County of Peterborough
County Road 20 Reconstruction
Class Environmental Assessment and
Detail Design

Final Study Design Report

April 22, 2019
Table of Contents

1.0 Study Introduction 1
   1.1 Study Area 1

2.0 Study Approach 3
   2.1 Guiding Principles 3
   2.2 Environmental Assessment Act Requirements 3
   2.3 EA Phases 3

3.0 Study Process 6
   3.1 Public Consultation Approach 6
   3.2 Indigenous Peoples Engagement 6
   3.3 Work Program 7
   3.4 Study Schedule 11

4.0 Assessment of Planning Solutions 12
   4.1 Preliminary Alternative Planning Solutions 12
   4.2 Preliminary Assessment of Planning Solutions 13

5.0 Preliminary Design Alternatives 14
   5.1 Coarse Screening of Preliminary Design Alternatives and Design Criteria 20
   5.2 Preliminary Design Considerations 20

Glossary of Terms 22

List of Figures
Figure 1: Study Area 2
Figure 2: Municipal Class EA Process 5
Figure 3: Cross Section Alternative 1 14
Figure 4: Cross Section Alternative 2 14
Figure 5: Cross Section Alternative 3 15
Figure 6: Cross Section Alternative 4 15
Figure 7: Intersection Alternatives County Road 20/County Road 18 16
Figure 8: Intersection Alternatives County Road 20/County Road 23 16
Figure 9: Holden Road/Long Point Road/County Road 20 Intersection Design Alternatives 17
Figure 10: Poplar Point Road/County Road 20 Intersection Design Alternatives 17
Figure 11: Centre Line/County Road 20 Intersection Design Alternatives 18
Figure 12: 10th Line/County Road 20 Intersection Design Alternatives 18
Figure 13: Birch Island Road/County Road 20 Intersection Design Alternatives 19
Figure 14: 11th Line/County Road 20 Intersection Design Alternatives 19

List of Tables
Table 1: Draft Study Schedule 11
1.0 Study Introduction

The County of Peterborough has initiated this Municipal Class Environmental Assessment (EA) for the planning of the reconstruction of County Road 20 (Selwyn Road) from County Road 18 to County Road 23. The existing condition of County Road 20 is surface treated with a narrow rural cross section and substandard shoulder width, and substandard vertical and horizontal curves. The Study will consider a range of cross-section, intersection, drainage, and cycling facility improvements for the roadway corridor. Phasing of the reconstruction will be considered in the design, including interim rehabilitation alternatives.

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 will be circulated at the initiation of the study to various agencies and to the Technical Advisory Committee (TAC), and will be available to the general public on the County’s website.

1.1 Study Area

The Study Area is located in the County of Peterborough, as illustrated in Figure 1. Environmental inventories will be focused within this Study Area, in areas where construction is anticipated.
Figure 1: Study Area
2.0 Study Approach

This Study will be completed as a Municipal Schedule C EA Study. The final document will be an Environmental Study Report (ESR).

This project will address all requirements under the Municipal Class EA by establishing the need and justification for the project, considering all reasonable alternatives with acceptable effects on the natural, social and cultural environments, and proactively involving the public in defining a Recommended Plan. Should the project trigger federal approvals, the documentation will include the planning process and recommended mitigation measures to satisfy federal requirements in principle.

2.1 Guiding Principles

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.

2.2 Environmental Assessment Act Requirements

The Study will follow the Class EA process meeting the requirements of the Municipal Class EA (MEA October 2000 as amended in 2007, 2011 and 2015). The study is being initiated as a Municipal Schedule C study, based on the range of anticipated effects and capital cost of the study.

This project will include two Public Information Centres (PIC’s) during the EA phase and conclude with the preparation of an ESR, followed by a third PIC during the detail design phase. The public will be provided with a 30-day review period of the ESR at the Study conclusion. This Study Design is being made available to the public as a discretionary Step 1.2 of the Municipal Class EA process, as illustrated in Figure 2. The public and agencies will have this early opportunity to comment on the proposed approach.

2.3 EA Phases

The Municipal Class EA Process is illustrated in Figure 2.

The following is the breakdown of tasks, by phase, for a Municipal Schedule C project:

Phase 1: Identify the Problem

- Step 1: Identification and description of the problem or opportunity.
- Step 2: Discretionary public consultation (Draft Study Design available on the County’s website).

Phase 2: Alternative Solutions
Step 1: Identification of alternative solutions to the problem.
Step 2: Identify the study area and a general inventory of the natural, social and cultural environments.
Step 3: Identification of the net positive and negative effects of each alternative solution.
Step 4: Review and validation of alternative solutions.
Step 5: Identification of reasonable design alternatives for the preferred solution.
Step 6: Public consultation at PIC No. 1.
Step 7: Confirmation of design alternatives, finalization of Study Design for work program, and refinements to or addition of design alternatives to be carried forward to Phase 3.
Step 8: Selection of the preferred solution, following the public and agency review.

Phase 3: Alternative Design Concepts for the Preferred Solution
Step 1: Identification of alternative designs.
Step 2: Preparation of a detailed inventory of the social and economic environments.
Step 3: Identification of the potential impacts of the alternative designs.
Step 4: Evaluation of the alternative designs.
Step 5: Selection of preferred design.
Step 6: Public consultation at PIC No. 2.

Phase 4: Environmental Study Report (ESR)
Step 1: Completion of the ESR.
Step 2: 30-day public review period.
Step 3: Filing of the ESR and Notice of Completion.

Phase 5: Implementation
This will be a future phase after this EA Study and will include public consultation at PIC No. 3.
Figure 2: Municipal Class EA Process
3.0 Study Process

3.1 Public Consultation Approach

The study will use several techniques to proactively involve the public including a Community Café event, three Public Information Centres (PICs) (two during the EA phase and one during detail design) and meetings with external agencies. Meetings will be organized with the stakeholders and may include adjacent land owners, MECP, Ministry of Tourism, Culture and Sport (MTCS), Ministry of Natural Resources and Forestry (MNRF), Otonabee Region Conservation Authority (ORCA), and other affected agencies. These meetings will be in addition to the progress meetings with the Technical Advisory Committee (TAC). These meetings will include representatives from the County of Peterborough and Selwyn Township staff.

The use of separate meetings with interest groups will ensure a high level of communication with the community, about potential issues and alternatives assessed.

Three PIC’s will be held. The first public event will be held as an early Community Café workshop/PIC for the public and stakeholders to attend. This event will be present the Draft Study Design, study goals, problem and opportunity statement, environmental inventories, traffic analysis and assessment of Planning Solutions. The second PIC will present the evaluation of alternatives and the Technically Preferred Alternatives for improvements. The third PIC will present the detail design drawings to the public. The PICs will be an integral component of the study - seeking input and comments from the public, stakeholders and Indigenous Peoples.

With respect to public involvement, the work program will have the following key elements:

- Study commencement notice and PIC notices presented in the local newspaper(s).
- Maintaining and updating study mailing lists.
- Submission and review of a Draft and Final Study Design Report (Scoping Document), available on the County’s web site for public review.
- Community Café event to share ideas and propose solutions.
- The PICs will present the project Problem and Opportunity Statement, Draft Study Design (Work Plan), environmental evaluations, assessment of Planning Solutions and the Technically Preferred Alternative (TPA) for the corridor improvements. The consultant and County will be available to answer any questions or concerns during each PIC.

3.2 Indigenous Peoples Engagement

Meetings will also be held with Indigenous Peoples communities (including Curve Lake First Nation, Kawartha Nishnawbe First Nation, Williams Treaty First Nation, Mississaugas of Scugog Island First Nation, Alderville First Nation, Hiawatha First Nation and Metis Nation of Ontario) who are rights holders. These meetings will be held on an as requested basis and be in addition to, and separate from, public meetings and events.
3.3 Work Program

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

Task 1: Project Start-Up: Upon initiation of the project, the project team will meet to: review study scope; budget and schedule; establish membership, meeting dates and role of the TAC; review the Notice of Study Commencement; and prepare all required agreements. The TAC will provide guidance into the technical elements of the study including the study issues, data collection, weighting of factors, and the evaluation of alternatives.

Task 2: Information Gathering: The collection and organization of the data necessary for the analysis, evaluation and design activities will include:

- Assembly and review of study materials;
- Field reviews to assess aquatic and terrestrial habitat, general SAR inventories, and the collection of photographs to maintain a visual record of existing conditions;
- Collect reports and modelling data/output from the County’s TMP and ATMP;
- Review the Official Plan, relevant Official Plan Amendments and Secondary Plans;
- Gather existing natural/social environmental inventories and stormwater reports; and,
- Review of existing and projected traffic volumes and collision data as identified in any area traffic studies and the TMP.

Task 3: Study Design and Value Planning Workshop: This Study Design document will help establish the foundation for all of the remaining environmental planning and public consultation processes. The Study Design allows the early identification of the major issues and concerns, recognizes areas of consensus or agreement, and defines the Problem Statement. The preliminary identification and assessment of Planning Solutions in the Study Area will be presented in this report for public-agency review and comment. Included in this Study Design is the documentation of a broad coarse screening analysis. This analysis is preliminary documentation of the scoping of reasonable and feasible alternatives.

An early Value Planning (VP) Workshop will be organized for the TAC to attend. This early workshop will allow open discussion with stakeholders as an event before the study presents any conclusions. A preliminary presentation by the Project Manager on the Problem Statement, study history and draft Study Design will precede the workshop roundtable discussions. In addition, this VP workshop will determine the interim rehabilitation phases of the County Road 20 reconstruction and present alternatives considering performance and value for money. A subsequent TAC meeting will discuss the results of the VP workshop and integration with the alternatives. This will be used as input to finalize the Study Design.

Task 4: Transportation Analysis: The transportation analysis will involve the following key tasks:

- An initial review of the previous traffic modelling activities;
• Documentation of existing profile of road users including all modes of travel (vehicular, bicycles, pedestrians and emergency services);
• Analysis of forecast traffic demands and future projections, and identification of level of service/forecasting and collision analysis for roadway links and intersections (building and documenting on previous forecasts) for land use development;
• Required design criteria required;
• Assessment of performance for each alternative (traffic operation and safety);
• Confirmation of the need and justification for roadway improvements and timing; and
• Identification of interim improvements required in the short term horizon.

Task 5: Community Café/PIC No. 1: The first public event will be held as an early Community Café workshop/ PIC for the public and stakeholders to attend. This format will allow open discussion with stakeholders as an event before the study presents any conclusions. The Community Café/first PIC will present the Problem Statement, Draft Study Design, preliminary analysis of Planning Alternatives, draft property acquisition policy and interim improvements to the public, followed by the workshop roundtable discussions. This will be used as input to finalize the Study Design. Preliminary recommendations for a list of preliminary planning solutions will be presented.

A Notice for each PIC will be prepared for the County to place in the local newspaper(s) and on their website and letters will be mailed.

Task 6: Inventory of Natural, Social and Cultural Environments

Social Environment: Areas of investigation will include existing and proposed land uses, land use policies and regulations, aesthetics, recreation facilities, and links with pedestrian and cycling facilities. The community plan of the existing and future land uses will be documented and form the baseline from which alternatives will be measured. This is expected to include dialogue with major land owners in the Study Area.

Natural Habitat Assessment: A desktop review of the natural habitat will be documented in the ESR. An inventory of Species at Risk (SAR) and their habitat will also be completed. The local terrestrial and aquatic environments will be assessed, and fish sampling undertaken if required. A targeted Headwater Drainage Feature (HDF) assessment will also be carried out to ensure a holistic approach to the protection of surrounding wetland areas is maintained. The desktop review, inventory of SAR, and habitat assessments will be documented in the ESR document.

Stage 1 Background Study (Archaeological Assessment): The objectives of a Stage 1 archaeological background study are to develop an inventory of archaeological resources in the proposed area; to determine the presence of any archaeological sites in the area; and, to recommend appropriate strategies for future planning consideration. The data gathered will advise the Project Team of the location, type, and significance of registered archaeological sites for a typical radius of 1 km around the subject property. Reviewing the registered archaeological site database will identify significant heritage
resources on or adjacent to the study area, and will summarize the form and extent of previous cultural heritage investigations undertaken within the general project vicinity.

Agricultural Land Uses: The farm activity land uses will be developed using an interactive tool at PIC No. 1. There will be a farm activity map/display on a table where we will ask local farmers to identify issues such as drainage, crop protection, triangular field, tile drainage issues, etc.

Task 7: Technical Investigations

Drainage and Hydrology: The drainage and storm water management design criteria will be confirmed with the County. Hydrologic calculations will be performed to determine the flows for the 5 to 100 year return period rainfall events and to establish the capacities of the existing system. As the various alternatives are developed, the corresponding drainage and storm water design will be developed and detailed in a storm water management plan, sufficient to permit identification of constraints and prepare preliminary cost estimates. The following is a breakdown of the drainage and hydrology work plan:

1. Background information review, field investigations, and documentation of existing conditions.
2. Determination of the design criteria for drainage and stormwater management, and conceptual storm water management plan to deal with any road widening and increases in impervious areas.

Utility Coordination: The Project Team will coordinate the design with utility companies to determine location and if relocation will be required, and a utility composite plan will be prepared.

Illumination: The Project Team will review the condition of all existing electrical systems and roadway lighting to determine materials for salvage or disposal and identify utility constraints and hydro line clearances and power supply locations. Based on the site investigation findings and the proposed roadway improvements, the requirements for temporary/full roadway illumination will be identified. Cost estimates will be completed for the recommended improvements and included in the detailed engineering cost estimates.

Task 8: Development, Analysis and Evaluation of Alternatives: The consideration of all reasonable alternatives is a guiding principle for EA studies. Planning alternatives will be reviewed by the County and a preliminary analysis is presented in this Study Design.

Preliminary Design Alternatives will include but not be limited to the following:

- Cross Section Alternatives
- Intersection Alternatives (conventional signalized, unsignalized or roundabout)
- Stormwater Alternatives
- Cycling Facility Alternatives (Multi-use Path (MUP) or use of shoulders).

This study will use a qualitative assessment and the Technically Preferred Alternative(s) will be presented to the public at PIC No. 2.
Task 9: PIC No. 2: The second PIC will present the qualitative evaluation of alternatives and preliminary preferred design (including both intersections) to the public to elicit input on the recommendations. This meeting will be consistent with our open and objective fresh approach to the study. We will listen before decisions are made. Preliminary recommendations for a basket of solutions will be presented.

Task 10: Preparation of ESR: The preparation of the draft and final report will follow the format and content for an ESR accepted by MECP. The ESR will document the study methodology, findings, public involvement and recommendations. A draft version will be submitted to the County and external review agencies prior to the preparation of the final document. Presentations will be made to County Council and the Township of Selwyn Council. The interim improvements will be included in the ESR document.

Task 11: Public Review of ESR: A Notice of Study Completion will be prepared for the County to place in the local newspaper(s) and on their website. The Consultant will be responsible for mailing letters to the mailing list. The public will be notified of the availability of the ESR for review. Individual letters (or emails) will be sent to persons/organizations on the contact lists which will be maintained throughout the study. The ESR will be made available at several convenient locations for the public review.

Task 12: Preliminary and Detailed Design: A Preliminary Design Report will be prepared for review and approval. Following approval, the Recommended Plan will proceed to Detailed Design and a third PIC to present the interim and final design of the reconstruction.
3.4 Study Schedule

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

<table>
<thead>
<tr>
<th>Tasks</th>
<th>Dates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Start-Up Meeting</td>
<td>September 2018</td>
</tr>
<tr>
<td>Study Design</td>
<td>September 2018</td>
</tr>
<tr>
<td>Value Planning Workshop</td>
<td>October 2018</td>
</tr>
<tr>
<td>Study Commencement Notice</td>
<td>October 2018</td>
</tr>
<tr>
<td>Information Gathering</td>
<td>October – November 2018</td>
</tr>
<tr>
<td>Transportation Analysis</td>
<td>October 2018</td>
</tr>
<tr>
<td>Community Café/PIC No. 1</td>
<td>November 2018</td>
</tr>
<tr>
<td>Development of Alternatives</td>
<td>December 2018 to January 2019</td>
</tr>
<tr>
<td>Analysis and Evaluation of Alternatives</td>
<td>Winter 2019</td>
</tr>
<tr>
<td>Environmental Review</td>
<td>March – May 2019</td>
</tr>
<tr>
<td>PIC No. 2</td>
<td>Spring 2019</td>
</tr>
<tr>
<td>Preparation of ESR</td>
<td>Spring 2019</td>
</tr>
<tr>
<td>Public Review of ESR</td>
<td>Spring/Summer 2019</td>
</tr>
<tr>
<td>Preliminary and Detail Design</td>
<td>Spring/Summer 2019</td>
</tr>
<tr>
<td>PIC No. 3 (during Detail Design)</td>
<td>Spring/Summer 2019</td>
</tr>
</tbody>
</table>
4.0 Assessment of Planning Solutions

Alternative Planning Solutions represent alternative ways or methods of addressing the problem to be solved by the project. These reflect different strategies and include the “Do Nothing” approach (maintaining the status quo). Following the assessment of Alternative Planning Solutions, those alternatives judged to address the problem statement will be carried forward to form the Recommended Planning Solution. The recommended planning solution will address the safety of the travelling public, while providing the best overall balance between engineering objectives, life cycle costs, and other environmental, cultural, socio-economic, and land use planning objectives.

4.1 Preliminary Alternative Planning Solutions

In determining the preferred planning alternative for the County, Alternative Planning Solutions were developed and analyzed including:

1) Do Nothing,
2) Transportation Demand Management,
3) Limit Development, and
4) Provide New or Improved Transportation Infrastructure.

The “Do Nothing” Alternative – The Do Nothing Alternative must be considered, as mandated by the Class EA. It represents a baseline from which other approaches can be compared. This alternative does not provide improvements to vehicular or active transportation. It has no capital cost or environmental effects, and does not support the objectives of the study.

Transportation Demand Management (TDM) – This strategy would reduce vehicular demand, and encourage alternative work hours, work at home, more active modes of transportation (cycling and walking) and the use of transit. This alternative is not recommended to be carried forward as a standalone solution, and is considered as a complementary solution to the solution carried forward.

Limit Land Use Planning – This strategy would be an approach that would limit any new residential, commercial or industrial development and therefore reduce the generation of new trips. This alternative does not provide a solution for existing delays and safety concerns, on the existing transportation network. In addition, restricting development does not align with the County’s planning objectives.

Provide New or Improved Transportation Infrastructure – This strategy would be to reconstruct County Road 20 to improve the infrastructure and support increased demand. This solution is consistent with the County’s Transportation Master Plan (TMP). This solution would include an interim phase of improvements.
4.2 Preliminary Assessment of Planning Solutions

Based on existing and projected traffic demands, the Do Nothing and Limit Land Use Planning alternatives are not recommended to be carried forward. These alternatives do not provide a solution to the existing traffic demand or roadway condition.

TDM is not carried forward as a standalone solution, but will be incorporated with the Provide New or Improved Transportation Infrastructure alternative as a Recommended Solution.

Provide new or improved infrastructure is recommended to be carried forward as the Preferred Planning Solution. This includes an interim phase to designate the road as a “No Truck Route” until reconstruction may occur. The Preliminary Design alternatives are described in Section 5.0.
5.0 Preliminary Design Alternatives

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

The extensive list of preliminary design alternatives includes:

Roadway Alternatives

Preliminary roadway alternatives have been generated, as illustrated in Figure 3 to Figure 6. The alternatives include:

Alignment Alternatives

- Alternative 1: 2-lane rural cross-section, widening to the west
- Alternative 2: 2-lane rural cross-section, widening on the centre
- Alternative 3: 2-lane rural cross-section, widening to the east
- Alternative 4: 2-lane semi-urban cross-section with MUP
Design Speed Alternatives

- Alternative 0: Existing Design Speed (Posted Speed 80 km/h)
- Alternative 1: Improve vertical and horizontal curves for posted speed of 80 km/h
- Alternative 2: Posted speed 60 km/h with multi-use path
- Alternative 3: Combined posted speed of 60 km/h and 70 km/h with multi-use path

Intersection Alternatives

The County Road 20/County Road 18 intersection is currently a T-intersection. Intersection alternatives at County Road 20/County Road 18 will consider conventional unsignalized (T-intersection, existing conditions), conventional signalized (T-intersection) and a single-lane roundabout, as illustrated in Figure 7.
The County Road 20/County Road 23 intersection is a 4-way stop controlled intersection. Intersection alternatives at County Road 20/County Road 23 will consider conventional unsignalized (existing conditions), conventional signalized and a single-lane roundabout, as illustrated in Figure 8.

Internal intersections (intersections along County Road 20 between County Road 18 and County Road 23) will consider improving the skew angle and/or roundabout alternatives. These intersections are illustrated in Figure 9 to Figure 14.
Figure 9: Holden Road/Long Point Road/County Road 20 Intersection Design Alternatives

Figure 10: Poplar Point Road/County Road 20 Intersection Design Alternatives
Figure 11: Centre Line/County Road 20 Intersection Design Alternatives

Figure 12: 10th Line/County Road 20 Intersection Design Alternatives
Figure 13: Birch Island Road/County Road 20 Intersection Design Alternatives

Figure 14: 11th Line/County Road 20 Intersection Design Alternatives
5.1 Coarse Screening of Preliminary Design Alternatives and Design Criteria

The Preliminary Design Alternatives described in the preceding section may be coarse-screened should technical, agency design criteria or economic issues preclude their application for this project. Those carried forward will then be subjected to a quantitative evaluation to rank the combined alternatives. Following the evaluation of alternatives, the Technically Preferred Alternative will be selected and refined to ensure it meets the design criteria.

5.2 Preliminary Design Considerations

The existing conditions in the study area present a variety of issues and constraints including:

**County Road 20/Selwyn Road Issues:**
- Intersection is in a 50 km/h zone but vehicles do not operate at this speed (speed limit or road design is not appropriate)
- Operational improvement alternatives to be reviewed include: slip-around lane (existing); left turn lane; addition of street lights; flashing amber; signals; roundabout; paved shoulders
- Intersection located with a crest curve to the east
- No existing facilities for cyclists/pedestrians
- Recommendation of the ATMP plan is for paved shoulders
- Speed limit transitions to 80 km/h immediately east of intersection
- To the west there is a transition zone into urban Bridgenorth which uses chevrons. Other speed treatments for the transition could be considered for the urban transition

**County Road 20 Issues:**
- Signed to Selwyn Beach (destination for cyclists)
- Signage to “Share the Road” and OPP enforcement of speed – indicative of not considering a “Complete Street” approach to provide space for each mode
- Pavement edge breakup – high maintenance costs can be reduced by the use of paved shoulders
- Safety of horizontal and vertical curvature on north approach to Country Road 18 intersection
- Osprey nest on Bell / Hydro pole
- High volume of heavy trucks (aggregates)
- Tourist destination (Buckhorn and Bobcaygeon) with peak tourist traffic volumes and influx of non-local traffic
- Poor pavement condition - rolling, edge break-up and rutting of travel lanes
- Need for paved shoulders on steep inclines (avoid erosion of shoulders) and superelevated curves on approach to CR18 where increased street flow is eroding low side shoulders
- Bell and aerial Hydro lines within clear zone distance
- Large areas where ditches require clean-out
- Areas with eroding backslopes onto agricultural fields
• Visibility of field entrances
• Need to review ditch outlets
• Areas of narrow right-of-way (66 ft wide) cannot accommodate standard shoulder widths and flat 3:1 foreslopes
• Constraints to widening the platform include mature trees, wetland areas designated as Provincially Significant (Moore Lake and Snelgrove Brook), Moore Creek and tributaries of nearby lakes, headwater drainage features (HDF), Hydro and Bell lines, and cedar rail fences (heritage feature)
• Safety of Pebble Beach Road (view of crest curve to the south)
• Hidden intersections posted at 60 km/h at Long Point/ Holden Road intersection. Alternatives in this section include vertical alignment curve flattening and use of mountable curb and gutter and localized storm drainage to avoid property acquisition
• Skew angles of a cross roads – Holden Road
• Possible improvement of skew angle to be less than 70°
• Potential to provide wider paved shoulders at sideroads to function as slip-around lanes should vehicles stop in the general purpose lane to make a left turn
• Likelihood for Bobolink, Eastern Meadowlark and Least Bittern SAR on adjacent fields
• Specimen trees within ditch line / hedgerows
• No daylight triangles at intersections (example Poplar Point Road)
• Historic 66 ft ROW would be considered substandard for a County Road where 26 m or 30 m are modern standards
• Existing 12 ft lanes (3.66 m) and 5 ft shoulders do not accommodate disabled vehicles
• Mature trees within clear zone measured at 7’-6” from travelled lane
• Mature trees negate effectiveness of winter grit/salt with shade impacting ability of salt to melt ice
• School bus drop-off and pick-up
• 10th Line /Smith intersection on a curve
• No room for ditches affects pavement drainage
• Potential for Multi-use Path (MUP) behind hedgerow
• Birch Island Selwyn Beach Conversion Area destination

Selwyn Burritt Mann Memorial Park at CR20/CR23 intersection Southeast Quadrant Issues:
• Safety of Mudroad/12 Line (it is between reverse horizontal curves and behind a vertical curve to the south)
• Potential for pedestrians/cyclists in the area to travel to the public park facilities
• Consider slip-around lane northbound for potential rear end collisions (hidden stopped vehicles turning behind crest curve) at 12th line intersection
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.

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

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

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

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

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

- **ATMP**
  Active Transportation Master Plan

- **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.

- **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.

- **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.

- **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.

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

- **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.

- **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.

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

- **EA**: Environmental Assessment

• **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.

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

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

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

• **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.

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

• **Factor**
  A category of sub-factors.

• **General Arrangement**
  Structural plan of the bridge and proposed works including elevations and cross-sectional views of the bridge.
- **Individual Environmental Assessment**: 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.

- **MECP**: Ministry of the Environment, Conservation and Parks.

- **Mitigating Measure**: A measure that is incorporated into a project to reduce, eliminate or ameliorate detrimental environmental effects.

- **Mitigation**: Taking actions that either remove or alleviate to some degree the negative impacts associated with the implementation of alternatives.

- **MNRF**: Ministry of Natural Resources and Forestry.

- **MTCS**: Ministry of Culture, Tourism and Sport.

- **MTO**: Ministry of Transportation Ontario.

- **PIC**: Public Information Centre.

- **Planning Alternatives**: Planning alternatives are “alternative methods” under the EA Act. Identification of significant transportation engineering opportunities while protecting significant environmental features as much as possible.

- **Planning Solutions**: 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.

- **Project**: A specific undertaking planned and implemented in accordance with the Class EA including all those activities necessary to solve a specific problem.

- **Proponent**: 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.

- **Public**: Includes the general public, interest groups, associates, community groups, and individuals, including property owners.
<table>
<thead>
<tr>
<th>Term</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Realignment</td>
<td>Replacement or upgrading of an existing roadway on a new or revised alignment.</td>
</tr>
<tr>
<td>Recommended Plan</td>
<td>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.</td>
</tr>
<tr>
<td>Screening</td>
<td>Process of eliminating alternatives from further consideration, which do not meet minimum conditions or categorical requirements.</td>
</tr>
<tr>
<td>Sub-factor</td>
<td>A single criterion used for the evaluation. Each sub-factor is grouped under one of the factors.</td>
</tr>
<tr>
<td>Technical Advisory Committee</td>
<td>The Advisory Committee will include the City and Consultant. It will act as the decision-making body for the study recommendations.</td>
</tr>
<tr>
<td>TMP</td>
<td>Transportation Master Plan</td>
</tr>
<tr>
<td>Traceability</td>
<td>Characteristics of an evaluation process which enables its development and implementation to be followed with ease.</td>
</tr>
<tr>
<td>Undertaking</td>
<td>In keeping with the definition of the Environmental Assessment Act, a project or activity subject to an Environmental Assessment.</td>
</tr>
</tbody>
</table>