



**Final Study Design Report**  
**County Road 34 (Main Street)**  
**Improvements**  
**Environmental Assessment Study**  
July 20, 2020

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### Revision History

Revision	Date	Description of Major Change
1	July 20, 2020	The Municipal Class EA has been elevated to a Schedule B Environmental Assessment Study.

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## 1.0 Study Introduction

The United Counties of Stormont, Dundas and Glengarry have initiated this Municipal Class Environmental Assessment (EA) for the County Road 34 (Main Street) improvements from County Road 10 (Lochiel Street East) northerly to Elgin Street. This Study will develop and evaluate alternatives for the roadway cross section, intersections, active transportation features, and drainage, and determine the property requirements to implement the project.

This report, the initial public document for the Municipal Class EA, presents a description of the work plan, alternatives, consultation plan and overall study process. It will define the key activities required to complete the Study and outline the EA planning process. The draft Study Design was circulated at the initiation of the Study to various agencies, to the Study's Technical Advisory Committee (TAC) and was available to the general public on the Counties' website.

### 1.1 Study Area

The Study Area is located in the Town of Alexandria, as illustrated in **Figure 1**.



**Figure 1: Study Area**

## **2.0 Study Approach**

This Study was initiated as a Schedule A+ EA Study, based on the range of anticipated effects. Based on the recommendations for property acquisition, the Municipal Class EA study has been elevated to a Schedule B EA Study and will meet the requirements of the Municipal Class EA process.

### **2.1 Environmental Assessment Act Requirements**

The Study will follow the Class EA process thereby meeting the requirements of the Municipal Class EA (MEA October 2015).

The study approach will involve the following Ministry of the Environment, Conservation and Parks (MECP) guiding principles for EA studies:

- Consider all reasonable alternatives;
- Provide a comprehensive assessment of the environment;
- Utilize a systematic and traceable evaluation of net effects;
- Undertake a comprehensive public consultation program; and
- Provide a clear and concise documentation of the decision-making process and the public consultation program.

This study will include one Community Café and one Public Information Centre (PIC), to advise the public of the study, and conclude with the preparation of a Project File. The public will be provided with a 30-day period for review of the Project File at the Study conclusion. This document is a discretionary step in the Class EA and has been provided to the public as well as agencies and stakeholders to comment on the proposed approach.

## **3.0 Study Process**

### **3.1 Public Consultation Approach**

Two public events will be scheduled. An initial Community Café will be held at the start of the study with members of the public and stakeholders to hear from community members on the issues and concerns they have with the Study Area before decisions are made. A Public Information Centre (PIC) will be scheduled to present the project and Recommended Plan to the public and external agencies. Public consultation will engage residents and businesses. The PIC will present the design drawings as displays. Indigenous Communities will be consulted throughout the EA process. This will include early engagement to determine traditional lands and interests in the study area through email correspondence and in-person meetings if requested.

### **3.2 Work Program**

The major elements of our technical work program include the following:

#### **Phase 1: Start-up and Information Gathering**

Task 1: Topographical Survey: A topographic survey of the project area will be completed.

Task 2: Agency and Utility Coordination: Agencies and stakeholders will be contacted to identify concerns and requirements for the project. Utility companies will be contacted to determine existing and planned infrastructure.

Task 3: Public Meeting (Community Café): A Community Café event will be held to create a network of dialogue about issues that matter to the local council, stakeholders and community. This event will include a presentation to present the Study, need and justification and long list of preliminary design alternatives.

#### **Phase 2: Evaluation of Issues and Opportunities**

Task 4: Existing Conditions Review: A visual inspection will be completed of the existing buried structure. Recommendations will include capital work improvements in the short to medium term and how the works would be coordinated with the Main Street reconstruction project.

The existing conditions and service life of the municipal services infrastructure (water, sanitary, storm) will be investigated to determine renewal and/or replacement timing. This review will focus on any as-built drawings, identified issues by the United Counties or camera inspections if available.

The project will involve a rehabilitation of the existing roadway. A cultural heritage screening checklist will be completed. No archaeological potential is anticipated due to the works being completed within previously disturbed lands.

**Task 5A: Transportation Analysis:** The transportation analysis will involve the following key tasks: an initial review of the previous traffic forecasts; documentation of existing profile of road users including all modes of travel (vehicular, bicycles, pedestrians, trucks and emergency services); analysis of forecast traffic demands and future projections and identification of level of service/forecasting; collision analysis for roadway links and intersections (building and documenting on previous forecasts) for land use development; evaluation of active transportation improvements; evaluation of alternative traffic control measures (roundabouts, traffic signals or unsignalized intersections); and confirmation of the need and justification for roadway improvements and timing.

A pedestrian and parking survey will be conducted in the downtown including 3 hour counts of pedestrians at intersections and midblock crossings. This field review will be used to identify pedestrian issues (sidewalk condition, width and high-volume movements).

**Task 5B: Origin/Destination Survey:** An interview origin/destination survey of traffic will be conducted at three survey stations south and east of the town. On this day, we will interview a sample size of peak hour traffic to define where drivers are destined and what percentage are candidates to be attracted to County Road 45. This will include the use of flag persons and upstream signage to assist in stopping vehicles for a short questionnaire.

### **Phase 3: Alternative Design Concepts**

**Task 6: Road Design Alternatives:** Preliminary Design Alternatives will include:

#### **Cross Section Alternatives:**

- 2 lanes with parking lane (on-street parking)
- 2 lanes (no parking and additional space for sidewalks)
- 2 lanes and parking pockets or new municipal parking lots
- 2 lanes with bike lanes (Complete Streets approach)
- 2 lanes (designated cycle route to another parallel side street)
- 3 lanes (provision for left-turn lanes)

#### **Intersection Alternatives:**

- Conventional unsignalized
- Conventional signalized
- Roundabout

#### **Phase 4: Selection of the Preferred Alternative and Preliminary Design**

Task 7: Evaluation of Design Alternatives: The evaluation of design alternatives will be completed as a qualitative assessment. The alternatives will be evaluated using criteria with meaningful and measurable differences. These criteria will include, but not be limited to: transportation safety; active transportation safety; design consistency; opportunity for enhancement to Main Street; cost; and, property impacts and social environment impacts (such as loss of parking for businesses).

Task 8: Public Information Centre: A second Community meeting (PIC No. 1) will be held to discuss the review of background information, survey, Community Café, existing conditions and transportation analysis. Preliminary Design Alternatives will be prepared and discussed at this meeting and study recommendations presented.

Task 9: Project File and Public Review Period: The preparation of the draft and final report will follow the format and content for a Project File for a Schedule B Municipal Class EA, to be submitted for public review and to MECP. The Project File will document the study methodology, findings, public involvement and recommendations. A Notice of Study Completion will be advertised and sent to the mailing list to inform the public, agencies and stakeholders of a 30-day public review period for the Project File.

Task 10: Environmental Clearance Letter: Assuming no issues are raised during the public review of the Project File, an Environmental Clearance letter will be issued to the United Counties. The letter will advise that all the Municipal Class EA requirements have been addressed and construction can commence once a contract has been prepared and tendered.

Task 11: Preliminary Design for Preferred Alternative: The roadway operational and safety improvements, municipal services and structural improvement plan will be generated through discussions with the Counties. The design considerations will include: circulation to utilities and identification of any necessary relocations; accommodating active modes of transportation; and review of geometric design elements, TAC Guidelines, active transportation, grading and drainage, and signage and speed limit issues as identified in the study.



## 4.0 Preliminary Design Alternatives

Preliminary design alternatives are site specific design solutions, generated to implement the recommended planning solution.

The list of preliminary design alternatives includes:

### Cross Section Alternatives:

- 2 lanes with parking lane (on-street parking)
- 2 lanes (no parking and additional space for sidewalks)
- 2 lanes and parking pockets or new municipal parking lots
- 2 lanes with bike lanes (Complete Streets approach)
- 2 lanes (designated cycle route to another parallel side street)
- 3 lanes (provision for left-turn lanes)

### Intersection Alternatives:

- Conventional unsignalized
- Conventional signalized
- Roundabout

#### 4.1 Coarse Screening of Preliminary Design Alternatives and Design Criteria

The long list of Preliminary Design Alternatives described in the preceding section may be coarse screened should technical, agency design criteria or economic issues preclude their use for this study. The technical evaluation will use a qualitative evaluation methodology.

#### 4.2 Preliminary Design Considerations

The existing conditions in the Study Area present a variety of issues and constraints including:

##### Transportation:

- Poor asphalt and curb condition
- Proximity of adjacent buildings on Main Street
- Wheel tracking from heavy vehicles
- Limited physical space for cyclists
- Through truck movements (lack of use of truck bypass)
- Limited sight distance at intersections (buildings in proximity to intersections)
- Lack of pedestrian crossovers
- Potential soil contamination due to historical uses

##### Social Environment:

- Potential for business and community impacts – requires on-street parking review
- Potential impacts to existing driveways

- Alexandria United Church Cemetery
- Opportunity for Complete Streets design/context sensitive design
- Elementary and high schools providing larger volumes of pedestrians at peak hours
- Opportunity for additional municipal parking lot

Natural Environment:

- Investigation and protection of trees, shrubs and wildlife in project area

Engineering:

- Location of existing utility conflicts within the study area including existing aerial Bell and Hydro utilities
- Storm sewer and municipal service condition
- Municipal services maybe at or near the end of their service lives and replacement should be planned to coincide with any surface works.
- Sidewalk widths should meet current TAC standards
- Buried Structure 34-227

## 5.0 Study Schedule

A draft schedule for this Study is shown below in **Table 1**.

**Table 1: Draft Study Schedule**

Tasks	Dates
Project Start-Up Meeting	October 2019
Study Commencement Notice	October 2019
Draft Study Design	October 2019
Indigenous Peoples Consultation Program	October 2019 – April 2019
Community Café	December 2019
Information Gathering	October – November 2019
Transportation Analysis	October – December 2019
Technical Investigations	October – November 2019
Analysis and Evaluation of Alternatives	January – March 2020
PIC No. 1	July 2020
Project File	August 2020
30-day Public Review	Fall 2020
Environmental Clearance Letter	Fall 2020
Preliminary Design	Fall 2020

## Glossary of Terms

- **AADT** Annual Average Daily Traffic – the average 24-hour, two-way traffic per day for the period from January 1st to December 31st.

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- **Alignment** The vertical and horizontal position of a road.

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- **Alternative** Well-defined and distinct course of action that fulfils a given set of requirements. The EA Act distinguishes between alternatives to the undertaking and alternative methods of carrying out the undertaking.

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- **Alternative Planning Solutions** Alternative ways of solving problems or meeting demand (Alternatives to the Undertaking).

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- **Alternative Design Concepts** Alternative ways of solving a documented transportation deficiency or taking advantage of an opportunity. (Alternative methods of carrying out the undertaking).

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- **Alternative Project** Alternative Planning Solution, see above.

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- **Bump-Up** The act of requesting that an environmental assessment initiated as a class EA be required to follow the individual EA process. The change is a result of a decision by the proponent or by the Minister of Environment to require that an individual environmental assessment be conducted.

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- **Canadian Environmental Assessment Act (CEAA)** The CEAA applies to projects for which the federal government holds decision-making authority. It is legislation that identifies the responsibilities and procedures for the environmental assessment.

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- **Class Environmental Assessment Document** An individual environmental report documenting a planning process which is formally submitted under the EA Act. Once the Class EA document is approved, projects covered by the class can be implemented without having to seek further approvals under the EA Act provided the Class EA process is followed.

- **Class Environmental Assessment Process** A planning process established for a group of projects in order to ensure compliance with the Environmental Assessment (EA) Act. The EA Act, in Section 13 makes provision for the establishment of Class Environmental Assessments.

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- **Corridor** A band of variable width between two locations. In transportation studies a corridor is a defined area where a new or improved transportation facility might be located.

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- **Criterion** Explicit feature or consideration used for comparison of alternatives.

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- **Cumulative Effects Assessment** Cumulative Effects Assessment assesses the interaction and combination of the residual environmental effects of the project during its construction and operational phases on measures to prevent or lessen the predicted impacts with the same environmental effects from other past, present, and reasonably foreseeable future projects and activities.

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- **Detail Design** The final stage in the design process in which the engineering and environmental components of preliminary design are refined and details concerning, for example, property, drainage, utility relocations and quantity estimate requirements are prepared, and contract documents and drawings are produced.

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- **DFO** Department of Fisheries and Oceans.

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- **EA** Environmental Assessment

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- **EA Act** Ontario Environmental Assessment Act (as amended by S.O. 1996 C.27), RSO 1980.

- **Environment**
  - Air, land or water,
  - Plant and animal life, including human life,
  - The social, economic and cultural conditions that influence the life of humans or a community,
  - Any building structure, machine or other device or thing made by humans,
  - Any solid, liquid, gas, odour, heat, sound, vibration or radiation resulting directly or indirectly from human activities, or
  - Any part or combination of the foregoing and the interrelationships between any two or more of them, in or of Ontario.

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- **Environmental Effect**

A change in the existing conditions of the environment which may have either beneficial (positive) or detrimental (negative) effects.

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- **ESR**

Environmental Study Report. The final documentation for Schedule C project, defining the project, consultation process, preferred solution and mitigation measures.

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- **Evaluation**

The outcome of a process that appraises the advantages and disadvantages of alternatives.

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- **Evaluation Process**

The process involving the identification of criteria, rating of predicted impacts, assignment of weights to criteria, and aggregation of weights, rates and criteria to produce an ordering of alternatives.

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- **External Agencies**

Include Federal departments and agencies, Provincial ministries and agencies, conservation authorities, municipalities, Crown corporations or other agencies other than MTO.

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- **Factor**

A category of sub-factors.

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- **General Arrangement**

Structural plan of the bridge and proposed works including elevations and cross-sectional views of the bridge.

<ul style="list-style-type: none"> <li>• <b>Individual Environmental Assessment</b></li> </ul>	<p>An environmental Assessment requiring the submission of a document for approval by the Minister, pursuant to the EA Act and which is neither exempt from the EA Act nor covered by a Class EA approval.</p>
<ul style="list-style-type: none"> <li>• <b>MECP</b></li> </ul>	<p>Ministry of the Environment, Conservation and Parks.</p>
<ul style="list-style-type: none"> <li>• <b>Mitigating Measure</b></li> </ul>	<p>A measure that is incorporated into a project to reduce, eliminate or ameliorate detrimental environmental effects.</p>
<ul style="list-style-type: none"> <li>• <b>Mitigation</b></li> </ul>	<p>Taking actions that either remove or alleviate to some degree the negative impacts associated with the implementation of alternatives.</p>
<ul style="list-style-type: none"> <li>• <b>MNRF</b></li> </ul>	<p>Ministry of Natural Resources and Forestry.</p>
<ul style="list-style-type: none"> <li>• <b>MHSTCI</b></li> </ul>	<p>Ministry of Heritage, Sport, Tourism and Culture Industries</p>
<ul style="list-style-type: none"> <li>• <b>MTO</b></li> </ul>	<p>Ministry of Transportation Ontario.</p>
<ul style="list-style-type: none"> <li>• <b>PIC</b></li> </ul>	<p>Public Information Centre.</p>
<ul style="list-style-type: none"> <li>• <b>Planning Alternatives</b></li> </ul>	<p>Planning alternatives are “alternative methods” under the EA Act. Identification of significant transportation engineering opportunities while protecting significant environmental features as much as possible.</p>
<ul style="list-style-type: none"> <li>• <b>Planning Solutions</b></li> </ul>	<p>That part of the planning and design process where alternatives to the undertaking and alternative routes are identified and assessed. Also described as “Alternative Project” under the federal EA Act.</p>
<ul style="list-style-type: none"> <li>• <b>Project</b></li> </ul>	<p>A specific undertaking planned and implemented in accordance with the Class EA including all those activities necessary to solve a specific problem.</p>
<ul style="list-style-type: none"> <li>• <b>Proponent</b></li> </ul>	<p>A person or agency that carries or proposes to carry out an undertaking, or is the owner or person having charge, management, or control of an undertaking.</p>
<ul style="list-style-type: none"> <li>• <b>Public</b></li> </ul>	<p>Includes the general public, interest groups, associates, community groups, and individuals, including property owners.</p>

- **Realignment** Replacement or upgrading of an existing roadway on a new or revised alignment.

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- **Recommended Plan** That part of the planning and design process, during which various alternative solutions are examined and evaluated including consideration of environmental effects and mitigation; the recommended design solution is then developed in sufficient detail to ensure that the horizontal and vertical controls are physically compatible with the proposed site, that the requirements of lands and rights-of-way are satisfactorily identified, and that the basic design criteria or features to be contained in the design, have been fully recognized and documented in sufficient graphic detail to ensure their feasibility.

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- **Screening** Process of eliminating alternatives from further consideration, which do not meet minimum conditions or categorical requirements.

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- **Sub-factor** A single criterion used for the evaluation. Each sub-factor is grouped under one of the factors.

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- **Technical Advisory Committee** The Advisory Committee will include the County and Consultant. It will act as the decision-making body for the study recommendations.

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- **TMP** Transportation Master Plan

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- **Traceability** Characteristics of an evaluation process which enables its development and implementation to be followed with ease.

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- **Undertaking** In keeping with the definition of the Environmental Assessment Act, a project or activity subject to an Environmental Assessment.