heating, cooling, and water heating energy compared to the current Title 24 Standards; b) the project shall incorporate light roof colors; c) each appliance (i.e., washer/dryers, refrigerators, stoves, etc.) provided by the builder must be Energy Star qualified if an Energy Star designation is applicable for that appliance; ~~photovoltaic cells (solar panels);~~ low flow appliances (i.e., toilets, dishwashers, shower heads, washing machines) shall be installed if provided by the builder/applicant and; d) solar powered water heaters and photovoltaic cells (solar panels) shall be offered to the homebuyers as an option.

Section 5.6, Traffic and Circulation

In response to comments from the Riverside County Department of Transportation, several revisions were made to the analysis and graphics contained in Section 5.6, Traffic and Circulation. Each of these changes is outlined in detail in the addendum prepared by the traffic consultant that is included with the responses to Letter 4, from Juan C. Perez, County of Riverside Transportation Department.

Pages 5.6-30 and 5.6-37

Also in Section 5.6, Traffic and Circulation, it was discovered that mitigation measures were transcribed inaccurately from the Traffic Impact Analysis to the mitigation measures for the year 2015 that appear on pages 5.6-30 and 5.6-37 of the Draft EIR. In combination with the changes made to the Draft EIR, as indicated above, the mitigation measures are amended to read as follows:

(a) Intersection #4 Archibald Avenue/Edison Avenue
- Provide EB free-flow-right-turn only lane

(b) Intersection #10 Haven Avenue/SR-60 EB Ramps
- Restripe EB center lane as shared left-turn/right-turn lane

(c) Intersection #11 Haven Avenue/Riverside Drive
- Provide NB and SB left turn protected phasing

(d) Intersection #13 Haven Avenue/Edison Avenue
- Provide NB and SB left turn protected phasing

(e) Intersection #17 Milliken Avenue/SR-60 WB Ramps
- Provide NB left-turn only lane
- Provide WB shared left-turn/right-turn lane

(f) Intersection #18 Milliken Avenue/SR-60 EB Ramps
- Restripe EB shared left-turn/right-turn lane as free-flow-right-turn only lane

SECTION 5:
MITIGATION MONITORING AND REPORTING PROGRAM

The California Environmental Quality Act (CEQA) requires public agencies to develop monitoring programs for the purpose of ensuring compliance with those mitigation measures adopted as conditions of project approval in order to mitigate or avoid significant environmental effects identified in environmental impact reports. Mitigation measures identified within the Rich Haven Specific Plan EIR have been described in sufficient detail to provide the necessary information to identify (1) the actions to be taken to reduce each significant impact, (2) the parties responsible for carrying out the mitigation measure, and (3) the timing of implementation of each mitigation measure.

A Mitigation Monitoring and Reporting Program (MMRP) for the Rich Haven EIR Specific Plan is presented in Table 1. The purpose of the MMRP is to provide a framework outlining the implementation steps for each mitigation measure in the approved EIR. In addition, the MMRP provides a format to document that each mitigation measure has been implemented and a monitoring loop for tracking performance of each mitigation measure.

Table 1
Rich Haven Project Mitigation Monitoring and Reporting Program

Impact Category	Impact/Issue	Mitigation Measures	Implementation Timing	Responsible Party	Verification of Compliance		
					Signature	Date	Remarks
Hydrology and Water Quality	The short-term construction phase and the long-term operations of the proposed project have the potential to release pollutants offsite and into receiving Waters of the U.S. that have the potential to negatively impact water quality.	**HWQ-1.** All development shall comply with the National Pollutant Discharge Elimination System (NPDES) regulations. Prior to the issuance of a grading permit, applicants shall demonstrate compliance with NPDES Stormwater Permit requirements to the satisfaction of the City of Ontario. Applicable BMP provisions shall be incorporated in the approved WQMP(s) for the Specific Plan.	Prior to issuance of Grading Permits and during grading.	Developer and City of Ontario Engineer			
Hydrology and Water Quality	The short-term construction phase and the long-term operations of the proposed project have the potential to release pollutants offsite and into receiving Waters of the U.S. that have the potential to negatively impact water quality.	**HWQ-2.** Individual projects within the specific plan area shall be reviewed by the City of Ontario for the inclusion of appropriate structural and non-structural Best Management Practices (BMPs) to control stormwater discharges to ensure compliance with the State and federal water quality requirements. Structural controls may include, but are not limited to filtration, common area efficient irrigation, common area runoff-minimizing landscape design, velocity dissipation devices, oil/grease separators, inlet trash racks, and catch basin stenciling. Non-structural BMPs can include, but not be limited to, education for property owners, tenants and	Prior to issuance of Grading Permits and during grading.	Developer and City of Ontario Engineer			

Impact Category	Impact/Issue	Mitigation Measures	Implementation Timing	Responsible Party	Verification of Compliance		
					Signature	Date	Remarks
		occupants, activity restrictions, common area landscape management, litter control, and catch basin inspection, BMP maintenance; and street sweeping. The following are examples of BMPs that may be included within NPDES permit requirements for individual projects: • Use of sand bags and temporary desilting basins during project grading and construction during the rainy season (October through April) to prevent discharge of sediment-laden runoff into stormwater facilities. • Installation of landscaping as soon as practicable after completion of grading to reduce sediment transport during storms. • Hydroseeding soil binders or other measures to retain soil on graded building pads if they are not built upon before the onset of the rainy season. • Incorporation of structural BMPs (e.g., grease traps, debris screens, continuous deflection separators, oil/water separators, drain inlet inserts) into the project design to provide detention and filtering of contaminants in urban runoff from the developed site prior to discharge to stormwater facilities. • Stenciling of catch basins and other publicly visible flood					

Impact Category	Impact/Issue	Mitigation Measures	Implementation Timing	Responsible Party	Verification of Compliance		
					Signature	Date	Remarks
		control facilities with the phrase "No Dumping-Drains to the Ocean."					
Hydrology and Water Quality	If the permanent off-site stormwater-related infrastructure identified in the Master Plan of Drainage has not been constructed prior to the commencement of construction activities on the project site, off-site flooding could result.	**HWQ-3.** Prior to the issuance of a grading permit or construction permit for the residential component, whichever would occur first, the City Engineer shall review the developers plans to determine whether a temporary water quality/stormwater detention basin or other treatment BMP shall be required onsite. Plans shall be submitted to the City Engineer identifying the location and size of the temporary water quality/stormwater detention basin or other treatment BMP. The City Engineer shall also approve the location and size of an onsite, temporary water quality/stormwater detention basin on the eastern portion of the project site serving the commercial component. These basins will be required to be sized to accept 100 percent of excess stormwater flows from the western and eastern portions of the project site, respectively. Excess stormwater flows during construction can include the quantity of additional run-off from a 100-year storm event caused on the impervious surface on the project site over and above existing conditions. These basins shall be designed in accordance with the	Prior to issuance of Grading Permits and during grading.	Developer and City of Ontario Engineer			

Impact Category	Impact/Issue	Mitigation Measures	Implementation Timing	Responsible Party	Verification of Compliance		
					Signature	Date	Remarks
		applicable standards of the State Water Resources Control Board Construction Storm Water Permit, the Regional Water Quality Control Board, Santa Ana Region, Area-Wide Urban Storm Water Runoff Permit, the San Bernardino County Flood Control District, and the City of Ontario.					
Hydrology and Water Quality	If the permanent off-site stormwater-related infrastructure identified in the Master Plan of Drainage has not been constructed prior to the commencement of construction activities on the project site, off-site flooding could result.	**HWQ-4.** The City of Ontario shall review subsequent development projects within the specific plan area for the application of Best Management Practices (BMPs) to reduce water pollution from urban runoff in accordance with regulatory requirements. Among the source-reduction BMPs that may be required by the City of Ontario for application to such projects are the following: • Animal waste reduction. • Exposure reduction. • Recycling/waste disposal. • Parking lot and street cleaning. • Infiltration (exfiltration) devices. • Oil and grease traps. • Sand traps. • Filter strips. • Regular/routine maintenance. • Maintenance of detention facilities should be provided by the homeowners' association. The specific measures to be applied shall be determined in conjunction	Prior to issuance of Grading Permits and during grading.	Developer and City of Ontario Engineer			

Impact Category	Impact/Issue	Mitigation Measures	Implementation Timing	Responsible Party	Verification of Compliance		
					Signature	Date	Remarks
		with review of required project hydrology and hydraulic studies, and shall conform to City standards and the standards of the County's Municipal Stormwater Permit, under the NPDES program.					
Biological Resources	Construction-related activities on the project site could negatively impact the Burrowing owl, if present on the project site, which is protected by the Migratory Bird Treaty Act and identified as Species of Special Concern by the California Department of Fish and Game.	**BR-1.** Not less than two weeks and not more than four weeks prior to the commencement of any ground-disturbing activities, a survey for burrowing owls will be conducted by a qualified biologist to document their presence or absence. If burrowing owls are documented to be present on the project site, they will be physically relocated to an established preserve relocation site.	Two to four weeks prior to commencement of ground-disturbing activities.	Developer, City of Ontario Planning Director and USFWS. Contact: Robin Ramas			
Biological Resources	Construction-related activities on the project site could negatively impact the Burrowing owl, if present on the project site, which is protected by the Migratory Bird Treaty Act and identified as Species of Special Concern by the California Department of Fish and Game.	**BR-2.** A focused survey by a qualified biologist for burrowing owl shall be conducted each year that the property remains in an undeveloped state to confirm the current number of owls occupying the site. Focused surveys would follow accepted burrowing owl protocol, which includes a nesting season survey. During the nesting season survey, four site visits are conducted between March 1 and August 31. Surveys should be conducted from two hours before sunset to one hour after, or from one hour before to two hours after sunrise.	Two to four weeks prior to commencement of ground-disturbing activities.	Developer, City of Ontario Planning Director and USFWS. Contact: Robin Ramas			

Impact Category	Impact/Issue	Mitigation Measures	Implementation Timing	Responsible Party	Verification of Compliance		
					Signature	Date	Remarks
Biological Resources	Construction-related activities on the project site could negatively impact the Burrowing owl, if present on the project site, which is protected by the Migratory Bird Treaty Act and identified as Species of Special Concern by the California Department of Fish and Game.	**BR-3.** Burrowing owl inside the project site will be passively relocated prior to construction activity in order to avoid direct impacts of burrow destruction. Once all burrows on the project site are confirmed to be absent of owls, they will be systematically collapsed. Where possible, burrows will be excavated using hand tools and refilled to prevent reoccupation. Sections of flexible plastic pipe or burlap bags will be inserted into the tunnels during excavation to maintain an escape route for any animals inside the burrow.	Two to four weeks prior to commencement of ground-disturbing activities.	Developer, City of Ontario Planning Director and USFWS. Contact: Robin Ramas			
Biological Resources	Construction-related activities on the project site could negatively impact the Burrowing owl, if present on the project site, which is protected by the Migratory Bird Treaty Act and identified as Species of Special Concern by the California Department of Fish and Game.	**BR-4.** No construction-related disturbance should occur within 50 meters (m), approximately 160 feet (ft), of occupied burrows during the non-breeding season of September 1 through January 31 or within 75 m., approximately 250 ft, during the breeding season of February 1 through August 31.	Two to four weeks prior to commencement of ground-disturbing activities.	Developer, City of Ontario Planning Director and USFWS. Contact: Robin Ramas			
Biological Resources	Construction-related activities on the project site could negatively impact the Burrowing owl, if present on the project site, which is protected by the Migratory Bird Treaty	**BR-5.** Prior to issuance of permits, the Applicant and the City of Ontario shall hire a qualified biologist to develop a mitigation plan to compensate for the loss of burrowing owl occupied habitat to the satisfaction of the CDFG.	Two to four weeks prior to commencement of ground-disturbing activities.	Developer, City of Ontario Planning Director and USFWS. Contact: Robin Ramas			

Impact Category	Impact/Issue	Mitigation Measures	Implementation Timing	Responsible Party	Verification of Compliance		
					Signature	Date	Remarks
	Act and identified as Species of Special Concern by the California Department of Fish and Game.						
Biological Resources	Removal of the windrows throughout the project site would negatively impact raptors if they were present.	**BR-6.** Removal of windrows shall be accomplished in a manner that avoids impacts to active nests during the breeding season. If a windrow is removed entirely between September 1 and January 14, no surveys or monitoring will be required. If removal of this windrow must be performed between January 15 and August 31, a nesting bird survey must be conducted one week prior to commencing tree removal. If any active nests are detected within the windrow, a 100-foot wide buffer area around the nest(s) will be flagged, and will be avoided until the nesting cycle is complete or it is determined that the nest(s) has failed. In addition, a qualified biological monitor will be present on the site to monitor tree removal or other construction activity in the vicinity of nest sites to assure that active nests are not disturbed.	During one week prior to tree removal, between January 15 an August 31, and until the nesting cycle is complete or until nests have been determined to have failed.	Developer, Contractor, City of Ontario Planning Director, and City of Ontario Building Official.			
Biological Resources	Elimination of the existing stormwater retention basin could negatively impact migratory waterfowl, which is classified as High Value Habitat by the	**BR-7.** Require the developer of the Rich Haven Project to pay a Habitat Mitigation Fee of $4,320 per net acre to the City of Ontario toward the development of the Waterfowl and Raptor Conservation Area,	Prior to approval of grading plans.	Developer and City of Ontario City Engineer.			

Impact Category	Impact/Issue	Mitigation Measures	Implementation Timing	Responsible Party	Verification of Compliance		
					Signature	Date	Remarks
	City's Sphere of Influence Parks, Recreation, and Biological Resources Implementation Program.	which would be based on the percentage of land area of the NMC that is occupied by the project site, as approved by the City of Ontario.					
Geology and Soils	Development of urban uses on the project site would expose people and structures to seismically-induced ground shaking.	**GS-1.** Future development of the site shall be based on evaluation of property-specific conditions by a geotechnical consultant following their review of the grading plans for a specific property.	Prior to approval of grading plans.	Developer and City of Ontario Building Official			
Geology and Soils	Structures built on unconsolidated or poorly compacted soils could settle during to seismically-induced ground shaking, which could result in structural damage. Structures built on unconsolidated or organically-rich soils could settle if these soils become too wetted, which could result in structural damage.	**GS-2.** Site-specific seismic design parameters determined in accordance with Section 16 of the 2001 California Building Code shall be provided in project-specific geotechnical investigation reports.	Prior to approval of building plans.	Developer and City of Ontario Building Official			
Geology and Soils	Structures built on unconsolidated or poorly compacted soils could settle during to seismically-induced ground shaking, which could result in structural damage.	**GS-3.** Compressible surficial materials unsuitable for construction shall be removed or overexcavated prior to construction in accordance with the standards of the City of Ontario.	During grading and prior to commencement of building construction	Developer and City of Ontario Building Official			

Impact Category	Impact/Issue	Mitigation Measures	Implementation Timing	Responsible Party	Verification of Compliance		
					Signature	Date	Remarks
	Structures built on unconsolidated or organically-rich soils could settle if these soils become too wetted, which could result in structural damage.						
Geology and Soils	Structures built on unconsolidated or poorly compacted soils could settle during to seismically-induced ground shaking, which could result in structural damage. Structures built on unconsolidated or organically-rich soils could settle if these soils become too wetted, which could result in structural damage.	**GS-4.** As part of the site grading and prior to the commencement of building construction, unconsolidated fill materials, organic rich soils shall be excavated and removed offsite and shall be replaced with engineered fill.	During grading and prior to commencement of building construction	Developer and City of Ontario Building Official			
Geology and Soils	Structures built on unconsolidated or poorly compacted soils could settle during to seismically-induced ground shaking, which could result in structural damage. Structures built on unconsolidated or organically-rich soils could settle if these soils become too wetted, which	**GS-5.** Improvements along the boundary of the site where unsuitable soils may remain shall be designed and constructed with deepened and/or strengthened foundations systems to withstand relative movement that is likely to result from consolidation of these potentially compressible surficial soils.	During grading and prior to commencement of building construction	Developer and City of Ontario Building Official			

Impact Category	Impact/Issue	Mitigation Measures	Implementation Timing	Responsible Party	Verification of Compliance		
					Signature	Date	Remarks
	could result in structural damage.						
Geology and Soils	Structures built on corrosive soils could have concrete and metal elements damaged and ultimately fail over time.	**GS-6.** Soils shall be tested to determine their corrosive potential. Some foundations may need to be constructed using Type V cement to mitigate deterioration from water-soluble sulfates. Additional testing for corrosivity shall be performed as part of property-specific investigations and a final evaluation shall be performed at or near the completion of rough grading to more accurately assess soil corrosivity, and a certified corrosion engineer shall be consulted to prepare project specific recommendations to protect against corrosion.	During grading and prior to commencement of building construction	Developer and City of Ontario Building Official			
Geology and Soils	Structures built on expansive soils could become severely damaged as a result of the movement in the soils.	**GS-7.** Contingencies shall be made for balancing earthwork quantities based on actual shrinkage and subsidence that occurs during construction.	Prior to approval of building plans.	Developer and City of Ontario Building Official			
Hazards	Demolition of structures on the project site that were built prior to 1978 have the potential to expose people to lead-based paints and asbestos.	**HM-1.** Prior to the issuance of permits by the City of Ontario for any structural demolition activities on the project site, the project developer will be required to submit documentation to the City of Ontario Building Department that asbestos and lead-based paint issues are not applicable to their property or that appropriate remediation actions will be undertaken to correct	Prior to the issuance of demolition permits.	Developer and City of Ontario Building Official			

Impact Category	Impact/Issue	Mitigation Measures	Implementation Timing	Responsible Party	Verification of Compliance		
					Signature	Date	Remarks
		any lead-based paint or asbestos issues, in conformance with the regulations of the South Coast Air Quality Management District and the State of California, Division of Occupational Health and Safety.					
Hazards	The presence of methane gas in soils could be significant, if present.	**HM-2.** Subsequent to grading activities, testing for the presence of methane in the soil shall be performed. This testing shall conform to applicable City of Ontario standards. If methane is detected, mitigation would include the installation of under-slab methane vents, methane barrier, and sealing utilities in locations where they enter a structure and penetrate the methane barrier.	After grading and prior to the commencement of building foundations.	Developer and City of Ontario Building Official			
Hazards	The presence of methane gas in soils could be significant, if present.	**HM-3.** Post-grading methane gas investigation should take place near the former Scritsmier Hog Ranch (13571 Haven Avenue) where subsurface methane levels exceed 5,000 ppm. A passive vent system and gas membrane beneath the floor slab should be installed, along with utility trench dams and conduit seals.	After grading and prior to the commencement of building foundations.	Developer and City of Ontario Building Official			
Hazards	The presence of methane gas in soils could be significant, if present.	**HM-4.** Careful clearing, grubbing, segregation, and stockpiling or proper disposal of the near surface organic-rich soils at the site prior to the initiation of mass grading activities should occur.	Prior to the initiation of mass grading.	Developer and City of Ontario Building Official			

Impact Category	Impact/Issue	Mitigation Measures	Implementation Timing	Responsible Party	Verification of Compliance		
					Signature	Date	Remarks
Hazards	The presence of methane gas in soils could be significant, if present.	**HM-5.** Identification and segregation/stockpiling or proper disposal of deeper soils which contain elevated levels of organic material should be conducted.	Prior to the initiation of mass grading.	Developer and City of Ontario Building Official			
Hazards	A portion of the project site (the Hillardis property) has not been subject to a Phase I ESA.	**HM-6.** Prior to approval of a discretionary permit or approval for development of proposed residential uses on the Hillardis property, such as a parcel map or tentative tract map, a Phase 1 Environmental Site Assessment (ESA) shall be conducted and the results of that ESA implemented.	Prior to approval of any discretionary permit.	Developer and City of Ontario Building Official			
Transportation and Circulation	The implementation of the proposed project would result in significant impacts to levels of service at several intersections and freeway ramps in the Year 2015.	**T-1.** Intersection Mitigation Measures: (a) Intersection #4 Archibald Avenue/Edison Avenue • Provide EB free-flow-right-turn only lane (b) Intersection #10 Haven Avenue/SR-60 EB Ramps • Restripe EB center lane as shared left-turn/right-turn lane (c) Intersection #11 Haven Avenue/Riverside Drive • Provide NB and SB left turn protected phasing (d) Intersection #13 Haven Avenue/Edison Avenue • Provide NB and SB left turn protected phasing	At the time of Tentative Tract Map Approval	Developer and City of Ontario, City Engineer.			

Impact Category	Impact/Issue	Mitigation Measures	Implementation Timing	Responsible Party	Verification of Compliance		
					Signature	Date	Remarks
		(e) Intersection #17 Milliken Avenue/SR-60 WB Ramps • Provide NB left-turn only lane • Provide WB shared left-turn/right-turn lane (f) Intersection #18 Milliken Avenue/SR-60 EB Ramps • Restripe EB shared left-turn/right-turn lane as free-flow-right-turn only lane					
Transportation and Circulation	The implementation of the proposed project would result in significant impacts to levels of service at several intersections and freeway ramps in the Year 2015.	**T-2.** Prior to the issuance of a building permit for the commercial component, the project applicant shall pay the proportionate share for all intersection improvements, or construct those improvements deemed necessary by the City Engineer at the time of development contained in mitigation measure T-1 and other transportation improvements in conformance with the City of Ontario's Traffic Impact Fee Program. The determination of whether the payment of proportionate share or installation of the improvements is required shall be made by the City Engineer at the time of Tentative Tract Map approval.	Prior to the issuance of a building permit for the commercial component.	Developer, City Engineer.			

Impact Category	Impact/Issue	Mitigation Measures	Implementation Timing	Responsible Party	Verification of Compliance		
					Signature	Date	Remarks
Noise	Sensitive receptors adjacent to the project site could be impacted by noise from short-term, construction-related activities.	**N-1.** Prior to Grading Permit issuance, the Applicant shall demonstrate that the project complies with the following: • All construction equipment, fixed or mobile, shall be equipped with properly operating and maintained mufflers, to the satisfaction of the Noise Control Officer. • During construction, stationary construction equipment shall be placed such that emitted noise is directed away from sensitive noise receivers, to the satisfaction of the City Planner. • During construction and to the satisfaction of the City Planner, stockpiling and vehicle staging areas shall be located as far as practical from noise sensitive receptors during construction activities.	Prior to the issuance of a Grading Permit.	Developer and city Building Official.			
Noise	Sensitive receptors adjacent to the project site could be impacted by noise from short-term, construction-related activities.	**N-2.** Prior to the issuance of a building permit, require an Acoustical Analysis Report to be submitted to the City of Ontario Planning Department that includes the following noise reduction information that adheres to the City of Ontario Noise Ordinance: a description of the interior and exterior noise levels for residential uses on the project site and specific design features and mitigation measures to document compliance	Prior to the issuance of building permits.	Developer and city Building Official.			

Impact Category	Impact/Issue	Mitigation Measures	Implementation Timing	Responsible Party	Verification of Compliance		
					Signature	Date	Remarks
		with the established City of Ontario noise criteria; identification of the hours of construction in compliance with Section 9-1.3350 of the Ontario Municipal Code; a description of the location of the construction equipment and the distance between the equipment and the affected sensitive receptors; identification of temporary noise attenuation fences; a description of the preferential location of construction equipment; and a description of the use of current noise suppression technology and equipment.					
Noise	Established City noise standards could be exceeded depending on the location of sensitive receptors in relation to roadways.	**N-3.** Prior to the construction of residential development along Riverside Drive, Haven Avenue, Mill Creek Avenue, Edison Avenue, and Milliken Avenue, an acoustical noise analysis should be prepared prior to the submittal of final tentative tract maps to ensure that exterior and interior noise levels are met. According to the California Building Code, typical residential construction has a Sound Transmission Class of 20 dBA, which would attenuate 65 dBA noise to 45 dBA. The acoustical analysis shall demonstrate that the buildings have been designed to limit interior noise levels to 45 dBA CNEL and exterior noise (backyards and habitable balconies and patios) to less than 65 dBA CNEL. In areas	Prior to the issuance of building permits.	Developer and city Building Official.			

Impact Category	Impact/Issue	Mitigation Measures	Implementation Timing	Responsible Party	Verification of Compliance		
					Signature	Date	Remarks
		where typical construction does not attenuate interior noise to 45dBA or less, additional measures shall be incorporated into the design and construction of the residences to limit interior noise to 45 dBA. Such additional measures may include, but not be limited to: • Install an eight-foot backyard perimeter wall at the edge of the pad for project site homes that back up onto Riverside Drive, Haven Avenue, Mill Creek Avenue, Edison Avenue, and Milliken Avenue. • Install double-paned windows and extra wall insulation in second story bedrooms of project site dwelling units that are adjacent to Riverside Drive, Haven Avenue, Mill Creek Avenue, Edison Avenue, and Milliken Avenue. • Use non-noise sensitive structures such as garages to shield noise-sensitive areas. • Orient buildings to shield outdoor spaces from a noise source. • Incorporate architectural design strategies, which reduce the exposure of noise-sensitive spaces to stationary noise sources (i.e., placing bedrooms or balconies on the side of the house facing away from noise sources). These design strategies shall be implemented based on					

Impact Category	Impact/Issue	Mitigation Measures	Implementation Timing	Responsible Party	Verification of Compliance		
					Signature	Date	Remarks
		recommendations of acoustical analysis for individual developments as required by the City to comply with City noise standards. • Modify elements of building construction (i.e., walls, roof, ceiling, windows, and other penetrations) as necessary to provide sound attenuation. This may include sealing windows, installing thicker or double-glazed windows, locating doors on the opposite side of a building from the noise source, or installing solid-core doors equipped with appropriate acoustical gaskets.					
Noise	Established City noise standards could be exceeded depending on the location of sensitive receptors in relation to roadways.	**N-4.** To mitigate noise from commercial parking areas into residential areas and other sensitive receptors, prior to the construction of commercial development an acoustical analysis shall be required to ensure that walls, landscaping or other attenuating measures are sufficient to reduce noise from parking areas to levels below 65 dBA.	Prior to the issuance of building permits.	Developer and city Building Official.			

Impact Category	Impact/Issue	Mitigation Measures	Implementation Timing	Responsible Party	Verification of Compliance		
					Signature	Date	Remarks
Air Quality	Short-term, construction related activities would exceed the daily and quarterly thresholds established by the South Coast Air Quality Management District for CO, ROC, NO_x, and PM_{10}.	**AQ-1.** During construction of the project, the developer shall require painting contractors to use only zero-VOC paints (assumes no more than 100 grams/liter of VOC) and coatings. All paints shall be applied using either high-volume low-pressure (HVLP) spray equipment or by hand application. For a listing of paints, see www.aqmd.gov/prdas/brochures/paintguide.html.	Prior to construction of the proposed improvements.	Developer, contractor, and City Building Official.			
Air Quality	Short-term, construction related activities would exceed the daily and quarterly thresholds established by the South Coast Air Quality Management District for CO, ROC, NO_x, and PM_{10}.	**AQ-2.** Prior to construction of the proposed improvements, the project proponent will provide a traffic control plan that will describe in detail safe detours around the project construction site and provide temporary traffic control (i.e. flag person) during concrete transport and other construction related truck hauling activities. This suggested condition is a standard procedural requirement imposed on projects by the City of Ontario and is implemented during the plan check process.	Prior to construction of the proposed improvements.	Developer, contractor, and City Building Official.			
Air Quality	Short-term, construction related activities would exceed the daily and quarterly thresholds established by the South Coast Air Quality Management District for CO, ROC, NO_x, and PM_{10}.	**AQ-3.** During construction of the proposed improvements, all contractors will be advised not to idle construction equipment onsite for more than five minutes.	During construction.	Developer, contractor, and City Building Official.			

Impact Category	Impact/Issue	Mitigation Measures	Implementation Timing	Responsible Party	Verification of Compliance		
					Signature	Date	Remarks
Air Quality	Short-term, construction related activities would exceed the daily and quarterly thresholds established by the South Coast Air Quality Management District for CO, ROC, NO_x, and $PM1_0$.	**AQ-4.** Construction equipment "run-time" shall be limited to no more than a total of 8 hours of work every day.	During construction.	Developer, contractor, and City Building Official.			
Air Quality	Short-term, construction related activities would exceed the daily and quarterly thresholds established by the South Coast Air Quality Management District for CO, ROC, NO_x, and PM_{10}.	**AQ-5.** During construction of the project, onsite electrical hook ups shall be provided for electric construction tools including saws, drills, and compressors to eliminate the need for diesel powered electric generators.	During construction.	Developer, contractor, and City Building Official.			
Air Quality	Short-term, construction related activities would exceed the daily and quarterly thresholds established by the South Coast Air Quality Management District for CO, ROC, NO_x, and PM_{10}.	**AQ-6.** Prior to the issuance of a grading permit, the developer will provide documentation to the City indicating that a carpool incentive plan has been developed to the satisfaction of the City. The incentive must include a method to educate workers about the benefits of carpooling and additional incentives for workers who carpool. In addition, to reduce worker trips during the lunch hour, workers shall carpool to lunch and/or a lunch wagon shall be provided.	Prior to the issuance of grading permits.	Developer, contractor, and City Building Official.			

Impact Category	Impact/Issue	Mitigation Measures	Implementation Timing	Responsible Party	Verification of Compliance		
					Signature	Date	Remarks
Air Quality	Short-term, construction related activities would exceed the daily and quarterly thresholds established by the South Coast Air Quality Management District for CO, ROC, NO_x, and PM_{10}.	**AQ-7.** During the construction of the proposed project, asphalt operations shall not occur at the same time as building operations.	During construction.	Developer, contractor, and City Building Official.			
Air Quality	Short-term, construction related activities would exceed the daily and quarterly thresholds established by the South Coast Air Quality Management District for CO, ROC, NO_x, and PM_{10}.	**AQ-8.** To reduce emissions of NOx and diesel particulate matter, during all phases of construction, the off-road construction equipment shall be fueled with aqueous diesel fuel.	During construction.	Developer, contractor, and City Building Official.			
Air Quality	Short-term, construction related activities would exceed the daily and quarterly thresholds established by the South Coast Air Quality Management District for CO, ROC, NO_x, and PM_{10}.	**AQ-9.** Prior to construction of the project, the project proponent will provide a Dust Control Plan that will describe the application of standard best management practices to control dust during construction. Best management practices will include application of water on disturbed soils a minimum of three times per day, covering haul vehicles, replanting disturbed areas as soon as practical, and restricting vehicle speeds on unpaved roads to 15 mph, and other measures, as deemed appropriate to the site, to control fugitive dust. The Fugitive Dust Control Plan shall be submitted to the City and SCAQMD	Prior to the issuance of grading and building permits.	Developer, contractor, and City Building Official, and SCAQMD.			

Impact Category	Impact/Issue	Mitigation Measures	Implementation Timing	Responsible Party	Verification of Compliance		
					Signature	Date	Remarks
		for approval and approved prior to construction.					
Air Quality	Long-term operations would exceed the daily thresholds established by the South Coast Air Quality Management District for CO, ROC, NO_x, and PM_{10}. Long-term operations would not exceed the daily thresholds for SO_x.	**AQ-10.** Fireplaces and wood-burning stoves shall be prohibited from the development.	Prior to the issuance of building permits.	Developer and City Building Official.			
Air Quality	Long-term operations would exceed the daily thresholds established by the South Coast Air Quality Management District for CO, ROC, NO_x, and PM_{10}. Long-term operations would not exceed the daily thresholds for SO_x.	**AQ-11.** To reduce fugitive dust emissions on the roads within the project site, the project shall contribute a fair share amount to the City of Ontario for its procurement of a street sweeper that meets the requirements of the South Coast Air Quality Management District Rule 1186. The main roads within the project site shall be cleaned a minimum of once per month or more frequently if the road is shown to have visible accumulation of road debris.	During grading.	Developer, contractor and City Building Official,			

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Air Quality	Long-term operations would exceed the daily thresholds established by the South Coast Air Quality Management District for CO, ROC, NO_x, and PM_{10}. Long-term operations would not exceed the daily thresholds for SO_x.	**AQ-12.** Sensitive land uses (residences, schools, parks) shall not be placed within 300 feet of any dry cleaning operation or gasoline station.	During operation of the project.	City Planning Director			
Global Climate Change	The project will increase carbon dioxide (CO_2) emissions and contribute to cumulative impacts.	**GCC-1.** To encourage recycling, there shall be areas designated for recycling incorporated into the project design in the multi-family housing and the commercial/retail uses.	During operation of the project.	City Planning Director			
Global Climate Change	The project will increase carbon dioxide (CO_2) emissions and contribute to cumulative impacts.	**GCC-2.** To increase energy efficiency, the following measures shall be implemented to the satisfaction of the City of Ontario: a) there shall be a 20 percent reduction in all buildings combined space heating, cooling, and water heating energy compared to the current Title 24 Standards; b) the project shall incorporate light roof colors; c) each appliance (i.e., washer/dryers, refrigerators, stoves, etc.) provided by the builder must be Energy Star qualified if an Energy Star designation is applicable for that appliance; low flow appliances (i.e., toilets, dishwashers, shower heads, washing machines) shall be installed if	During operation of the project.	City Planning Director			

Impact Category	Impact/Issue	Mitigation Measures	Implementation Timing	Responsible Party	Verification of Compliance		
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		provided by the builder/applicant and; d) solar powered water heaters and photovoltaic cells (solar panels); shall be offered to the homebuyers as an option.					
Global Climate Change	The project will increase carbon dioxide (CO_2) emissions and contribute to cumulative impacts.	**GCC-3.** To reduce idling emissions at commercial loading docks, the following shall be implemented to the satisfaction of the City of Ontario: all dock and delivery areas shall be posted with signs informing truck drivers of the California Air Resources Board (CARB) regulations; truck drivers shall turn off engines when not in use; all diesel delivery trucks servicing the project shall not idle for more than five minutes per truck trip per day; and electricity shall be provided in any major loading dock areas that anticipate transportation refrigeration units visiting the site.	During operation of the project.	City Planning Director			

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Public Services	The development of urban uses on the project site would result in the generation of 1,569 elementary and middle school students, and 723 high school students, which could negatively impact school facilities in the Mountain View Unified School District and Chaffey Joint Union High School District that are near or over capacity.	**S-1.** Prior to the issuance of building permits or grading permits, the project applicant shall pay developer impact fees or otherwise, in lieu of fees, meet Project Obligations to schools as approved by the Mountain View School District and Chaffey Joint Union High School District in accordance with Section 65995 of the California Government Code.	Prior to the issuance of building permits or grading permits.	Developer, contractor, City Building Official, Mountain View School District, Chaffey Joint Union High School District.			
Public Services	The project will increase demands on police services	**P-1.** The developer shall pay development impact fees to that will offset the cost of new police services.	Prior to the issuance of building permits or grading permits.	Developer, Contractor, City Building Official			
Public Services	The project will increase demands on fire services.	**F-1.** To reduce fire hazards, wood-shingle and shake-shingle roofs shall be prohibited.	During operation.	City Building Official			
Public Services	The project will increase demands on fire services.	**F-2.** To reduce fire hazards, fire hydrant locations and water mains shall meet standards established by the City Fire Department and reviewed and implemented by the Engineering Department.	Prior to the issuance of building permits.	Developer, contractor, City Fire Department, City Engineer.			

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Public Services	The project will increase demands on fire services.	**F-3.** To reduce fire hazards when water is provided to the site, adequate fire flow pressure shall be provided for residential areas and non-residential projects in accordance with currently adopted standards (2001 California Fire Code Appendix III-A).	Prior to the issuance of building permits.	Developer, contractor, City Fire Department, City Engineer.			
Public Services	The project will increase demands on fire services.	**F-4.** To reduce fire hazards, adequate water supply shall be provided by the Fire Department prior to the framing stages of construction.	Prior to the issuance of building permits.	Developer, contractor, City Fire Department, City Engineer.			
Public Services	The project will increase demands on fire services.	**F-5.** To reduce fire hazards, houses located on cul-de-sacs longer than 300 feet shall be constructed with residential fire sprinklers.	Prior to the issuance of building permits.	Developer, contractor, City Fire Department, City Engineer.			
Public Services	The project will increase demands on fire services.	**F-6.** To reduce fire hazards, access roadways designed in accordance with Fire Department standards to within 150 feet of all structures, shall be provided prior to the framing stages of construction. This access is to be maintained in an unobstructed manner throughout construction.	Prior to the issuance of building permits.	Developer, contractor, City Fire Department, City Engineer.			
Utilities	The proposed project would contribute to a cumulative deficit in the availability of solid waste disposal capacity.	**SW-1.** Commercial - The developer shall comply with Municipal Code Section 6-3.314 Commercial Storage Standards, and Section 6-3.601 Business Recycling Plan.	Prior to the issuance of building permits.	Developer, Contractor, City Planning Director.			

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Utilities	The proposed project would contribute to a cumulative deficit in the availability of solid waste disposal capacity.	**SW-2.** Apartment - For apartments using commercial bin service, the developer shall comply with Municipal Code Section 6-3.314 Commercial Storage Standards and Section 6-3.601 Business Recycling Plan.	Prior to the issuance of building permits.	Developer, Contractor, City Planning Director.			
Utilities	The proposed project would contribute to a cumulative deficit in the availability of solid waste disposal capacity.	**SW-3.** Residential - For curbside automated container service, the developer shall comply with Municipal Code Section 6-3.308.9(a) and (d), Residential Receptacles, Placement.	Prior to the issuance of building permits.	Developer, Contractor, City Planning Director.			
Utilities	The proposed project would contribute to a cumulative deficit in the availability of solid waste disposal capacity.	**SW-4.** Recycling Requirements - The developer shall comply with Municipal Code Article 6. Recycling Requirements for Specified Business Activity, Section 6-3.601 Business Recycling Plan, and Section 6-3.602 Construction and Demolition Recycling Plan.	Prior to the issuance of building permits.	Developer, Contractor, City Planning Director.			
Utilities	The proposed project would contribute to a cumulative deficit in the availability of solid waste disposal capacity.	**SW-5.** Site Improvement Plans shall follow the City of Ontario refuse collection standards.	Prior to the issuance of building permits.	Developer, Contractor, City Planning Director.			
Cultural Resources	Possible subsurface archaeological resources, paleontological resources, and/or human remains could be affected by the proposed project.	**CR-1.** Prior to issuance of a grading permit, the project sponsor shall provide written evidence to the City of Ontario that a qualified archaeologist, experienced with Native Americans and Native American resources, has been retained to observe grading	Prior to the issuance of a grading permit.	Developer, Contractor and City Building Official.			

Impact Category	Impact/Issue	Mitigation Measures	Implementation Timing	Responsible Party	Verification of Compliance		
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		activities and conduct salvage excavation of any archaeological resources or Native American resources that are discovered. The archeologist shall be present at the pre-grading conference, shall, establish procedures for archaeological resource surveillance, and shall establish procedures for temporarily halting or redirecting work in order to permit the sampling, identification and evaluation of the artifacts. If additional or unexpected archaeological features are discovered, the archaeologist shall report such findings to the City of Ontario. If the archeological resources or Native American resources are found to be significant, the archaeological observer shall determine appropriate actions, in cooperation with the City of Ontario, for exploration and/or salvage. These actions, as well as final mitigation and disposition of the resources, shall be subject to the approval of the City of Ontario.					
Cultural Resources	Possible subsurface archaeological resources, paleontological resources, and/or human remains could be affected by the proposed project.	**CR-2.** Prior to issuance of a grading permit, the project sponsor shall provide written evidence to the City of Ontario that a qualified paleontologist has been retained to observe grading activities and salvage any discovered fossils. The paleontologist shall be present at the	Prior to the issuance of a grading permit.	Developer, Contractor and City Building Official.			

Impact Category	Impact/Issue	Mitigation Measures	Implementation Timing	Responsible Party	Verification of Compliance		
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		pre-grading conference, shall establish procedures for paleontological resource surveillance, and shall establish procedures for temporarily halting or redirecting work to permit the sampling, identification, and evaluation of the fossils. If major paleontological resources are discovered which require long term redirecting of grading, the paleontologist shall report such findings to the City of Ontario. The paleontologist shall determine appropriate actions, in cooperation with the applicant, which ensure proper exploration and/or salvage. These actions, as well as final mitigation and disposition of the resources, shall be subject to the approval of the City of Ontario.					
Cultural Resources	Possible subsurface archaeological resources, paleontological resources, and/or human remains could be affected by the proposed project.	**CR-3.** If human remains are discovered during construction related activities, in conformance with California Health and Safety Code Section 7050.5, disturbance of the immediate area shall be halted until the San Bernardino County Coroner has made a determination regarding the origin and disposition as required by California Public Resources Code Section 5097.98. If encountered remains are determined to be of Native American origin, the Native American Heritage Commission shall be notified.	During grading activities.	Developer, Contractor and City Building Official.			