

HALDIMAND COUNTY

DESIGN CRITERIA

SECTION T

TRAFFIC IMPACT STUDY GUIDELINES

Revised 2015

T 1.00 INTRODUCTION

T 1.01 TRAFFIC IMPACT STUDY

One of Haldimand County's key objectives is to operate and maintain a safe and efficient roadway system. The review and management of development-generated traffic is an integral part of operating and maintaining a safe and efficient roadway system. The Traffic Impact Study (TIS) guidelines outlined in this section have been established to meet this objective. The Traffic Impact Procedures establish a range of Traffic Impact Study categories based on the characteristics of the development and the estimated peak hour traffic volumes. The guidelines also outline the analysis approach and methods.

A Traffic Impact Study identifies existing traffic volumes and conditions, proposed development traffic volumes and conditions and their combined impacts on the existing and future roadway system.

A Traffic Impact Study is an important tool in the overall development planning process (Residential, Commercial, Industrial, Institutional, etc.) It assists developers and public agencies in making land use decisions, such as Official Plan amendments, re-zonings, subdivisions, site plans and planning approvals. It provides information, which identifies the impacts of proposed developments on the existing, short range and long-range roadway/circulation networks. It also identifies mitigation measures for the impacts identified.

Traffic impact studies benefit the County by:

- Providing decision makers with a basis on which to assess transportation implications of proposed development applications;
- Providing a rational basis on which to evaluate the appropriateness of the scale of development for a particular site, and determining required improvements, on and off the site, to provide safe and efficient access and traffic flow;
- Providing a basis for assessing existing or future localized transportation system deficiencies which require improvement;

- Addressing transportation-related issues associated with development proposals that may be of concern to neighboring residents, businesses and property owners; and
- Providing a basis for negotiations for improvements and funding participation in conjunction with a development or zoning application or petition.

A traffic impact study may vary in scope and complexity depending on the type and size of the proposed development.

T 1.02 NEED AND JUSTIFICATION

Haldimand County has prepared these guidelines in order to streamline the approval process and provide a standardized framework for consultants to follow, when submitting traffic/transportation studies for review, and should be complemented with good transportation engineering judgment.

T 1.03 PURPOSE OF GUIDELINES

The purpose of these guidelines is to ensure that traffic impact studies prepared for Haldimand County's review meet the following criteria:

- Objective assessment – the study will evaluate the impacts of proposed new development in a rational manner;
- Consistency – the study will utilize assumptions consistent with Haldimand County's accepted methodologies and parameters, and thus be comparable to other traffic studies in the County;
- Recognized by developers and consultants – the guidelines will provide a standard approach to be followed and will reduce confusion and delay in processing development proposals;
- Promote understanding of process – the steps outlined in these guidelines will enable proponents, reviewers and elected officials to understand the process more effectively; and
- Ease of review by staff – a standardized set of

guidelines will aid the efficiency of staff in reviewing Traffic Impact Studies.

T 2.00 GENERAL TRAFFIC IMPACT STUDY REQUIREMENTS

Need for Traffic Impact Study

There are a number of criteria under which a traffic impact study may be required. *In general, a traffic impact study should be conducted whenever a proposed development will generate more than 100, additional (new) peak hour, peak direction trips to or from the site during the adjacent roadway's peak hour or the development's peak hour. The specific analysis requirements and level of detail are summarized in Table 1 and are determined by the following categories:*

CATEGORY 1

Developments, which generate 100 to 499 trips during either the morning or afternoon peak hour. A traffic impact study may also be required for sites generating less than 100 peak hour, peak direction trips when one or more of the following conditions are anticipated or present:

- The existence of any current traffic problems or concerns in the local area such as an offset intersection, a high number of traffic accidents, etcetera.
- The development/re-development is located in an area of high roadway congestion and/or a high expected rate of population or employment growth;
- The development, its access or type of operation is not envisaged by local land-use or transportation plans;
- The development or re-development proposal requires amendment of the applicable official plan(s).
- As part of the proposed development, a new traffic signal is proposed to be installed on a County roadway; and

- If, in the opinion of the County, the development/ re-development has the potential to create unacceptable operational and safety impacts on the County road network. Examples include the following:
 - Inadequate horizontal or vertical sight distances at access points;
 - The proximity of the proposed access points to other existing driveways or intersections;
 - Lack of existing left or right turn lane(s) on the adjacent roadway at the proposed access point(s);
 - The vehicular traffic generated by the development/re-development would result in volume/capacity ratios at a signalized intersection becoming critical (i.e. greater than 0.85 overall or for a shared through/turning movement, or greater than 1.0 for an exclusive turning movement).

CATEGORY 2

Developments, which generate 500 to 999 trips during either the morning or afternoon peak hour.

CATEGORY 3

Developments, which generate 1,000 to 1,499 trips during either the morning or afternoon peak hour.

CATEGORY 4

Developments, which generate more than 1,500 trips during either the morning or afternoon peak hour.

T 2.01 STAFF CONSULTATION

It is highly recommended that, prior to commencing a traffic impact study, a pre-consultation meeting be arranged with County staff in order to review the level of detail and confirm the scope of the traffic impact study, arrange contacts with the various affected road jurisdictions and to determine data requirements and their availability.

In addition to the County's requirements, adjacent municipal and Provincial (MTO) roadway authorities may require additional information or analysis to satisfy their requirements for a development/re-development proposal.

The proponent should contact these road authorities, as required, to determine their requirements.

T 2.02 STUDY UPDATES

Generally, a Traffic Impact Study will have a “shelf life” of three years. However, major changes within the study area may reduce the “life” of the document if they were not considered in the impact assessment. Where the timing of subsequent development approvals exceeds five years, a new study will generally be required.

T 2.03 QUALIFICATIONS TO CONDUCT A TRAFFIC IMPACT STUDY

When the scale of the development/re-development warrants a Traffic Impact Study, it is the proponent's responsibility to retain a qualified transportation consultant experienced in transportation planning and traffic engineering.

The consultant shall be a member of the Institute of Transportation Engineers and registered as a Professional Engineer in the Province of Ontario. The report must be dated, signed & stamped, accordingly. The signing Engineer is verifying that appropriate assumptions and methodologies have been utilized in the completion of the Traffic Impact Study and that they are the individual who is taking corporate/professional responsibility for the work.

Alternatively, at the discretion of the Manager Of Engineering or his designate, the County may retain a consultant at the proponent's expense.

T 3.00 TRAFFIC IMPACT STUDY OUTLINE

The following sections and Table 1 outline the format and requirements of the traffic impact study. Adjacent municipal or provincial roadway authorities may require additional information or analyses beyond the County's requirements outlined in these guidelines. The contents and extent of the traffic impact study generally depend on the location and size of the proposed development/redevelopment and the conditions prevailing in the surrounding area.

T 3.01 DESCRIPTION OF THE PROPOSAL AND THE STUDY AREA

A description of the development proposal, its location and the proposed traffic impact study area is required to permit County staff to identify the site location, its anticipated operation and area of potential impact. In addition, this valuable information allows timely review of key study assumptions ranging from the study area limits and horizon years to the trip assignment assumptions.

Description of the Development or Redevelopment Proposal

The traffic impact study should provide a full description of the proposed development. This may include the following elements, as applicable:

- Municipal address
- Existing land uses or permitted use provisions in an Official Plan, Official Plan Amendments, Zoning By-law, etc.
- Proposed land uses and relevant planning regulations to be used in the study;
- Total building size and building locations
- Floor space including a summary of each type of use/number of residential units;
- Anticipated date of occupancy;
- Approximate hours of operations;
- Planned phasing of the development;
- Near-by intersections and accesses to adjacent developments including type of control;
- Proposed access points and type of access (full turns, right-in right-out, turning movement restrictions, etc.) and;
- Nearby transit facilities/stops

It is a requirement to provide a site plan, of a suitable scale, for consideration in the review of the traffic impact study. If the proposed development/redevelopment is to be constructed in phases, describe each phase and the proposed timing of implementation.

Study Area

The minimum study area will be determined by project type and size in accordance with the criteria in Table 1.

The County reserves the right to establish the study area as may be deemed necessary.

A description of the existing transportation system in the study area, using a combination of maps and other documentation should identify relevant information, such as the following:

- All adjacent and nearby roads, indicating the number of lanes and posted speeds;
- All adjacent and affected intersections, indicating type of control, lane configurations, lane widths, and any turning or similar restrictions;
- If appropriate, on-street parking spaces/standing/stopping restrictions in the vicinity of the development site and those which would affect the operation of key intersections being analyzed;
- Transit routes;
- Heavy vehicle prohibitions and restrictions and;
- Other transportation facilities as appropriate

Potential future transportation improvements that are currently being considered and may facilitate the traffic demand produced by the development/redevelopment should be identified. These improvements should be described to a level of detail sufficient to assess their implications for travel to/from the development. In each case, the status and anticipated date of implementation shall be identified.

T 3.02 HORIZON YEAR AND TIME PERIODS FOR ANALYSIS

T 3.02.01 HORIZON YEAR

The horizon year for impact analysis is determined by the traffic development characteristics at the site as summarized in Table 1. Horizon years should also be identified for any interim phases of development and additional horizon years, may be required depending on the magnitude of the development.

T 3.02 PEAK PERIODS

The critical time period for traffic generated by a given project is directly associated with the peaking characteristics of both the development related traffic and the transportation system traffic. Typically, the AM and PM peak traffic period will constitute the “worst case” combination of site related and background traffic. However, in the case of retail, entertainment, religious, institutional, sports facility uses, the Saturday, Sunday or site peak may require analysis. As part of the pre-consultation meeting prior to commencing the study, the consultant should determine, in conjunction with County staff, the selected time periods for analysis.

T 3.03 EXISTING TRAFFIC CONDITIONS

To provide a representative picture of the existing traffic conditions, exhibits showing the existing traffic volumes and turning movements for roadways and intersections in the study area (including pedestrian volumes and heavy truck movements) should be included.

Traffic volumes may be acquired from the County, local municipalities or previous transportation planning, traffic operation or traffic impact studies undertaken in the study area. Traffic counts more than two years (2) old, or counts that appear not to reflect existing conditions, should be updated to ensure that they reflect current traffic levels.

A field observation (peak one hour count at minimum) should be undertaken to verify that traffic volumes through an intersection reflect actual demand, and to determine the necessary adjustments to level-of-service calculation to ensure actual conditions are fairly represented.

T 3.04 BACKGROUND TRAFFIC GROWTH

T 3.04.01 BACKGROUND TRAFFIC

The background growth traffic should be established in consultation with County staff through one of the following methods:

- Estimation of roadway growth factors from a calibrated traffic forecast model;
- Regression analysis of historical traffic growth;
or
- A growth rate based on area transportation studies

In some situations, alternative assumptions or methods, such as the application of development absorption rates, may be appropriate. In the absence of these methods, rates provided by the municipality should be used.

T 3.04.02 OTHER AREA DEVELOPMENTS

All significant developments under construction, approved or in the approval process within the study area, and likely to occur by the specific horizon years, should be identified and recognized in the study. The land-use type and magnitude of the probable future developments in the horizon years should be identified through consultation with County staff.

T 3.04.03 TRANSPORTATION NETWORK IMPROVEMENTS

Changes to the present or planned transportation network should be determined from the approved County, Provincial and local capital improvement programs. A realistic assessment of timing and certainty should be made. The impacts of the transportation system changes should be identified. In particular, diversion of volumes from other facilities to new or improved facilities should be estimated.

T 3.04.04 TRANSIT CONSIDERATIONS

In areas with transit service, any existing transit service should be identified as having significant potential impact and possible changes in modal split should be evaluated.

An exhibit showing the background traffic volumes and turning movements for roadways and intersections in the study area should be included.

T 3.05 ESTIMATION OF TRAVEL DEMAND

All trip generation, trip distribution, assignment and modal split assumptions should be in accordance with standard/accepted techniques and based on local parameters. Sources should be well documented, and any assumptions which may be considered less-than conservative should be rigorously justified. Any "soft" parameters where there is a significant uncertainty or a range of possible values should be subjected to sensitivity analysis unless a demonstrated "worst case" situation is assumed.

T 3.05.01 TRIP GENERATION

Consultation with County staff is recommended to ensure that appropriate and agreed upon trip generation rates are being employed in the traffic impact study. Available trip generation methods include:

- Trip generation surveys from similar developments in the County, which have similar operating characteristics as the proposed development. Modifications should be made to the trip generation rates to account for differences in the surveyed and proposed development sites;
- "First principles" calculations of anticipated trips to/from the site; and
- ITE Trip Generation rates, provided that differences in site nature and size are accounted for

Typical trip generation rates or equations are usually derived from counts taken at driveways of various land uses. However, for many commercial land uses, not all of the trips generated at the driveway(s) represent new trips added to the adjacent street system. The number of trips generated may include pass-by trips and internal "synergy" trips.

Where appropriate, it may be justified to change the trip generation of the proposed development to account for:

- Trips generated by land use activities being replaced by the proposed development. Unless otherwise accounted for, these trips will normally be subtracted from the trip generation estimates.
- Pass by trips – pass-by trips are made by traffic already on the roadway(s) that enter the site as an intermediate stop on the way from an origin to a primary destination. For example, a driver may stop at a convenience market on his/her way home from work. If this market is located along the roadway the driver normally uses to get home, then the trip "generated by the market" is not a new trip added to the roadway system. It should be recognized that pass-by reduction is only applicable to evaluation of traffic operations at intersections removed from the site; pass-by trips must be accounted for in the turning movements into/out of the site;
- Internal "synergy" trips – represents trips which are shared between two or more uses on the same site, i.e. a motorist visiting a retail store and a grocery store on the same site; and Transportation Demand Management (TDM) strategies.

All trip generation assumptions and adjustments assumed in the calculation of "new" vehicle trips should be documented and justified in terms of previous research or surveys.

Sensitivity analysis should be undertaken where trip generation parameters have the potential to vary considerably, and most probable values cannot be readily identified.

A table should be provided in the study report identifying the categories and quantities of land uses, with the corresponding trip generation rates or equations and the resulting number of trips. For large developments that will be phased in over time, the table should identify each significant phase separately.

T 3.05.02 TRIP DISTRIBUTION

The directions from which traffic will approach and depart the site can vary depending on several location-specific factors, including:

- Size of the proposed development;
- Type of proposed development;
- Surrounding, and in some cases competing, land uses, population and employment distributions; and
- Prevailing conditions on the existing street system

The trip distribution assumptions should be supported by one or more of the following:

- Origin-destination surveys;
- Comprehensive travel surveys
- Existing/anticipated travel patterns;
- Output from the EMME/2 transportation planning model; and
- Market studies

Engineering judgment should be utilized to determine the most applicable of the above methodologies for each particular application.

T 3.05.03 TRIP ASSIGNMENTS

Traffic assignments should consider logical routings, available and projected roadway capacities, and travel times. Traffic assignments may be estimated using a transportation-planning model or "hand assignment" based on knowledge of the proposed/future road network in the study area. The County will provide traffic information from any relevant studies that it may possess.

T 3.05.04 SUMMARY OF TRAFFIC DEMAND ESTIMATES

A summary of the future traffic demands (each combination of horizon year and peak period for both site generated and total future traffic conditions) should be provided in the form of exhibits. Pass-by traffic assumptions should be clearly identified and illustrated on an exhibit, which summarizes the reassignment of pass-by traffic.

T 3.06 EVALUATION OF IMPACTS OF SITE GENERATED TRAFFIC

An evaluation of signalized and unsignalized intersections which will be affected by site-generated traffic volumes for all relevant time periods and scenarios is required, and summaries are to be provided in a tabular format.

The objective should be to ensure that no new “problem” movements are created by the development, and that “problem” movements, which exist with the addition of site-generated traffic, are not worsened by this addition.

In an appendix to the traffic impact study, all assumptions used in the analysis (concerning lane configuration/use, pedestrian activity, saturation flows, traffic signal cycle length, phasing and timing, utilization of the inter-green phase and other relevant parameters) shall be documented. Existing signal timings should be used for existing intersections. Signal-timing modifications may be considered as a measure to address capacity or level of service deficiencies.

T 3.06.01 CAPACITY ANALYSIS AT INTERSECTIONS

The summary should include the level-of-service, including average vehicle delay and volume to capacity (v/c) ratios for overall intersection operations and individual critical movements, for all analysis periods and time horizons. Full documentation of the results of all level of service analyses should be provided in an appendix.

The County accepts both the Highway Capacity Manual (HCM) and Canadian Capacity Guide (CCG) methodologies of intersection analysis. Specific software packages include CCG/CALC2, HCS Version 3.0 or higher, Synchro 4.0 or higher, InterCap or HCM/Cinema. Should a consultant wish to utilize a software package other than these listed above, prior approval from the County must be obtained. The analysis should incorporate adequate crossing time for pedestrians and should use conventional signal timing plans.

The analysis should include the identification of signalized intersections where:

- Volume/capacity (V/C) ratios for overall intersection operations, through movements or shared through/turning movements increased to 0.85 or above;
- V/C ratios for exclusive movements increased to 0.95 or above; or
- Queues for an individual movement are projected to exceed available turning lane storage.

Identification of unsigned intersections where:

- Level of service (LOS) based on average delay per vehicle, on individual movements exceeds LOS "E" or
- The estimated 95th percentile queue length for an individual movement exceeds the available queue storage.

Conventional signal timing plans should be used and all proposed adjustments to traffic signal timing, phasing and cycle lengths should be evaluated in terms of pedestrian crossing time, effect on queue lengths, adequacy of existing storage and effects on the existing signal coordination.

T 3.06.02 SAFETY ANALYSIS

Identification of potential safety or operational issues associated with the following, as applicable:

- Weaving
- Merging
- Corner clearances
- Sight distances
- Vehicle-pedestrian conflicts
- Traffic infiltration
- Access conflicts
- Cyclist movements
- Heavy truck movement conflicts
- Etc.

T 3.07 ACCESS ANALYSIS REQUIREMENTS

T 3.07.01 ACCESS GEOMETRICS

The number and location of access points should be reviewed to ensure only the minimum number necessary are provided to serve the project without negatively impacting the flow of traffic along abutting streets. Access points should be located on minor roads where feasible and justification for more than one access must be based on capacity of site traffic, not design preference.

The locations should be adequately spaced from adjacent street and driveway intersections. The number of exit lanes, radii and vehicle storage should be appropriate to accommodate traffic demands placed on them. The throat length at the road should be sufficiently long to minimize conflicts with street traffic and within the site.

Access points should be evaluated in terms of capacity, safety and adequacy of queue storage capacity. Access points should be free of all encumbrances and provide appropriate sight triangles. Proposed loading facilities and access to these facilities should be evaluated to ensure that they are adequately sized, designed and provided with suitable access so that they will not adversely affect traffic operations on County roads.

Access standards should be in conformance with those outlined in the "Geometric Design Guide for Canadian Roads", 1999 edition, issued by the Transportation Association of Canada (TAC).

T 3.07.02 TURN LANE REQUIREMENTS

The requirements for left turn and right turn lanes should be examined. Adequate spacing should be provided between access points to avoid potential turn lane overlaps. All design standards must be in conformance with those outlined in the TAC Manual.

T 3.08 TRAFFIC COLLISION ANALYSIS

Where the development is adjacent to an area with identified problems, existing collision data (available from the County) should be reviewed and an assessment of the impact of the proposed development provided. Such information may be helpful to minimize any additional problems through the design or location of access points.

T 3.09 SIGHT DISTANCE EVALUATION

At each access and at each intersection where a new road is proposed, the sight distance requirements should be determined based on appropriate standards (TAC Manual) and the availability of sight distance determined from actual field measurements.

T 3.10 TRANSPORTATION SYSTEM MITIGATION MEASURES

This section outlines the process of identification of operational transportation system improvements and other measures required to ensure that acceptable operation of the transportation system is maintained. The improvements must incorporate recommendations and standards outlined in previous County transportation or corridor studies.

T 3.10.01 REQUIRED ROADWAY IMPROVEMENTS

The physical and operational road network deficiencies that have been identified in the traffic impact study must be addressed. Solutions provided must be feasible and economical to implement.

Functional design plans or detailed design drawings may be required for identified physical improvements to ensure their feasibility.

T 3.10.02 REQUIRED TRAFFIC SIGNAL IMPROVEMENT

Any traffic signal operational deficiencies that have been identified in the Traffic Impact Study must be addressed and mitigated, provided that implementation is feasible.

T 3.10.03 PRELIMINARY COST ESTIMATES

A preliminary cost estimate must be provided for all identified infrastructure improvements.

T. 3. 11 RECOMMENDATIONS

It is important to structure recommendations for improvements within appropriate time perspectives. Recommendations should be sensitive to the following issues:

- Timing of short-range and long-range network improvements that are already planned and scheduled;
- Anticipated time schedule of adjacent developments;
- Size and timing of individual phases of the proposed development;
- Logical sequencing of various improvements or segments;
- Right-of-way needs and availability of additional right-of-way within the appropriate time frames;
- Local priorities for transportation improvements and funding;
- Cost-effectiveness of implementing improvements at a given stage of development; and
- Necessary lead-time for additional design and construction.

Since improvements can often be implemented in more than one order, the recommendation should address an implementation sequence that would provide maximum compatibility with the overall roadway system configuration needed for network effectiveness.

T. 4.00 DOCUMENTATION AND REPORTING

The structure and format of the Traffic Impact Study should follow the guidelines outlined in this document, as applicable. The following is a suggested study structure:

- Site/Development Description (site plan if applicable)
- Study Area (map identifying the study area and site)
- Existing Conditions (exhibit required)
- Analysis Periods
- Background Traffic Demand – Existing and Future Background (exhibits required)
- Site Generated Traffic (exhibits required)
- Total Traffic Demand – Future Background plus Site Generated Traffic (exhibits required)
- Improvement Alternatives Required to Mitigate Traffic Impacts
- Traffic Impacts for Future Background and Total Traffic with and without mitigation measures (tabular summaries)
- Access Considerations and
- Recommendations

This format will facilitate review, discussion and communication. Relevant maps, graphs and tables should be placed adjacent to the relevant text.

The Traffic Impact Study should consist of a main document, supplemented by technical appendices containing detailed analyses as required. The County reserves the right to request digital copies of the analysis.

The Development Planner will determine the required number of copies of the Final Traffic Impact Study (complete with supporting documentation) to be submitted to County Planning staff for circulation.

All information submitted to County staff in connection with any Traffic Impact Study will be considered to be in the public domain.

TABLE T-1

Table T-1

Analysis Category	Development Characteristic	Study Horizons	Minimum Study Area (a)	Minimum Study Area (b)
I	Small Development 100-499 peak trips	1. Opening Year 2. 5 YEARS AFTER OPENING	1. Site access drives 2. Adfacent signal controlled intersections within ½ Km and/or major street intersections without signal control and driveways within 200 m	The study area should extend far enough, within reason, to contain all municipal, regional and provincial roadways that will be noticeably affected by the travel generated by the proposed development. In general, the analysis area should include all roads, ramps and intersections through which peak hour site traffic composes at

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<p>II</p>	<p>Moderate Development 500-999 peak hour trips</p>	<p>1. Opening Year 2. 5 years after opening</p>	<p>1. Site access drives 2. All signal controlled intersections within 1km and/or major street intersections without signal control and major driveways within 1km.</p>	
<p>III</p>	<p>Large Development 1,000-1,500 peak hour trips</p>	<p>1. Opening Year 2. 20 years after opening</p>	<p>1. Site access drives 2. All signal controlled intersections within 2km and/or major street intersections without signal control and major driveways within 2km.</p>	
<p>IV</p>	<p>Regional Development >1,500 peak hour trips</p>	<p>1. Opening Year 2. 20 years after opening</p>	<p>1. Site access drives 2. Key signal controlled intersections and major street intersections without signal control within 5km.</p>	

NOTES:

ASSUME FULL OCCUPANCY AND BUILD-OUT FOR SINGLE-PHASE DEVELOPMENTS. MULTI-PHASE DEVELOPMENTS MAY REQUIRE ASSESSMENT OF UP TO THREE (3) HORIZON YEARS CORRESPONDING TO KEY PHASES AS DIRECTED BY THE MANAGER OF ENGINEERING.

FOR MINIMUM STUDY AREA USE CRITERIA (a) OR (b) WHICHEVER IS GREATER.

AN ENLARGED STUDY AREA MAY BE REQUIRED WHEN THE MINIMUM STUDY AREAS IDENTIFIED IN TABLE 1 DO NOT PROVIDE SUFFICIENT INFORMATION TO MEET THE INTENT OF THE TRAFFIC IMPACT STUDY GUIDELINES.

THE ONUS WILL BE ON THE PROPONENT/CONSULTANT TO DEMONSTRATE THAT A TRAFFIC IMPACT STUDY IS NOT REQUIRED.

List of Available Documentation and Data

The following documents and data may be available upon request from the County Engineering and Infrastructure Division. A nominal cost may apply in accordance with County Council Policy.

Data

Intersection Turning Movement Counts
ADT Counts (Volumes, Speeds and Classification)
Forecasted Volumes (EMME/2 Model), trip distribution and modal split assumptions
Collision Reports
Segment/Intersection geometry, lane configuration and physical parameters
Master Servicing Plans (when available)