Guidelines for the Preparation of Traffic Impact Studies (TIS)

The Town of Collingwood

Type of Document:
Policy Document

Prepared By:
EXP Services Inc.
2650 Queensview Drive
Ottawa, Ontario
K2B 8K1

Table of Contents

1. Policy Summary

Many municipalities around the Town of Collinwood have established Traffic Impact Study Policies to guide the evaluation of both existing and future transportation conditions due to new construction and/or developments. For the Town of Collingwood, a Traffic Impact Study Policy provides a formal method to assess the potential impacts of new land use developments within the surrounding network. By establishing a Traffic Impact Study Policy for the Town of Collingwood, this document will provide streamlined, consistent guidelines to accurately measure existing and future impacts on new developments and/or construction. The policy also helps consultants working with the Town of Collingwood make informed decisions based on engineering judgement to efficiently identify and mitigate transportation issues to improve traffic conditions in the Town.

2. Introduction

Purpose: This policy document outlines the guidelines for the preparation of Traffic Impact Studies (TIS), ensuring consistency and comprehensiveness in evaluating the impact of proposed land-use developments on traffic conditions.

Scope: The guidelines apply to all Traffic Impact Studies conducted within the jurisdiction of the Town of Collingwood.

Sources: The guidelines are based on a thorough review of existing standards and practices from the Ontario Ministry of Transportation, the County of Simcoe, the Township of Essa, the City of Ottawa, and the City of Toronto.

3. Traffic Impact Studies - What they are and what they accomplish

A TIS assesses the impacts of proposed land use developments on the transportation network and, if necessary, indicates proposed mitigation strategies to address those impacts. Usually, a TIS is undertaken for a single proposed development but can also be undertaken to address multiple proposed developments concurrently.

TISs support the Town's goal of developing a safe, multi-modal, and integrated transportation system as expressed in the Town's Official Plan by:

- Evaluating proposed development transportation characteristics with the Town's goals and policies.
- Comparing the transportation network performance around the site both before and after the development.
- Enabling negotiations between the Town and developers about sharing the costs for transportation system modifications.

4. When is a Traffic Impact Study Required

A Traffic Impact Study is not required for all proposed developments. Small-scale developments that are unlikely to contribute a significant number of additional trips to the transportation network will not need to include a TIS as part of their application. To help guide the Town of Collingwood as to when a TIS would be required, the following criteria would need to be satisfied by the proposed site:

- Estimated to generate 100 or more vehicle trips during the morning or afternoon peak hours.
- Satisfies any of the following minimum development size criteria:

Land Use Type	Minimum Development Size
Single Family Homes	40 Units

Land Use Type	Minimum Development Size
Townhomes or apartments	90 Units
Office	3,500 m^2
Industrial	5,000 m^2
Fast-food restaurant or coffee shop	100 m^2
Destination retail	1,000 m^2
Gas station on the convenience market	75 m^2

- Incorporate direct vehicle access to an arterial road.
- Raise safety concerns such as the potential to cause adverse safety impacts on the road network or inadequate horizontal and vertical curves at access points (at the discretion of the Town of Collingwood staff).
- Is required at the discretion of the Town Engineer and/or Infrastructure department.

Traffic impact studies are often requested during re-zoning or planning of subdivision applications. For developments that do not meet the criteria listed above, proponents should seek written confirmation of agreement from the Town of Collingwood to revoke the requirement for a TIS. For smaller scale developments where little or no impact on the adjacent road network is anticipated, a Traffic Impact Brief can be accepted. A Traffic Impact Brief will be a reduced scope and focus on localized issues based the judgement of Town staff.

5. Components of a Traffic Impact Study

If a TIS is determined to be required (per Section 3), it shall be prepared under the supervision of a qualified and experienced transportation engineer, licensed under the Province of Ontario. A TIS can be divided into three sections: Scoping, Forecasting, and Analysis.

Section 1: Scoping

The objective of this section is to determine if the transportation network will require modifications to offset the estimated impacts of the proposed development and should include the following subsections:

Proposed Development: Provide a detailed description of the proposed development along with key details such as the existing and proposed land uses, development size, date of occupancy, planned phasing of developments, proposed parking spaces, and access points.

Study Area & Time periods: This subsection will determine the study area boundaries in consultation with Town staff, including the intersections to be analyzed and study area boundaries. The proponent will also identify the appropriate peak hour time periods for operational analysis. The proponent must consider two horizon years for the analysis:

1. The expected year of development build-out or full occupancy (if not the same as build-out)
2. Five years after development build-out or full occupancy

Existing Conditions: Document the existing roads, ramps, and intersections within the study area and provide details such as the jurisdiction, classification, number of lanes, posted speed limits, type of traffic control, and turning restrictions. In addition, this subsection will also need to identify the existing pedestrian, cycling, and transit infrastructure, existing traffic management measures within the study area, and existing peak hour travel demands by mode within the study area. Town Staff may, at their discretion, require the proponent to review historical collision data (provided by the Town) at locations within the study area in proximity to the site where data is available and if it is anticipated that the site may exacerbate safety issues.

Section 2: Forecasting

This section will detail an estimate of future transportation demand required to analyze the future road network performance. It will consider the proposed development itself, nearby background developments, and general changes in background traffic demands anticipated to occur on the road network in the future. This section will consist of the following subsections:

Development-generated travel demand: Estimate the number of trips generated from the proposed development, estimate the percentage of trips by each mode of travel (e.g. vehicle driver, vehicle passenger, public transit, bicycle, walking), and assign the estimated additional vehicular trips onto the road network.

Background Network Travel Demand: Forecast changes in background vehicle travel demand on the road network for the study horizon years.

Demand Rationalization: This subsection rationalizes future traffic demands in the study area to account for capacity limitations of the transportation network and potential adjustments in travel behaviour*.

**There may be cases where a proposed development is being considered in a location where:*

- *the surrounding road network is already near or at its vehicular capacity limit;*
- *there is nominal potential for increasing vehicular capacity on the network; and*
- *there are good existing and/or proposed alternatives to driving such as public transit and active transportation routes.*

In situations like this, travel demand on the road network is likely to adapt to changing land use environments over time. For example, peak hour traffic will 'spread' over a longer peak period as a proportion of motorists avoid travelling during the busiest hours of the day. Some trips will be done by other modes and or eliminated altogether.

Section 3: Analysis

This section requires the proponent to assess the estimated performance of the future road network once the development is in place, compare the performance of the network to the Town's established performance targets, and identify potential mitigation measures to offset the impact of the proposed development (if required). This section will consist of the following subsections:

Development Design: This subsection will review the proposed development's internal circulation functionality, including the ability to accommodate municipal service vehicles and loading.

Parking requirements: The subsection will ensure that the proposed vehicle and bicycle parking capacity comply with the zoning requirements and demand estimates. This subsection also requires the assessment of potential spillover parking (i.e. parking activity that is generated by the site but occurs off-site) and the implementation of mitigation measures strategies if necessary.

Boundary Streets: This subsection determines the design elements required for boundary streets (i.e. streets at the property boundaries of the proposed development) to accommodate the proposed development so that they are consistent with the Town's complete street policy and urban design objectives.

Access Intersections: This subsection is required to document the design elements of access points to the proposed development and determine if they are consistent with the Town's complete street policies, and urban design objectives within the study area.

Intersection Design: This subsection will assess if the study area intersections can accommodate the additional travel demands generated by the proposed development. It will assess if the appropriate control measures, intersection configurations, and control strategies are provided to accommodate the proposed development.

6. Proponent's Role

If a TIS is required (see Section 3), it is the responsibility of the proponent (developer/owner or the owner's designated agent) to have a TIS prepared by a qualified and experienced transportation engineer licensed in the Provence of Ontario. and approved by Town of Collingwood staff. A term of reference will be prepared by the applicant. Town staff will receive and determine whether to accept it as fulfilling the noted requirements as part of the broader development application process. The proponent must provide a TIS stamped by a Professional Engineer (P.Eng.) licensed to work in Ontario.

7. Town's Role

The Town's role will be to:

- Provide a generic guideline for conducting Transportation Impact Studies
- Supply readily available data and relevant reports
- Review the submitted report
- Approve or reject the Transportation Impact Study in a timely fashion (4 weeks)
- Circulate (if necessary) the Transportation Impact Study to relevant Town Departments, Utility Organizations, and/or external agencies

8. Costs

All costs associated with the preparation of the TIS shall be borne by the applicant.