Draft – MTO Class EA (2020)

FOR REVIEW

MTO

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1 Introduction to MTO's Class EA

1.1 General Introduction

The *Ontario Environmental Assessment Act* (1990) (EA Act), as amended, provides for the preparation of Class Environmental Assessments (Class EA) for approval by the Minister of the Environment, Conservation and Parks (MECP). Provided the process is followed, projects included under the Class EA do not require formal review and approval under the EA Act.

In Ontario, the Ministry of Transportation (MTO) is responsible for managing, administering and operating provincial transportation facilities, including provincial highways, freeways, transitways and ferries. As part of those responsibilities, MTO has prepared the MTO Class EA to manage the need to undertake transportation-related infrastructure projects using a streamlined approach. This document has been written in accordance with the requirements of the EA Act and related codes and practices to describe the processes that relate to provincial transportation facilities.

1.2 Background to Class Environmental Assessments

The following is an excerpt from the MECP's Code of Practice "Preparing, Reviewing and Using Class Environmental Assessments in Ontario (January 2014)". It provides context for Ontario's approach to environmental assessment.

Environmental assessment is a planning and decision-making process used to promote environmentally responsible decision-making. In Ontario, this process is defined and finds its authority in the Environmental Assessment Act. The purpose of the Environmental Assessment Act is to provide for the protection, conservation and wise management of Ontario's environment. To achieve this purpose, the Environmental Assessment Act promotes responsible environmental decision-making and ensures that interested persons have an opportunity to comment on undertakings that may affect them. In the Environmental Assessment Act, environment is broadly defined to include the natural, social, economic, cultural and built environments.

It should be noted that environmental assessment is a planning process that allows proponents to assess the potential for environmental effects using best information available in order to make an informed decision about whether a project should proceed. It is not the proponent's responsibility to achieve consensus about whether a project should proceed or attempt to resolve issues outside the scope of the project. While the objective is to avoid or minimize potential negative environmental effects, it may not always be possible to do so. There will be times where individuals may be

affected by a project that would benefit society as a whole. The objective is to ensure that projects are planned in an environmentally responsible manner so that the environment is protected.

A Class EA is a document approved under the EA Act, which applies to similar groups ("classes") of undertakings that are carried out routinely and have predictable environmental effects that can be readily managed. When a Class EA is approved by the Minister of MECP and Cabinet, the approval is for both how the classes of activities are distinguished from one another and the planning and decision-making process for each class of undertakings. Defining the planning process in a Class EA document ensures that the environmental assessment for projects falling within a class of undertakings will be carried out in accordance with an approved planning and decision-making process set out in the Class EA.

A Class EA document may include a streamlined self-assessment process in order to fulfill the requirements of the EA Act for those undertakings that occur on a frequent basis, are generally small in scale, and the potential impacts are generally low, predictable or well understood.

1.3 The MTO Class EA

1.3.1 History of the MTO Class EA

MTO has used the Class EA process for provincial transportation undertakings since 1979. The most recent version of the MTO Class EA document (entitled "Class Environmental Assessment for Provincial Transportation Facilities") was approved by the (then) Minister of the Environment and the Ontario Cabinet in 1999. The approval included conditions requiring a minor amendment of the document in 2000.

This updated version of the MTO Class EA document includes amendments recommended by both MTO and MECP and ensures consistency with the EA Act, as amended.

1.3.2 Overview of the MTO Class EA

Provincial transportation facility undertakings, for which the MTO Class EA applies, are found in Chapter 5. Undertakings, or projects, are classified into three groups:

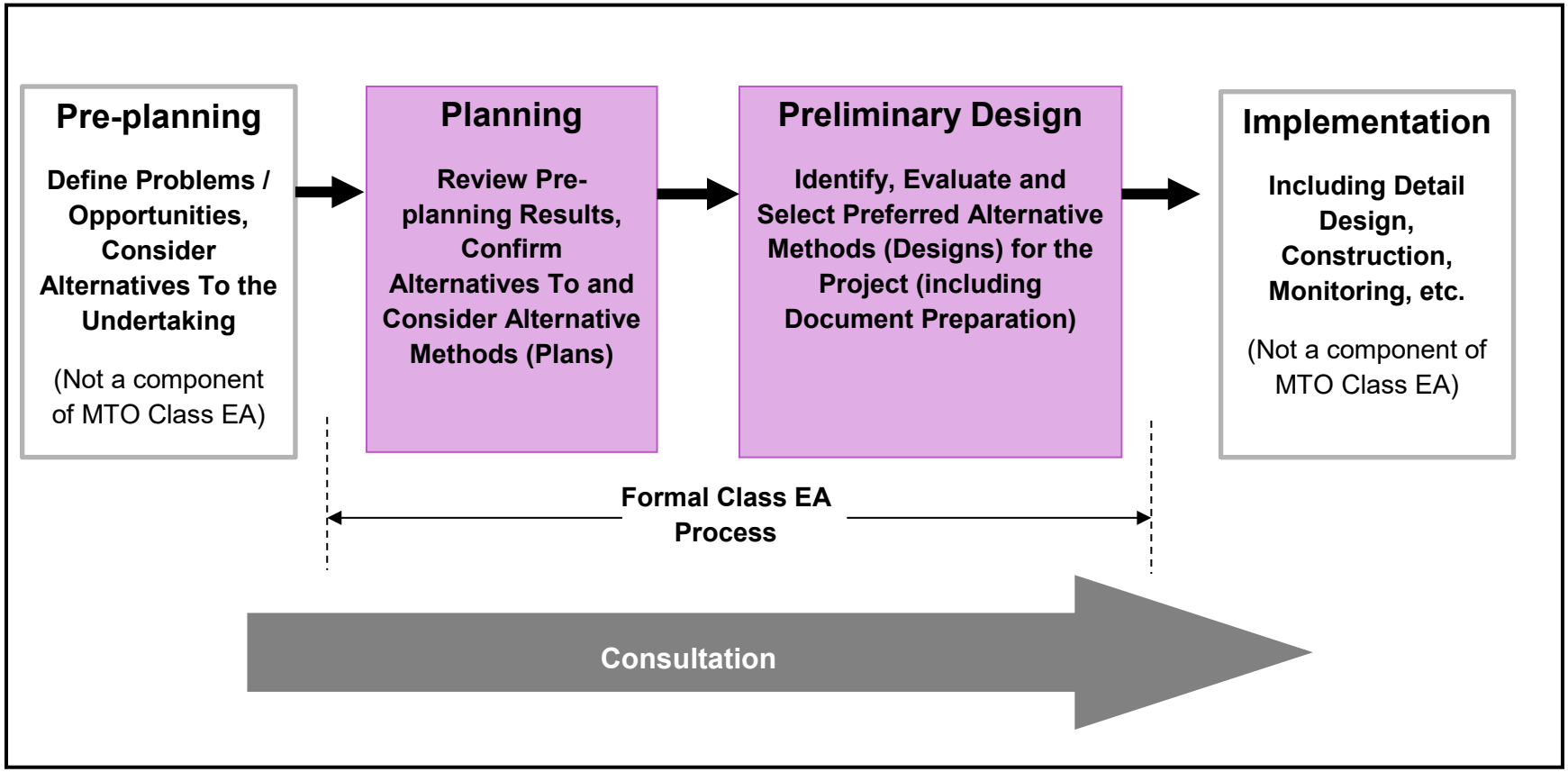
- Group A projects are new provincial transportation facilities and highway / freeway realignments
- Group B are projects that modify access or add capacity to existing provincial transportation facilities, and new service / maintenance / operations facilities
- Group C are improvements to existing provincial transportation facilities.

The groupings are largely defined by their relative complexity and potential for impacts. Projects and activities exempt from the EA Act are identified in Section 5.9 and Appendix B. The MTO Class EA processes for Group A, B and C projects are not prescriptive. Rather, the MTO Class EA is principle-based. The process stages provided in the MTO Class EA give proponents a pre-approved method for planning and carrying out specified projects in an environmentally responsible manner.

1.3.3 MTO Class EA Process

The MTO Class EA process provides a consistent framework for making decisions about how to meet the transportation problems and / or opportunities in an environmentally responsible manner. Figure 1.1 shows the four stages of MTO's planning process**.** As the figure indicates, there are only two stages within the formal Class EA process: Planning and Preliminary Design.

Figure 1.1 General MTO Class EA Process



Within each of these stages are a number of phases that involve the consideration of alternatives, their evaluation and the selection of a preferred alternative. Environmental protection is an element of each study stage and phase, although the project type and complexity influence the duration and intensity of the work and associated documentation and consultation.

The Pre-Planning stage, or Transportation Needs Assessment, is described in Chapter 4: Provincial Transportation Problems, Opportunities and Needs Assessment. This stage examines the Alternatives To a project. The results of the Alternatives To work is reviewed and confirmed as part of the Planning phase.

The Planning and Preliminary Design stages are described in Chapters 6, 7 and 8 for Groups A, B, and C projects respectively and examine the Alternative Methods (Plans or Designs) of a project. The Planning and Preliminary Design stages may be combined depending on the complexity of the project and potential impacts.

Implementation (Detail Design and construction) occurs after the Class EA is complete. However, as described in Chapters 6, 7, 8, and Appendix E: Detail Design, there may be instances where some elements of Detail Design are included in the Class EA process.

Further information regarding the considerations for environmental protection, consultation and documentation are outlined in Chapters 2 and 3. An overview of typical transportation engineering and environmental protection activities for the stages is provided in Tables 1.1 to1.3.

Table 1.1 Overview of Typical Transportation Engineering Decisions - *GROUPS A, B, and C LINEAR FACILITIES*

Planning Stage* **(Chapter 6, 7, and 8)**	**Preliminary Design Stage*** **(Chapter 6, 7, and 8)**	**Implementation Stage (Detail Design)**** **(Chapter 6, 7, and 8, Appendix E)**
Purpose: Develop plan to design concept level of detail (typically at 1:10,000 scale)	**Purpose:** Develop plan to design criteria level of detail (typically at 1:2,000 or 1:1,000 scale)	**Purpose:** Develop plan to design implementation level of detail (typically at 1:500 scale), and develop construction documentation
Typical Transportation Engineering Decisions / Alternatives / Elements, and Issues: Facility Type: • roadway (freeway vs. highway) • transitway technology (rail vs. bus etc.) • access control Basic plan and profile (including route location); design speed; typical project cross-section covering elements such as: • typical right-of-way requirements • number of lanes / tracks • median width and type Need / location / type of interchanges, intersections Need / location / type of transit stations (if applicable) Need / location of bridges & culverts	**Typical Transportation Engineering Decisions / Alternatives / Elements and Issues:** Calculated horizontal and vertical alignment, design speed & typical project cross-section covering elements such as: • typical right-of-way requirements • number of lanes / tracks (including auxiliary and turning lanes) • median width and type • shoulder type • ditches Need / location / type of: • interchanges and intersections • bridges and culverts (including span & width) • stormwater management facilities • illumination and traffic signals • safety infrastructure Initial property acquisition plan Preliminary staging of major work activities Preliminary assessment of waste materials generation and disposal options Agreements in principle for road assumptions, transfers, closures, and the resolution of major rail and utility conflicts	**Typical Transportation Engineering Decisions / Alternatives / Elements, and Issues:** Calculated horizontal and vertical alignment and segment-specific cross-section details covering elements such as: • roadway, including shoulders, median, ramps • pavement • ditches • construction staging, detours, and construction access Surveyed structure and culvert location / span / width Details of illumination, traffic signals and safety infrastructure Application of project-specific standards, and calculation of quantities for all of the above items Signed agreements for road assumptions, transfers, closures and the resolution of major rail and utility conflicts Final property requirements

Notes: Project stages can be expanded /contracted/combined based upon project specifics and complexity. *Planning and Preliminary Design are combined in Group B and C projects. **Implementation is included here for information purposes only, to provide an understanding of possible elements considered if the proponent decides to bring Detail Design into the Class EA process for a given project. Transportation engineering decisions are balanced with environmental protection decisions (See Table 1.3)

Table 1.2 Overview of Typical Transportation Engineering Decisions- *GROUP A, B, AND C SERVICE, MAINTENANCE AND OPERATIONS FACILITIES*

Planning Stage* (Chapter 6, 7, and 8)	**Preliminary Design Stage* (Chapter 6, 7, and 8)**	**Implementation Stage (Detail Design)** (Chapter 6, 7, and 8, Appendix E)**
Purpose of Stage: Develop plan to design concept level of detail (typically 1:2,000 scale)	**Purpose of Stage:** Develop plan to design criteria level of detail (typically 1:1,000 scale)	**Purpose of Stage:** Develop plan to design implementation level of detail (typically at 1:500 scale), and develop construction documentation
Typical Transportation Engineering Decisions / Alternatives / Elements, and Issues Need / type of facility Site location (new facility only), considering: • visibility, accessibility • availability of utilities • difficult to bypass (Commercial Vehicle Inspection Facility) • maximum opportunity to support transportation system with minimum disruption	**Typical Transportation Engineering Decisions / Alternatives / Elements, and Issues:** Need / location / type of site components: • connection with transportation system (ramps, roads, shipping lanes, transitway) • docking requirements (ferry ports), platform requirements (transitway) • buildings • internal roads • parking • illumination • safety infrastructure • auxiliary facilities (storage, washrooms) Initial property acquisition plan Staging of major work activities	**Typical Transportation Engineering Decisions / Alternatives / Elements, and Issues:** Detailed and surveyed site plan for all components Building architectural drawings Application of project-specific standards, and calculation of quantities for all of the above items Final property requirements

Notes: Project stages can be expanded / contracted / combined based upon project specifics and complexity. *Planning and Preliminary Design are combined in Group B and C projects. **Implementation is included here for information purposes only, to provide an understanding of possible elements considered if the proponent decides to bring Detail Design into the Class EA process for a given project. Transportation engineering decisions are balanced with environmental protection decisions (See Table 1.3).

Table 1.3 Overview of Typical Environmental Protection Activities and Decisions - *GROUP A, B AND C PROJECTS*

Planning Stage* **(Chapter 6,7, and 8)**	**Preliminary Design Stage*** **(Chapter 6,7, and 8)**	**Implementation Stage (Detail Design)**** **(Chapter 6,7, and 8)**
Purpose of Stage: Develop plan to design concept level of detail (typically at 1:10,000 scale)	**Purpose of Stage:** Develop plan to design criteria level of detail (typically at 1:2,000 or 1:1,000 scale)	**Purpose of Stage:** Develop plan to design implementation level of detail (typically at 1:500 scale), and develop construction documentation

Typical Environmental Protection Activities:
• Identify environmental constraints to project objectives
• Identify environmental deficiencies (e.g. contaminated properties)
• Develop environmental protection strategies:
  ○ avoidance / prevention through Planning alternatives
  ○ environmental design strategies
  ○ environmental remediation strategies
	Typical Environmental Protection Activities:
	• Identify environmental constraints to design
	• Develop environmental design concepts
	• Develop environmental mitigation concepts
	• Obtain agreements in principle for formal environmental approvals and permits
		Typical Environmental Protection Activities:
		• Identify environmental constraints to construction
		• Complete/modify environmental design elements
		• Complete/modify environmental mitigation
		• Develop environmental construction constraints
		• Sign agreements for formal environmental approvals and permits
		• Develop environmental monitoring approaches

Typical Environmental Protection Decisions / Alternatives / Elements, And Issues
• Avoidance / Prevention of:
  ○ footprint impacts
  ○ interference impacts
	Typical Environmental Protection Decisions / Alternatives / Elements, and Issues
	• Avoidance / Prevention / Control / Mitigation of:
	  ○ footprint impacts
	  ○ interference impacts
	  ○ traffic access modification impacts
	• Avoidance / Prevention of:
	  ○ emissions impacts
	  ○ timing impacts
	• Compensation/Offsetting/Overall Benefit and Enhancement concepts
		Typical Environmental Protection Decisions / Alternatives / Elements, and Issues
		• Control / Mitigation of:
		  ○ footprint impacts
		  ○ interference impacts
		  ○ traffic access modification impacts
		  ○ emissions impacts
		  ○ timing impacts
		• Compensation for Impacts /Offsetting/Overall Benefit and Enhancement details

Notes: The actual stage in which activities occur and decisions are made varies with project specifics. The principles for environmental protection and mitigation are provided in Chapter 2. *Planning and Preliminary Design are combined in Group B and C projects. **Implementation is included here for information purposes only, to provide an understanding of possible elements considered if the proponent decides to bring Detail Design into the Class EA process for a given project. Typical environmental protection and mitigation measures are outlined in Appendix C and D.

1.4 Reasons for Using the MTO Class EA Process

There are a number of reasons for using the MTO Class EA process. The groups of projects included generally have predictable environmental impacts that are well managed through the application of standard mitigation measures. The net environmental impacts are not of a size or scale requiring the MECP Minister's approval.

The Class EA provides:

- a successful process for environmentally responsible decision-making that has been used for provincial transportation undertakings since 1979
- a consistent consultation framework
- a self-assessment process that gives proponents the flexibility to plan and implement a range of projects without requiring approval by the Minister of MECP under the EA Act for each project
- clear and consistent direction on how to complete and document the assessment process for a range of projects
- significant efficiencies and cost-savings for proponents, delivery partners, agencies and the public, because it allows them to follow a pre-approved, predictable process for a large number of projects of a similar nature
- flexibility to proponents to adapt the process to the level of interest and complexity of each project.

1.5 Proponents Using the MTO Class EA

A proponent is defined as 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.

Under this Class EA the following are defined as proponents:

- the Ontario Ministry of Transportation (MTO);
- Infrastructure Ontario
- Local Roads Boards, as defined under the *Local Roads Board Act*;
- other proponents (in their own right, and under their own responsibility) of work on the Provincial Transportation system for which there is no current MTO need and / or construction commitment, and where that work is defined under the terms of this Class EA (e.g., new freeway interchange needed by a municipality or developer for access to a new development).

Regardless of who the proponent may be, it is recognized that the undertaking may either be carried out by the proponent itself or its employees or servants; or by service

providers, contractors, consortia or other parties who may be retained by the proponent from time to time to effect the carrying out of the undertaking, or by another proponent who assumes responsibility for project implementation (in compliance with EA commitments).

The proponent may choose to deliver the project using in-house service providers or consultants, or any combination thereof.

1.6 Environmental Assessment and Other Environmental Legislation

The MTO Class EA process does not replace or exempt the proponent from the formal approval processes of other applicable federal and provincial legislation. These other processes may require permits / approvals and specific consultation.

1.6.1 Coordination with the Impact Assessment Act, 2019

The *Impact Assessment Act* (2019) is the legislation governing the federal environmental assessment process. It is possible that an undertaking eligible for MTO's Class EA process also requires approval under the IAA. In this case it is likely a "coordinated" EA will be conducted. The intent of coordination is to avoid duplication in processes for the same project, address information and consultation requirements of both the Class EA and the *IAA,* and, to ensure that the undertaking is subject to the appropriate level of review.

In such cases, the MTO Class EA process should be coordinated with other applicable formal approval processes as effectively as possible to avoid duplication. The intent of these coordinating efforts is to produce a single body of documentation of environmental impacts and mitigation measures that will meet the information needs of both the federal and provincial governments.

1.6.2 Coordination with Other Class EA Processes

Similar to MTO's Class EA, other Ministries and organizations have Class EA documents that are approved under the EA Act. It is possible that an undertaking under MTO's Class EA process will also require review and / or approval under one of these Class EA documents. Where possible, a coordinated EA will be conducted. The intent of the coordination is to avoid duplication in processes for the same project; address information and consultation requirements of both Class EAs; and, to ensure that the undertaking is subject to appropriate review. Where possible and feasible, the intent of this coordination effort is to produce a single body of documentation on environmental impacts and mitigation measures that will meet the needs of both Classes.

1.6.3 Other Environmental Documentation Supporting the MTO Class EA Process

The MTO Class EA is supported by the MTO Environmental Standards and Practices documents. These documents provide MTO staff and service providers working on behalf of MTO with the requirements, guidance and tools to make decisions that will protect the environment during all stages of highway provincial transportation facility management, including transportation planning, design, construction, operations and maintenance.

2 Principles of MTO's Class EA

2.1 Introduction

The MTO Class EA is based on a series of principles. The MTO Class EA defines what must be achieved to comply with the *Ontario Environmental Assessment Act*,*1990*, rather than specifying how it should be done.

This chapter describes the MTO Class EA principles and how those principles are applied broadly throughout the processes for Group A, B and C projects. The detailed processes for Groups A, B and C projects are provided in Chapters 6, 7 and 8 respectively.

This chapter provides an overview of environmental assessment and project management principles. These principles align with MECP's Code of Practice, "Preparing and Reviewing Environmental Assessments in Ontario, 2014". Principles outlined in this chapter collectively provide direction to proponents who are undertaking a project using the MTO Class EA.

2.2 MTO Class EA Principles

The MTO Class EA principles are as follows:

- Consultation
- Identification and Consideration of Alternatives
- Consideration of All Aspects of the Environment - Environmental Protection
- Consideration of All Aspects of the Environment - Transportation Engineering
- Evaluation
- Documentation
- Project Management

Figure 2.1 outlines the stages where principles in this chapter may be applied to the general MTO Class EA process.

2.3 Principles for Consultation

Effective and meaningful involvement of interested and impacted individuals and organizations* is an integral part of the MTO Class EA process. Participants in consultation can often play a significant role in determining the outcome of a project by providing information and raising issues about the proposed project. While the MTO Class EA process will not always achieve consensus amongst those who are consulted, consultation at decision points provides a formal process for dissemination and collection of information. This promotes environmentally responsible decision-making.

The consultation process will allow for:

- appropriate opportunities for individuals and organizations to provide input and/ or identify their issues and concerns
- information about the MTO Class EA process and the undertaking, including opportunities for formally challenging decisions made during the process
- opportunities for EA participants to gather information on the existing conditions and identify issues and concerns that can be addressed through the planning and design process that may not otherwise have been known
- gathering information about potential decisions and their related impacts
- the development of solutions to complex environmental issues, including possible mitigation measures by involving individuals and organizations
- resolution of any outstanding concerns or issues at the conclusion of the process by working with individuals and organizations*

*Note: For the purposes of the MTO Class EA document, the phrase individuals and organizations includes: interested members of the public, government agencies and Indigenous communities and Indigenous organizations.

Please refer to the list found in Section 3.1.1 – Interested individuals and organizations for those typically consulted with as part of the MTO Class EA process.

2.4 Principles for Identification and Consideration of Alternatives

During the MTO Class EA process, a reasonable range of alternatives must be considered. This should include examining Alternatives To the undertaking - functionally different ways of approaching and dealing with the defined problem or opportunity. Alternatives To the undertaking are discussed in Chapter 4. It should be noted, however, that depending on the nature of the problem or opportunity identified, there may be limited to no reasonable Alternatives To consider.

In addition, consideration must be given to the “do nothing” alternative which represents what is expected to happen if none of the alternatives being considered during the MTO

Class EA process are carried out. The “do nothing” alternative is considered as the benchmark against which the advantages and disadvantages of each of the alternatives being considered are compared in order to demonstrate the rationale for proceeding with a particular alternative.

The proponent must also consider Alternative Methods of carrying out the proposed project, which includes different approaches of accomplishing the same objective.

2.5 Principles for Considering all Aspects of the Environment - Environmental Protection

The EA Act broadly defines environment to include the natural, social, economic, cultural and built environments.

During the preparation of the Class EA for a project, the proponent must consider not only the potential impacts on the natural environment, but also the project’s potential impact on the social, economic, cultural and built environments. Proponents may identify both beneficial and detrimental environmental effects.

Determining impacts and selecting environmental protection measures will vary depending on the significance of the potential environmental impact and the stage in the MTO Class EA process. In general, environmental assessment is based on a phased sequence of decision-making in which alternatives are assessed at an increasing level of detail as the project progresses. Preliminary assessments are undertaken to support the comparing of Alternatives To the undertaking. For consideration of Alternative Methods for the project, the proponent undertakes more detailed studies to provide a clearer understanding of the potential impacts on the environment of the various Alternative Methods for the project. Once the proponent has selected a Preferred Alternative Method, more focussed data is collected to refine and complete the design.

The proponent will apply the Principles of Environmental Protection when considering the project’s potential impacts on all aspects of the environment. To satisfy the principles, the proponent must consider the expected range of environmental impacts.

2.5.1 Hierarchy of Environmental Protection

The hierarchy of environmental protection is the application of the following protection approaches in order of decreasing preference:

- avoid, mitigate or prevent negative environmental impacts
- reduce the severity of environmental impacts through control or mitigation measures

- provide equivalent environmental features through compensation or enhancement

Proponents often combine these approaches to minimize the net environmental impacts.

2.5.2 Sources of Information for Addressing Impacts

Potential sources for identifying environmental impact mitigation and protection measures are:

- government environmental policy documents
- manuals, guidelines, and standards prepared by government agencies and the proponent
- standard environmental best practices;
- consultation with interested individuals and organizations
- project-specific approaches developed by the proponent

Unless the proponent decides otherwise, the Class EA process will be complete at the end of Preliminary Design; therefore, some technical information may not be available or known.

Examples of environmental impacts and typical environmental protection measures are provided in Appendix C. Typical transportation planning and design elements used to create Alternative Methods (Plans and Designs) and related environmental protection activities and decisions from groups A, B, and C projects are provided in Appendix D.

2.6 Principles for Considering all Aspects of the Environment - Transportation Engineering

Transportation engineering planning and design decisions for provincial transportation facilities are based on the following principles:

- provide for the efficient movement of people and goods
- meet the needs of the travelling public, by maximizing opportunities for access and mobility
- address the identified transportation problems and opportunities
- maximize the opportunity to satisfy existing and future provincial travel demand
- reflect sound engineering judgement, site-specific transportation engineering and/or environmental constraints, transportation demand, capacity of existing and future transportation facilities, traffic composition, trip length, population density and land development, and traffic habits of the overall transportation system users, in meeting or exceeding current provincial design standards and practices

- ensure compatibility with the existing and future municipal, provincial and federal transportation system and system needs, including alternative modes and improve the level of service, safety and operation for the provincial transportation system users
- ensure compatibility with other transportation infrastructure in the vicinity to ensure rational and predictable behaviour of users
- ensure the technical feasibility of construction, operation and maintenance are considered to the extent possible
- minimize known and typical environmental impacts and the use of non-renewable natural resources
- minimize property requirements and impacts on adjacent properties
- minimize adverse impacts to established or credibly asserted Aboriginal and treaty rights
- minimize net energy usage of the transportation system
- maximize opportunities to make the facility safer
- in consideration of all of the above, provide the maximum benefit for the lowest cost (considering construction, maintenance and operation costs)

2.7 Principles for Evaluation of Alternatives

Net environmental impacts simply mean the environmental impacts that remain after environmental protection and / or mitigation measures have been applied. Potential net environmental impacts are estimated for a project based on the understanding of the relevant aspects of the environment and the potential protection measures. Net environmental impacts are refined throughout the project.

The proponent will apply the Principles for the Evaluation of Alternatives when evaluating the net environmental impacts for each alternative considered under the MTO Class EA.

This MTO Class EA does not prescribe an approach to evaluation in recognition that different qualitative or quantitative approaches may be appropriate for different types of projects. Moreover, evaluation factors that may be considered at one stage of a project may not be appropriate at other stages and may change as the project progresses through the Class EA and planning and design process.

For the evaluation of Alternative Methods (Plans and Designs) for the project, the proponent determines how to compare the advantages and disadvantages of the alternatives with the goal of selecting the Alternative Method that maximizes the transportation benefit while minimizing the overall negative net impacts on the environment (i.e., the Preferred Alternative Method (Plan / Design)). During the evaluation of alternatives, the proponent determines the relative importance of the

various features and functions of the environment potentially affected by the project, and the significance of the potential impacts.

The evaluation process is established to assist the proponent to make decisions about the project. The evaluation process is based on the following guiding principles:

- the evaluation process must be traceable, replicable, and must be understandable by those who may be affected by the decisions
- all relevant factors, including transportation engineering and environmental protection, will be given due consideration
- the evaluation may be subjective (based on reasoned argument) or objective (using quantifiable data)

2.8 Principles for Documentation

Documentation of the Class EA process is an important element of the MTO Class EA process for each of the groups (see Chapters 6, 7 and 8). Documentation must describe the Class EA process followed, as well as the application of the consultation, environmental protection, transportation engineering and evaluation principles and processes.

MTO Class EA documentation includes the:

- Notices of Commencement, Completion, and Exemption (if applicable)
- Transportation Environmental Study Report (TESR) and TESR Addendum
- Study Design Report (SDR) (if applicable)

In addition, the proponent may decide to produce supplementary documents to address project-specific needs in support of the MTO Class EA process. Documentation will:

- provide clear, simple, complete, and precise Class EA project documents
- fulfil the document content requirements prescribed by this Class EA process
- include project-specific details and issues
- summarize the results of the study
- for TESRs and TESR Addendums, provide an opportunity to review and comment upon the Class EA process and conclusions

2.9 Principles for Project Management

The MTO Class EA principles also include project management principles which are aligned with MECP's Code of Practice, "Preparing and Reviewing Environmental Assessments in Ontario," 2014. When followed, these principles can assist a proponent in navigating the MTO Class EA process successfully for a specific undertaking. These

project management principles should result in efficient progression through the process and timelier decisions. These project management principles include:

- Timeliness
- Clarity and Consistency
- Openness and Transparency
- Coordination of Approvals
- Best Available Information
- Appropriate Level of Detail

2.9.1 Timeliness

The proponent should commence its environmental assessment as early in the planning process as possible. This will allow sufficient time to assess the project implications, to make modifications as required, and allow for possible coordination with other processes.

Timeliness is also important from the perspective of consultation. The proponent should involve interested individuals or organizations early in the environmental assessment planning process in order to identify and permit appropriate consideration of issues or concerns.

Expectations for a timely process also apply to interested persons. Interested individuals or organizations participating in the environmental assessment process should make their submissions about proposed undertakings in a timely manner and by the prescribed deadlines so that there is sufficient time for the proponent to evaluate the submission and consider it in its decision-making process.

2.9.2 Clarity and Consistency

The MTO Class EA process should be applied consistently to similar undertakings, and the ministry's expectations of all participants in the process should be articulated clearly. Proponents and individuals and organizations should be able to expect generally how the MTO Class EA process will be carried out in similar circumstances in a manner that is rational and transparent.

2.9.3 Openness and Transparency

The MTO Class EA process should be open and transparent. This will enable all interested individuals and organizations to follow the process through its various stages of planning and decision-making until a preferred undertaking is selected. Anyone

should be able to trace the results of the MTO Class EA process using the evaluation approaches set out therein.

Means of achieving transparency can include, but are not limited to:

- using appropriate, well-established and easily understood evaluation methods
- making the process clear and rational
- sharing information with individuals and organizations to support conclusions and recommendations at each phase in the process
- documenting the process in easy to understand language with explanations of the rationale for making certain choices

2.9.4 Coordination of Approvals

As early as possible in the planning process, proponents should determine whether approvals under other provincial legislation (for example, *Environmental Protection Act*, *Public Lands Act*, *Lakes and Rivers Improvement Act*, *Conservation Authorities Act*) or federal legislation (for example, *Impact Assessment Act*, *Fisheries Act*, *Canadian Navigable Waters Act*) are required.

Where an environmental assessment is required by another jurisdiction, to the extent possible, these multiple environmental assessment approvals should be coordinated where appropriate. The proponent recognizes the benefits of coordination, but also understands that there are times when differences in approval requirements may make it impossible to coordinate environmental assessment fully.

2.9.5 Best Available Information

The proponent should provide information about the potential environmental impacts (both positive and negative) of a proposed undertaking. Proponents should prepare technical studies using the best available data, carefully select their assessment and evaluation methods to analyze their proposal, and use sound scientific, engineering and planning practices in their work. Consultation with interested individuals and organizations may assist the proponent in selecting appropriate analytical tools or information to be included in the planning and design process.

2.9.6 Appropriate Level of Detail

The level of detail of required information for each Class EA project will vary by undertaking or stage in the planning and design process. The appropriate level of detail depends on a number of factors such as the approvals required; the nature and complexity of the proposed undertaking, the potential for environmental impacts, and the level of interest from individuals and organizations. The level of detail presented

should be sufficient to fulfil the requirements of the MTO Class EA and to assure interested individuals and organizations that the proposed undertaking is technically feasible, and the environment is protected.

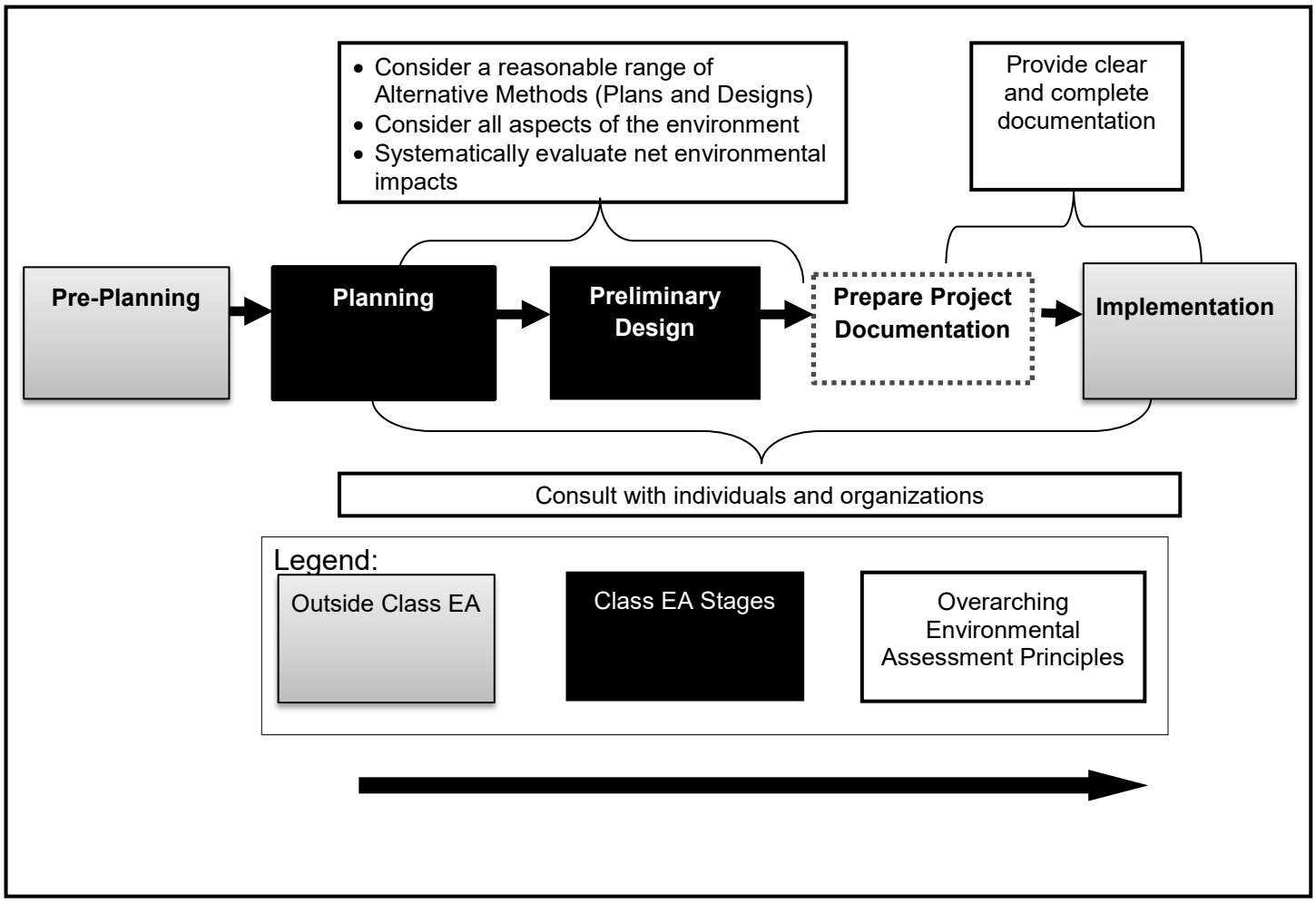


Figure 2.1: Principles Applied to the General MTO Class EA Process

3 Processes and Requirements of MTO's Class EA

This chapter provides an overview of the processes and requirements for some of the MTO Class EA specific principles outlined in Chapter 2. This chapter provides guidance on how proponents may carry out certain activities during the MTO Class EA process and the requirements needed to fulfill the conditions of the MTO Class EA.

3.1 Consultation Processes and Requirements

The consultation process includes the following steps:

- identify potentially interested or impacted Indigenous communities
- notify individuals and organizations of the proponent's intention to carry out a project
- consult with individuals and organizations most directly affected or interested
- elicit information from individuals and organizations to assist in understanding the nature of the project study area.
- constructively address the input received during the consultation process
- identify the issues and concerns of individuals and organizations (including Indigenous communities and organizations) that may have an interest in the project or that may be adversely impacted
- identify agency mandates, involvement and concerns
- collect information about the existing environment (natural, social, economic, cultural and built)
- document in the Transportation Environmental Study Report (TESR) how the input received in earlier stages has affected the project
- select appropriate methods of notification based on the nature of the study area, the interested parties to be contacted, the stage of the project and the issues to be addressed
- make reasonable efforts to resolve concerns
- use the issues resolution process for major issues at key decision points

NOTE: The amount, extent and timing of the consultation on each project will vary according to the complexity of the project, the nature of the specific environmental issues and the concerns expressed.

3.1.1 Interested Individuals and Organizations

The Class EA process typically includes consultation with various individuals and organizations, including:

- applicable provincial and federal government agencies
- applicable municipal and local government bodies
- Indigenous communities and organizations

- other public and private service providers that have infrastructure in the area affected
- Francophone communities in designated areas
- property owners
- environmental groups or clubs
- naturalist organizations
- agricultural organizations
- sports or recreational groups
- local community organizations
- municipal heritage committees and/or local heritage organizations
- ratepayer associations
- cottage associations
- business and commercial associations

The proponent is responsible for determining the appropriate individuals and organizations to consult for each project.

Note: This list is from MECP's Code of Practice, "Preparing and Reviewing Environmental Assessments in Ontario," 2014.

3.1.2 Timing of Consultation

The proponent will involve interested individuals and organizations as early as practicable in the project.

When determining the timing of consultation, proponents should consider that the project must not be so advanced that irreversible decisions and commitments have been made, preventing concerns from being considered.

Interested parties are encouraged to participate in the consultation opportunities the proponent makes available. Issues and concerns brought forward early in the Planning or Preliminary Design stages are more likely to be successfully resolved.

3.1.3 Consultation Methods

Consultation methods are determined by the proponent and based on several considerations including:

- project complexity
- interested individuals and organizations potentially impacted by the project
- nature and extent of potential environmental impacts

Consultation methods may include the following: newspaper advertisements, brochures, posters, letters or electronic means.

3.1.4 Extent of Consultation

After applying the Consultation Principles (Section 2.3), the proponent will determine the extent of consultation needed for each project.

The extent of consultation required will vary from project to project, depending on:

- the complexity of a project
- the results of previous consultation
- the nature of the environmental issues/ significance of predicted impacts
- the concerns expressed / sensitivity of the project
- length of time that has elapsed since any previous consultation efforts took place.

For projects with potential environmental impacts, the proponent will identify:

- external agencies for obtaining legislative or regulatory approvals, and pertinent technical information in subsequent stages
- adjacent property owners, where the proposed work is likely to have an impact on their property
- affected property owners, where the purchase of property could be required

3.1.5 Consulting with Indigenous Communities and Organizations

Indigenous communities and organizations must be consulted during the Class EA process when they may be interested in the project and its potential environmental impacts.

3.1.5.1 Interest-Based Consultation

Indigenous communities and organizations must be consulted during the Class EA process when they may be interested in the projects and its potential environmental impacts.

The proponent must include interested Indigenous communities and organizations that may be interested in the list of individuals to consult when developing the consultation plan.

For Indigenous communities and organizations that may be interested in the project, the proponent will, at a minimum, provide:

- the required Notices of Commencement and Completion under this MTO Class EA
- notification of consultation opportunities available
- project documentation on request

The results of consultation with Indigenous communities and organizations will be documented as a separate section in the TESR.

3.1.5.2 Right-Based Consultation

A project may also have an adverse impact on Constitutionally protected Aboriginal and Treaty rights which include the right to hunt, fish, trap, or gather or Aboriginal title rights.

The Ontario Crown (i.e. a ministry) has a constitutional obligation to consult with First Nation and Métis communities when it has knowledge of an established or credibly asserted Aboriginal or Treaty right and contemplates a decision or conduct that may adversely impact the right. This is called the 'duty to consult'. The source of the duty to consult is the honour of the Crown and the constitutional protection accorded Aboriginal and treaty rights under section 35 of the *Constitution Act, 1982.*

When there is a potential for an adverse impact to Aboriginal and / or treaty rights, a deeper level of consultation than what is required through the MTO Class EA process known as the 'Duty to Consult and Accommodate' may be owed. A failure to adequately discharge the Crown's Duty to Consult obligation may lead to an EA decision being legally challenged by a right-holding Aboriginal community.

If an Indigenous community raises concerns with respect to a project's potential impact on an Aboriginal and / or treaty right, proponents should refer to the Ministry of Environment, Conservation and Parks' Code of Practice titled: "Environmental assessments: consulting Indigenous communities." https://www.ontario.ca/page/environmental-assessments-consulting-indigenous-communities.

3.1.6 Consultation Requirements – The Consultation Plan

At the beginning of the project, a consultation plan may be established, depending on the requirements outlined in Sections 6.2.1, 7.2.1, and 8.2.1. The proponent will identify:

- the extent, frequency and timing of the consultation
- the consultation methods and points of notification
- interested individuals and organizations is to consult
- the transportation and environmental issues and related factors that may require special or separate consultation efforts

The proponent should consider flexibility, additional time needed to review documents and the unique needs of interested individuals and organizations when designing the consultation plan.

3.2 Systematic Evaluation of Environmental Impacts

The following processes support protection of the environment through the Class EA process:

- identify existing environmental conditions and typical potential impacts that are relevant to the project
- meet the requirements of federal and provincial environmental legislation where appropriate, recognizing some of this work may be undertaken after the Class EA process
- meet the intent of government-approved policy and inter-ministerial protocols
- conduct studies with an inherent approach of avoiding or minimizing overall environmental impacts through consideration of alternatives
- recognize that it may not be possible to satisfy all interests in the EA process, and that no single environmental factor is always paramount
- provide mitigation effort in proportion to environmental significance and ability to reasonably mitigate
- recognize that environmental mitigation measures themselves may have environmental impacts which offset their benefit
- monitor the implementation of environmental protection and mitigation measures during implementation, after the formal Class EA process has ended

3.2.1 Expected Range of Environmental Impacts

Time and proximity have the largest influence on the severity of the environmental impacts. In the case of time, the severity of the impacts is influenced by their duration (e.g., hours, days, weeks or permanent), and by the timing of the impacts (e.g., during the spawning cycle for local fish populations). In the case of proximity, the severity of some effects is related to the distance of the project from sensitive receptors. For example, typically, the impact of factors such as noise is greater for sensitive receptors located closer to the transportation project or facility.

The potential for cumulative impacts should also be considered.

The types of impacts, along with considerations about their severity, are discussed in general below.

3.2.2 Types of Impact

Undertakings covered by this Class EA have a wide range of potential environmental impacts. These impacts are determined by the project type, size and complexity; and by the existing conditions for all aspects of the environment as it is defined in Section 1 of the EA Act. The potential environmental impacts can be generally categorized as follows:

- **Footprint Impact** - Footprint impacts are caused by physical intrusion of the transportation facility into adjacent lands, water bodies, etc. Considerations related to footprint impact include the boundaries of features, the need for buffers, and the impact of reducing the size and severing of areas.

- **Interference Impact** -Interference impacts are caused when the transportation facility obstructs or hinders the natural flow or balance of the affected area for example by hampering fish and wildlife migration, or by disturbing water flow, creating light pollution, impeding traffic and pedestrian access, etc.

- **Traffic Access Modification Impacts** - To property, neighbourhoods, commercial areas etc.), which are caused by the closure or redirection or opening up of a previous inaccessible area of traffic access to or from an area.

- **Emissions Impact** - Emissions impacts (to air, water, soil, and their utilization) are caused by the release or escape from the transportation facility of noise, dust, sediment, chemicals, odours, light, etc. These impacts can have significant effects on human, plant and animal health, as well as on land-use.

- **Timing Impacts** - Relative to season, week, day, hour, duration, which relate to the timing of the footprint, interference, traffic access modification, and emissions impacts; and combinations of the above.

- **Cumulative Impacts** - Cumulative impacts are caused by the interaction of factors over space and time. These impacts can have negative effects on the ecosystem.

NOTE: Appendix C includes examples of environmental impacts and typical environmental protection measures.

3.2.3 Process for Evaluating Environmental Impacts

3.2.3.1 Evaluating Net Environmental Impacts Systematically

Environmental assessment typically includes the evaluation of alternatives, and a clear discussion of the advantages and disadvantages of each alternative. During the MTO Class EA process, there are distinct points at which proponents are expected to identify and evaluate Alternatives To and Alternative Methods (Plans and Designs) and the net environmental impacts associated with each alternative.

It is important to understand that for some routine MTO Class EA projects, there may either be limited Alternative Methods (Plans and or Designs) or only one Alternative Method (Plan or Design) that can effectively address the transportation problem or opportunity. Even if there is only one reasonable Alternative Method (Plan or Design), proponents must still consider the net environmental impacts associated with that Alternative Method (Plan or Design).

Net environmental impacts are assessed and evaluated based on the following criteria, including the:

- severity of potential impacts (including their scale and duration)
- sensitivities of the various environmental components to the potential impacts
- degree of uncertainty in the estimate of the potential impacts
- anticipated success of mitigation or enhancement measures in offsetting potential impacts.

3.2.3.2 Identifying Factors

The transportation engineering factors will be project-specific and will include relevant highway design standards, including level of service standards and safety standards. The environmental factors will be derived from the definition of “environment” in the EA Act. The factors selected for each project will vary based on matters such as the characteristics of the study area, the potential significance of impacts, and the degree of concern expressed by interested Individuals and organizations.

3.2.3.3 Considering the Factors

Efforts are made to understand the functions of the various factors and interrelationships between factors. The environmental issues are considered in the context of the principles set out above and the guidelines discussed in Appendix C. Depending on project specifics some factors may be more significant than others. The evaluation process should reflect this. In order to ensure that appropriate consideration is given to the various factors and/or groups of factors, relative “weights” may be assigned to factors. Factors may be used to evaluate the environmental impacts of alternatives. Factors related to cost, constructability, operation and maintenance may be used to evaluate impacts related to transportation engineering.

3.2.3.4 Refining Factors at Different Stages

Factors considered at one stage of a study may not be appropriate at others. At each decision point, the factor list may be refined by considering such matters as the:

- characteristics of the alternatives under review
- level of detail of the analysis
- characteristics of the potentially affected environment
- types of potential effects of the alternatives
- consistency with other decision points in the process
- purpose of the decision point
- EA process goals, objectives and principles

3.2.3.5 Indicators

In order to identify the impacts on various factors, “indicators” are developed for each factor. Indicators are ways of identifying, describing, and measuring environmental impacts, costs and level of service. Even if the same factor is used throughout a study, the indicators may change to reflect the anticipated level of impact.

3.3 Documentation Requirements

3.3.1 Notices of Commencement, Completion and Exemption

Notices of Commencement and Completion are required for all Group A and B projects. A Notice of Commencement for Group C Projects is required. At a minimum the Notices of Commencement and Completion should include the following information:

- name of the project
- brief description of the problem, opportunity and project
- the geographical location of the project
- name of the proponent and reference to using the MTO Class EA
- an invitation to participate in the planning process / provide comment on the results
- name and contact information for individuals who can provide further information
- location where additional information can be obtained (e.g., website, physical location)

In addition to the above, the following should also be included in the Notice of Completion:

- duration of the review period
- notification of process for issue resolution
- date of publication of the notice

The Notice of Exemption is prepared for Group C projects that the proponent has determined are eligible for exemption from the Class EA process, when a Notice of Commencement has already been issued, and when the project has been successfully subjected to a screening process. The screening process for this is further described in Section 5.6. Only Group C projects are eligible for exemption. The Notice of Exemption should provide the same information as was included in the Notice of Commencement, as appropriate.

3.3.2 Transportation Environmental Study Report (TESR)

The level of detail in the TESR will change depending on project scope, complexity, and / or if the proponent has decided to include some or all elements of Detail Design in the

TESR. For example, Group B and C projects may have a less detailed TESR than a Group A due to the project's complexity and scope.

The TESR must include:

- study objectives and description of the undertaking
- a summary of project-specific earlier and related work
- significant transportation engineering issues
- significant environmental issues
- project-specific external consultation
- changes made as a result of external consultation
- Preferred Alternative Method (Design) (selected transportation alternative incorporating environmental protection measures)
- Impacts, mitigation and commitments to future action, including external approvals known to be required

3.3.2.1 TESR Timing Requirements

The Class EA process provides options for the point in the Class EA process at which the TESR can be issued.

The TESR is usually issued at the completion of Preliminary Design. It may be published at the completion of Detail Design, or of part of Detail Design when the proponent has decided to include Detail Design in the Class EA process.

Issuance at the completion of Preliminary Design eliminates uncertainty about the location and character of future improvements, enabling affected parties to make plans knowing about proposed transportation improvements, the extent of property requirements, etc. Alternatively, the proponent can choose to include some or all Detail Design elements to provide more detail on design decisions and mitigation measures, which would be incorporated into construction.

It is important to note that the Class EA process is focused on the Planning and Preliminary Design stages of provincial transportation projects. Implementation (Detail Design and construction activities) is typically undertaken after the Class EA process is complete.

3.3.2.2 TESR Review

A number of conditions may arise which cause a time lag between submission of the TESR and commencement of construction.

When the TESR is submitted at the end of Preliminary Design, Detail Design has not started and if a project has not commenced construction within a 10-year period

following the Notice of Completion of the TESR for Group A and B projects, and completion of the TESR for Group C projects, the proponent must carry out a review of the unconstructed portions of the projects before construction may begin.

The TESR Review will document significant changes that have taken place since the completion of the TESR. The changes may include significant new conditions in the study area, the development of new technology or mitigating measures, newly asserted or established Aboriginal and treaty rights, changes to design standards, or the identification of previous unknown information or concerns.

If there are no significant changes to the original concept of the project as described in the TESR, then the design can proceed. The results of the TESR Review should be documented in the project file. If, however, significant changes to the project, net environmental impacts, or commitments made in the TESR are identified through the review, then a TESR Addendum must be prepared.

3.3.2.3 TESR Addendum and Requirements

If it is necessary to make significant changes to the design of portions of the project or to the commitments outlined in a TESR as a result of the TESR Review, an Addendum may be required.

The proponent determines the need for an Addendum based on discussions with impacted parties and the significance of the changes.

When an Addendum is prepared, it documents the:

- change(s)
- circumstances necessitating the change
- anticipated environmental impacts associated with the change
- proposed mitigation.

All affected parties are notified that the Addendum is available. The TESR Addendum will be made available for a 30-day public review period that gives the public and interested persons a final opportunity to raise issues regarding the TESR Addendum. Chapter 10 further outlines details on these two processes and requirements.

3.3.2.4 Study Design Report

For complex projects, where there is an advantage to establishing a formal record of the completion of the Transportation Needs Assessment (see Chapter 4 for details), a Study Design Report can be produced. The SDR documents the:

- summary of the transportation needs assessment, including results of the evaluation of Alternatives To the undertaking

- consultation plan for the Class EA process

The Study Design Report is made available for public review and comment, then finalized by the proponent, providing a clear record of decisions made early in the process and a roadmap for consultation. Work does not need to stop while the public reviews the Study Design Report. A summary is included in the TESR.

The Study Design Report is optional.

4 Provincial Transportation Problems, Opportunities and Needs Assessment

4.1 Introduction

The province regularly undertakes reviews and studies of the function, operation and needs of the provincial transportation network. These studies are part of the province's ongoing management and administration of the transportation system and are referred to as transportation needs assessments.

Needs assessments vary in size and scope. The assessment of a "need" can be determined through large complex studies of an area; however, it can also pertain to smaller studies that discuss the need for rehabilitation or repair of the existing infrastructure. For less complex projects the "need" is identified by MTO's internal processes, conducted to ensure that the provincial transportation infrastructure is safe and in good condition. For these projects there may not be an evaluation of Alternatives To conducted as outlined in Section 4.3.1. Larger, more complex needs assessments will generally follow the alternatives outlined in Section 4.3.2.

The needs assessment process is completed as "research" or a "feasibility study," as defined by the EA Act, and is not subject to the formal requirements of the Act when it is being conducted.

The conclusion of the transportation needs assessment process, however, will be reviewed within the MTO Class EA process. Accordingly, this chapter includes a brief description of the transportation needs assessment process and its relationship to the MTO Class EA. This chapter also describes problems and opportunities that may exist that determine the need for a transportation-related project.

Generally, a transportation needs assessment serves to:

- identify transportation problems and opportunities
- develop and evaluate Alternatives To address the problems and opportunities
- identify a recommended alternative to address the problems and opportunities

The sections below describe each component of a transportation needs assessment. The last section of this chapter describes how the transportation needs assessment is considered and included in the MTO Class EA process.

4.2 Identify Transportation Problems and Opportunities

4.2.1 Problems

Existing and future transportation problems may include deficiencies in the following:

- effectiveness and efficiency of the transportation network and ancillary facilities
- traffic capacity
- operational and safety conditions
- infrastructure condition, and
- service and maintenance facilities

4.2.2 Opportunities

Transportation opportunities are improvements that can be made to the provincial transportation system both now and in the future. There may be opportunities in one or any combination of the following:

- identification of future transportation corridors that may be required to support growth in population and employment
- right-of-way designation / property acquisition to ensure availability of land for transportation purposes in developing areas
- optimization of existing transportation infrastructure
- facility rehabilitation and / or preventative maintenance to avoid / delay replacement
- support of other government initiatives such as regional planning / economic development and tourism / resource access
- partnerships with other proponents to co-operatively address common problems and / or multiple objectives
- income generation or cost reduction

4.2.3 Sources of Information

Transportation problems and opportunities are identified from one or more of the following:

- transportation network plans
- area transportation system reviews
- area or corridor planning studies
- inventories of the provincial transportation system
- highway assessment reports
- scope and cost reports
- traffic, collision, infrastructure service and maintenance data

- modelling / projection of future transportation demands and desires based upon planned future conditions as articulated in provincial plans, municipal official plans, etc.
- federal, provincial, and municipal agency liaison
- other transportation planning activities

In addition to identifying problems and opportunities, information will be used to identify and evaluate Alternatives To to address the problems and opportunities as well as select the preferred transportation projects.

4.3 Identify and Evaluate Alternatives

4.3.1 Projects with No Alternatives

Because the concept of needs assessment is broad, there may be smaller and less complex projects that have no reasonable Alternatives To consider. In these cases, the process of identification and evaluation of alternatives outlined below would not be followed and would stop at the identification of the problem or opportunity.

There may also be times when the transportation needs assessment relies entirely on a provincial government priority initiative. Provincial government priority initiatives include announcements in throne speeches, budget announcements or initiatives in provincial plans and policies. In these cases, it may not be appropriate to examine the usual range of alternatives in the needs assessment process as the actual project has been pre-defined by the initiative. If this is the case, the TESR will outline the rationale for not examining alternatives and the extent to which any previous planning supports the provincial government priority initiative.

4.3.2 Identification of Alternatives To the Undertaking

Alternatives To the undertaking are defined in the *Environmental Assessment Act*. They are functionally different ways of approaching and resolving the identified problems and opportunities.

For larger and more complex projects a reasonable range of alternatives is developed to address the identified problems and opportunities. A “do nothing” alternative is an inherent part of the process of developing a range of alternatives. Alternatives can include, but are not limited to the following:

- **Do Nothing** – “Do Nothing” is considered the status quo, where improvements to the transportation system are limited to maintenance of current infrastructure and the implementation of approved provincial, regional and local municipal initiatives.

- **Travel Demand Management (TDM)** – TDM refers to a variety of strategies to reduce demand and congestion at peak periods, reduce reliance on single occupant vehicles and achieve a more sustainable transportation system. The objectives of TDM strategies include reducing the overall demand on the existing network, shifting demand away from peak periods, and shifting demand to alternative modes of transportation, principally transit, cycling and walking.

- **Transportation System Management (TSM)** – The objective of TSM is to improve the efficiency and safety of the transportation system and optimize the use of existing and planned infrastructure, through a wide range of strategies and technology policies and initiatives. Measures include transit priority facilities, intelligent transportation system (ITS) strategies, carpooling, high occupancy vehicle (HOV) lanes and reserved bus lanes (RBL), park and ride facilities and intersection improvements.

- **Improved or New Freight Rail Service** – Increased freight rail services for goods movement within existing rail corridors and / or along new rail corridors may be an alternative to highway improvements in some areas. Expanded rail service and the diversion of longer haul goods to rail may provide some relief to congestion on the roads network.

- **Improved or New Passenger Rail Service** – Increased or new passenger rail service (commuter and tourist travel) within existing rail corridors and / or along new rail corridors may also be able to address some transportation problems and / or opportunities. Expanded passenger rail service offers modal choice and may provide some congestion relief to the road network.

- **Improved or New Transit Services** – Expanding the capacity of the transit system through increased services within the existing transportation network and / or accommodating new transit services on new corridors will enhance modal choice and may relieve congestion and increase the performance of the transportation network.

- **Improved or New Roadways / Transitways** – The provision of improved capacity and operations on existing facilities and / or accommodating capacity needs on new corridors may enhance the performance of the transportation network. Congestion may be relieved through additional capacity on existing roadways / transitways or by introducing new corridors for provincial highways, transitways, or both.

- **Improved or New Marine / Air Transport Services** – Modifications to existing marine and / or air transport services and new marine and / or air transport infrastructure may result in changes to travel patterns for both passengers and freight. These changes may reduce congestion and enhance the performance of the transportation network.

- **Combinations** – In some cases, a single transportation infrastructure improvement may not be able to fully address the identified problems and opportunities. In these

cases, a combination of various Alternatives To the undertaking may be developed to address the identified problems and opportunities more effectively.

Each alternative is assessed against the following questions:

- Does the alternative address the identified problems and opportunities?
- Does the alternative, when used in conjunction with other alternatives, make a significant contribution towards addressing the identified problems and opportunities?

Those that satisfy at least one of the above-noted questions are considered to be reasonable alternatives and are carried forward for evaluation.

4.3.3 Evaluating Reasonable Alternatives and Selecting the Recommended Alternative

Reasonable alternatives undergo a comparative evaluation. This includes a review of the unique advantages and disadvantages of each alternative in relation to the:

- ability to address the identified transportation problems and opportunities and study objectives
- potential for environmental impacts (natural, social, economic, cultural and built environments) that can be determined at this high level of transportation planning. Impacts are determined after appropriate impact mitigation measures are considered.

During the evaluation, alternatives may be discarded or modified.

The evaluation process will result in a preferred alternative. The recommended alternative may be a combination of the alternatives considered to address the identified problems and opportunities. The evaluation and decision may be made in consultation with external agencies, interested persons and Indigenous communities.

Alternatives that are part of the recommended solution but not covered by this MTO Class EA such as other modes of transportation may require other approval processes.

4.4 Provincial Transportation Needs Assessment and the MTO Class EA Process

The transportation needs assessment process for larger and more complex projects may be completed outside the EA Act in a manner that has similar components to those required by the EA Act. These include things such as:

- an examination of Alternatives To and Alternative Methods (Plans and Designs)

- regard for the environment and environmental impacts
- consultation with individuals and organizations
- an ability for the public to inspect the needs assessment document in its entirety
- an approval by a recognized decision-making body (e.g., federal or other jurisdictions) in a transparent manner.

For such cases, the transportation needs assessment can be relied upon to define the problems, opportunities and the preferred Alternative To for a MTO Class EA project. It is documented in the TESR, thus becoming part of the undertaking and the Class EA process being conducted.

The outcome of the needs assessment process may result in separate projects such as new facilities, major improvements to existing facilities, or minor improvements to existing facilities.

5 Classification of Projects

5.1 Introduction

The MTO Class EA classifies projects into three groups. These groupings reflect the complexity and potential for net environmental impacts of the projects that fall within each group.

The groups in MTO's Class EA are:

- Group A: new provincial transportation facilities and highway / freeway realignments
- Group B: projects that modify access or add capacity to existing provincial transportation facilities, and new service / maintenance / operations facilities
- Group C: improvements to existing transportation facilities

If the appropriate classification of a project is not apparent, the classification of a project should be based on the similarity to projects within a specific group, and the anticipated net environmental impacts, the need for and level of consultation.

For the projects under this MTO Class EA, the following sections of this chapter describe:

- the similarities and differences between the three groups of projects
- list of projects included within Groups A, B and C
- Group C projects screening for exemption
- project "bundling".

5.2 Similarities and Differences Between Groups of Projects

Because projects covered by this MTO Class EA are all part of the same provincial transportation network, the groups share the following similarities:

- the types of problems and opportunities represented by the projects are recurring in nature
- a common set of Alternatives To the undertaking and Alternative Methods (Plans / Designs) for the project apply.
- projects follow the same general study process with similar stages and phases.
- the same transportation planning and design principles are applied on an ongoing basis.
- the types of environmental impacts, mitigation measures and approaches to environmental protection are recurring in nature.
- the documentation for each of the groups is a Transportation Environmental Screening Report (TESR), although the scope and scale of the document may change with the complexity of the project.

The differences among groups of projects covered by this MTO Class EA include:

- Group A projects involve new routes for transportation facilities, while Group B and C projects involve existing facilities.
- Group A projects are the most complex, while Group C are the least complex, in terms of:
    - the scale and engineering requirements
    - potential environmental impacts
    - public concerns
    - alternatives
- Consultation is an important component of all of the groups, however the requirements vary by group (see Table 5.1).

Table 5.1: Comparison between the MTO Class EA Process for Group A, B, and C Projects

MTO Class EA Stage	MTO Class EA Process for:		
	Group A Projects	**Group B Projects**	**Group C Projects**
Planning Stage	A separate stage in the process, in which Alternative Methods (Plans) are considered.	Planning and Preliminary Design are usually one stage. Alternative Methods (Plans) are usually only considered for those projects or portion of projects where more than one reasonable alternative exists. Alternative Methods (Designs) are considered in the combined Planning and Preliminary Design Stage. There may be a limited number of Alternative Methods (Designs) for some projects.	Planning and Design (Preliminary and Detail Design) can be grouped as one stage.
Preliminary Design Stage	A separate stage in the process, in which Alternative Methods (Designs) are considered.		
Consultation	A minimum of two consultation points between the Notice of Commencement and Notice of Completion, at a minimum prior to selecting the Preferred: 1) Alternative Method (Plan) 2) Alternative Method (Design)	A minimum of one consultation point between the Notice of Commencement and Notice of Completion, and prior to selecting the Preferred Alternative Method (Design)	There are no minimum consultation points between the Notice of Commencement and completion of the TESR. An option to screen for exemption is available for any Group C project. NOTE: Even in cases where no public consultation is required, consultation with Indigenous communities may still be required if the project has the potential to adversely impact Aboriginal and Treaty rights.

Figure 5.1 provides a comparison of the different groups and the Class EA process:

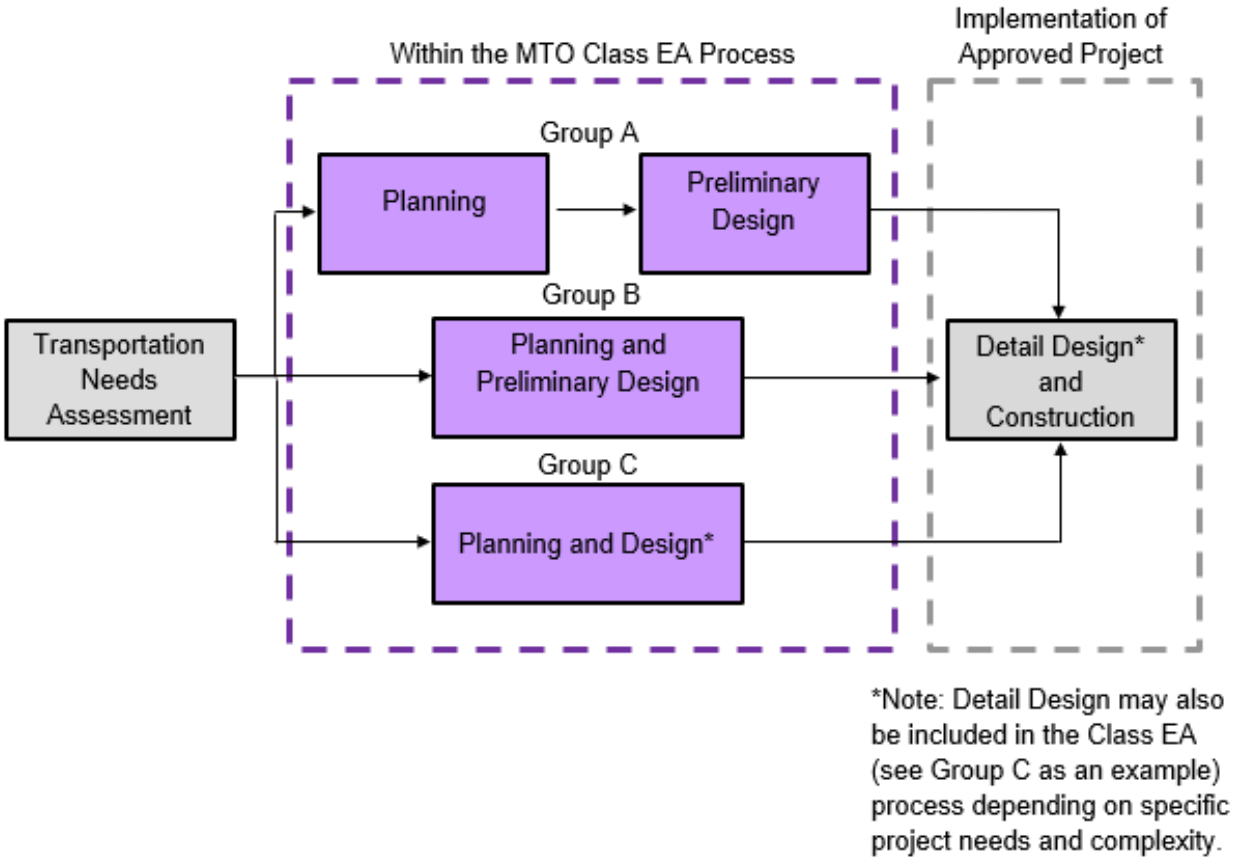


Figure 5.1: Class EA Process Comparison Between Groups A, B, and C

5.3 Group A Projects

New Provincial Transportation Facilities and Highway / Freeway Realignments

Group A projects include the following:

- New provincial highways, including extensions to existing highways
- New provincial transitways, including extensions, associated with an existing provincial highway
- New ferryboat docks and terminals
- Major realignments of highways / freeways and bypasses that do not substantially follow the existing ROW
- Other analogous projects

NOTE: New provincial **freeways** and associated transitways, including extensions to existing facilities, will be undertaken through the Individual Environmental Assessment process. For more information, refer to Section 5.9.1.

A new provincial transitway (planning and design) that is not combined with a highway or freeway project will follow the Transit Project Assessment Process (i.e., Ontario Regulation 231/08).

5.4 Group B Projects

Projects that Modify Access or Add Capacity to Existing Provincial Transportation Facilities, and New Service / Maintenance / Operations Facilities

Group B projects include the following:

- Highway and freeway expansions, including:
    - Widening, including associated structures, for the purposes of adding lane capacity;
    - Bridge and culvert replacement with major design changes, including changes that accommodate future increases to traffic capacity;
    - Highway or freeway widening that includes both through traffic lanes and a transitway or transit lanes;
    - New interchange, intersection or roundabout;
    - Modifications to existing interchanges, intersections or roundabouts that introduce or eliminate moves to or from any direction;
    - Modification of an existing highway for the purpose of conversion to a freeway; and
    - New service roads.
- Adding capacity (i.e., new or expanded infrastructure) to existing ferryboat docks and terminals
- New service, maintenance and operations facilities, including:
    - Commuter parking lots;
    - Freeway / highway service centres;
    - Picnic sites and rest areas;
    - Patrol yards, equipment repair and storage depots and material storage depots;
    - Traffic management centres and transit control centres;
    - Commercial Vehicle Inspection Facilities;
    - Toll plazas; and
    - Provincial transitway stations.
- Other analogous projects

5.5 Group C Projects

Improvements to Existing Provincial Transportation Facilities

Group C projects include the following:

- Highway and freeway improvements, including:
    - Addition of passing lanes, truck climbing lanes or turning lanes to improve traffic flow;
    - Interchange, intersection or roundabout relocations, including conversion of an intersection to a roundabout, that do not introduce or eliminate moves to or from any direction;
    - New median barriers that require the addition of a through traffic lane; and
    - New bridges or culverts, including under / over passes, for agriculture, recreation, etc.

- Operational and service improvements to existing provincial ferryboat dock / terminals and associated access routes to/from the facility.

- Other analogous projects.

5.6 Group C Project Screening for Exemption

Any Group C project can be subjected to a screening to determine eligibility for exemption from EA Act requirements.

The screening criteria used to exempt a project are found below in Section 5.6.3 and includes an assessment of potential impacts to a wide range of environmental components. The Group C Screening Template can be found in Appendix A.

Screening can occur prior to and after the Notice of Commencement.

5.6.1 Screening Prior to the Notice of Commencement

The proponent will conduct the screening prior to issuing a Notice of Commencement. If results indicate minimal or no significant environmental impacts associated with the project, the project will be exempted from further Class EA requirements and a Notice of Commencement will not be prepared.

Results of the screening will be documented and included in the project file.

Proponents should be aware that consultation with Indigenous communities may be required if the project has the potential to adverse impact Aboriginal and Treaty rights, even if the projects is otherwise exempted from the Class EA process.

5.6.2 Screening After the Notice of Commencement

The proponent may determine that a Group C Screening is appropriate following the issuance of the Notice of Commencement. In such cases, the proponent will conduct the screening and if it is determined the project is eligible for exemption, the results of the screening will be made publicly available by providing a Notice of Exemption that will be available for a 30-day public review. Any public comments will help the proponent determine if the project should be kept as a Group C or be exempted.

5.6.3 Group C Screening Requirements

The screening will be completed by the proponent using the project characteristics, available secondary sources of information, and information available from any pre-existing research or feasibility studies (e.g., Transportation Needs Assessments) done outside of the EA process. No additional investigation or studies are required; however, the proponent may choose to supplement secondary source information through consultation with Indigenous communities, regulatory agencies, municipalities and other stakeholders as appropriate.

The project is evaluated using the criteria listed in Table 5.2. The criteria are features that would not otherwise be covered under existing permits, authorizations and approvals.

Projects that do not include any of the environmental functions or features described by the criteria, of if they exist in limited scope or scale within the study area, are eligible for exemption from the MTO Class EA.

To help determine the scope and scale of the feature(s), Table 5.2 provides "Considerations" for the proponent to go through. This includes the magnitude or relative severity of the effect, the geographic extent of the issue, the duration, frequency and timing of the effect, and the amount of relative uncertainty surrounding the possible effect or nature of potential mitigation. One or more of these criteria may be present on a project, however, the decision to exempt, once eligibility is confirmed, is made by the proponent and may include consideration of additional project-specific factors.

The proponent will complete the Group C Screening Template found in Appendix A, as documentation for determining eligibility and to support the rationale in the results of the Group C screening.

The exemption criteria do not include those functions and features that are specifically protected by other federal and provincial legislation and regulation (e.g., fish, ground and surface water, species at risk / endangered species, etc.), as impacts to these functions and features require specific measures (e.g., mitigation, compensation) to obtain required

approvals / permits / authorizations that would be finalized following the completion of the formal Class EA.

Regardless of whether a project is subject to the Class EA, the proponent must comply with other provincial and federal legislation that protects the environment, including seeking permits, authorizations and approvals. These requirements remain unchanged regardless of whether a project is subject to the MTO Class EA or not. Impacted individuals and organizations would still need to be consulted regarding the project.

Table 5.2: Group C Screening

Criteria				
Environmental Function / Feature		**Measure / Description of Feature**	**Considerations**	**Potential Secondary Sources**
Natural	Wetlands	Significant wetlands within 120 metres of the ROW (in Ecoregions 5E, 6E, and 7E and in the Canadian Shield north of Ecoregions 5E, 6E, and 7E) Significant coastal wetlands within 120 metres of the ROW Other coastal wetlands in Ecoregions 5E, 6E, and 7E Wetland protection is identified in the Provincial Policy Statement.	• The presence of wetlands in proximity to the ROW / property limits may alter the project and require mitigation • Wetlands are not protected by other requirements	Ministry of Natural Resources and Forestry (MNRF) – Land Information Ontario (LIO) database
	Woodlands	Significant woodlands in Ecoregions 6E and 7E (excluding islands in Lake Huron and the St. Marys River) within 120 metres of the ROW Woodland protection is identified in the Provincial Policy Statement.	• The presence of woodlands in proximity to the ROW / property limits may alter the project and require mitigation • Woodlands are not protected by other requirements	Ministry of Natural Resources and Forestry (MNRF) – Land Information Ontario (LIO) database
	Valleylands	Significant valleylands in Ecoregions 6E and 7E (excluding islands in Lake Huron and the St. Marys River) within 120 metres of the ROW Valleyland protection is identified in the Provincial Policy Statement.	• The presence of valleylands in proximity to the ROW / property limits may alter the project and require mitigation • Valleylands are not protected by other requirements	Ministry of Natural Resources and Forestry (MNRF) – Land Information Ontario (LIO) database
	Areas of Natural and Scientific Interest (ANSI)	Life and earth science ANSIs within 120 metres of the ROW Protection of ANSIs is recognized in the PPS	• The presence of ANSIs in proximity to the ROW / property limits may alter the project and require mitigation • ANSIs are not protected by other requirements	MNRF LIO database
	Niagara Escarpment	Lands designated as Escarpment Natural Area or Escarpment Protection Area in the Niagara Escarpment Plan within 120 metres of the ROW This land is designated in a Provincial Plan for a higher level of environmental protection, infrastructure is permitted	• The presence of escarpment protection / natural areas in proximity to the ROW / property limits may alter the project and require mitigation • Consultation with the Niagara Escarpment Commission may be required	Niagara Escarpment Plan Schedules
	Oak Ridges Moraine	Lands designated as Natural Core Area or Natural Linkage Area within the Oak Ridges Moraine Conservation Plan within 120 metres of the ROW This land is designated in a Provincial Plan for a higher level of environmental protection, infrastructure is permitted	• The presence of natural core or linkage areas in proximity to the ROW / property limits may alter the project and require mitigation • Consultation with MMAH / municipality may be required	Oak Ridges Moraine Conservation Plan Schedules

	Greenbelt	Lands designated as Natural Heritage System in the Protected Countryside of the Greenbelt Plan within 120 metres of the ROW This land is designated in a Provincial Plan for higher level of environmental protection, infrastructure is permitted	• The presence of greenbelt natural heritage system in proximity to the ROW / property limits may alter the project and require mitigation • Consultation with MMAH / municipality may be required	Greenbelt Plan Schedules
	Provincial Park or Conservation Reserve	Provincial Park or Conservation Reserve within 120 metres of the ROW This land is designated for park or conservation purposes	• Issues of access may be of concern • Consultation with MECP / Conservation Authority may be required	Ontario Parks Database, Conservation Authority mapping (where available)
Agriculture	Prime agricultural areas including specialty crop lands and/or livestock facilities within 120 metres of ROW	This land is designated in a Provincial Plan for a higher level of agricultural protection, infrastructure is permitted	• The presence of specialty crop lands and / or livestock facilities in proximity to the ROW / property limits may alter the project and require mitigation • Consultation with OMAFRA / farmer may be required	Municipal Property Assessment Corporation (MPAC) - Property Codes Greenbelt Plan Schedules Ontario Ministry of Agriculture Food and Rural Affairs (OMAFRA) Soil Maps
Socio-economic	Built heritage resources and cultural heritage landscapes and archaeological resources	Buildings, structures, and landscapes of cultural heritage value or interest identified federally, provincially or municipally within the study area which is comprised of three zones being: • ROW • 25 metres immediately adjacent the ROW • 24-250 metres further off the ROW Indigenous cultural heritage resources (e.g., burials, archaeological artefacts) are present	• The project type and proximity of actions to the feature would need to be considered to determine if a Class EA is required • Where vibration, blasting or other activities that may harm the structural integrity of the feature may be considered a part of the project, a Class EA should be undertaken • Realignment of a project to avoid proximity with the feature may be considered. Consultation may be required with the property owner, or designation authority	Parks Canada, Ontario Heritage Trust, Municipal Heritage Registers, Ministry of Heritage, Sport, Tourism and Culture Industries, Ontario Heritage Act
	Other transportation or utility networks and infrastructure	Project includes modifications to a component of a different transportation networks / mode (e.g. municipal, rail, active trails, etc.) or utility corridor.	• Consultation with municipality(ies) / utilities / rail authority / etc. would be required to consider access issues • Are there large built features? (recreational trails)	MTO Project Description Official Plan Schedules
	Significant predicted impacts to communities, people and businesses	Definition of environment as per the *Environmental Assessment Act*, includes the social, economic, and cultural conditions that influence the life of humans or a community	• Consideration should be given to how the project and its alternatives may interrelate with components of the environment • Conduct appropriate scoping to ensure that all elements of the undertaking's life cycle (commissioning, operations, decommissioning) are assessed, in order to appropriately protect the environment for current and future generations • Study area for each alternative, or for each component of the environment, may vary depending on the alternatives and the geographic extent of the potential environmental impacts	Municipal official plans, zoning by-laws

Note that there may be other features identified in the table that can be included as part of criteria for screening; this will be project-specific and determined by the proponent.

5.7 Project “Bundling”

At times multiple projects of a similar nature (e.g., bridges and/or culverts) or projects in close proximity to each other are grouped (“bundled”) together and awarded to a single service provider for the Class EA process and sometimes also implementation over several years. If lower order projects are needed to implement a higher-order project, the projects should be bundled together and classified as the higher-order group. Similarly, if only one TESR is to be produced for all of the “bundled” projects, all of the work must be grouped into the most stringent Class EA group. If separate TESRs are being produced for each project, then each project is classified into the appropriate Class EA group.

5.8 Division of a Project

As a project proceeds through the MTO Class EA process, the proponent may, based on the project complexity and level of interest, combine stages of the project. When stages are combined, the most rigorous consultation and documentation requirements of the combined stages apply. If the proponent decides to include some or all of Detail Design in the Class EA process, the results of this work would be included in the TESR.

As a study proceeds, the proponent has the option of severing it into distinct projects after the:

- Planning stage - a project may be split into a number of Preliminary Design projects conducted over several years; or
- Class EA process is complete - a project may be further split into a number of Detail Design projects conducted over several years.

A project may also be separated into a number of construction contracts over several years.

The following figure illustrates how a project can be divided.

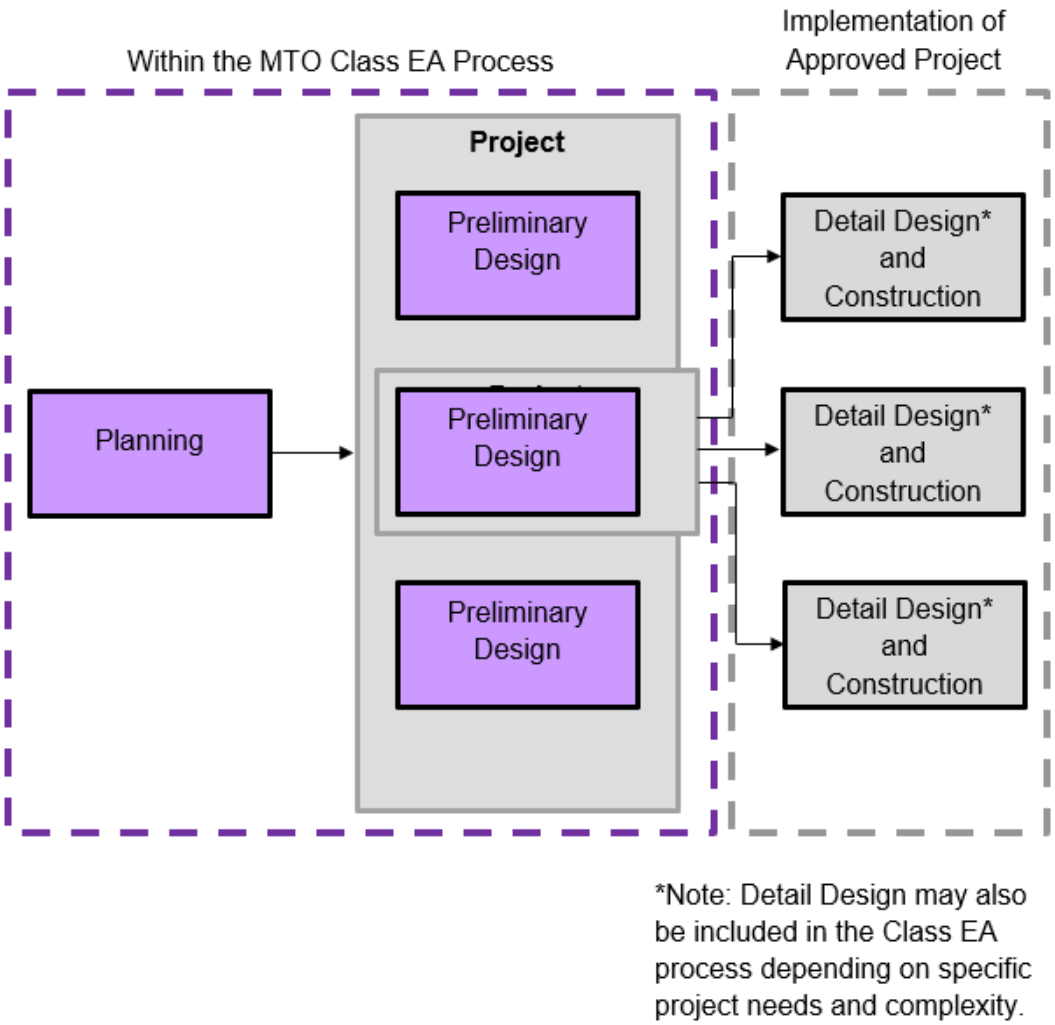


Figure 5.2: Division of a Project

5.9 Projects for Which this Class EA Does Not Apply

The MTO Class EA does not apply to Individual Environmental Assessments, transit projects, and activities found in Appendix B (operation, maintenance, administration and miscellaneous activities), and other activities necessary for routine highway rehabilitation and maintenance, described below.

5.9.1 Individual Environmental Assessments

New provincial freeways and associated transitways, including new extensions to existing facilities are subject to an Individual Environmental Assessment and are not included under this MTO Class EA due to their complexity, potential for environmental impacts and potential public interest.

Proponents are required to undertake these projects in accordance with MECP's Code of Practice: Preparing and Reviewing Environmental Assessments in Ontario.

In some cases, it may be recommended / directed that the subsequent stages of a project that started as an Individual EA may be undertaken using the MTO Class EA process.

5.9.2 Transit Projects

The streamlined Transit Project Assessment Process as described in Ontario Regulation 231/08 (O. Reg. 231/08) applies to MTO transit projects. Transit projects are defined in regulatory schedules and include new or modifications to existing transitways, reserved bus lanes, transit stations, and associated parking facilities. A new provincial transitway (planning and design) that is not combined with a highway or freeway project will follow O. Reg. 231/08, or its successor.

If the proponent decides to use MTO's Class EA process instead of the streamlined transit environmental assessment process then the proponent must notify MECP's Director, Environmental Assessment and Permissions Branch as per the Regulation. Transit projects not specifically identified in O. Reg. 231/08 are exempt from the requirements of the *Environmental Assessment Act* unless they are combined with other types of projects that must undergo MTO's Class EA. In this case, the most rigorous Class EA process will apply.

5.9.3 Other Projects that are Exempted from the Environmental Assessment Act

Other projects that are exempted from the EA Act are those that have:

- few or no Alternatives To that address the need to improve safety or maintain the operational viability of existing transportation infrastructure;
- limited Alternative Methods (Plans and Designs) determined by previous technical assessments completed by MTO;
- standard mitigation approaches to address potential environmental impacts that have been developed through extensive experience with planning, design, and construction of these types of projects;
- minimal potential environmental impacts as the work is focused on existing transportation infrastructure; and / or,
- work is required to meet safety requirements and consistently maintain effective operating standards, or work for which there is an expedited need (emergency work, risk of imminent failure of infrastructure)

Exemption from the EA Act does not exempt the proponent from the requirements of following good planning principles, consultation, fulfilling the requirements of other

legislation, directives, policy and protocols in accordance with MTO's Environmental Standards and Practices, mitigating negative environmental impacts as appropriate, and fulfilling constitutional Aboriginal consultations requirements (i.e., duty to consult). Consultation for each exempt project will be determined by MTO or the proponent to resolve and/or mitigate the identified issues.

Below is a list of projects that are exempt from the EA Act.

5.9.4 Exempt Facility Operation, Routine Maintenance, Administration, and Miscellaneous Activities

Some activities have been exempted from the Class EA process and are listed in Appendix B of this document.

5.9.5 Exempt Safety Projects

The following safety projects are exempt:

- New or replaced median crossovers
- New median barriers that do not require the addition of a new through traffic lane
- New or replacement of high-mast, conventional lighting or electrical systems (like-for-like)
- New or replaced Advanced Transportation Management System (ATMS)
- New or replacement of snow plow turnarounds and emergency vehicle access
- New or replaced traffic safety and control systems, including upgraded traffic signals, message signs, guide rails, ramp closure gates
- Extensions to turning / passing / truck-climbing lanes
- Horizontal and vertical alignment shifts
- Lane and shoulder width increases (granular and paved)
- Addition of bike or pedestrian lanes or facilities
- New or replaced fencing
- Vegetation control, including clearing for sight lines and clear zones

5.9.6 Exempt Rehabilitation / Reconstruction and Like-for-Like Replacement Projects

The following rehabilitation / reconstruction and like-for-like replacement projects are exempt:

- Reconstruction / replacement of drainage ditches, storm sewers and stormwater management facilities (also includes erosion and sediment control measures and watercourse erosion corrections);
- Freeway and highway resurfacing / rehabilitation;
- Bridge and culvert replacement including minor design changes (for projects with no changes to traffic capacity);

- Bridge and culvert rehabilitation / extension (for projects with no changes to traffic capacity);
- Reconstruction / replacement of interchanges, intersections or roundabouts (for projects with no changes to existing access);
- Replacement of existing noise barriers (like-for like);
- Conversion of general-purpose freeway or highway lanes to toll lanes or High Occupancy Vehicle (HOV) lanes or High Occupancy Toll (HOT) lanes, including the installation of any required infrastructure; and
- Landscaping improvements

5.9.7 Exempt Improvements and Upgrades to Existing Facilities

The following improvements and upgrades are exempt.

- Improvements to existing:
    - service facilities such as commuter parking lots, freeway / highway service centres (food/fuel/rest rooms/parking), picnic sites, rest areas, information centres, provincial transitway stations;
    - maintenance facilities such as patrol yards, equipment repair and storage depots, material storage depots; and
    - operations facilities such as traffic management centres, Commercial Vehicle Inspection Facilities, toll plazas, and transit control centres

- New or replaced signage, and new noise barriers

6 Class EA Process for Group A Projects

6.1 Introduction

Group A projects are new provincial transportation facility projects, and highway / freeway realignments and are defined in detail in Chapter 5. Using the MTO Class EA process for Group A projects, the proponent applies a systematic decision-making approach to identify, evaluate and select a planning and preliminary Alternative Method (Design) that achieves the greatest overall transportation benefit, while minimizing the overall negative net environmental impacts.

As a minimum, the selected Alternative Method (Design) will address the project problems and opportunities.

As described in Chapter 1, this is accomplished through the following steps.

- Prepare consultation plan and issue Notice of Commencement
- Review and confirm the problems, opportunities and Alternatives To the undertaking
- Consider Alternatives Methods (Plans and Designs) to the undertaking by:
    - identifying a reasonable range of Alternative Methods (Plans and Designs), where feasible, and considering all aspects of the environment for each
    - evaluating the Alternative Methods (Plans and Designs) and net environmental impacts in a systematic manner, and
    - selecting the Preferred Alternative Method (Plan and Design)
- Consult with individuals and organizations as part of the decision-making process
- Prepare documentation (i.e., TESR, Notice of Completion)

Because the MTO Class EA process is principle-based, the proponent may change the order of the steps or combine the steps as needed. Moreover, the decision-making process is iterative. This means the proponent may repeat steps as new information becomes available.

As shown in Figure 6.1, the Class EA process for a Group A project consists of two stages: a Planning stage and Preliminary Design Stage. As a project proceeds, the proponent has the option of dividing it up into distinct projects as outlined in Section 5.8.

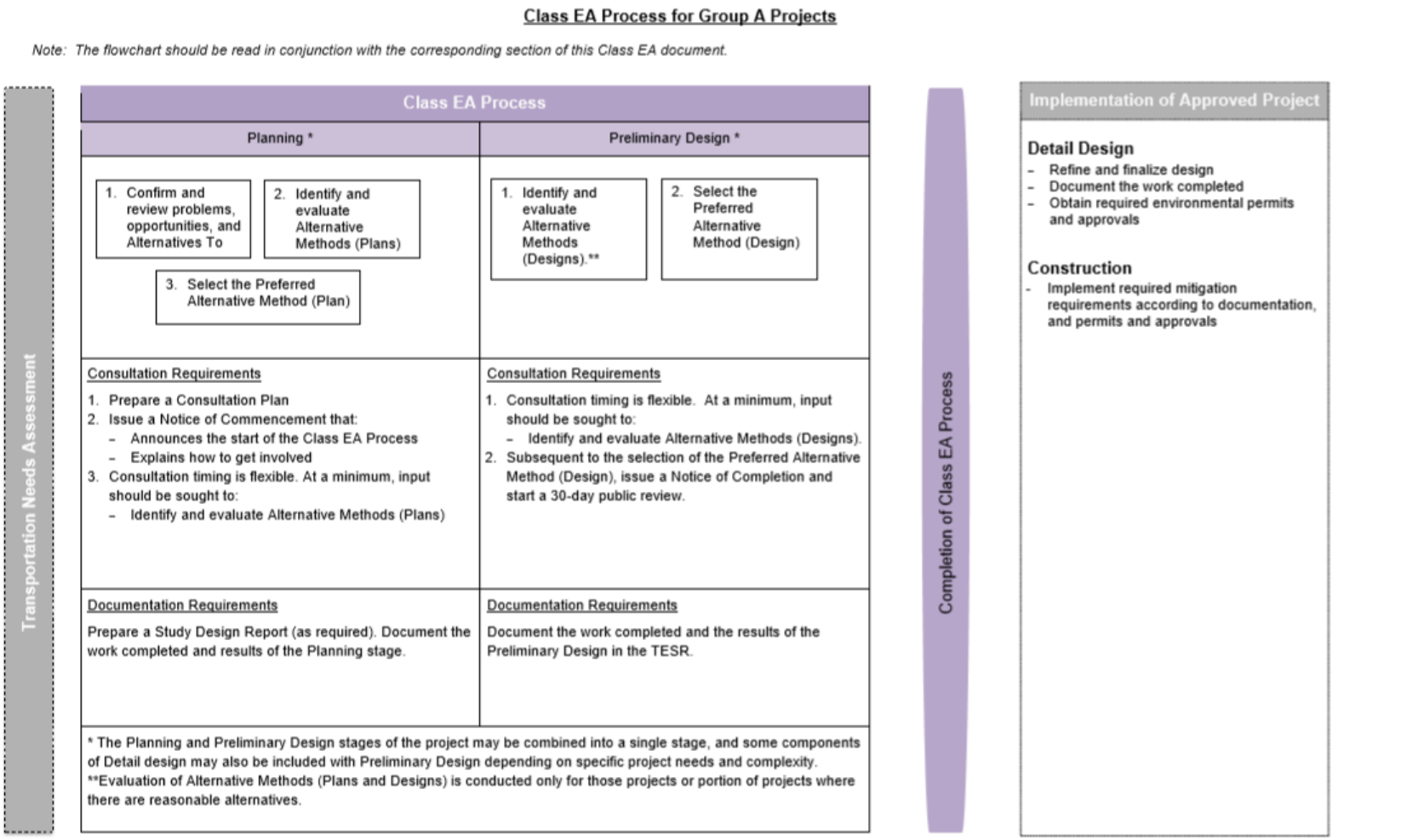


Figure 6.1: Class EA Process for Group A Projects

6.2 Planning Stage

The planning work required will vary according to the nature of the specific project. The proponent generally develops the project to a level of detail in the Planning stage that is adequate to define the project's fundamentals - including such things as facility type; basic plan and profile (see Appendix D for examples).

As shown in Figure 6.1, the proponent does this by undertaking the following:

- Prepare the consultation plan and issuing the Notice of Commencement
- Review and confirm problems, opportunities, and Alternatives To
- Consult on Alternatives To (as required)
- Identify Alternative Methods (Plans)
- Evaluate Alternative Methods (Plans)
- Consult on the identification, assessment and evaluation of alternative plans
- Select the Preferred Alternative Method (Plan)

Under certain conditions, the proponent may limit or replace the consideration of Alternative Methods (Plans) in the Planning stage, based on previous planning work or changes in government priorities.

For complex undertakings, the proponent may prepare a Study Design Report that documents the conclusions that were drawn as part of the reviews and assessments undertaken, and the proponent's plans for consultation throughout the remainder of the Class EA process. This provides a formal conclusion of the Planning stage and documents the plans for public consultation at an early point in the Class EA process, which can be useful.

6.2.1 Prepare the Consultation Plan and Issue the Notice of Commencement

A consultation plan will be prepared to provide guidance regarding the consultation approach envisioned for the project. This plan should be flexible to account for new information as the project progresses, while providing some structure at the expected points of consultation. More information regarding the consultation plan is outlined in Section 3.1.6. Determine the benefits of a study design report at this time.

As further described in Section 3.3.1, the Notice of Commencement announces the formal start of the MTO Class EA process. The proponent will issue a Notice of Commencement prior to consulting and engaging with individuals and organizations. However, the proponent may begin collecting information pertinent to the project prior to issuing the Notice.

6.2.2 Review and Confirm Problems, Opportunities, and Alternatives To

As described in Chapter 4, the transportation needs assessment consists of research and feasibility work carried out by the proponent or others before the MTO Class EA process begins. The proponent will review the work completed earlier to determine whether it is sufficient to represent the transportation needs assessment required by the Class EA process.

To conduct the review, the proponent will identify and assess the:

- transportation problems and opportunities and the statement of objectives
- reasonable Alternatives To the undertaking evaluated and the preferred alternative selected
- preliminary study area and corridors, where appropriate to the project.

Based on this review, the proponent may reject, modify, refine, and / or confirm the transportation needs assessment results. The proponent may need to augment the considerations of Alternatives To the undertaking carried out during the transportation needs assessment, in order to meet the requirements of the EA Act during the Planning stage.

If a transportation needs assessment has not been completed, assessment and evaluation of reasonable Alternatives To should be considered at the beginning of the Planning stage.

6.2.3 Identify Alternative Methods (Plans)

The proponent will identify a reasonable range of Alternative Methods (Plans) that meet the transportation project problems and opportunities by:

- identifying initial Alternative Methods (Plans), and
- assessing the initial Alternative Methods (Plans) to develop a reasonable range of planning options to consider.

Examples of Alternative Methods (Plans) are provided in Appendix D.

In some cases, the project being considered under the MTO Class EA may be the result of previous planning work carried out either by the proponent or by other government agencies. The MTO Class EA process can recognize this work and incorporate it, to avoid duplication. The proponent may use such previous planning work to limit or replace the examination of Alternative Methods in the Planning stage of the MTO Class EA, however, must document the rationale in the TESR.

For the initial identification of Alternative Methods (Plans) typically the proponent will gather information necessary to consider all components of the environment within the preliminary study area. The environment includes the natural, social, economic, cultural and built environments (Section 1.2). The proponent will develop an overview of the "existing conditions" of the preliminary study area and use this information to identify major opportunities and constraints related to transportation planning, design and environmental protection.

Based on the "existing conditions," and following the principles in Chapter 2, the proponent will develop initial Alternative Methods (Plans). Alternative Methods (Plans) may include:

- Corridor options (linear areas within which one or more route alternatives may be considered). Corridor options are typically generated for larger or more complex study areas. Corridor options may overlap or be coordinated with other improvements to existing provincial transportation facilities.
- Route options within the corridor. Route options may overlap or be coordinated with other improvements to existing provincial transportation facilities. Route options will include:
    - Geometrics:
        - Design Speed
        - Horizontal Alignment
        - Vertical Profile
        - Right of Way Requirements
        - Cross-Section (number of lanes / tracks / shoulders)
    - Access Points:
        - Access Type (intersection / interchange)
        - Transit Stations
        - Structure Locations
- Options for new ferryboat docks and terminals:
    - Need / type of facility
    - Site location (new facility only).

6.2.4 Evaluate Alternative Methods (Plans)

The proponent will evaluate each Alternative Method (Plan) to:

- identify significant beneficial and detrimental features, that include transportation planning and design and the anticipated net environmental impacts

- obtain transportation planning and environmental protection input through consultation
- make any necessary modifications, and
- ensure the feasibility of any Alternative Method (Plan) that is carried forward.

At the end of this part of the process, the proponent will identify a reasonable range of Alternative Methods (Plans). The proponent will also describe the extent to which project-specific conditions had an effect on limiting the Alternative Methods (Plans) to be evaluated.

The reasonable range of Alternative Methods (Plans) carried forward will be evaluated to compare the advantages and disadvantages of each plan with the goal of selecting the Preferred Alternative Method (Plan). (i.e., the one that maximizes the transportation benefit while minimizing the overall negative net environmental impacts). Different approaches to evaluation may be appropriate for different types of Group A projects. At the beginning of the evaluation process, the proponent will develop a systematic and clear approach to evaluating the Alternative Methods (Plans). As part of the evaluation, the proponent will determine the:

- relative importance of the various environmental factors and / or specific elements within those factors potentially affected by the project, and
- significance of the potential impacts.

The proponent may develop relative weightings for transportation benefits and environmental factors that may include qualitative and quantitative factors.

The proponent will establish a “do nothing” scenario as a baseline for evaluating the Alternative Methods (Plans).

The proponent may determine during the evaluation phase that the Alternative Methods (Plans) should be modified or discarded, that additional alternatives should be identified, or that additional engineering and / or environmental studies are necessary to support the evaluation and support the decision-making process.

The proponent will document the development of the evaluation process and the evaluation results in the Transportation Environmental Study Report.

6.2.5 Consult on the Evaluation of Alternative Methods (Plans)

The proponent will complete a minimum of one round of consultation in the Planning stage that facilitates input and feedback on the identification, assessment and evaluation of Alternative Methods (Plans). Additional rounds of consultation can be included based on project complexity, timing of the project, potential for environmental impacts and feedback from individuals and organizations participating in the project.

The timing and extent of consultation is flexible as long as the minimum consultation requirements have been met, in accordance with the principles detailed in Chapter 2.

Input and feedback received may be used to establish the relative importance of various environmental factors and the significance of potential impacts.

The proponent will document the consultation process including the responses to feedback, in the TESR.

6.2.6 Select the Preferred Alternative Method (Plan)

From the alternatives, the proponent will select the Preferred Alternative Method (Plan) by:

- comparing Alternative Methods (Plans) using typical protection measures (predicted net environmental impacts) as a baseline
- removing Alternative Methods (Plans) that have significant (negative) net environmental impacts and no significant transportation benefit (result: a short-list of Alternative Methods (Plans)
- assessing overall transportation benefit (how well each meet transportation objectives) of short-listed Alternative Methods (Plans)
- selecting the Preferred Alternative Method (Plan) that achieves the greatest overall transportation benefit while minimizing the overall negative net environmental impacts

Consultation on transportation planning and environmental protection issues may result in the proponent deciding to modify or re-examine the Preferred Alternative Method (Plan). Once the Preferred Alternative Method (Plan) has been finalized, the proponent will move on to the Preliminary Design stage.

6.2.7 Documentation During Planning

The Notice of Commencement is produced in the Planning stage. The results of the planning process are documented in the TESR, including the:

- review and confirmation of the problems, opportunities and Alternatives To
- summarizing results of the Study Design Report (as required by the project)
- identification and evaluation of the Alternative Methods (Plans) (including the assessment methods and criteria)
- results of the consultation process, and
- justification of the Preferred Alternative Method (Plan).

6.3 Preliminary Design Stage

In the Preliminary Design stage for Group A projects, the proponent refines the project from the fundamentals determined in the Planning stage to a level of detail that is specific enough to determine that the design of the project is technically, environmentally and economically feasible to construct.

As shown in Figure 6.1, the proponent undertakes the following components during the Preliminary Design stage:

- Identifying Alternative Methods (Designs)
- Evaluating Alternative Methods (Designs)
- Consulting with individuals and organizations on the identification, assessment and evaluation of the Alternative Methods (Designs)
- Selecting the Preferred Alternative Method (Design)
- Preparing the Transportation Environmental Study Report
- Issuing the Notice of Completion and start 30-day public review period

6.3.1 Identify Alternative Methods (Designs)

The proponent will identify a reasonable range of Alternative Methods (Designs) that support the Preferred Alternative Method (Plan).

When identifying Alternative Methods (Designs), the proponent may decide to re-evaluate and modify the Preferred Alternative Method (Plan) from the Planning stage considering new information that has become available.

The proponent will identify a reasonable range of Alternative Methods (Designs) in accordance with the principles outlined in Chapter 2. The number of Alternative Methods (Designs) considered for any given project varies with the nature of the project's problems and opportunities, the type and complexity of the project and the nature of the study area.

To identify alternatives, the proponent typically considers design elements such as:

- For linear facilities:
    - Geometrics:

        - Design Speed
        - Horizontal Alignment
        - Vertical Profile
        - Right of Way Requirements
        - Cross Section (i.e. number of lanes / tracks / shoulders)
        - Median width / type

    - Access Points:

        - Type of Intersection / Interchange
        - Type of Structure

- For ferryboat docks and terminals, and service, maintenance and operations facilities:

    - the need / location / type of site components
    - connection with transportation system (ramps, roads, shipping lanes, transitway)
    - docking requirements (ferry ports), platform requirements (transitway)
    - buildings
    - internal roads
    - parking
    - illumination
    - safety infrastructure
    - auxiliary facilities (e.g., storage, washrooms)

Typically, the proponent will also gather more detailed information on specific environmental factors within the study area.

The proponent will identify and describe a reasonable set of Alternative Methods (Designs) in sufficient detail (in terms of design and net environmental impacts) to permit evaluation. The proponent will document the Alternative Methods (Designs) and supporting information in the TESR.

Some Alternative Methods (Designs) may be dropped from further consideration in the evaluation process if predicted impacts are not acceptable, or the alternative is not technically feasible or constructible.

6.3.2 Evaluate Alternative Methods (Designs)

The proponent will assess the Alternative Methods (Designs) by:

- identifying and gathering data about specific features of the environment that may be affected in enough detail for determination of potential impacts
- identifying the potential environmental effect of each Alternative Method (Design) and typical mitigation and protection measures

- determining the substantial expected net environmental impacts (i.e., after mitigation) of each Alternative Method (Design) to allow for evaluation

The proponent may modify Alternative Methods (Designs) as needed as the process progresses.

The remaining reasonable set of Alternative Methods (Designs) will be carried forward and evaluated. The proponent undertakes comparative evaluation of the Alternative Methods (Designs) to provide a basis for selecting a Preferred Alternative Method (Design). The proponent will develop an appropriate approach to evaluating Alternative Methods (Designs).

The following is a typical approach to evaluating Alternative Methods (Designs) in consultation with the public:

- Establish criteria for evaluation. Criteria are values for environmental protection or sustainability that, when applied to the indicators, will reveal differences in predicted impacts
- Select indicators. Indicators are measurable variables or characteristics of transportation benefits and environmental factors and / or parts of those factors that can be used to determine the degree of benefit or effect
- Develop weightings. A weighting is qualitative and/or quantitative value assigned to a transportation benefit or environmental factor (or parts thereof) to make its effect on the evaluation reflect its importance

Using the criteria, the proponent conducts a comparative analysis of advantages and disadvantages for each Alternative Method (Design), based on the indicators for the transportation benefits and net environmental impacts and their weightings.

The proponent will document the evaluation process and results in the TESR.

During the evaluation, the proponent may determine that:

- Alternative Methods (Designs) should be modified or discarded
- additional Alternative Methods (Designs) should be identified, or
- additional Preliminary Design and / or environmental studies are needed to support the evaluation.

After undertaking any of the above, the proponent will re-evaluate the Alternative Methods (Designs).

6.3.3 Consult on the Evaluation of Alternative Methods (Designs)

During the identification and evaluation of Alternative Methods (Designs), the proponent will consult and engage with individuals and organizations. The proponent will complete

a minimum of one round of consultation in the Preliminary Design stage that facilitates input and feedback on the identification, assessment and evaluation of the Alternative Methods (Designs). Additional rounds of consultation can be included based on project complexity, timing of the project, potential for environmental impacts and feedback from individuals and organizations participating in the project. The timing and extent of consultation is flexible as long as the minimum consultation requirements have been met.

This consultation is intended to gather input on the identification, evaluation and / or selection process, to ensure the concerns have been adequately considered and addressed. Input and feedback received may be used to establish the relative importance of various environmental factors and the significance of potential impacts.

The proponent will document the process and results of all consultation, including responses to feedback, in the TESR.

6.3.4 Select the Preferred Alternative Method (Design)

The proponent will undertake a selection process that includes the following steps:

- Compare Alternative Methods (Designs) using typical mitigation and protection measures (predicted net environmental impacts) as a baseline
- Remove Alternative Methods (Designs) that have significant negative predicted net environmental impacts and no significant transportation benefit to create a short-list of reasonable Alternative Methods (Designs)
- Assess the overall transportation benefit (how well each meet transportation objectives) of the short-listed Alternative Methods (Designs)
- Select the (Preferred Alternative Method (Design) that achieves the greatest overall transportation benefit while minimizing the overall negative net environmental impacts
- Document the assessment, evaluation, and selection process for the Preferred Alternative Method (Design) in the TESR.

6.3.5 Documentation During Preliminary Design

Documents required for completion of the Preliminary Design stage are described below.

6.3.5.1 Prepare the TESR

The proponent will prepare the TESR to summarize the evaluation completed during the Planning and Preliminary Design stages. The TESR will describe:

- how the requirements of the MTO Class EA for the project were met during the Planning and Preliminary Design process

- how the project achieves the greatest overall transportation benefit while minimizing overall negative net environmental impacts through the assessment of reasonable alternatives
- other key decisions, and
- commitments for consultation and environmental protection to carry forward.

Additional requirements of the TESR are provided in Section 3.3.2.

6.3.5.2 Issue the Notice of Completion and Start Public Review

The Notice of Completion informs individuals and organizations that the MTO Class EA process has been completed and that the TESR is available for review.

A 30-day public review period is provided following the completion of the TESR and distribution of the Notice of Completion. This period allows individuals or groups an opportunity to provide comments on the TESR to the proponent

The public review period is the last opportunity for interested persons to comment and raise objections to the project. The proponent will seek to address comments and resolve issues identified through consultation.

The review period provides an opportunity for the commenter and proponent to resolve perceived issues, make changes to the undertaking, etc., however resolution is not mandatory. If an issue remains unaddressed an issues resolution process will be followed, described in Section 9.2.

6.4 Combining Preliminary Design and Including Detail Design into the Class EA Process

Detail Design is usually part of the implementation phase of a project undertaken following completion of the Class EA process. In Detail Design, the proponent refines and finalizes the design of the project and obtains other environmental permits and approvals applicable to the project(s) and required prior to construction.

In the MTO Class EA process, the proponent may choose to include Detail Design, or part of Detail Design in the Class EA process. If both Preliminary Design and Detail Design stages are included in the Class EA process, the proponent undertakes all of the components of both stages and documents decision-making and consultation in the TESR. For more information on Detail Design outside the Class EA process, please refer to Appendix E.

In some cases, new information becomes available during the Detail Design stage that prompts the proponent to re-evaluate the approved project. In such cases, the proponent will follow the process for amending the TESR as detailed in Chapter 10.

7 Class EA Process for Group B Projects

7.1 Introduction

Group B projects are defined as projects that modify access or add capacity to existing provincial transportation facilities and new service, maintenance, and operations facilities, and are described in detail in Chapter 5. Using the MTO Class EA process for Group B projects, the proponent applies systematic decision-making to identify, evaluate and select an Alternative Method (Design) that achieves the greatest overall transportation benefit while minimizing the overall negative net environmental impacts.

As a minimum, the selected Alternative Method (Design) will address the project problems and opportunities.

As described in Chapter 1 this is accomplished through the following steps:

- Prepare consultation plan and issue Notice of Commencement
- Review and confirm the problems, opportunities and Alternatives To the undertaking
- Consider Alternative Methods (Plans and Designs) of undertaking the project by:
    - identifying a reasonable range of Alternative Methods (Plans and Designs), where feasible, and considering all aspects of the environment for each alternative
    - evaluating the Alternative Methods (Plans and Designs) and net environmental impacts of alternatives in a systematic manner
    - selecting the Preferred Alternative Method (Plan and Design).
- Consult with individuals and organizations as part of the decision-making process
- Prepare project documentation (i.e., TESR, Notice of Completion)

Because the MTO Class EA process is principle-based, the proponent may change the order of the steps or combine the steps as needed. Moreover, the decision-making process is iterative. This means the proponent may repeat steps as new information becomes available.

As shown in Figure 7.1, the Class EA process for a Group B project consists of the Planning and Preliminary Design stage. As a project proceeds, the proponent has the option of dividing it up into distinct projects as outlined in Section 5.8.

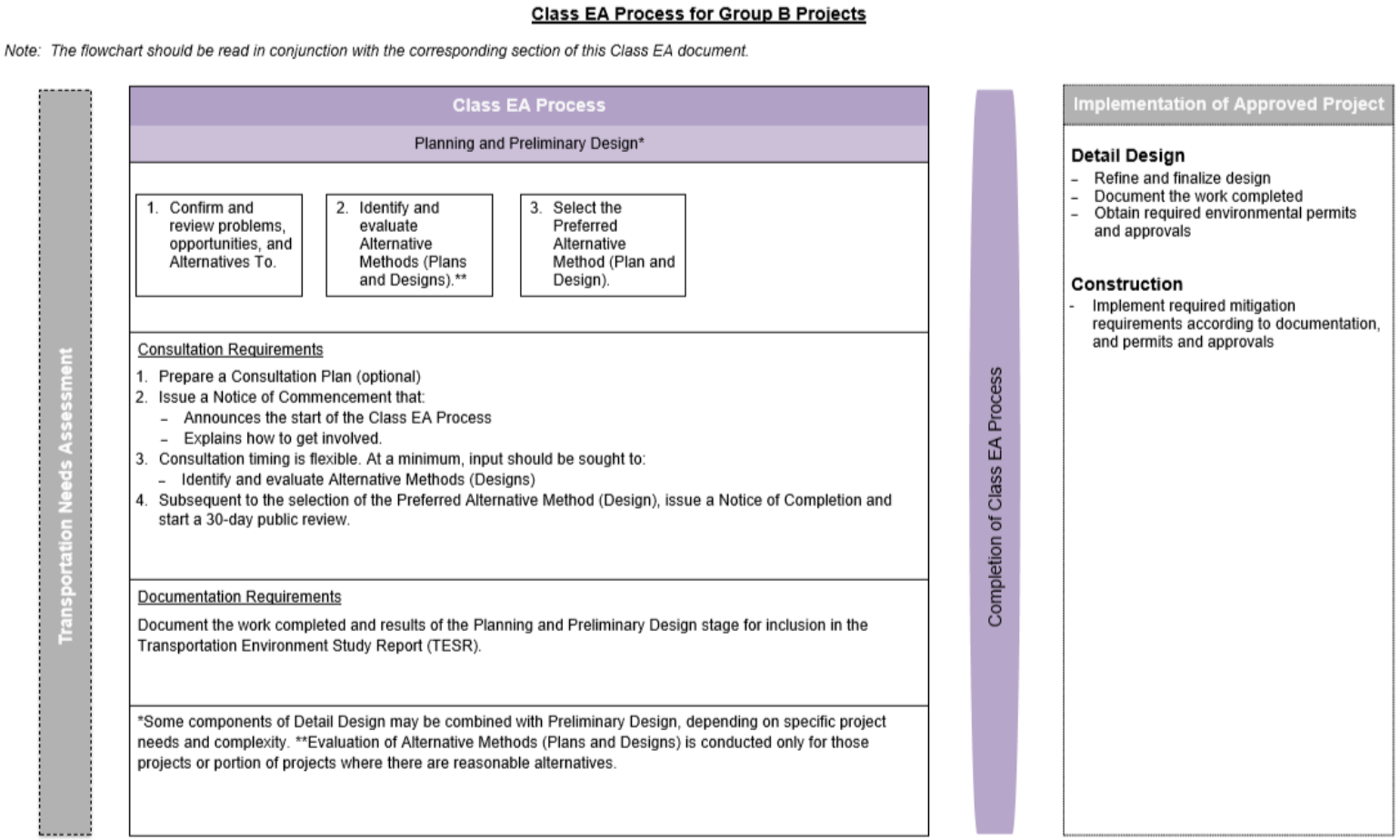


Figure 7.1: Class EA Process for Group B Projects

7.2 Planning and Preliminary Design Stage

Depending on the scale and complexity of the projects, the Planning aspect may be limited. Work may therefore be focused on Preliminary Design components.

At the end of the Planning and Preliminary Design Stage, the proponent will have completed the design to a level of detail where the proponent can determine the:

- technical and economic feasibility of implementing the project, and
- need to secure environmental permits, approvals and authorizations required to implement the project.

As shown in Figure 7.1, the proponent undertakes the MTO Class EA process through the following activities, which are discussed in detail in the following sections:

- Prepare a Consultation Plan (as required) and Issue the Notice of Commencement
- Planning and Preliminary Design:
    - Review and confirm the Alternatives To.
    - Identify and evaluate Alternative Methods (Plans)
    - Select the Preferred Alternative Method (Plan)
    - Identify Alternative Methods (Design)
    - Evaluate Alternative Methods (Designs)
    - Consult regarding Alternative Methods (Designs)
    - Select the Preferred Alternative Method (Design)
    - Prepare the TESR.
- Documentation during Planning and Preliminary Design

7.2.1 Prepare a Consultation Plan and Issue the Notice of Commencement

A consultation plan should be prepared to provide guidance regarding the consultation approach envisioned for the project. This plan should be flexible to account for new information as the project progresses, while providing some structure as the expected point(s) of consultation. More information regarding the consultation plan is outlined in Section 3.1.6.

The Notice of Commencement enables the proponent to announce the formal start of the MTO Class EA process, and to provide information about what is being proposed and how to get involved in the process. For example, the Notice may be combined with an announcement of a consultation opportunity. The proponent will issue a Notice of Commencement prior to consulting and engaging with individuals and organizations.

However, the proponent may begin collecting information pertinent to the project prior to issuing the Notice.

7.2.2 Review and Confirm Problems, Opportunities, and Alternatives To

As described in Chapter 4, the transportation needs assessment consists of research and feasibility work carried out by the proponent or others prior to the beginning of the MTO Class EA process. The proponent will review the Transportation Needs Assessment.

During the review, the proponent will identify and confirm the:

- transportation problems and opportunities and the statement of the objectives
- reasonable Alternatives To the undertaking selected and selection of the preferred alternative to.
- preliminary study area and corridors, where appropriate to the project.

Based on the review, the proponent may reject, modify, refine, and / or confirm the transportation needs assessment results. The proponent may also need to augment the considerations of Alternatives To the undertaking considered during the transportation needs assessment, in order to meet the requirements of the *Environmental Assessment Act*.

If a transportation needs assessment has not been completed, an assessment and evaluation of reasonable Alternatives To must be conducted at the beginning of the Planning and Preliminary Design stage.

7.2.3 Identify and Evaluate Alternative Methods (Plans)

In general, proponents will only consider Alternative Methods (Plans) for projects or portions of projects for which there are reasonable Alternative Methods (Plans) due to the scale or complexity of the project. For some Group B projects, the proponent would need to consider a range of reasonable Alternative Methods (Plans) to establish the fundamentals of the project, including such things as facility type, basic plan and profile (see Appendix C for examples of elements that are combined for Alternative Methods (Plans and Designs) for Group B projects). By contrast, other Group B projects have the fundamentals essentially established by the scope and nature of the project, and there may not be any reasonable Alternative Methods (Plans) for the proponent to consider.

In some cases, the project being considered under the MTO Class EA may be the result of previous planning work carried out either by the proponent or by other government

agencies. The MTO Class EA process can recognize this work and incorporate it, to avoid duplication. The proponent may use such previous planning work to limit or replace the examination of Alternative Methods (Plans) in the Planning stage however, the rationale must be documented in the TESR.

To assess alternatives at this stage (plans) and select the preferred alternative the proponent will:

- Identify Alternative Methods (Plans) that meet the transportation objectives. The proponent will develop each Alternative Method to:
    - identify initial Alternative Methods (Plans), and
    - assess the initial Alternative Methods (Plans) to develop a reasonable range of options to consider (a “short-list”)
- Evaluate the Alternative Methods (Plans). This would typically be done by:
    - determining a method for evaluating the Alternative Methods (Plans)
    - establishing criteria for evaluation. Criteria are values for environmental protection that will reveal differences in the predicted impacts when applied to the indicators
    - selecting indicators that are measurable variables or characteristics of transportation benefits and environmental factors and / or parts of those factors that can be used to determine the degree of benefit or effect)
    - developing weightings appropriate to the project. (A weighting is a value assigned to a transportation benefit or environmental factor (or parts thereof) to make its effect on the evaluation reflect its importance)
- Evaluate the Alternative Methods (Plans) using the weighted criteria (if applicable) and qualitative and quantitative indicators.

7.2.4 Select the Preferred Alternative Method (Plan)

From the alternatives, the proponent will select the Preferred Alternative Method (Plan) in accordance with the steps outlined in Section 6.2.6. The Preferred Alternative Method (Plan) will be carried forward for refinement through the Class EA process.

7.2.5 Identify Alternative Methods (Designs)

In a Group B project, the proponent refines the project to a level of detail that is specific enough to determine that the design of the project is technically, environmentally and economically feasible to construct. Appendix C includes examples of typical Alternative Methods (Designs) for Group B projects.

The proponent will identify a reasonable range of Preliminary Design alternatives that meet the transportation objectives. The proponent will refine the list of Alternative Methods (Designs) to:

- identify important advantages and disadvantages of each Alternative Method (Design), in relation to transportation planning and design benefits and potential net environment impacts
- make any necessary modifications to Alternative Methods (Designs) as a result of the consultation, and
- ensure that the Alternative Methods (Designs) selected for evaluation are feasible

7.2.6 Evaluate Alternative Methods (Designs)

The following is a typical evaluation process of Alternative Methods (Designs) for a Group B project:

- Develop criteria for evaluation
- Select indicators that are measurable variables or characteristics of transportation benefits and environmental factors and / or parts of those factors that can be used to determine the degree of benefit or effect, and
- Develop weightings (A weighting is a value assigned to a transportation benefit or environmental factor (or parts thereof) to make its effect on the evaluation reflect its importance and may include consideration of qualitative and quantitative information)

The proponent conducts a comparative analysis of advantages and disadvantages for each Alternative Method (Design) based on the indicators for the transportation benefits and net environmental impacts and any weighting.

The proponent will document the evaluation process and results in the TESR.

During the evaluation, the proponent may determine that:

- Alternative Methods (Designs) should be modified or discarded
- additional Alternative Methods (Designs) should be identified, or
- additional design and / or environmental studies are needed to support the evaluation.

After undertaking any of the above, the proponent will re-evaluate the Alternative Methods (Designs).

7.2.7 Consultation - Alternative Methods (Designs)

As part of the evaluation, the proponent will seek input on the Alternative Methods (Designs) but may also confirm the Alternatives To and Alternative Methods (Plans) as necessary.

At a minimum, the proponent will consult with directly impacted individuals and organizations. The proponent will seek additional consultation as needed to apply the principles (see Chapter 2) and / or satisfy other project-specific needs.

Additional rounds of consultation can be included based on project complexity, timing of the project, potential for environmental impacts and feedback from individuals and organizations participating in the project.

The proponent will document the consultation process and results in the TESR.

7.2.8 Select the Preferred Alternative Method (Design)

The proponent will select the Alternative Method (Design) that achieves the greatest overall transportation benefit while minimizing the overall negative net environmental impacts. Section 5.3.4 includes additional details on selecting a Preferred Alternative Method (Design).

The proponent may decide to continue to refine the project and undertake components of Detail Design before completing the MTO Class EA. This is discussed further in Section 6.4

The proponent will document the above process in the TESR.

7.2.9 Documentation During Planning and Preliminary Design

Following the selection of the Preferred Alternative Method (Design), there are two documents required to fulfill the requirements of the Class EA process for Group B projects:

- TESR
- Notice of Completion

Details regarding the requirements for preparing the TESR can be found in Section 6.3.5.1. Details regarding the issue of the Notice of Completion and starting the 30-day public review can be found in Section 6.3.5.2.

7.3 Including Detail Design in the EA Process

Detail Design is not typically considered within MTO's Class EA process.

However, the proponent may choose to include all or parts of Detail Design in the Class EA process. This could be appropriate for less complex undertakings, where alternatives are limited and where the proponent decides including all or parts of Detail Design is helpful to understanding the predicted environmental impacts, mitigation and environmental protection.

If Detail Design is not included in the Class EA process no Class EA related consultation is conducted during Detail Design. Note that there may be other reasons that the proponent conducts consultation during the Detail Design phase, for example if other permits and approvals require it.

For more information on Detail Design outside the Class EA process, refer to Appendix E.

8 Class EA Process for Group C Projects

8.1 Introduction

Group C projects are improvements to existing provincial transportation facilities and are described in detail in Chapter 4. Using the MTO Class EA process for Group C projects, the proponent applies systematic decision-making to identify, evaluate and select an Alternative Method (Design) that achieves the greatest overall transportation benefit while minimizing the overall negative net environmental impacts.

As a minimum, the Preferred Alternative Method (Design) will address the project problems and opportunities.

As outlined in Figure 8.1, this is accomplished through the following steps:

- Prepare consultation plan (as required) and issue Notice of Commencement
- Review and confirm the problems, opportunities and Alternatives To the undertaking
- Consider Alternative Methods (Plans and Designs) of undertaking the project by:
    - identifying a reasonable range of Alternative Methods (Plans and Designs), where possible,
    - assessing and evaluating the Alternative Methods (Plans and Designs) and net environmental impacts in a systematic manner,
    - selecting the Preferred Alternative Method (Plan and Design)
- Consult with directly affected individuals and organizations, throughout the process as required; and
- Prepare project documentation (i.e., TESR)

Because the MTO Class EA process is principle-based, the proponent may change the order of the steps or combine the steps as needed. Moreover, the decision-making process is iterative. This means the proponent may repeat steps as new information becomes available.

Group C projects may be assessed against screening criteria to determine if the project should be exempted from the MTO Class EA process. Further information about this process is provided in Section 5.6.

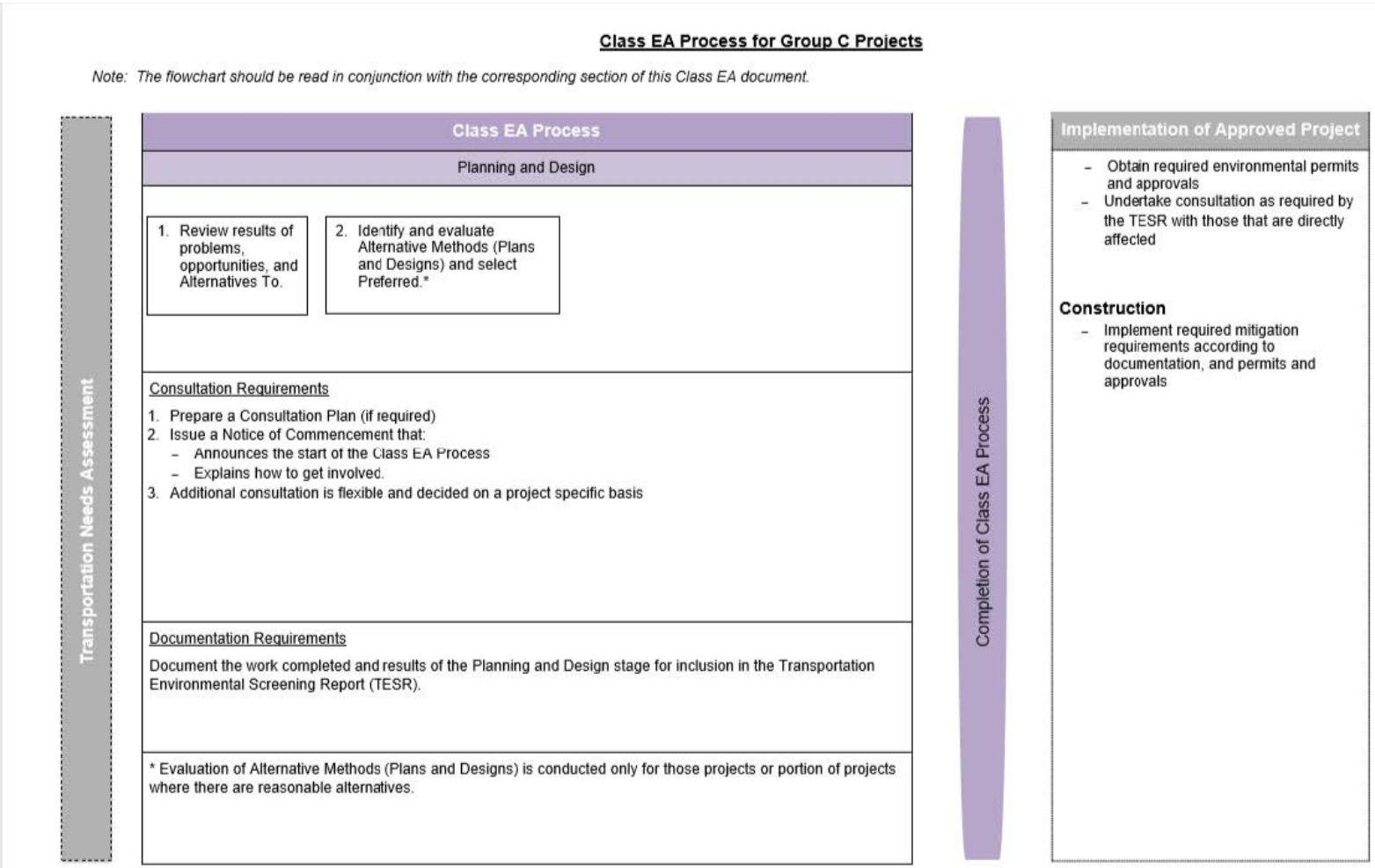


Figure 8.1: Class EA Process for Group C Projects

8.2 Planning and Design Stage

For Group C projects there may be limited Planning and often elements of Detail Design are brought into the process to supplement Preliminary Design. Planning and Preliminary Design can be completed in one stage. The proponent reviews the previous planning work done on a project and undertakes and then completes the design of the project by carrying out the following steps:

- Prepare consultation plan (as required) and issue the Notice of Commencement
- Review and confirm the problems, opportunities and Alternatives To the undertaking
- Evaluate Alternative Methods (Plans and Designs) as appropriate
- Undertake consultation, as needed
- Prepare project documentation (i.e. TESR)

8.2.1 Prepare the Consultation Plan (as required) and Issue Notice of Commencement

A consultation plan may be prepared to provide guidance regarding the consultation approach envisioned for the project if it is deemed by the proponent to be required. This plan should be flexible to account for new information as the project progresses, while providing some structure at the expected points of consultation. More information regarding the consultation plan is outlined in Section 3.1.6.

The Notice of Commencement announces the formal start of the MTO Class EA process. It provides information about what is being proposed and how to get involved in the process. It may refer to upcoming consultation opportunities. The proponent will issue a Notice of Commencement prior to consulting. However, the proponent may begin collecting information pertinent to the project prior to issuing the Notice.

Section 3.3.1 contains further details about the content of the Notice of Commencement.

8.2.2 Review and Confirm Problems, Opportunities, and Alternatives To

As described in Chapter 4, the transportation needs assessment process consists of research and feasibility work carried out by the Ministry of Transportation or others prior to the beginning of the MTO Class EA process.

At the beginning of the Design stage, the proponent reviews the results of the transportation needs assessment to identify and confirm the following information:

- transportation problems and opportunities
- the general components of the plan for carrying out the minor improvements needed.

Group C projects are improvements to existing provincial transportation facilities. There are typically no reasonable Alternatives To the undertaking for a Group C project (i.e., functionally different ways of approaching and dealing with a problem or opportunity). Therefore, evaluation of Alternatives To the undertaking during the Class EA process for Group C projects is not usually required.

8.2.3 Alternative Methods (Plans and Designs as appropriate)

The purpose of this step in the Group C Class EA process is to identify Alternative Methods (Plans and Designs) of meeting the undertaking's objectives. Examples of such Alternative Methods (Plans and Designs) are included in Appendix D.

In some cases, the project being considered under the MTO Class EA may be the result of previous planning work carried out either by the proponent or by other government agencies. The MTO Class EA process can recognize this work and incorporate it, to avoid duplication. The proponent may use such previous planning work to limit or replace the examination of alternative methods in the Planning stage of the MTO Class EA, however, the rationale will be documented in the TESR.

Typically, Alternative Methods (Plans and Designs) are various combinations of specific design elements. It should be noted that in some cases the work required in Group C projects is of such that only one solution is available. The proponent will use the Preferred Alternative Method (Plan) and ensure the Alternative Method (Design) is refined to a level of detail that is specific enough to determine that the design of the project is technically, environmentally and economically feasible to construct. The proponent may also choose to refine the project further by including some or all elements of the Detail Design, as outlined in Appendix E.

While considering Alternatives Methods (Plans and Designs), the proponent will:

- Identify Alternative Methods (Plans and Designs) for evaluation. Typically, there are a limited number of alternatives for Group C projects. The number of Alternative Methods (Plans and Designs) will vary with each specific project, depending on the type and complexity of the project and the nature of the study area (i.e., only one reasonable alternative)
- Establish criteria for evaluation of the Alternative Methods (Plans and Designs) that may include qualitative and quantitative factors. Criteria are values for environmental protection or sustainability that, when applied to indicators, will reveal differences in predicted impacts.
- Identify specific indicators for evaluation

- Develop a methodology that is appropriate for the project
- Evaluate the Alternative Methods (Plans and Designs)
- Select the Preferred Alternative Method (Design).

Details on any of the above steps are outlined further in Chapter 6. The proponent will document the results of any factor-specific studies in the TESR.

8.2.4 Optional Consultation - Alternative Methods (Design)

The proponent will determine the need for consultation on a project-specific basis. The proponent will determine the extent of consultation needed and the appropriate timing for each project. Such consultation will be focused on assessing and mitigating the potential impacts associated with the preferred project design.

The proponent will document the consultation process and its results in the TESR.

8.2.5 Documentation During Planning and Design

To complete the Group C project a TESR is required.

Details regarding the requirements for preparing the TESR can be found in Section 6.3.5.1. The scope and scale of the TESR should reflect the project complexity. No Notice of Completion is required to be issued and there is no formal 30-day public review period.

9 Class EA Completion and Issues Resolution

9.1 Class Environmental Assessment Process Completion

The Class EA process is complete when the Notice of Completion is issued for a Group A or B project, or when the TESR is complete for a Group C project, unless a Part II Order request is submitted during the 30-day public review period. At time of writing the Part II Order process is under review. Readers should refer to the Environmental Assessment Act for direction.

At the end of the Class EA process there may be issues raised by individuals or organizations that are unresolved. Section 9.2 outlines the issue resolution process.

Comments received during or after the 30-day public review period for a Group A or B project and after the completion of the TESR for a Group C project, will be documented. Changes to the information in the TESR about the design, impact or mitigation measures as a result of public comments provided during the 30-day review period will also be documented. If changes are significant and impact decisions made in the TESR after the 30-day review period, a TESR Addendum may need to be prepared. More guidance as to whether a TESR Addendum is required is provided in Chapter 10 –TESR Review and TESR Addendum.

9.1.1 Moving Utilities Prior to Class EA Completion

Moving utilities can be minimally intrusive and early completion of this activity can expedite construction schedules. This Class EA allows utilities to be relocated prior to issuing the Notice of Completion if the current and new location of the utilities are both in the existing right of way.

If the circumstance described above does not exist, utilities may be moved in advance of issuing the Notice of Completion for Group A and B projects, and prior to the completion of the TESR for Group C projects, provided the following criteria are met, all of which will be documented internally:

- there is no question of the need to move utilities, and specifics are identified (i.e. number of poles to be moved)
- the new location (as a result of the project) is established and will not change
- relocation has minimal environmental impact, and that any impacts have been mitigated to the extent practicable
- there is no adverse impact on Aboriginal and treaty rights.

9.1.2 Class EA Completion by non MTO Proponents

This Class EA may be used by others when they are conducting works on the provincial transportation system for which there is no current MTO need or construction

commitment, and where that work is defined under the terms of this Class EA (e.g. new freeway interchange needed by a municipality or developer for access to a new development). When a non MTO proponent has completed the Class EA process MTO will receive a copy of the TESR and indicate whether it meets the requirements of the Class EA process.

9.2 Issues Resolution

As referenced in Section 1.2, environmental assessment is a planning and decision-making process used to promote environmentally responsible decision-making. Early consultation and consultation at significant decision points ensure environmental impacts are minimized to the extent possible and are understood and acceptable.

The proponent minimizes outstanding issues at the end of the Class EA process by:

- Open sharing and availability of relevant information early in the process and throughout, and the provision of opportunities for individuals and organizations to review and provide comments on key documentation
- Tracking of issues as the decision-making process proceeds
- Providing direct responses where appropriate to issues raised, using an appropriate form of communication
- Refining decisions where appropriate and revising documentation to address comments
- Pursuing further discussion to clarify scope, where responses do not satisfy a commenter to provide additional information or in some cases, defer consideration to a more appropriate, later phase
- Providing the rationale to support that decision, where a comment does not result in a change

Regardless, there will be objections to the conclusions reached in the decision-making process from time to time. In these cases, the proponent will attempt to resolve issues through an issue resolutions process by:

- Acknowledging the commenter and the issue and ensuring the issue is clearly understood
- Using appropriate methods of communication and consultation, working with the commenter to attempt to address concerns by revising elements of the undertaking, mitigation measures etc.
- Reasonable efforts should be made to resolve the issue
- Where resolution is not possible, clearly explaining and documenting the reasons

9.3 Part II Order Requests

Please refer to the EA Act, Part II for information about requesting a Part II Order.

10 TESR Review and TESR Addendum

10.1 TESR Review

There are two reasons for conducting a review of the results of a TESR:

- when a TESR is submitted at the end of Preliminary Design and if a project has not commenced construction within a 10-year period following the Notice of Completion of the TESR for Group A and B projects, and completion of the TESR for Group C projects, the proponent must carry out a review of the not-constructed portions of the projects before construction can begin
- the proponent may choose to review the TESR because there may have been changes to existing conditions, the development of new technology or mitigating measures, newly asserted or established Aboriginal or treaty rights or the identification of other previously unknown information or concerns

The proponent will use the version of the MTO Class EA that is current at the time of the review.

The TESR Review requires the proponent to determine if there have been significant changes to the original concept of the project, its net environmental impacts, or commitments made in the TESR.

The TESR Review is an internal review document for the proponent to determine if a TESR addendum is required and if changes to a project are needed. This may require gathering new field information.

10.2 TESR Addendum

If the TESR Review indicates significant changes to the design concept, the net environmental impacts, and the commitments documented in the original TESR the proponent must produce a TESR Addendum. A significant change is determined by considering project-specific circumstances and will vary from project to project. If in doubt, MTO can consult with MECP and other regulatory agencies to determine whether a change is significant.

If the results of the TESR Review indicate changes are not significant, the proponent will document them in the project file. Impacted parties will be advised of the change as applicable. If there are no changes after the TESR Review that will also be documented.

If the results of the TESR Review indicate changes may be significant enough to change the conclusions in the TESR, the proponent will undertake either of the following actions:

- The proponent will advise individuals and organizations affected of the proposed changes. If affected individuals and organizations can be clearly identified, and they agree that a TESR Addendum is not required, the proponent does not need to prepare one. In this case, the proponent will produce or revise other EA or design-related documentation including a record of the consultation for internal record-keeping; or
- Applying the Class EA documentation principles detailed in Chapter 2, the proponent will prepare a TESR Addendum, using the process outlined below:

    - Prepare a TESR Addendum to document the necessary changes (Section 3.3.2.3)
    - Issue a Notice of TESR Addendum Process (Section 3.3.1) and provide a 30-day public review period that provides interested and impacted individuals and organizations a final opportunity to raise issues regarding the TESR Addendum
    - Consult with individuals and organizations on the significant changes.

If the change is voluntary (i.e. not as a result of a change in existing conditions, legislation, government policy, or standards and technology changes), the proponent may decide to proceed with the project as it was originally documented, rather than seeking an addendum to make significant changes to the project. If this is the case a public notice must be issued to say the process has been terminated.

11 Class EA Administration

This chapter describes features related to the administration of the Class EA process:

- amending procedures;
- a description of how the proponent will transition from the "MTO Class EA process for Provincial Transportation Facilities" (2000) to the MTO Class EA, 2020 process; and
- how the proponent will monitor the effectiveness of the Class EA process

11.1 Amending the MTO Class Environmental Assessment

Section 15.4(1) of the *Environmental Assessment Act* sets out the authority for and conditions under which the Minister of the Environment, Conservation and Parks (Minister of MECP) and the Director of the Environmental Assessment and Approvals Branch (EAAB) at MECP may amend the Class EA. An amendment may be made at any time and may be initiated by the Minister of MECP or the Director, or as a result of a request for an amendment.

The Minister of MECP may amend the Class EA if the Minister of MECP is satisfied that the amendments are consistent with the purpose of this Act and are in the public interest. The types of amendments that the Minister of MECP may make include:

- Improving the efficiency or the effectiveness of the process described in the document;
- Adding new undertakings/projects to the Class EA;
- Recategorizing existing undertakings/projects in the Class EA; and
- Updating the Class EA to be consistent with new or updated guidelines, policies, regulations or legislation.

The Director may amend the Class EA to make any of the administrative changes set out in section 15.4(5) of the EA Act as described in Section 11.1.2 – Director Amendments.

Written requests for amendments to a Class EA should be submitted to the Director of the Environmental Assessment Branch (EAAB) at the MECP. In some cases, the MECP Minister of MECP may require that consideration of an amendment be postponed until the next review period.

If approved, the proponent would be responsible for incorporating any amendments to the Class EA into a new revised Class EA. Amendments can be appended to the Class EA or incorporated directly into the body of the document.

The two types of amendments, Director and Minister of MECP, are described in the following sections.

11.1.1 Director of MECP Amendments

The Director of MECP at the EAAB may make administrative amendments to the Class EA, including:

- correcting errors that are editorial or typographical in nature;
- updating references to a guideline, Act or regulation, or provisions or other portions of an Act or regulation;
- updating references to bodies, offices, persons, places, names, titles, locations, websites or addresses; and
- clarifying the existing text of the Class EA.

To request a Director of MECP amendment, a written request should be submitted to the Director of MECP including details on the proposed amendment and the reason for the request.

Based on the information before the Director of MECP, the Director of MECP will decide whether to amend the Class EA. The Director of MECP will notify the proponent of any amendments so that the proponent can update the Class EA document and make it available. The amendment will come into effect upon publication of a notice of the amendment in the registry under the *Environmental Bill of Rights, 1993.*

11.1.2 Minister of MECP Amendments

Requests for Minister of MECP amendments should be made in writing to the Director of MECP at the EAAB. The request should include the current text in the Class EA, the proposed changes and rationale for the changes. MECP may request additional information regarding the requested amendment.

As part of the request for an amendment, a consultation plan must be submitted to the MECP. The consultation plan may outline the method for consultation on the proposed amendments and identify the persons, agencies, ministries and Indigenous communities to be consulted. The proponent will be required to address any concerns that are raised during the consultation process.

The MECP will undertake consultation on any Minister of MECP initiated amendments and may undertake additional consultation on requested amendments.

Based on the information before the Minister of MECP, the Minister of MECP may:

- amend the Class EA, as requested or amend with changes; or,

- refuse to amend the Class EA.

The Minister of MECP will give notice, together with written reasons, of the Minister of MECP's decision to the proponent of the Class EA and any other party the Minister of MECP determines appropriate. Any amendments to the Class EA come into effect following publication of an information notice of the amendment in the Environmental Registry in accordance with the Environmental Bill of Rights, 1993.

11.2 Phase-in Provisions

Phase-in provisions will ease the transition from the existing Class EA, 2000 to the start of the amendment to the existing Class EA:

- Projects following the procedures specified in the 2000 Class EA have the option to continue to use that Class EA until the Class EA is completed or transition to the new Class.
- Projects initiated after the approval of this Class EA will comply with the requirements and procedures specified herein.

11.3 Class EA Process Monitoring

The overall goal of the monitoring program is to determine ways of making the MTO Class EA process better while ensuring that Class EA commitments are met. The objectives are to:

- evaluate the overall effectiveness of the process described in the Class EA document
- identify specific problems with the process
- suggest improvements to the process

These objectives will be achieved through ongoing review of the application of the principles for environmental protection, consultation, evaluation, and documentation.

Where MTO is the proponent, monitoring results will be provided to MECP annually.

Appendix A Group C Screening Template

Table A1: Group C Screening Template

Item #	Environmental Function / Feature	Level of impact on the factors / level of anticipated net environmental impacts (scope and scale: high, medium, low)	Changes to and type of mitigation / protection; level of significance (scope and scale: high, medium, low)

Overall Rationale:

NOTE: This table should be used to support the rationale in the results of the Group C screening and should be included in the project file. Additional comments that support the rationale should be included here.

Appendix B Group D: Operation, Maintenance, Administration and Miscellaneous Activities

In addition to the exempt projects listed in sections 5.9.4 – 5.9.7, Group D activities as identified in *MTO's Class Environmental Assessment for Provincial Transportation Facilities, 2000 have* been exempted from the EA Act through the More Homes, More Choices Act, 2019. These activities consist of facility operation, routine maintenance, administration and miscellaneous activities and have low potential for significant negative environmental impacts and public or agency concerns. Therefore, the proponent has no Class EA requirements to fulfill prior to undertaking the activity.

These activities include:

- Operation activities for provincial transportation facilities such as:
    - use of highways and freeways, transitways and ferryboats for transportation of people / goods
    - use of maintenance, service and operations facilities as centres for facility and equipment maintenance, materials storage, service to the travelling public, and operations activities
    - conversion of highway and freeway lanes from general purpose to special purpose and vice-versa
    - monitoring and enforcement of vehicle and driver / operator safety standards
    - monitoring of traffic flow and user "origin / destination"
    - collection of fees for use
    - other analogous facility operation activities.

- Routine maintenance activities (that do not meet the definition of Group C projects*) for provincial transportation facilities and infrastructure such as:
    - highway and freeway surface such as snow plowing, salting, sanding, pothole repair, crack filling, road sweeping
    - bridges and culverts
    - lighting and electrical systems
    - ditches, storm sewers, stormwater management facilities and other drainage facilities (including removal of beaver dams)
    - traffic safety and control systems (such as guide rail and median barrier)
    - service, maintenance and operations facilities
    - fencing
    - noise barriers
    - vegetation (maintenance and control)
    - other analogous routine maintenance activities.

- Emergency work and response activities such as:
    - transportation and environmental emergency repair work / response (Note: under severe circumstances this could include work that would otherwise be a Group B or C project)
    - traffic accident response
    - spill response
    - other analogous emergency work and response.

- Facility administration activities such as:
    - proactive and reactive "corridor control" on and adjacent to provincial transportation facilities (under the *Public Transportation and Highways Improvement Act*), which may include the issuance of permits and licences and the levy of charges and fees for the facilities and undertakings of other proponents in their own right and under their own responsibility, such as road access, entrances, drainage, grading, excavation, utilities, buildings and signing
    - modifications to highway, freeway or roadway ownership
    - property acquisition and disposal
    - introduction of controlled access status to king's highways
    - other analogous facility management activities.

- Waste management activities for Group A, B, C projects and Group D activities*.

- Property management activities such as:
    - routine building and grounds maintenance
    - upgrading of property that is not defined as Group A, B or C* project work
    - contamination clean-up.
    - demolition and removal of buildings, in advance of environmental clearance for Group A, B and C* work, when those buildings are derelict and a danger to the public, or are in such poor condition that they cannot be economically tenanted
    - well abandonment and septic system decommissioning
    - other analogous property management activities (except those directly associated with Group A, B or C projects*).

- Pre / post construction field work activities for Groups A, B and C* projects, such as:
    - engineering activities such as foundation, geotechnical, soils and legal surveys
    - environmental activities such as archaeology survey and salvage, fisheries surveys, mitigation/compensation
    - management of contamination within the Right-of-Way and other property contamination

    - other analogous preconstruction/post-construction field work.

- Extraction of earth, rock and aggregate from sites not specified by the proponent or design-build consortium retained by the proponent; and disposal of excess earth, rock and aggregate at locations not specified by the proponent or design build consortium retained by the proponent.

* Note: Refer to MTO's Class Environmental Assessment for Provincial Transportation Facilities approved by the Lieutenant Governor in Council on October 6, 1999 under Order in Council 1653/1999 for the list of Group A, B, and C projects.

Appendix C Examples of Environmental Impacts and Typical Environmental Protection Measures

Note: In this appendix, the examples of environmental protection are provided for the Planning and Preliminary Design stages of all projects (Detail Design is not required within the Class EA process, but can be included at the discretion of the proponent). The Implementation stage includes construction, operation and maintenance. Environmental protection for the implementation stage has been included in this appendix to fulfill requirements of what should be included in the Class EA under the EA Act.

The examples are for illustrative purposes only and are not all-inclusive. Actual environmental protection will be applied based on project specifics. In cases where the proponent includes components of Detail Design in the Class EA for a project, environmental protection for Detail Design would be included in the Class EA. The MTO Class EA is supported by the MTO Environmental Standards and Practices (ESP) documents. The ESP documents provide MTO staff and service providers working on behalf of MTO or other proponents, with the requirements, guidance and tools to make environmentally responsible decisions during all stages of a project. A link to these documents can be found on MTO's public website.

FISHERIES	
Example of Effect	**Example of Protection Measure**
Planning Stage (Alternative Methods (Plans))	
Direct loss or harmful alteration of fish habitat	• Protect through alternate route to avoid significant fish habitat, meander bends, braided watercourses, active floodplains, or any other area that is inherently unstable or select route with the least impact on sensitive watercourses
Changes to water quality and quantity	• Protect through alternate route to avoid ground water recharge areas or select route with the least impact on ground water recharge areas
Preliminary Design Stage (Alternative Methods (Designs))	
Direct loss or harmful alteration of fish habitat	• Avoid loss of critical fish habitat through alternative culvert / structure types and designs • Minimize all other in-stream and floodplain habitat loss, through alternative culvert / structure types and designs • Restore disturbed vegetation and aquatic habitat features (e.g., substrate) • Minimize stream relocations and channelization • Design stream relocations and channelization in such a manner that habitat features are maintained or enhanced • Minimize changes to stream gradients • Minimize trees and other vegetation removals adjacent to streams • Stabilize existing unstable banks and reaches to compensate for lost / altered habitat • Enhance existing in-stream and floodplain habitat to compensate for lost / altered habitat • Enhance stream flow characteristics (e.g., flow deflectors) to compensate for lost / altered habitat • Remove existing barriers to fish passage to compensate for lost / altered habitat

FISHERIES	
Example of Effect	**Example of Protection Measure**
Changes to water quality and quantity	• Stormwater control through Stormwater Best management Practices (e.g., grassed swales, extended detention ponds) • Design of culverts / stormwater facilities to account for groundwater upwelling areas
Implementation Stage	
Direct loss or harmful alteration of fish habitat	• Minimize work within watercourses • Minimize access to and across watercourses • Enhance existing fish habitat to offset for lost or altered habitat
Indirect loss of fish habitat through sedimentation and debris	• Prevent sediment from entering the watercourse • Prevent debris from entering the watercourse • Isolate work area from watercourse • Stabilize disturbed soils Also see "Erosion and Sediment Control"
Inhibit fish passage	• Ensure culvert / structure design permits fish passage • Monitor during construction to ensure culvert / structure installed according to the design, with any necessary field-fitting, to ensure fish passage

TERRESTRIAL ECOSYSTEMS (WILDLIFE HABITATS AND MOVEMENTS)	
Example of Effect	**Example of Protection Measure**
Planning Stage (Alternative Methods (Plans))	
Loss of wildlife habitat	• Protect through alternate route or, if it is a valley crossing, then use of higher structure to provide adequate clearance and limit footprint impacts • Select route with least impact on habitat
Obstructing wildlife movement	• Avoidance, as above • Select route with fewest crossings of wildlife corridors
Effect on Species at Risk	• Protect through alternate route for known locations • Control through appropriate setback from known habitat
Severance of / encroachment on identified upland ecosystems	• Protect through alternate route • Select route with least impact
Severance of / encroachment of identified aquatic / wetland ecosystems	• Protect through alternate route • Select route with least impact
Preliminary Design Stage (Alternative Methods (Designs))	
Loss of wildlife habitat	• Protect through alignment modification • Minimize impact by following edges of habitat areas and / or crossing habitat areas at narrowest location • Minimize impact on edge or any part of area using appropriate design measures
Obstructing wildlife movement	• Protect corridors to provide wildlife access across right of way using appropriate design measures (e.g., under / overpasses, culverts, wildlife fencing to direct flow, etc.)
Wildlife mortality	• Same as above

TERRESTRIAL ECOSYSTEMS (WILDLIFE HABITATS AND MOVEMENTS)	
Example of Effect	**Example of Protection Measure**
	• Mitigate using appropriate signage to increase driver awareness
Severance of / encroachment on identified upland ecosystems	• Minimize intrusion by use of design measures (e.g., horizontal / vertical alignments) • Mitigate with additional property acquisition and / or plantings and other design measures
Severance of / encroachment on identified aquatic / wetland ecosystems	• Minimize intrusion by use of design measures (e.g. alignments, design of structures)
Implementation Stage	
Intrusion into sensitive area	• Protect area using silt fence / tree protection • Protect area by prohibiting access • Prohibit / restrict open burning • Minimize tree removal • Employ wildlife deterrence measures to prevent nesting or roosting in areas of potential disturbance • Conduct work outside nesting or roosting periods, where possible

TERRESTRIAL ECOSYSTEMS (WETLANDS)	
Example of Effect	**Example of Protection Measure**
Planning Stage (Alternative Methods (Plans))	
Severance of / loss of wetlands	• Protect through alternate route • Select route with least impact
Preliminary Design Stage (Alternative Methods (Designs))	
Severance of / loss of wetlands	• Minimize intrusion by use of design measures (e.g., alignments, design of structures)
Implementation Stage	
Intrusion into sensitive area	• Protect area using silt fence / tree protection • Protect area by prohibiting access • Restore sensitive area or compensate for impact if unavoidable as applicable

TERRESTRIAL ECOSYSTEMS (VEGETATION)	
Example of Effect	**Example of Protection Measure**
Planning Stage (Alternative Methods (Plans))	
Impacts on woodlands and other vegetated areas	• Protect through alternate route that would avoid / minimize encroachment
Preliminary Design Stage (Alternative Methods (Designs))	
Impacts on woodlands and other vegetated areas	• Minimize impacts through horizontal / vertical alignments, and grading design to permit maximum retention of existing resources, including inserting vegetated buffer requirements and clearing restrictions • Utilize landscape planting plan to mitigate impact resulting from tree removal, consider snowdrift mitigation, and provide ecological restoration where possible or feasible • Staging of work to salvage vegetation material
Implementation Stage	
Impacts on woodlands and other vegetated areas	• Avoid / mitigate impacts through enforcement of retention / protection measures, exercise careful work habits, and implementation of landscape plan • Time construction activities to minimize side impacts to wildlife / vegetation

WATER (SOURCEWATER)	
Example of Effect	**Example of Protection Measure**
Planning Stage (Alternative Methods (Plans))	
Potential for significant risk to vulnerable areas identified in approved Source Protection Plan	• Adjust alignment to comply with approved Plan in consultation with responsible Source Water Protection Authority
Preliminary Design Stage (Alternative Methods (Designs))	
Potential for manageable risks to source protection area	• Develop a risk management plan if required by the responsible Source Water Protection Authority.
Implementation Stage	
Interference with vulnerable areas identified in approved Source Protection Plan	• Apply contingency planning to address unexpected occurrences.

WATER (GROUNDWATER)	
Example of Effect	**Example of Protection Measure**
Planning Stage (Alternative Methods (Plans))	
Impacts of groundwater quality (increased pollutants) and quantity (fluctuation of ground water levels)	• Adjust alignment to avoid source water protection areas, areas with high groundwater table, recharge areas and wells
Preliminary Design Stage (Alternative Methods (Designs))	
Increased pollutants to groundwater recharge areas	• Carry out Stormwater Management Plan (Study) to minimize water quality impacts to groundwater recharge areas, and incorporate recommended stormwater management practices into the design package • Avoid infiltration measures
Increased / Decreased runoff (water quantity) to groundwater recharge areas	• Carry out Stormwater Management Study and incorporate recommendation in design package • Reduce depth of cuts in areas of shallow groundwater
Increased pollutants to groundwater in source water protection areas / recharge area	• Carry out Stormwater Management Plan (Study) to minimize water quality impacts to groundwater recharge areas, and incorporate recommended stormwater management practices into the design package • Avoid infiltration measures
Potential impacts to well water levels and quality due to the proposed design	• Identify wells of high potential for impacts due to the proposed design • Consider pre-construction monitoring (sampling) of wells

WATER (GROUNDWATER)	
Example of Effect	**Example of Protection Measure**
Implementation Stage	
Interference with the quality and / or quantity of water supply (wells) due to construction activities; or removal of wells	• Provide temporary water supply • Monitoring (sampling) of wells • Decommission wells
Contamination of groundwater due to contractor activities (refuelling spills, etc.)	• Require equipment refuelling restrictions • Remove or contain contaminated material • Minimize disturbance of septic systems • Utilize good management practices for the establishment and abandonment of wells and septic systems • Ensure positive drainage • Conduct monitoring of problems or potential problems as necessary
Impacts to or removal of septic system •	• Repair septic system and ensure septic systems removed from service are properly abandoned / decommissioned

WATER (SURFACE WATER)	
Example of Effect	**Example of Protection Measure**
Planning Stage (Alternative Methods (Plans))	
Increased water quantity to receiving watercourse (flood levels and erosion)	• Adjust alignment to avoid sensitive watercourse crossings (flooding and erosion) • Property acquisition / protection for stormwater management ponds (flooding and erosion) • Minimize amount of impervious area
Increased pollutants to receiving watercourse (water quality)	• Adjust alignment to avoid erodible soils • Adjust alignment to avoid sensitive watercourse crossings • Property acquisition / protection for stormwater management facilities • Maximize grassed areas (median ditches and outside ditches)
Preliminary Design Stage (Alternative Methods (Designs))	
Potential increase in upstream / downstream flood levels and erosion at watercourses	• Design of watercourse crossings (culverts and bridges) in accordance with Ministry Standards, Policies and Directives to minimize flood risk and erosion • Via stormwater management study, include facilities to control peak flow (runoff) • Identify locations requiring erosion protection and incorporate erosion protection measures into the design package
Potential increase of pollutants to receiving watercourses (increase imperviousness) and resulting damage to water quality	• Carry out a stormwater management study to identify stormwater management practices (SWMPs) to be incorporated into the design package, including promoting infiltration and incorporating vegetation/planting, where it is determined to limit impervious areas
Potential increase in surface erosion to receiving watercourses	• Incorporate erosion and sediment control measures into contract package

WATER (SURFACE WATER)	
Example of Effect	**Example of Protection Measure**
Implementation Stage	
Increase runoff from construction site to receiving watercourses	• Require temporary detention basin / pond • Require contractor to have an adequate drainage conveyance system during construction • Monitor to ensure erosion and sediment control measures are installed and maintained
Contamination of surface waters	• Remove or contain contaminated material • Clean out catch basins in storm sewer systems • Restrict equipment from entry into water • Utilize equipment refuelling setbacks from water bodies and other precautions • Stockpile setbacks from water bodies • Use enclosures on structural rehabilitation work and containment of spent blasting media • Prohibit use of hydraulic cleaning methods in sensitive areas • Prohibit stockpiling of materials in sensitive areas (e.g., within floodplain of watercourse or other designated areas) • Direct run-off away from sensitive areas • Contain and clean-up spills quickly and effectively • Report spills quickly and accurately

AIR QUALITY	
Example of Effect	**Example of Protection Measure**
Planning Stage (Alternative Methods (Plans))	
Potential effect of long-term exposure, if exceedances of current air quality standards on: • health impacts • plant and crop damage	• Control impacts through maintaining a setback from homes, schools, etc., from the proposed route, for air quality problem areas, based on variables of topography, wind, etc. • Avoid residential areas/ homes/ hospitals, long-term care facilities etc.
Preliminary Design Stage (Alternative Methods (Designs))	
Potential effect of long-term exposure, if exceedances of current air quality standards on: • health impacts • plant and crop damage	• Determine need to model impact of highway improvements on air quality, based on criteria for modelling developed by MTO and determine the need for mitigation measures • Improve traffic flow to reduce "stop and go" driving

AIR QUALITY	
Example of Effect	**Example of Protection Measure**
Implementation Stage	
Short-term impacts of construction operations on adjacent sensitive receivers (e.g., residences, schools, hospitals, flora and fauna, etc.)	• Include special provisions in contract to ensure no unnecessary idling of vehicles • Provide dust control / suppression • Locate contractors' yards away from sensitive areas • Use incentive / disincentive clauses in contract to reduce the duration of construction

NOISE	
Example of Effect	**Example of Protection Measure**
Planning Stage (Alternative Methods (Plans))	
Increased highway noise levels	• Avoid residential areas / homes • Avoid other Noise Sensitive Areas (e.g., hospitals, long-term care facilities, etc.)
Preliminary Design Stage (Alternative Methods (Designs))	
Increased highway noise levels	• Minimize impacts through adjustments to highway gradient and / or vertical alignment • Use quieter pavement type • Install noise barriers in accordance with provincial policy
Implementation Stage	
Construction noise disturbance	• Restrict night-time operations • Require equipment to be in good repair • Prohibit equipment yards in Noise Sensitive Areas

LAND USE (GENERAL)	
Example of Effect	**Example of Protection Measure**
Planning Stage (Alternative Methods (Plans)	
Severance of communities	• Protect through alternative alignment • Maintain local roads (e.g., provide underpasses / overpasses) for delivery of community services (i.e., emergency vehicles, school buses)
Loss of homes / businesses / mixed-use facilities	• Avoid through alternative route selection to bypass urban areas and clustered rural settlements to decrease the number of people affected
Fragmentation of designated environmentally sensitive areas	• Avoid alignments that fragment environmentally sensitive areas, including areas with potential for minerals / aggregates
Impacts on Niagara Escarpment Plan Area, Oak Ridges Moraine Plan Area, ANSI's, ESA's, etc. •	• Protect through alternate route that would avoid / minimize encroachment
Preliminary Design Stage (Alternative Methods (Designs))	

Loss of homes / businesses / mixed-use facilities	• Mitigate impacts by:
	  ○ acquiring property at fair market value
	  ○ considering advance purchase
	• providing appropriate notice period (per lease agreements) if land is in public ownership

Impacts to property	• Minimize direct impacts to property by following lot / concession / field lines or existing ROW • Compensate for “injurious affection.” Where land is taken MTO may compensate landowners for damages resulting from both construction and use of the highway. Where no land is taken, MTO is only responsible for damages resulting from construction of the highway. • Restoration of / improvement to access, where possible

LAND USE (GENERAL)	
Example of Effect	**Example of Protection Measure**
	• Restoration of / improvement to visibility, where possible • Use of construction and timing methods to limit noise, dust, light and vibration impacts
Disrupting character of area	• Preserve existing amenities as much as possible • Retain and / or plant vegetative buffer areas • Grade site to pleasing lines, utilize berms • Employ context-sensitive design and site structures to blend with adjacent areas
Potential impacts on environmentally sensitive areas	• Use of construction and timing methods to limit noise, dust, light and vibration impacts • Consider relevant provincial plans for more detailed requirements in sensitive areas (e.g. Niagara Escarpment, Oak Ridges Moraine) • Avoid mineral / petroleum resource areas where possible • Use appropriate landscaping
Potential impacts on public transit routes	• Consult with transit authorities to minimize conflicts / enhance opportunities
Potential impacts on emergency response routes	• Consult with response agencies during design to minimize disruption, coordinate activities
Reduced ability to proceed with approved private developments	• Consider alternative alignments, cross-sections to minimize impacts on approved developments
Higher intensity of land use than previously existed	• Corridor control to ensure that entrances and exits on the highway remain at a safe level
Impacts on Niagara Escarpment Plan Area, Oak Ridges Moraine Plan Area, ANSI's, ESA's, etc. •	• Protect through horizontal / vertical alignments, grading and structural design that would avoid incursion • Utilize landscape planting plan to provide buffer

LAND USE (GENERAL)	
Example of Effect	**Example of Protection Measure**
Implementation Stage	
Loss of / encroachment on environmentally sensitive areas	• Prohibit entry and equipment storage in environmentally sensitive areas
Disruption of residents	• Provide community relations program (e.g., provision of information on timing of construction, project schedule, contact person to deal with day-to-day issues) • Provide contractor incentives to maintain or shorten construction schedule • Schedule construction to avoid disruption of peak outdoor activities of residents
Potential impacts on public transit routes	• Maintain liaison / coordinate construction with transit authorities
Potential impacts on emergency response routes	• Maintain liaison / coordinate construction with responding agencies
Dust accumulation on private property	• Provide dust control / suppression • Utilize temporary erosion control methods on staged construction
Smoke impairing visibility / air	• Prohibit / restrict open burning in vicinity of dwellings • Prohibit open burning on days weather conditions prevent dissipation of smoke
Impacts on Niagara Escarpment Plan Area, Oak Ridges Moraine Plan Area, ANSI's, ESA's, etc. •	• Mitigate impacts through enforcement of retention / protection measures, exercise careful work habits, and implementation of landscape plan

LAND USE (AGRICULTURE)	
Example of Effect	**Example of Protection Measure**
Planning Stage (Alternative Methods (Plans))	
Loss of prime agricultural land (including specialty crop lands and class 1,2, and 3 agricultural soils), capital improvements, or fragmentation of designated prime agricultural areas	• Avoid / protect through alternative route selection
Preliminary Design Stage (Alternative Methods (Designs))	
Loss of prime agricultural land (including specialty crop lands and class 1,2, and 3 agricultural soils) or capital improvements	• Minimize direct impacts to property by following lot / concession / field lines or existing right of way • Compensate for “injurious affection” where land is taken, MTO may compensate landowners for damages resulting from both construction and use of the highway; where no land is taken, MTO is only responsible for damages resulting from construction of the highway
Permanently removing existing access	• Provide new access

LAND USE (AGRICULTURE)	
Implementation Stage	
Decrease in agricultural productivity because of blocked drainage	• Repair construction damage to agricultural field tiles
Disrupting agricultural operations	• Schedule construction to avoid work during active farm periods (e.g., cultivation, harvesting, etc.) and rehabilitate areas disturbed by construction • Provide signage to direct potential customers • Replacement of fences • Use non-invasive and agriculturally supportive plant species for landscaping
Temporarily closing agricultural access	• Provide alternative access
Disrupting livestock by creating noise and dust	• Management of dust, vibration, noise and light, • Require equipment to be in good repair • Minimize the impacts of blasting
Contaminants in run-off affecting crops	• Direct run-off away from sensitive areas
Injury to crops and livestock due to particulate matter in air from open burning	• Prohibit / restrict open burning during sensitive crop periods and in vicinity of livestock

LAND USE (COMMERCIAL / INDUSTRIAL)	
Example of Effect	**Example of Protection Measure**
Planning Stage (Alternative Methods (Plans))	
Business Interruption	• Protect through alternate route • Avoid impacting core business areas
Preliminary Design Stage (Alternative Methods (Designs))	
Loss of business	• Acquiring property at fair market value • Considering advance purchase
Impacts to property	• Minimize direct impacts to property by following lot / concession / field lines or existing ROW • Compensate for “injurious affection.” Where land is taken, MTO may compensate landowners for damages resulting from both construction and use of the highway. Where no land is taken, MTO is only responsible for damages resulting from construction of the highway. • Consider context-sensitive design solutions • Minimize potential of extraordinary isolation of operations • Consider transit and emergency routes in planning and staging of work
Permanently removing existing entrance / exit	• Provide alternate entrance / exit
Implementation Stage	
Disrupting business operations	• Schedule construction to avoid work during business hours / peak tourist periods • Provide signage to direct potential customers • Compensate for business losses • Minimize impacts of noise, vibration, dust and light

LAND USE (COMMERCIAL / INDUSTRIAL)	
Example of Effect	**Example of Protection Measure**
Temporarily closing entrance / exit	• Provide alternate entrance / exit

LAND USE (COMMUNITY FACILITY / INSTITUTIONAL / RECREATION / TOURISM)	
Example of Effect	**Example of Protection Measure**
Planning Stage (Alternative Methods (Plans))	
Severance of Trails / Paths / etc.	• Avoid / protect through alternative route selection
Presence of recreational / community facilities	• Avoid sensitive land uses through alternative route selection
Preliminary Design Stage (Alternative Methods (Designs))	
Preferred location in institutional / recreational area	• Employ context-sensitive design solutions
Severance of Trails / Paths / etc.	• Shift alignment to avoid impact • Design structure to span area • Establish alternative trail linkages
Loss of recreation / community facilities	• Mitigate impacts by acquiring property at fair market value
Permanently removing existing driveway / business access	• Provide new access
Permanently closing pedestrian / bicycle access	• Provide alternative route / access
Permanently closing driveway / business access	• Provide alternative access
Disruption of community infrastructure / services	• Consult with utilities (electricity / water / sewer / gas / telephone / cable) during design to minimize disruption, coordinate activities

LAND USE (COMMUNITY FACILITY / INSTITUTIONAL / RECREATION / TOURISM)	
Example of Effect	**Example of Protection Measure**
Implementation Stage	
Intrusion on Trails / Paths / etc.	• Protect area using silt fence / tree protection • Protect area by prohibiting access • Restore damage areas by repair, grading, landscaping
Temporarily closing driveway / business access	• Provide alternative access • Utilize signing and detours to minimize inconvenience for both businesses and potential customers • Minimize the time when access is affected • Stage construction to minimize inconvenience where possible, and be as responsive as possible to the needs of individual businesses
Temporarily closing pedestrian / bicycle routes / access	• Provide alternative routes / access
Disruption of community infrastructure / services	• Maintain liaison with utilities • Consider coordinating construction and utility maintenance / upgrading to minimize disruption

LAND USE (COMMUNITY / RECREATION)	
Example of Effect	**Example of Protection Measure**
Planning Stage (Alternative designs (plans))	
Loss of recreational / community facilities	• Avoid through alternative route selection
Preliminary Design Stage (Alternative Methods (Designs))	
Loss of recreation / community facilities	• Mitigate impacts by acquiring property at fair market value
Permanently removing existing driveway / business access	• Provide new access
Permanently closing pedestrian / bicycle access	• Provide alternative route / access
Permanently closing driveway / business access	• Provide alternative access
Disruption of community infrastructure / services	• Consult with utilities (electricity / water / sewer / gas / telephone / cable) during design to minimize disruption, coordinate activities

Implementation Stage	
Temporarily closing driveway / business access	• Provide alternative access • Utilize signing and detours to minimize inconvenience for both businesses and potential customers • Minimize the time when access is affected • Stage construction to minimize inconvenience where possible, and be as responsive as possible to the needs of individual businesses
Smoke impairing visibility / air	• Prohibit / restrict open burning in vicinity of dwellings • Prohibit open burning on days weather conditions prevent dissipation of smoke
Temporarily closing pedestrian / bicycle routes / access	• Provide alternative routes / access
Disruption of community infrastructure / services	• Maintain liaison with utilities • Consider coordinating construction and utility maintenance / upgrading to minimize disruption

CONTAMINATED PROPERTY AND EXCESS MATERIAL MANAGEMENT	
Example of Effect	**Example of Protection Measure**
Planning Stage (Alternative Methods (Plans))	
Encroachment upon waste disposal sites, and contaminated or potentially contaminated property	• Avoid waste disposal sites and contaminated property

Preliminary Design Stage (Alternative Methods (Designs))	
Encroachment upon waste disposal sites and contaminated property	• Remediate contaminated property as necessary • Minimize encroachment through design measures (e.g., alignment shift)
Contamination of groundwater	• See Groundwater
Contamination of surface waters	• See Surface Water
Contamination of ROW from waste disposal sites or contaminated properties	• Design drainage measures to prevent landfill leachate from mixing with Highway drainage • Design measures to prevent waste material from impacting / entering the ROW • Design measures to prevent construction activities from impacting site, or contacting contaminated areas • For combustible gas, design measures to prevent explosive build-up in confined spaces on ROW
Release of asbestos or lead into the air / environment	• Controlled removal of asbestos / lead-containing materials • Proper handling and disposal of asbestos / lead waste
Generation of excess materials (e.g. earth, concrete, asphalt, or natural wood) from the ROW.	• Incorporate / re-use excess materials into the design where possible and applicable

Implementation Stage	
Encroachment upon waste disposal sites and contaminated property	• Monitor work in vicinity of waste disposal site or contaminated property as necessary to ensure absence of contamination • Site or item-specific monitoring and / or testing to identify contamination and determine viable options where necessary • Remediation of contamination in accordance with legislation and guidelines • Ensure good property and materials management practices to minimize negative impacts to the environment
Contamination of ground or surface water	• See Groundwater or Surface Water

CULTURAL HERITAGE RESOURCES	
Example of Effect	**Example of Protection Measure**
Planning Stage (Alternative Methods (Plans))	
Disturbance or destruction of archaeological resources	• Undertake archaeological assessment(s) to identify and evaluate resources. All archaeological assessment work must be carried out by licensed archaeologists • Avoidance, through alternative route selection
Displacement of built heritage resources and/or cultural heritage landscapes by removal and/or demolition and/or disruption	• Identify, evaluate, and manage significant built and landscape heritage resources as per *Standards and Guidelines for Conservation of Provincial Heritage Properties* • Avoidance, through alternative route selection • Prevent significant built heritage resources from undergoing demolition by neglect, with the consideration of property maintenance measures Carry out impact assessment and appropriate public engagement, given removal and demolition of significant cultural heritage resources is considered to be a last resort
Impacts to registered and unregistered cemeteries which have been identified and documented	• Avoidance, through alternative route selection • Compliance with the *Funeral, Burial and Cremation Services Act*
• Impacts on cultural heritage landscape features, and disruption of resources by the introduction of physical, visual, audible or atmospheric elements that are not in keeping with the	• Protect through alternate route to avoid / minimize encroachment • Consider alternative alignment to retain and maintain the visual settings and physical relationships of heritage features • Retain and maintain the visual settings and other physical relationships that contribute to the cultural heritage value.

CULTURAL HERITAGE RESOURCES	
Example of Effect	**Example of Protection Measure**
character and setting of the cultural heritage resource	
Preliminary Design Stage (Alternative Methods (Designs))	
Disturbance or destruction of archaeological resources	• Complete archaeological assessment(s) if not undertaken or completed at the earlier Planning stage • Avoid and protect an archaeological site as a preferred alternative • If a preferred alternative is not possible, excavate the archaeological site All archaeological assessments and excavations must be carried out by licensed archaeologists and shall include consultation and engagement with First Nations, where necessary.
Displacement of built heritage resources and/or cultural heritage landscapes by removal and/or demolition and/or disruption	• Avoid and preserve built heritage resources and/or cultural heritage landscape features in-situ and consider adaptive reuse alternatives • Relocate heritage buildings(s) and/or structures, and consider adaptive re-use alternatives • Document and salvage features from heritage buildings and/or structures prior to demolition
Deterioration of significant cultural heritage resources as a result of environmental changes	• Decrease harmful environmental condition changes such as vibration, altered water table, etc. to built heritage resources, cultural heritage landscapes, and archaeological sites
Impacts on cultural heritage landscape features, and Disruption of resources by the	• Minimize impact through horizontal/vertical alignments, and grading design to permit maximum retention of existing features

CULTURAL HERITAGE RESOURCES	
Example of Effect	**Example of Protection Measure**
introduction of physical, visual, audible or atmospheric elements that are not in keeping with the character and setting of the cultural heritage resource	• Utilize landscape planting plan to provide mitigation, screening and enhancement • Explore alternative alignments that retain and maintain the visual settings and physical relationships of heritage features • Ensure the design of new construction, visual intrusions, or other interventions that do not adversely affect the heritage attributes or characteristics of a property
Implementation Stage	
Disturbance or destruction of cultural heritage resources including built heritage, cultural heritage landscape and archaeological resources	• Include provisions in contract to stop construction in areas where archaeological resources are discovered during construction • Ensure avoidance of archaeological sites with the use of protective fencing and/or barriers, to be monitored by a licensed archaeologist • Protect sites by restricting access, to reduce noise/vibration and control dust • Avoid and preserve heritage buildings and/or cultural heritage landscape features in-situ and consider adaptive reuse alternatives • Relocate heritage buildings(s) and/or structures and consider adaptive re-use alternatives if not completed in the earlier Detail Design stage • Document and salvage features from heritage buildings and/or structures prior to demolition if not completed in earlier Detail Design stage • Retain and maintain the visual settings and other physical relationships that contribute to the cultural heritage value. • Ensure construction activities and other interventions do not affect the heritage attributes or characteristics located on or adjacent to a property.

CULTURAL HERITAGE RESOURCES	
Example of Effect	**Example of Protection Measure**
Impacts on cultural heritage landscape features	• Mitigate impacts through enforcement of retention / protection measures, exercise careful work habits, and implementation of landscape plan

Appendix D Typical Transportation Planning and Design Elements Used to Create Alternative Methods (Plans and Designs) and Related Environmental Protection Activities and Decisions

GROUP A & B PROJECTS: Typical Transportation Planning and Design Elements Used to Create Alternative Methods (Plans and Designs) and Related Environmental Protection Activities and Decisions				
Stage	**Typical Elements that are considered to develop Alternative Methods (Plans and Designs)**		**Environmental Protection Activities**	**Typical Environmental Protection Decisions**
	Linear Facilities	**Service, Maintenance and Operations Facilities**		

Planning
Purpose: To establish the fundamentals of a project
	• Facility Type:
	  ○ new highway / extension to highway
	  ○ access control
	• Basic plan and profile (including route location); design speed; typical project cross-section
	• Need / location / type of interchanges, intersections
	• Need / location of bridges and culverts
		• Need / type of facility
		• Site location (new facility only), considering such things as visibility and accessibility
			• Identify environmental constraints to project objectives
			• Identify environmental deficiencies (e.g., contaminated properties)
			• Develop environmental protection strategies:
			  ○ avoidance / prevention through planning alternatives
			  ○ environmental design strategies
			  ○ environmental remediation strategies
				• Avoidance / prevention of:
				  ○ footprint impacts
				  ○ interference impacts

GROUP A, B and C PROJECTS: Typical Transportation Planning and Design Elements Used to Create Alternative Methods (Plans and Designs) and Related Environmental Protection Activities and Decisions				
Stage	**Typical Elements that are considered to develop Alternative Methods (Plans and Designs)**		**Environmental Protection Activities**	**Typical Environmental Protection Decisions**
	Linear Facilities	**Service, Maintenance and Operations Facilities**		

Preliminary Design
 	
Purpose: To develop the project to a level of detail that is specific enough to determine that the design is technically and economically feasible to construct, and that it is feasible to secure environmental permits, approvals and authorizations
	• Calculated horizontal and vertical alignment, design speed and typical project cross-section covering elements such as:
	  ○ typical right-of-way requirements
	  ○ number of lanes / tracks
	  ○ median width and type
	  ○ shoulder type
	  ○ ditches
	• Need / location / type of:
	  ○ interchanges and intersections
	  ○ bridges and culverts (including span and width)
	  ○ stormwater management facilities
	  ○ illumination and traffic signals
	  ○ safety infrastructure
	• Preliminary staging of major work activities
	• Agreements in principle for road assumptions, transfers, closures, and the resolution of major rail and utility conflicts
	• Initial property acquisition plan
		• Need / location / type of site components:
		  ○ connection with transportation system (ramps, roads, shipping lanes, transitway)
		  ○ docking and platform requirements
		  ○ buildings
		  ○ internal roads
		  ○ parking
		  ○ illumination
		  ○ safety infrastructure
		  ○ auxiliary facilities
		• Initial property acquisition plan
		• Staging of major work activities
			• Identify environmental constraints to design
			• Develop environmental design concepts
			• Develop environmental mitigation concepts
			• Identify environmental approvals and permits required to be obtained
				• Avoidance / prevention of:
				  ○ footprint impacts
				  ○ interference impacts
				• Control / mitigation of:
				  ○ footprint impacts
				  ○ interference impacts
				  ○ traffic access modification impacts
				  ○ emissions impacts
				  ○ timing considerations
				• Compensation and Enhancement details

GROUP A, B and C PROJECTS: Typical Transportation Planning and Design Elements Used to Create Alternative Methods (Plans and Designs) and Related Environmental Protection Activities and Decisions				
Stage	**Typical Elements that are considered to develop Alternative Methods (Plans and Designs)**		**Environmental Protection Activities**	**Typical Environmental Protection Decisions**
	Linear Facilities	**Service, Maintenance and Operations Facilities**		
Detail Design Purpose: To complete the design of the project	• Calculated horizontal and vertical alignment and segment-specific cross-section details • Surveyed structure and culvert location / span / width • Details of illumination, traffic signals and safety infrastructure • Application of project-specific standards, and calculation of quantities for all of the above items • Signed agreements for road assumptions, transfers, closures and the resolution of major rail and utility conflicts • Final property requirements	• Detailed and surveyed site plan for all components • Building architectural drawings • Application of project-specific standards, and calculation of quantities for all of the above items • Final property requirements	• Identify environmental constraints to construction • Complete / modify environmental design elements • Complete / modify environmental mitigation • Develop environmental construction constraints • Sign agreements for formal environmental approvals and permits	• Control / mitigation of: o footprint impacts o interference impacts o traffic access modification impacts o emissions impacts o timing considerations • Compensation and enhancement details

Appendix E Detail Design

1 Including Detail Design in the MTO Class EA Process

Detail Design is part of the implementation stage of a project undertaken following the completion of the MTO Class EA process. The proponent, however, may decide to incorporate some or all of Detail Design into the Preliminary Design stage of the Class EA process.

In Detail Design, the proponent typically:

- refines and finalizes the design of the project
- obtains environmental permits and approvals applicable to the project(s) required prior to construction
- meets the commitments applicable to the design made during the MTO Class EA process as documented in the TESR
- prepares the construction contract package, where applicable

If the proponent decides to include some or all elements of Detail Design in the MTO Class EA process, they are documented in the evaluation and selection of the Preferred Alternative Method (Design) in the TESR. These elements of the design are subject to consultation as outlined for the given project group, and public review following the Notice of Completion.

Elements of Detail Design not included within the MTO Class EA process are not subject to EA related consultation, although there may be other reasons for which consultation is necessary.

Should elements of Detail Design remain following the completion of the MTO Class EA, the proponent will generally document the details.

2 Changes to Project Following MTO Class EA

In some cases, new information may become available during the Detail Design stage that prompts the proponent to re-evaluate the approved project.

The proponent may determine that the anticipated net environmental impacts of the project have significantly changed from those predicted in the TESR, either because:

- additional information was discovered during Detail Design, and / or
- significant changes or refinement have been made to the project's design.

In such cases, the proponent will follow the process for making changes to the TESR as detailed in Chapter 10.

Any outstanding permits, approvals or authorization required under other legislation are obtained and the approved project is constructed in accordance with the requirements. Where ongoing monitoring is required during or post construction, the proponent will ensure the conditions of the approval are met.

Appendix F Glossary

The definitions in this glossary are specific to the Ministry of Transportation's work and provided for convenience only and should not be relied on as authoritative. Alternative definitions may occur in other documents produced by the Ministry of Transportation or external agencies. For terms related to legislation, it is recommended that the appropriate legislation be consulted.

Term or Acronym	Definition or Meaning
Aboriginal Community/ Indigenous Communities	The terms 'Indigenous' and 'Aboriginal' are both terms that refer to First Nation, Inuit and Métis peoples collectively. It is always best to be as specific as possible and only use the term 'Indigenous / Aboriginal' when referring to First Nation, Métis and Inuit peoples / communities as a group (e.g. when referring to only First Nation communities, do not use the term 'Indigenous'). Generally speaking, it is usually more appropriate to use the term 'Indigenous'; however, in some circumstances 'Aboriginal' is the correct term to use (e.g. 'Aboriginal' rights, because the term 'Aboriginal' has legal meaning). A First Nation community is sometimes referred to as a First Nation 'reserve'. Generally speaking, it is usually more appropriate to use the term 'community'; however, in some circumstance, 'reserve' is the correct term to use (e.g. 'on-reserve' road infrastructure').
Aboriginal Peoples	First Nation, Inuit and Métis peoples of Canada who have rights pursuant to s. 35 of the *Constitution Act*, 1982. Note: There are no rights-bearing Inuit communities in Ontario.

Term or Acronym	Definition or Meaning
Aboriginal Rights	Defined by the Supreme Court, Aboriginal rights are rights related to practices, customs or traditions that distinguish the unique culture of each Aboriginal community. The rights of certain peoples to hunt, trap, fish and gather on ancestral lands are examples of Aboriginal rights. For First Nation and Inuit communities, the activity must have existed prior to contact with Europeans. For Métis communities, the activity must have existed prior to the time of effective European control. Current practice must have continuity with the historic practice and must remain integral to the community's culture.
Advanced Traffic Management System (ATMS)	Part of an Intelligent Transportation System, it is the process of monitoring traffic and controlling the flow of traffic using a variety of detectors, cameras, and communication systems managed by a control centre.
Alignment	The vertical and horizontal position of a road.
Alternative Methods	Alternative Methods of carrying out the proposed undertaking are different ways of doing the same activity. Alternative Methods could include consideration of one or more of the following: alternative technologies; alternative methods of applying specific technologies; alternative sites for a proposed undertaking; alternative design methods; and, alternative methods of operating any facilities associated with a proposed undertaking. They are referenced in the Class as Alternative Methods (Plans) and Alternative Methods (Designs).
Alternative Methods (Plans)	Consideration of alternatives that bring the project to a design concept level of detail. (i.e., 1:10,000 scale) (e.g. facility types, basic plan and profile, interchange need, need for bridges or culverts)

Term or Acronym	Definition or Meaning
Alternative Methods (Designs)	Consideration of alternatives that bring the project to a design criteria level of detail. (i.e., 1:2,000 or 1:1,000 scale) (i.e., typical cross-section including alignments, number of lanes / tracks, interchanges and intersections, staging, right of way needs)
Alternatives	Both Alternative Methods (Plans / Designs) and Alternatives To a proposed undertaking.
Alternatives To the Undertaking	Alternatives To the proposed undertaking are functionally different ways of approaching and dealing with a problem or opportunity (i.e., doing nothing, choosing road improvements or transit)
Amendment	A change to an approved class environmental assessment which can be initiated by the applicant or the MECP Minister: • Before a Notice of Completion of Review is given under subsection 7.1(2) of the *Environmental Assessment Act*; • After a Notice of Completion of Review subject to conditions, if any, imposed by the MECP Minister; or • In accordance with the amending procedures specified in an approved class environmental assessment. When the amendments are made, and the class environmental assessment has been resubmitted, a decision to approve, approve with terms and conditions or refuse the undertaking can be considered.
Analysis Area	See Study Area
Approved Project	Approved or completed project is used in the MTO Class EA to mean that a project has complied with and completed the class environmental assessment process for the applicable Group.

Term or Acronym	Definition or Meaning
Bus Bypass Shoulders	Highway shoulders that have been widened and strengthened so public transit buses can use them when roads are congested.
Bypass	A form of realignment in which the route is intended to go around a particular feature or collection of features.
Class Environmental Assessment (Class EA)	A document that sets out a standardized planning process for those classes or groups of activities for which the applicant is responsible. It is also known as a "parent" document in some class environmental assessments. A class environmental assessment is approved under the *Environmental Assessment Act* and applies to projects that are carried out routinely and have predictable environmental impacts that can be readily managed. Projects defined within a class environmental assessment require no further environmental approval under section 5 of the *Environmental Assessment Act*, conditional upon being planned according to the procedures set out in the document.
Class Environmental Assessment Process (Class EA Process)	The process established for projects under the Class Environmental Assessment.
Commitment	Represents a guarantee from a proponent about a certain course of action, that is, "I will do this, at this time, in this way." Proponents acknowledge these guarantees by documenting obligations and responsibilities, which they agree to follow, in environmental assessment documentation. Commitments are found in environmental reports for class environmental assessment projects. Although not approved by the Minister and Cabinet, they represent guarantees from a proponent about a certain course of action.

Term or Acronym	Definition or Meaning
Compensation (Environmental or Property Related)	The act of providing mitigation or monies for the following purposes: • in return for land, or use of the land required for a project • to fulfill legislative requirements to limit the effect on an environmental feature or species.
Concerned Person	Any individuals or groups who raise a concern about a project during the public review period.
Consortium	A group of businesses or organizations contracted to design and / or construct and / or maintain a project.

Term or Acronym	Definition or Meaning
Consultation	A two-way communication process to involve interested individuals or organizations in the planning, implementation and monitoring of a proposed undertaking, or in the context of class environmental assessments, in the determination of the planning process itself. Consultation is intended to: • Identify concerns, relevant information, and guidelines, policies and standards pertinent to the project; • Facilitate the development of a list of all required approvals, licenses or permits; • Provide guidance to the proponent about the preparation of the class environmental assessment; • Ensure that relevant information is shared about the proposed undertaking; • Encourage the submission of requests for further information and analysis early in the class environmental assessment process; • Enable the proponent to make a fair and balanced decision. Minimum consultation requirements for each Group are included in the Class EA. Depending on the project, the proponent may exceed these minimum requirements. Consultation methods will be selected based on the scope, scale and complexity of the project and the general context. The approach to consultation will vary according to the specific circumstances of each project. 'Consultation' also has a specific legal meaning when a project has the potential to have an adverse impact on Aboriginal and treaty rights. See Duty to Consult and Accommodate.

Term or Acronym	Definition or Meaning
Corridor	In transportation studies, a corridor is a defined area where a new or improved transportation facility might be located.
Designation	Formal identification of the right-of-way for a proposed highway, through the provisions of the *Public Transportation and Highway Improvement Act*. The route is registered in the appropriate land registry office, so that those wishing to purchase or develop property will be aware of the intended use.
Detail Design	The final stage in MTO's design process where engineering and environmental components of Preliminary Design are refined and details concerning, for example, property, and drainage are prepared, and contract documents and drawings are produced. Detail Design is typically done outside of the Class EA process.
Do Nothing Alternative	An alternative that is typically included in the evaluation of alternatives that identifies the implications of doing nothing to address the problem or opportunity that has been identified. Also referred to as the "null" alternative in some class environmental assessments.

Term or Acronym	Definition or Meaning
Duty to Consult and Accommodate (Aboriginal Consultation)	The Ontario Crown (i.e. a ministry) has a legal obligation to consult with First Nation and Métis communities when it has knowledge of an established or credibly asserted Aboriginal or treaty right and contemplates conduct that may adversely impact the right in question (e.g. a bridge replacement project may adversely impact fishing rights). This is called the 'duty to consult and accommodate'. The source of the duty to consult is the honour of the Crown and the constitutional protection accorded Aboriginal and treaty rights under section 35 of the *Constitution Act, 1982.* The duty to consult may include a duty to accommodate in some circumstances. This means the Crown must make genuine efforts to identify and avoid or mitigate the adverse impacts of the proposed decision or conduct on Aboriginal and treaty rights. The Crown must be prepared to change the initiative in a way that will reduce adverse impacts on rights.
Emergency Response	Activities undertaken when emergency work is required.
Emergency Work	The actions taken immediately after detection of a situation where there is an imminent risk to life, public safety, damage or loss of property (such as an accident, natural disaster [including beaver dam failure], catastrophic structural failure, or the detection of a pending failure [including containment, cleanup and disposal of material]).
Environment	The *Environmental Assessment Act* defines environment to mean: (a) Air, land or water; (b) Plant and animal life, including human life; (c) The social, economic and cultural conditions that influence the life of humans or a community; (d) Any building, structure, machine or other device or thing made by humans; (e) Any solid, liquid, gas, odour, heat, sound, vibration or radiation resulting directly or indirectly from human activities; or, (f) Any part or combination of the foregoing and the interrelationships between any two or more of them.

Term or Acronym	Definition or Meaning
Environmental Assessment (EA)	Environmental assessment is a study, which assesses the potential environmental impacts (positive and negative) of an individual proposal. Key components of an environmental assessment include consultation with individuals and groups; consideration and evaluation of alternatives; and, the management of potential environmental impacts. Conducting an environmental assessment promotes good environmental planning before decisions are made about proceeding with a proposal.
Environmental Assessment Act (EA Act)	The *Environmental Assessment Act* (and amendments and regulations thereto) is a provincial statute that sets out a planning and decision-making process to evaluate the potential environmental impacts of a proposed undertaking. Proponents wishing to proceed with an undertaking which is subject to the Act, must document their planning and decision-making process and submit the results from their environmental assessment to the Minister of the Environment Conservation and Parks for approval or follow an approved Class EA process.
Environmental Impact	The effect that a proposed undertaking or its alternatives has or could potentially have on the environment, either positive or negative, direct or indirect, short- or long-term.
Environmental Factors	MTO uses environmental factors as a way of organizing environmental effect assessment during MTO Class EA projects. Environmental factors include the various features and functions of the broad environment (see definition) and include: fisheries, terrestrial ecosystems, ground and surface water, noise, land use, contaminated property and excess material management, built heritage and cultural heritage landscapes, archaeology, air quality and GHGs, and landscape architecture.

Term or Acronym	Definition or Meaning
Environmental Sensitivities	A term used to recognize that a project may affect an environmental factor or factors in a manner not addressed by standard environmental protection measures.
Environmental Protection Measures (Impact Management Measures)	Measures which can lessen potential negative environmental impacts or enhance positive environmental impacts. These measures could include mitigation, compensation, or community enhancement. MTO uses the term “environmental protection measures” to mean the same as “impact management measures”.
Environmentally Sensitive Areas	Those areas identified by any agency or level of government which contain natural features, ecological functions or cultural, historical or visual amenities which are susceptible to disturbance from human activities and which warrant protection.
Expansion	The act of increasing the size or function of a transportation facility to increase potential capacity, access, or support other modes in addition to the original. i.e., a new travel lane to a highway.
Extension	The act of lengthening a linear facility, or structures, culverts, bridges, and lanes.
External Agencies	Include Federal departments and agencies, Provincial ministries and agencies, conservation authorities, municipalities, Crown corporations or other agencies other than MTO. External agencies are considered part of individuals and groups.
Excess Materials	Materials which are surplus to the requirements of a highway construction or maintenance operation. These materials should be used on site or re-used locally where possible.

Term or Acronym	Definition or Meaning
Factor-Specific Studies	Studies of the various aspects of the environment (see definition) undertaken during the MTO Class EA process to identify environmental sensitivities, determine potential impacts and anticipated protection measures, and determine the importance of any net environmental impacts of alternatives in accordance with the direction and guidance provided in MTO's Environmental Standards and Practices documents. A link to the documents can be found on MTO's public website.
Footprint	The physical area occupied by a facility. i.e., area of land covered by the existing roadbed.
Freeway	Free ways are controlled access median divided highway facilities with grade separated crossings and interchanges (i.e., QEW and 400 series highways).
Grade Separation	A vertical separation between two or more roads or a road and a rail crossing allowing one to surmount the other.
Group Project	A project that falls under the Class EA.
High Occupancy Vehicle (HOV) Lane	A roadway lane designated for use only by vehicles with a specified minimum number of occupants, usually two or three. High Occupancy Vehicle (HOV) lanes can also be opened to buses, or others using Green Vehicle Plates or who have paid a toll on High Occupancy Toll (HOT) lanes.
Highways	Highways are roadways under the jurisdiction of MTO including King's highways, secondary highways and tertiary roads. This includes all components, i.e., structures, drainage works, traffic and safety devices or any other structure incidental thereto, and any part of which is intended for or used by the general public for the passage of vehicles and includes the area between the lateral property lines thereof.

Term or Acronym	Definition or Meaning
Highway Facilities	Any facility associated with a provincial highway including service, maintenance, and operations facilities such as patrol yards, Commercial Vehicle Inspection Facilities (CVIF), winter maintenance facilities, rest areas, commuter parking lots, travel information centres and service centres and can include projects and activities undertaken by Local Road Boards as defined under the *Local Roads Board Act*.
Impact Management Measures	Measures which can lessen potential negative or enhance positive environmental impacts. These measures could include mitigation, compensation, or community enhancement.
Indigenous Community	See definition for Aboriginal Community.
Individual Environmental Assessment	An environmental assessment for an undertaking to which Part II of the *Environmental Assessment Act* (provincial) applies and which requires formal review and approval under the Act.
Individuals and Organizations	A broad term meant to capture all persons or organizations who may have an interest or concern in a project. Individuals and organizations may include interested persons, external agencies, Indigenous people or communities, interest groups, property owners, and businesses.
Interchange	The intersection between two roadways at different levels with structures and connecting ramps for traffic turning between them.

Term or Acronym	Definition or Meaning
Interested Persons	Individuals or organizations with an interest in a particular undertaking often include neighbours and individuals, environmental groups or clubs, naturalist organizations, agricultural organizations, sports or recreational groups, organizations from the local community, municipal heritage committees, ratepayers associations, cottage associations, Indigenous communities and organizations, Francophones and businesses.
Issues Resolution	A general process the proponent uses to resolve issues raised by individuals and organizations through undertaking a project. The process offers an opportunity to mediate to reach consensus and build collaboration in attaining a solution.
Like for Like Replacement	Replacing a new feature with one that is virtually the same as the original. Examples include a replacement of a culvert with a new one of the same size, replacing a lighting system, or repaving a roadbed without changing the function of the road.
Master Plans	Master Plans are long range transportation plans, integrating transportation infrastructure requirements for present and future land use with environmental planning principles. These plans examine the whole provincial transportation infrastructure system in order to outline a framework for planning for subsequent projects and / or developments. Transit infrastructure, and that of other jurisdictions (i.e,. federal / municipal / international / private), is included in Master Transportation Plans where sufficient information is available. Transportation Master Planning is done outside of the Class EA process as part of Needs Assessment.
MECP	Ministry of the Environment, Conservation and Parks
Median	The portion of a divided highway separating oncoming traffic (space, barrier or combination).

Term or Acronym	Definition or Meaning
Mediation	A dispute resolution process in which a neutral third party (mediator) who is acceptable to all parties assists disputants in reaching a mutually acceptable agreement. The mediator has no authority to impose a settlement and participation in the process is voluntary.
Mitigation Measure	A measure that is incorporated into a project to reduce, eliminate or ameliorate detrimental environmental impacts.
Monitoring	The activities carried out by the proponent after approval of an undertaking to determine the environmental impacts of the project ('impacts monitoring'). Monitoring can also refer to those activities carried out by MECP to ensure that an applicant complies with the conditions of approval of the class environmental assessment ('compliance monitoring'). Effectiveness monitoring is a third type of monitoring in which a proponent evaluates how effectively its class environmental assessment is working in the planning and implementation of its class environmental assessment projects.
MTO	Ontario Ministry of Transportation
MTO Class EA	MTO's Class Environmental Assessment document for provincial transportation facilities
MTO Class EA Project	An undertaking that does not require any further approval under the *Environmental Assessment Act* if the planning process set out in the class environmental assessment document is followed and successfully completed.
MTO Environmental Standards and Practices (ESPs)	A comprehensive set of technical guidance documents addressing all environmental requirements and factors, and developed in partnership with DFO, MNRF, and others. A link can be found on MTO's public website.

Term or Acronym	Definition or Meaning
Net Environmental Effect	The estimated or actual environmental effect after application of environmental protection measures.
New Route	New provincial transportation facility created where no such facility existed previously within an identified corridor.
Notice of Commencement	A formal notice shared publicly via a website or other means to mark the initiation of a Class EA process. The Notice provides basic information about the project, any known consultation opportunities, and contact information for the proponent. The Notice is to be sent to MECP with the required materials. (i.e., project information form)
Notice of Completion	A formal notice shared publicly via a website or other means to mark the completion of the TESR for a project. The Notice will provide contact information for the proponent and the final date for the end of the 30day review period.
Planning	The first part of MTO's planning and design process for projects where the fundamentals of the project are determined or reviewed. Planning is generally separate for Group A projects but can be combined with Preliminary Design as is common for Group B projects. Planning work is documented in the TESR.
Preliminary Design (PD)	The part of MTO's planning and design process for Group A, B and C projects where the proponent refines the project from the fundamentals to a level of detail specific enough to determine that the design project is technically and economically feasible to construct and that it is feasible to secure environmental permits, approvals and authorizations. Preliminary Design is the end of the Class EA process, and the work is documented in the TESR.

Term or Acronym	Definition or Meaning
Project	A specific undertaking subject to the Environmental Assessment Act, planned and implemented including all those activities necessary to solve a specific transportation problem or need.
Property Boundaries	The area designated for the operation of service, maintenance and operations transportation facilities, such as a ferry terminal, or patrol yard.
Proponent	A person, agency, group or organization that carries out or proposes to carry out an undertaking or is the owner or person having charge, management or control of an undertaking (defined in the *Environmental Assessment Act).* In the context of the Class Environmental Assessment Code of Practice, the proponent is the person, agency, group or organization that proposes to carry out a class environmental assessment project, rather than the development of the class environmental assessment itself.
Provincial Transportation System	Provincial highways; provincial freeways; provincial transitways (separate transit facilities directly associated with a provincial highway); provincial ferryboats; private controlled access toll highways that are not part of the King's Highway; other transportation corridors which have strategic and economic importance to the province; and the service, maintenance and operations facilities to support the above.
Publish	For the purposes of this document, publish means to make a document available to the public.
Realignment	Replacement or upgrading of an existing highway on a new or revised alignment.
Rehabilitation	Restoring a transportation facility to near original condition. Rehabilitation is often done to extend the functional life of a facility.

Term or Acronym	Definition or Meaning
Repair	Restoring a transportation facility to a safe condition after damage has occurred. Repairs may be done as part of routine maintenance, to extend the life of a facility, or after an emergency situation.
Roadbed	The graded portion of a highway or road usually considered as the area between the intersections of top and side slopes upon which the base course, surface course, shoulders, and median are constructed.
Roadway	That portion of a highway which is improved, designed or ordinarily used for vehicle travel, inclusive of the shoulder.
Route Alternatives	Location alternatives within a provincial transportation corridor.
Route Planning	The extensive planning of the placement of highway systems.
Safety	Refers to the methods and measures used to prevent road users from being killed or seriously injured. Examples include lighting, medians, etc.
Screening Criteria	A set of criteria to review projects against to consider if they are exempt from the Class, or should remain in Group C.
Screening Evaluation	A process that reviews the project considering each of the screening criteria. The results of the evaluation are contained in the Table A1 and should be kept on file for those that are exempted through review.
Statement of Environmental Values	Each of the ministries subject to the Environmental Bill of Rights has a Statement of Environmental Values (SEV). The SEV is the framework used by the MTO when it makes decisions that may affect the environment. Each ministry has its own SEV, reflecting the environmental issues and considerations specific to its own mandate. The SEVs for MTO and each of the ministries subject to the EBR are published on the Environmental Registry.

Term or Acronym	Definition or Meaning
Study Area	The study area is the broad area within which information is to be collected for the environmental factors. Except where a specific factor area is more explicit through the Environmental Standards and Practices documents, it includes all lands potentially impacted / disturbed by the proposed transportation facility within the proposed right of way / property bounds plus the following: • access roads, detours, staging and storage areas, directly and indirectly impacted • areas of other works and activities associated with the construction and, • adjacent lands, when impacts may occur, to a reasonable distance. When early in the Planning Stage, it is often referred to as the preliminary study area or the analysis area.
Study Design Report (SDR)	A report prepared for complex projects that details the results of the evaluation of Alternatives To and the consultation plan for subsequent phases of the Class EA process. The proponent determines the need for preparation of an SDR.
Traffic Capacity	In general, it is the maximum sustainable flow of traffic passing in a time period under favourable road and traffic conditions.
Traffic Access	The ability of users in vehicles to reach desired destinations.
Transitway	A separate transit facility directly associated with a provincial highway. The transit right-of-way may be shared with a highway right-of-way.
Transportation Environmental Study Report (TESR)	The report prepared for all Group A, B and C class environmental assessment projects which describes how the class environmental assessment project was planned to meet the requirements of the approved class environmental assessment parent document.

Term or Acronym	Definition or Meaning
Transportation Environmental Study Report Addendum (TESR Addendum)	This is a supplement to the TESR to document the key decision made and consultation undertaken by the proponent to support making significant changes to an approved Group A, B, or C project.
Transportation Environmental Study Report Review (TESR Review)	A review undertaken when a change is proposed to the completed TESR, or an extended period of time (10 years) has elapsed since the TESR completion. A TESR Review may lead to a TESR Addendum.
Transportation Needs Assessment (TNA) Process	The collection of different programs, studies, etc. that are part of the ongoing management and administration of the transportation system by the province.
Treaty Rights	Refer to rights that are included, either explicitly or implicitly, in a treaty entered into by one or more groups of Aboriginal people and the Crown. The scope is determined by the wording of the treaty, informed by the intentions of the parties when the treaty was entered. They may also include additional rights or commitments such as the creation of reserves and treaty payments. There are historic treaties and there are modern day treaties (known as land claims agreements). In Ontario, almost all historic treaties are understood to have included the right of Aboriginal signatories (and, by extension, their successors) to hunt, fish, trap, and gather throughout their traditional and/or treaty territories. The courts have found that oral promises can form part of a treaty and give rise to treaty rights. Treaties are also not frozen in time; modern activities that are the logical evolution of traditional activities may also be protected.
Twinning	The addition of one or more lanes to a highway facility where the new lanes are on their own alignment separated from the existing lanes by a median or other technique and substantially following the existing right-of-way.

Term or Acronym	Definition or Meaning
Undertaking	An enterprise, activity or a proposal, plan, or program that a proponent initiates or proposes to initiate - see Class Environmental Assessment Project (*Environmental Assessment Act*).