Preliminary Design and Class Environmental Assessment

Wolfe Island Ferry and Docking Improvements

Class Environmental Assessment

G.W.P. 4061-14-00

STUDY DESIGN REPORT

March 2016
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Ontario

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1. INTRODUCTION

The Ministry of Transportation (MTO) has retained Morrison Hershfield Limited to conduct a Preliminary Design and Class Environmental Assessment Study for Wolfe Island Ferry and Docking Improvements. The project is located in the Township of Frontenac Islands and the City of Kingston, within the County of Frontenac. The project will address short term and long term needs, within the 20 year planning horizon, for the Wolfe Island Ferry and will build on the 2011 Wolfe Island Transportation Planning Study. The Wolfe Island Transportation Planning Study (2011) was a planning study to identify needs and review solutions within a twenty year time horizon. The study recommended that a second ferry to Wolfe Island be provided to increase capacity for the next 20 years. Beyond 20 years a study should be undertaken to examine the feasibility for a bridge connection.

The Ministry is moving forward with a Preliminary Design and Class Environmental Assessment Study for increasing capacity of the Wolfe Island ferry services via a second ferry, and associated ferry dock/mooring improvements as recommended in the 2011 Planning Study.

Improvements that will be examined at existing terminals, both on and off shore, may include changes to the marshaling areas, larger dock/mooring facilities, improved pedestrian and cycling facilities, including terminal facilities. The existing three terminals are located in Kingston, and Dawson Point and Marysville on Wolfe Island. The Ministry will also look at any potential new terminal locations that are available. Improvements to intersections impacting the marshaling at the terminals will also be considered.

The study will follow the approved environmental planning process for Group “A” projects under the Class Environmental Assessment for Provincial Transportation Facilities (2000). Opportunities for public input will be provided throughout the study, including two rounds of Public Information Centres.

This Study Design Report (SDR) is being prepared to meet Group “A” Class Environmental Assessment (Class EA) requirements and outlines the process to be followed to generate, evaluate and select preferred alternatives.

1.1 Study Area

The study area, as shown in Figure 1, covers lands within the Township of Frontenac Islands and the City of Kingston, within the County of Frontenac. The study area includes three established ferry terminals: Kingston Terminal in the City of Kingston; Dawson Point Terminal on Wolfe Island; and Marysville Terminal on Wolfe Island. The Ministry will also look at any potential new terminal locations that are available.
The City of Kingston is primarily an urban setting incorporating residential, industrial and institutional zones. Wolfe Island is primarily comprised of agricultural lands with the shoreline developed for residential use, including both year-round and seasonal dwellings. A large wind farm, consisting of 86 wind turbines spread out over the western portion of the island, is also found on the island.

Wolfe Island is located in the St. Lawrence River at the river’s westerly extents. The St. Lawrence River drains water out of the Great Lakes and flows into the Atlantic Ocean. The near shore aquatic ecosystems within the study area have been influenced by agricultural activities and shoreline disturbances related to boat use. Most of the vegetation in the study area has been influenced by human activities. There are also numerous wetlands located within the study area, primarily located on the shorelines.

[Diagram of Wolfe Island showing the terminals]

**Figure 1: Key Plan**

Current operations for the Wolfe Island Ferry use three separate terminals, one in Kingston (mainland) on The Tragically Hip Way (known as the Kingston Terminal) and two on Wolfe Island. Marysville is the commercial and tourist centre on Wolfe Island and its terminal is therefore the main island terminal and is used primarily during the summer, fall and spring. However, under certain conditions, the ferry is unable to use the Marysville terminal. Typical conditions which make Marysville Terminal inaccessible include low water levels or the presence...
of significant ice. Water depth approaching the Marysville terminal is approximately 3.3 metres at its shallowest point. The current ferry in use, the Wolfe Islander III, requires 2.75 metres of water to operate. This relatively small amount of clearance can force the ferry to divert to the deeper Dawson Point terminal east of Marysville when conditions are unfavorable (such as drought or ice). Dawson Point terminal is located approximately 4 km from the Marysville downtown. A bubbler system is used during winter operations to keep access to the Dawson Point terminal open. No bubbler system is used to keep Marysville clear of ice. Consequently, the Marysville terminal is not used during ice-in conditions, generally from mid-December to mid-April.

No matter which terminal is used on the Wolfe Island side, the ferry operates on the same schedule. It takes roughly 15 minutes to unload and load the vessel and 15 minutes to transit between terminals, making it possible to make a crossing every 30 minutes. There is generally no difficulty in maintaining the schedule except when an emergency vehicle requires an immediate crossing. The first scheduled crossing leaves at 5:45 a.m. from Wolfe Island while the final crossing leaves from Kingston at 2:00 a.m. Two lanes of vehicles are unloaded at a time at the Kingston terminal, with only one lane on Wolfe Island due to road width limitations; loading is always a single lane at a time.

1.2 Study Background

The Wolfe Island Transportation Planning Study (2011) was a planning study to identify needs and review solutions within a twenty year time horizon. The outcome of that study was a sustainable transportation plan intended to improve access between Wolfe Island and the mainland (City of Kingston). Two main types of planning alternatives were examined to address the identified need for improved vehicle capacity: ferry and fixed link alternatives.

After evaluating the various planning alternatives, it was recommended that the ferry alternative be carried forward for further examination. Fixed-link alternatives were not recommended due to a variety of factors. Although a fixed-link would provide very fast crossing time, significant vehicle capacity, improved emergency response times, and the lowest 20-year planning horizon cost, the alternative is dependent on significant upgrades to infrastructure and would result in greater environmental impacts. The proposed fixed-link alternatives were not as accommodating to pedestrians or cyclists, as the fixed link crossing locations did not have the same existing access to transit and bike lanes. Public consultation also raised concerns of the island’s community character which may be affected by the introduction of a fixed-link. Based on these factors the 2011 Planning Study did not recommend a fixed-link as a solution to accessing Wolfe Island. The process with which the 2011 Planning Study evaluated these alternatives is discussed in Section 3.1.
The 2011 Planning Study recommended improvements to the existing ferry terminals to support dual ferry operations with the introduction of a new vessel that could handle 75 vehicles. Specific recommendations included:

- Dual-vessel ferry operations;
  - A new, more efficient vessel between Kingston and Dawson Point terminals would operate year-round with a 75-vehicle capacity. This vessel will be procured by the Ministry under a separate assignment but information on dimensions and modes of operation will be provided to inform this study.
  - The Wolfe Islander III, the current vessel in use, would continue to operate between Kingston and Marysville, and between Kingston and Dawson Point when ice/water conditions preclude operations at Marysville (similar to current operations).
- Marshalling area improvements at all three locations, including improvements to queueing commuter parking, and site circulation;
- Dock/mooring improvements at Kingston and Dawson Point terminals to accommodate the proposed 75-vehicle ferry;
- Improving pedestrian and cyclist passenger amenities at the three terminals, and
- Intersection improvements at The Tragically Hip Way/Ontario Street in Kingston and Centre Street/County Road 96 in Marysville.

1.3 Purpose of the Document

This SDR outlines the planning process that will be followed during this Class EA study. In providing a focus for early and meaningful consultation, this SDR is an important element in the Environmental Assessment (EA) process for this study, incorporating the study principles and processes of the *Class Environmental Assessment for Provincial Transportation Facilities* (2000).

In addition to documenting the planning process, the SDR specifically addresses the following elements of the EA Process:

- The study area to be considered (See Section 1.1)
- The purpose of the study – problems and opportunities (See Section 2)
- The generation and evaluation of alternatives to the undertaking (See Section 3)
- The process to generate and evaluate alternative methods of carrying out the undertaking – design alternatives (See Section 3.2-3.6)
- The public and agency consultation process (See Section 4)
1.4 Study Process

The preliminary design for new ferry and docking improvements will be planned in accordance with a Group “A” project under the *Class Environmental Assessment for Provincial Transportation Facilities* (2000). The study process in relation to the overall MTO Class EA Process is shown in Figure 2. Figure 3 outlines the specific process to be followed during this study.

Two types of alternatives are required to be examined to meet the requirements of the *Ontario Environmental Assessment Act*; these include alternatives to the undertaking and alternative methods of carrying out the undertaking (design alternatives). The MTO Class EA refers to these as Planning Alternatives (alternatives to the undertaking) and Preliminary Design or Design Alternatives (alternative methods of carrying out the undertaking). These alternatives are fundamentally different in scope and nature. Planning alternatives (alternatives to the undertaking) consider a number of different approaches to deal with a given problem or opportunity and, once an approach has been decided upon, the design alternatives (alternative methods) look at different ways of applying the chosen approach.

As illustrated on Figure 2, the problems and opportunities (needs assessment) and evaluation of planning alternatives were completed as part of 2011 Planning Study. The focus of this study is to build upon the recommendations of the 2011 Planning Study and examine design alternatives. Public consultation is an integral component of the environmental assessment process. Two rounds of Public Information Centres (PICs) will be held throughout the study process to allow the public, agencies, government officials and other interested stakeholders an opportunity to review and comment on study details. Additional details on the Consultation Plan are outlined in Section 4.

Upon completion of the study, a Transportation Environmental Study Report (TESR) will be prepared. The TESR will be made available for a 30 day public review period that will be announced in local newspapers and on the study website. All affected government ministries/agencies, municipalities, property owners, interest groups and other individuals/groups on the study’s mailing list will be notified of the filing of the TESR. The notice will announce the beginning of the public review period and will notify the public of their right to submit a request for a Part II Order (“bump-up”) to the Minister of the Environment and Climate Change (MOECC) if concerns cannot be resolved in consultation with the Study Team. All interested persons will be encouraged to review the TESR and provide comments. If the MOECC decides to grant a “bump-up” request, then the project will be assessed as an Individual Environmental Assessment (EA) in accordance with the *Ontario Environmental Assessment Act*. 
Figure 2: MTO Class Environmental Assessment Process
Figure 3: Preliminary Design Process (Subject of this Study)
2. PROBLEMS AND OPPORTUNITIES

2.1 Study Purpose

The objectives of this study are:

- To identify existing deficiencies of the current ferry and docking facilities;
- To consider/evaluate all reasonable alternatives for increasing ferry capacity and docking improvements to address deficiencies and ultimately recommend a technically preferred alternative;
- To incorporate consultation with the public and with any interested or affected agencies/organizations into the preliminary design of the project; and,
- To identify and design a preferred alternative that has acceptable/mitigable effects on the natural/social/economic/cultural environment that can be implemented at an acceptable cost.

2.2 Problems and Opportunities

The Ministry of Transportation owns and operates the Wolfe Island Ferry Service between the City of Kingston and Wolfe Island.

The problems and opportunities for this study were identified as part of the 2011 Planning Study. The following summarizes this.

Ferry Service

The Wolfe Island Ferry operates on a year-round schedule using the ferry boat MV Wolfe Islander III completing a round trip between Kingston and the Wolfe Island roughly on an hourly interval between 5:45 a.m. to 2:00 a.m. the next day. The Wolfe Islander III has a current capacity of 55 vehicles and 300 passengers (including six crew members). During the period when the Wolfe Islander III is in the dock for servicing, the ferry boat from the Amherst Island Service, MV Frontenac II, which has a lower, 33-car capacity, is brought in to fill its place. MV Frontenac II can only dock at Dawson Point. Currently the ministry is mitigating this by funding a shuttle bus service to carry walking passengers to downtown Marysville.

Existing demand for the ferry is shown to be at or over capacity for weekday peak periods year-round and is over capacity for much of the day from June through September. Based on historic growth rates and the Township of Frontenac Island’s Official Plan, demand is expected to continue to increase to 2029. Using historic growth rates, peak demand is estimated to climb to 138-151 vehicles per hour. Although measures such as improved transit access and improving cycling and
pedestrian facilities could reduce demand, it is anticipated that the vehicle demand will continue to increase as development and tourism continue on Wolfe Island. As such, there is a need to increase access between Wolfe Island and the mainland.

Another limitation of the ferry service is the insufficient draft (which generally means the minimum depth of water required for the ferry to operate) and icing condition along the Kingston – Marysville route. This renders the Marysville dock inoperable in winter months. Each terminal experiences different deficiencies in terms of capacity issues.

**Ferry Terminals**

The Kingston Terminal has storage capacity for approximately 60 passenger cars and eight trucks. Separate truck parking allows ferry marshals to easily load the trucks into optimal positions. However, vehicles disembarking the ferry have inadequate lane storage to accommodate all vehicles disembarking the ferry when it is at or near capacity. This can cause delays both for ferry loading/unloading and at the intersection of The Tragically Hip Way and Ontario Street. The Kingston dock has a 2-storey administration building that provides information and washroom facilities for both crew members as well as the general public, along with a public waiting area and shelter for pedestrians waiting to board the ferry. The building at Kingston Terminal is also the office for operation personnel, main maintenance facility and parts storage that supports the Wolfe Island, Howe Island and Glenora ferries.

The Marysville Terminal has only a single lane of storage sufficient for nine cars on the ferry road. As a result, additional vehicles queue along the side of the westbound lane of County Road 96. There is also insufficient unloading storage of approximately 21 vehicles between the unloading ramp and the ferry road’s intersection with County Road 96. A “stop” sign at this intersection gives priority to the traffic on County Road 96, thus creating backups onto the terminal and slows the disembarking process. A commuter parking lot is provided at the nearby Sacred Heart of Mary Church. Apart from a glass shelter structure and some benches, there are no other existing amenities on the Marysville dock, observed during non-operating periods of this dock.

The Dawson Point Terminal has only a single lane of storage sufficient for approximately 23 cars. Cars in excess of 23 queue on the soft shoulder of the ferry terminal road. A commuter lot located adjacent to the dock has sufficient spaces for 40 cars; cars in excess of this number use the shoulder of the eastbound Dawson Point Road for parking. Several temporary aluminum container structures can be found at the dock, used as a heated waiting area for pedestrian travellers in cold weather months. The heated structure is moved to which every Wolfe Island terminal is currently in use. Portable toilets are also present at the Dawson Point terminal.
Both the Wolfe Islander III and Frontenac II are “roll-on, roll-off (RORO)” vessels with no side-loading abilities. The ramps of the boats are not just used by vehicles; pedestrians and dismounted cyclists use the same ramp to board and get off the boats as well. Although a low curb separates automobiles with walking passengers, the pedestrian and vehicular traffic are not properly channelled and are often mixed together, causing concerns in pedestrian safety.

Ferry Dock Structure

The ferry dock structures generally comprise a perimeter enclosure formed by contiguous steel or concrete piles equipped with proper fendering, mooring and guiding systems, to safely dock the ferry vessels. The inside of the enclosure is then filled with materials and the surface paved to provide running surfaces, parking and marshalling areas. At the docks on the island, additional dolphins in the form of circular off-shore structures, protected with fenders, are constructed to facilitate the mooring of the ferry boats. Docking ramps, as part of a hydraulically operated system with mechanical and electrical equipment, properly housed in concrete structures, are located at each dock for the operation of the boats. These structures are in various degrees of deterioration and their failure or improper functioning may jeopardize normal ferry operation.

New Ferry Boat Design

A new vessel will be acquired by the Ministry to meet the new capacity and pedestrian, cyclist safety requirements, and other amenities, as described above under a separate assignment, once environmental approval is obtained. A new ferry (that increases capacity) cannot be put in service until there is environmental approval to increase capacity. The design and operation parameters of the new vessel will be essential to the development of alternatives that will be considered during this study.

The ferry provides a crucial link to the island residents and tourists as it is the only mode of transportation between the City of Kingston and Wolfe Island. The opportunities of this study are:

- To provide a technically preferred alternative which will relieve capacity and provide greater access between the island and the mainland for residents and tourists;
- Complete a preliminary design for the technically preferred alternative that incorporates appropriate environmental mitigation; and
- Assist local municipalities in planning future land use and support continued economic growth within the Township of Frontenac Islands.

The Wolfe Island Ferry services are integrated with some City of Kingston transit services. In order to better facilitate the passage of tourists and residents travelling to and returning from Wolfe Island, City of Kingston transit services can help to relieve vehicle congestion through supporting pedestrian and cycling use of the ferry. These connections are supported by the City of Kingston.
in the 2010 Official Plan which supports the promotion of active modes of transportation and emphasizes pedestrian, cycling, transit and accessibility for residents and visitors. Improvements to integrated transit services would alleviate congestions associated with the ferry and reduce capacity issues. The City of Kingston’s Official Plan also encourages the ferry service to provide appropriate vehicle access, and areas for queueing, parking as well as pedestrian and bicycle access routes which should be integrated with the City’s transportation system.

The County of Frontenac’s Official Plan is also supportive of ferry improvements. This includes the intent to support and work with the Township of Frontenac Islands and the City of Kingston to improve access to the islands for vehicles, pedestrians and cyclists. Improved access to Wolfe Island is also featured in the Township of Frontenac Islands’ Official Plan.
3. ASSESSMENT AND EVALUATION OF ALTERNATIVES

As noted in Section 1.4 two types of alternatives are required to be examined to meet the requirements of the *Ontario Environmental Assessment Act/MTO Class EA*.

Planning alternatives (alternatives to the undertaking) were assessed as part of the 2011 Planning Study. The rationale for that assessment are summarized in Section 3.1. This assessment will be further documented in the TESR.

The main focus of this Class EA will involve the generation and evaluation of design alternatives and the development of a Preliminary Design for the Technically Preferred Alternative.

3.1 Planning Alternatives

Planning alternatives (alternatives to the undertaking) are defined as functionally different ways of addressing identified problems and opportunities. Planning alternatives were identified and evaluated during the 2011 Planning Study. The following summarizes the process and evaluation of these alternatives. Additional details can be viewed in the 2011 Report.

The first step in the Planning Study was to identify the functionally different ways to address the problem. This included:

- Do Nothing
- Land Use Restrictions
- Transit
- Transportation Demand Management/Transportation Systems Management
- Fleet Modifications/Improvement
- Route Modification
- Facility Improvements
- Fixed Link Crossing

The only item not recommended to be carried forward to the next stage was Land Use Restrictions, as it did not adequately address the study objectives. The remaining alternatives were carried forward because the alternative either by itself, or incorporated with other alternatives, addressed the study objectives.
From the alternatives carried forward a Long-List of crossing alternatives was developed. In total, 18 different crossing alternatives were generated. This included twelve ferry crossing alternatives and six fixed link alternatives. These alternatives are listed below:

### Ferry Crossing Alternatives
- Existing summer route between Kingston and Marysville;
- Existing winter route between Kingston and Dawson Point;
- Portsmouth to Simcoe North via a ferry, and Simcoe South to Wolfe Island West via a fixed link;
- Portsmouth to Marysville West;
- Kingston to Marysville West;
- Downtown West to Marysville West;
- Downtown to Marysville;
- CFB East to Dawson Point;
- CFB East to Knapp Point;
- Ravensview to Dawson Point;
- Ravensview to Knapp Point; and
- Ferry Road to Howe Island North via a fixed link, and Howe Island to Oak Point via a ferry.

### Fixed Link Alternatives
- Portsmouth to Wolfe Island West via Simcoe Island;
- Downtown West to Marysville West via Garden Island;
- CFB East to Dawson Point;
- CFB East to Knapp Point;
- Ravensview to Knapp Point; and
- Ferry Road to Oak Point via Howe Island.

A list of ancillary alternatives were also developed as part of the long list:

### Ancillary Alternatives
- Higher capacity vessel;
- Faster vessel;
- Dual vessel operation;
- Shallow draft vessel;
- Operation at multiple routes;
- Operate pedestrian ferry in tandem with automotive ferry/bridge;
- Dredge at Marysville to facilitate year-round operation;
- Transfer ferry service to municipality (if fixed link is constructed);
- Expand marshalling area by constructing on piers/filling into river;
Implement fare system;
Implement carpool incentive program;
Implement automated message signs;
Implement transit shuttle bus on Wolfe Island;
Improve pedestrian and cyclist passenger amenities;
Improve connections to transit at the mainland terminal; and
Provide integrated transit service with the City of Kingston.

As a result of a high level screening and comments from the initial round of PICs during the 2011 study, a short list of alternatives was created. The short list alternatives were evaluated further to determine the best alternative for a:

- Ferry service between Wolfe Island and the mainland; and
- Fixed link services between Wolfe Island and the mainland.

The best ferry services alternative was chosen to be dual-operation between Kingston and Marysville, with the option to use Dawson Point during winter operations. Through the evaluation process and public consultation, it was noted that alternatives which included a single higher capacity vessel were least desirable due to increased footprint impacts relative to alternatives with dual vessel operations. Therefore dual-vessel operations using both Marysville and Dawson Point terminals was selected as the preferred alternative. The benefits of this alternative included shorter wait times, multiple trips per hour, high accessibility to crossing locations, flexibility for emergency services, good pedestrian/cyclist/transit environment, lower environmental impacts, and lower impacts to the local economy. These benefits outweighed the cost premium when compared to other ferry alternatives.

The best fixed link alternative was chosen to be a fixed link between CFB East and Dawson Point, with a transit service to Marysville. The benefits of this fixed link over the other alternatives included minimized impacts to the natural environment, minimized impacts to residential properties, and significantly less out-of-the-way travel. These benefits also outweighed the cost premium of other fixed link alternatives.

After determining the best alternative for each, the best fixed link alternative was compared to the best ferry service alternative. Despite the factors which make a fixed-link a better alternative, such faster crossing time, significant vehicle capacity, improved emergency response times, and the lowest 20-year planning horizon cost, the alternative is dependent on significant upgrades to infrastructure outside the planning horizon and would result in greater environmental impacts. The best fixed-link also did not accommodating to pedestrians or cyclists as the CFB East location does not have the same access to public transit or bike paths that the current Kingston Terminal does. Public consultation also raised concerns of the island’s community character which could be...
affected by a fixed-link. Based on these factors the ferry alternative was recommended to be carried forward.

The 2011 Planning Study recommended improvements to the existing ferry terminals to support dual ferry operation with the introduction of a new vessel that could handle 75 vehicles. Specific recommendations included:

- Dual-vessel ferry operations;
  - A new, more efficient vessel between Kingston and Dawson Point terminals would operate year-round with a 75-vehicle capacity.
  - The Wolfe Islander III, the current vessel in use, would continue to operate between Kingston and Marysville, and between Kingston and Dawson Point when ice/water conditions preclude operations at Marysville (similar to current operations)
- Marshalling area improvements at all three locations, including improvements to queueing commuter parking, and site circulation;
- Dock/mooring improvements at Kingston and Dawson Point terminals to accommodate the proposed 75-vehicle ferry;
- Improving pedestrian and cyclist passenger amenities at the three terminals, and
- Intersection improvements at The Tragically Hip Way/Ontario Street in Kingston and Centre Street/County Road 96 in Marysville.

In addition, the study recommended the consideration of the following:

- Implementing Travel Demand Management measures such as priority boarding for HOV/green/small vehicles, a toll regime and a carpool incentive program;
- Intelligent Transportation System measures such as variable message signs and notification of ferry status via electronic media, coordinated with queue counters at the ferry terminals and status updates distributed by staff;
- Improved tourism signage to reduce unnecessary vehicle trips on the ferry;
- Implementing a transit shuttle between Marysville and Dawson Point when the Wolfe Islander III uses the Dawson Point terminal, with operating authority to be determined.

As previously noted, this study will build upon the work completed as part of the 2011 Planning Study. Specifically, the 2011 Planning Study will form the basis of the problem statement and generation/evaluation of alternatives to the undertaking. This study will focus on carrying forward the preferred planning alternative outlined above to the next level of detail and generate/evaluate design alternatives (alternative methods).
3.2 Alternative Methods (Design Alternatives)

The purpose of this stage is to examine specific design alternatives at each of the three terminal locations, as well as any potential new terminal locations that are available in order to select the alternative that provides the best set of benefits while attempting to minimize negative effects. This stage of the process will focus on the following study steps:

- Identifying significant study area features;
- Generating design alternatives for each ferry terminal location;
- Assessing design alternatives (including the refinement of evaluation criteria/measures);
- Evaluating and selecting a Technically Preferred Alternative for each ferry terminal location;
- Preparing the preliminary design of the selected Technically Preferred Alternative (including the identification of potential effects and development of mitigation measures); and
- Preparing and submitting.

3.3 Identification of Study Area Features

Data necessary to support the generation of alternatives will be collected from secondary sources, such as aerial photography, municipal Official Plans, information collected during previous MTO and municipal studies, including the 2011 Planning Study, as well as results and findings of investigations and calculations conducted as part of this study.

This information will be supplemented, as required, by data collected from field reviews, technical agencies, discussions with ministries, and interested groups and individuals. Additionally, field investigations to be completed by the Study Team relating to structural, traffic, electrical and marine engineering disciplines, as well as environmental geotechnical, land and underwater survey activities. These investigations will provide key information of each site location to assist in generating and evaluating alternatives.

One set of the crucial design parameter is the information regarding the new 75-vehicle vessel to be used on this service. The Ministry will be procuring the boat under a separate project, subject to this environmental assessment study. The Study Team will rely on information provided by the Naval Architect of the other assignment to provide key parameters such as boat dimensions, draft, modes of operation, access points for pedestrians and cyclists, mooring loadings, etc. in order to complete the study and preliminary design of the reconstructed ferry docks.
3.4 Generating Alternatives

The alternatives will be generated based on the following guiding principles:

- Resolve transportation and operational problems and take advantage of existing and future opportunities, recognizing the project needs;
- Minimize impacts on existing residential, institutional, recreational and commercial uses;
- Utilize existing infrastructure to the extent possible;
- Minimize impacts to natural and cultural heritage systems, (features, functions, systems and communities);
- Ensure cost-effectiveness in achieving the objectives with minimum cost;
- Compatibility with provincial and municipal policies and initiatives; and,
- Consistency with applicable provincial and industrial standards.

The objectives and rationale for generating alternatives will be to ensure not only that alternatives are efficient and meet technical objectives/design requirements, but also minimize/avoid impacts to significant environmental and study area features to the extent possible.

Alternatives will be generated for all three existing terminal sites as well as any potential new terminal locations that are available. For each site a number of reasonable alternatives will be generated. A ‘do-nothing’ option will also be generated which will include the necessary maintenance required to continue to operate the ferry service provided by the Wolfe Island III ferry boat under current conditions.

The generation of alternatives will meet the project objectives and will address a number of aspects key to ferry/terminal operations. The specific characteristics of each site will be taken into consideration to determine the extent of work required to meet the project objectives, such as property, depth of water, connectivity to local road network systems, environmental sensitivity, and new commuting and shuttle services to be introduced to the entire operation.

The alternatives will address:

- Ferry boat docking, mooring, loading and unloading, including those for agricultural equipment, pedestrians and cyclists, taking into consideration the different requirement for accommodating the existing and new vessels and current and projected meteorological conditions at each of the three docking locations;
• Ferrying routes, including adequacies of water depth at each route, scouring, sedimentation, de-icing and maintenance requirements;

• Connection of ferry terminals to municipal road network and proposed shuttle and bus services that may require special setups within the future docks;

• Servicing buildings and facilities, and supporting engineering works, such as stormwater and sanitary sewers, illumination, security measures, water, gas and electrical supply to the docks;

• Parking for public and staff, marshalling areas, including special requirements for trucks and movement of dangerous goods, markings and metering where needed;

• Durability and aesthetic considerations; and,

• Construction staging to manage both ferry boat and access road operations to minimize disruption to services and inconvenience to the public during construction of the proposed works.

The first round of consultation will be used to obtain input on the preliminary alternatives. Input received from this consultation will assist in refining the alternatives.

3.5 Assessment and Evaluation of Alternatives

The evaluation of alternatives is a two-step process. The first step (assessment) entails the identification of advantages and disadvantages associated with, or resulting from, the various alternatives under consideration. At this stage, each environmental feature is examined to determine the extent of impact. Net impacts are identified, which refers to the effects on the environment that remain after standard mitigation measures have been applied.

The second stage is the evaluation itself, which will be completed by applying an arithmetic method. This method is a quantitative assessment methodology that assigns weighted-scores to represent the likelihood or magnitude of potential impacts. It is a comparative analysis that builds upon the information obtained from the impact assessment stage in order to compare the advantages and disadvantages of the considered alternatives, and is a recognized practice for the evaluation of complex alternatives.

Under this method, the Study Team will develop a weighting scenario to assign a level of importance to the various factors, sub-factors, and criteria. Scores representing the potential impacts, or consequences, of each alternative are then assigned based on the impact assessment. The members of the Study Team completing the selection of scores and weights will be specialists in the specific factor area being assessed – i.e. an ecologist will be responsible for
assessing/evaluating natural environment impacts, a transportation engineer will be responsible for evaluating how transportation objectives are being assessed, etc.

Weights are then multiplied by scores to develop a weighted-score, and the alternative with the lowest overall weighted-score is selected as the Technically Preferred Alternative (TPA). A number of different weighting scenarios can be developed as sensitivity tests to determine how different weighting could affect the selection of a TPA.

The assessment and evaluation of alternatives for this study, including the application of the weighted scoring methodology, will be completed in the following steps:

- Develop evaluation criteria. These represent factors that will be used to measure and assess the differences between alternatives;
- Public review (PIC Round #1);
- Develop weighting scenario;
- Develop an approach to ‘score’ the level of impact of each alternative;
- Assess the impacts of the alternatives via weighted-scores;
- Selection of the TPA – highest ranked alternative after the application of weighted-scores;
- Sensitivity Testing;
- Public Review (PIC Round #2); and
- Presentation of a Recommended Plan.

**Evaluation Criteria**

Evaluation Criteria will be developed to assess the impacts of the alternatives based on technical considerations and the various components of the environment. The criteria will be grouped by the following factors:

- Environment (socio-economic, cultural, and natural);
- Transportation; and,
- Cost.

While these factor groups are the starting point for the evaluation, sub-factors and corresponding criteria will be further developed to assess the specific effects of the alternatives. The following table summarizes potential criteria.
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<th>Factors</th>
<th>Sub-Factor</th>
<th>Examples of Criteria</th>
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<td>Environmental</td>
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<td>o Community Impacts (Recreational, Institutional Facilities)</td>
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<td></td>
<td></td>
<td>o Noise</td>
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<td></td>
<td>Natural Environment</td>
<td>o Fisheries and Aquatic Ecosystems</td>
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<td>o Terrestrial Ecosystems</td>
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<td>o Groundwater</td>
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<td>o Surface Water</td>
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<td>o Air Quality</td>
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<td>Cultural Environment</td>
<td>o Cultural Heritage</td>
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<td>o Archaeology</td>
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<td></td>
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<td>o Built Heritage</td>
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<tr>
<td>Transportation</td>
<td>Transportation Objectives and Technical</td>
<td>o Vehicle capacity</td>
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<td></td>
<td>Considerations</td>
<td>o Pedestrian capacity</td>
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<td>o Separation of traffic</td>
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<td>o Marshalling impacts</td>
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<td></td>
<td></td>
<td>o Adherence to applicable Design Standards</td>
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<td></td>
<td>o Ferry operation requirements relating to new and existing vessels</td>
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<td></td>
<td></td>
<td>o Compatibility with the Transportation Network</td>
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<tr>
<td></td>
<td></td>
<td>o Durability of new facilities</td>
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<td></td>
<td></td>
<td>o Construction complexity (impacts to vehicles, pedestrians, etc.)</td>
</tr>
<tr>
<td>Cost</td>
<td>Cost</td>
<td>o Cost and Life Cycle Cost</td>
</tr>
</tbody>
</table>

Weighting Scenarios (Level of Importance)

In developing a weighting scenario, the Study Team will initially distribute a total of 100 ‘points’ among the factors listed in the above Table and another 100 ‘points’ between the sub-factors. The exact distribution of points between factors and sub-factors will be reached through consensus among the Study Team members. Specialists within the Study Team will then distribute another
100 ‘points’ among the identified criteria within their specialty factor, establishing the weights that will be applied at the scoring stage.

The Factor Weight represents the overall importance of a factor in relation to other factor areas; while the Sub-Factor Weight represents the overall importance of sub-factors within the factor areas. Factors and sub-factors may be judged to be more important/less important when compared to one another in assigning weights.

A variety of weighting scenarios can be developed as sensitivity tests to ensure that one factor, sub-factor, or criteria is not assigned a disproportionate level of importance in the overall evaluation.

**Approach to ‘Score’ and Assess the Level of Impact**

The specific impacts of each alternative will be assessed by the Study Team’s technical specialists. Effects can range from those that provide a benefit to the environment to those that are detrimental to the environment. Using information derived from field measurements, prediction models, secondary data sources, and other means as necessary, the technical specialists will assess the effect and score the criteria for each alternative. Each alternative will be given a score between 1 and 5 for each criteria. The score assigned to each criteria will be relative to the potential effect generated by that alternative, with 5 being poor performance of the alternative and 1 being good performance of that alternative.

**Selection of the Preferred Alternative and Sensitivity Testing**

The TPA will be selected by multiplying each alternative’s criteria scores with their associated weighting: the alternative with the lowest overall weighted score is considered preferred.

Sensitivity tests are performed in recognition of the fact that the scope of the evaluation and the determination of weights for the evaluation criteria are a matter of some professional judgment – i.e. the nature of the evaluation is sensitive to the weights assigned to each criterion. A number of separate sensitivity tests will be run to see what, if any, factors would cause a change in the TPA. This will provide a further level of confidence in the evaluation process before a TPA is recommended to be carried forward and presented to the public during the second round of PICs.

If the results of the arithmetic evaluation are very close, the Study Team may go back to reexamine the raw data from the assessment to explore the key differences among alternatives to confirm the TPA.
3.6 Preliminary Design of the Preferred Alternative

A Preliminary Design will be prepared for the Technically Preferred Alternative. During Preliminary Design, the environment and effects on the environment that will be caused or might reasonably be expected to be caused will be identified.

The Preliminary Design will be developed to a level that will allow MTO to accurately assess environmental impacts, as well as property impacts and overall constructability.

Approval requirements, mitigation or compensation measures and enhancement opportunities will also be addressed with applicable agencies and other relevant stakeholders. The identification of mitigation measures will be developed in the context of all relevant technical guidelines. Appropriate technical and economically feasible mitigation measures will be developed for specific characteristics and sensitivities of environmental features, appropriate to the significance (e.g. magnitude, duration, certainty) of the potential impact.

Mitigation measures will be developed in consultation with appropriate agency staff and stakeholders. Mitigation measures could also include recommendations for a monitoring program, where warranted.
4. PUBLIC AND AGENCY CONSULTATION

One of the intentions of the EA Act is to ensure that, from the earliest stages of planning, decisions are made after careful consideration of environmental benefits and impacts. Consultation with interested and/or affected parties is an essential part of this planning process and provides a mechanism for the proponent to identify and respond to issues before decisions are made and documentation is filed with the Minister of the Environment and Climate Change (MOECC).

Consultation will take place throughout the study process, including formal opportunities at significant study milestones as well as informal opportunities throughout the process. The consultation program for this study will ensure that the consultation principles of the Class EA are met.

The purpose of consultation activities conducted during this study is to present and address issues and concerns pertaining to the range and types of alternatives to be considered, and to seek input in the development of Class EA process commitments.

External agencies provide valuable support by identifying compliance requirements (laws, regulations, policies and programs) and issues or areas of concern within their jurisdiction. These groups offer valuable input and professional expertise, and are knowledgeable regarding local issues and can assist in the identification of interest groups that should be consulted. The following section discusses consultation with regulatory agencies, municipal staff, municipal councils, First Nations, property owners/tenants and the general public/interest groups.

The consultation process will provide the opportunity:

- To review and comment on the proposed study process, technical analysis, and public consultation process;
- To be made aware of the future opportunities to review the study progress and findings of the study at each of its stages; and
- To review and comment on alternatives.

This SDR has been developed early in the process to obtain input on the proposed planning process and consultation plan. Once finalized, consultation activities during the study are expected to be structured around obtaining input on the following two rounds of consultation.

4.1 General Public/Interest Groups

The public has a major role and responsibility in determining the success of a public consultation program. The extent to which the public participates, the issues they raise and how such issues
are resolved all influence the effectiveness of the consultation process. Consequently, nearby residents and ferry users will be included in the consultation process for this study, which is summarized below.

Public Notification

Public notification is an essential element in the EA process and will be provided at the following times:

- A “Notice of Study Commencement” (newspaper advertisement and mailing);
- A “Notice of Release of Draft Study Design Report” (newspaper advertisement and mailing);
- A “Notice of Public Information Centre 1” (newspaper advertisement and mailing);
- A "Notice of Public Information Centre 2” (newspaper advertisement and mailings); and
- A “Notice of Study Completion” (newspaper advertisement and mailings) announcing completion of the study and the availability of the Transportation Environmental Study Report for public review, including locations where the report is available.

The Notices will be published in the following newspapers:

- Kingston Whig Standard; and
- Kingston Heritage

For each key study milestone, notices and letters will be sent to those individuals, agencies and organizations on the mailing list that have identified interest in the study. An additional mailing list has been prepared based on the property assessment list provided by the Township of Frontenac Island. The list contains addresses for all property owners on Wolfe Island. This list will be used in addition to other stakeholder lists to ensure all Wolfe Island property owners stay informed throughout the study.

In addition, brochures will be distributed via Canada Post mail drop in advance of each PIC.

Study Website

A study website (www.wolfeislandferryea.ca) has been set up to provide information to interested parties and to provide a means to directly contact the Study Team via email at any time during the study. The website is an effective tool for making study information available.
The website will host all pertinent study information such as notices, displays from public meetings, final reports etc. The website will also include a “Contact Us” feature to allow the public to submit comments and questions.

Twitter

A twitter account has been developed for providing information to stakeholders. The Twitter handle for this account is @WolfeIslandEA. Tweets are posted on a regular basis and include current, relevant information regarding the study.

Twitter is used to effectively convey information to the public at large, however it is dependent on either those interested in the information being proactive and following the twitter account, or having other interested parties broadcast the information to their followers through re-tweeting the original message. To increase access we have contacted the municipalities and other Wolfe Island related twitter users in order to coordinate re-tweeting of the Wolfe Island Ferry EA’s tweets.

Community Advisory Group

A Community Advisory Group (CAG) will be formed. The objective of the CAG is to find a representative group of people to provide community perspectives. The CAG will:

- Act as a sounding board – a forum for discussing options and sharing ideas;
- Provide input on the direction and finding of the study from a community perspective; and
- Project a sense of broader community reactions and concerns, and how these might be addressed.

The intent is to form a group that has:

- 25-30 members; and
- A broad cross-section of representation, including:
  - Village residents;
  - Rural residents;
  - Village business;
  - Tourism business;
  - Recreational groups;
  - Cottage/Seasonal resident Association;
  - Agricultural interests, etc.

The proposed approach to eliciting members will be to:

- Send a letter to all property owners on Wolfe Island to ask them to contact us if interested in joining the group; and
Contact key members of the Wolfe Island community including the Township of Frontenac Islands Staff, MTO staff and known community groups and ask for a list of people who represent the above.

An independent facilitator will be retained to facilitate the sessions. A total of four (4) meetings will be held as detailed below:

- Meeting 1 – introduce study and group and discuss elements of the facility that are important to users to assist in generating alternatives (early Spring 2016)
- Meeting 2 – discuss alternatives and obtain input on the evaluation process (around the time of PIC 1)
- Meeting 3 – input on the evaluation and the selection of a preferred alternative (around the time of PIC 2)
- Meeting 4 – input on mitigation and finalize design (prior to preparation of Transportation Environmental Study Report)

Public Information Centres and Follow-up Activities

Two rounds of Public Information Centres (PICs) will be held at key milestones to present the study progress and receive comments. Each round will be held in two locations (one on Wolfe Island and one in the City of Kingston). These will be drop-in (open house) format where representatives of the Study Team are available to answer questions and discuss the study. This provides the opportunity for the public, agencies, affected property owners and stakeholders to review and comment on the study information to date.

The timing of the PICs will be arranged so that sufficient information about the alternatives will be available to provide for meaningful review and discussion and yet be sufficiently early enough to allow the Study Team to incorporate comments prior to finalizing recommendations. A separate session is proposed immediately prior to the PICs to allow First Nations, External Agencies and Municipalities to discuss the study with the Study Team before the public arrives.

The purpose of the first round of consultation will be to introduce the study, present and seek input on:

- An overview of environmental conditions and constraints;
- Study background and problem statement for the study; and
- The full range of design alternatives, any coarse screening, and the proposed approach to evaluate alternatives.

The second round of consultation is intended to present and seek input on:
• Comments/responses from PIC #1;
• Assessment and evaluation of alternatives;
• Preliminary design of the Technically Preferred Alternative for ferry and docking alternatives; and,
• A summary of potential effects and proposed mitigation measures.

Comment sheets will be available at the PICs to provide an opportunity for the attendees to submit comments, so that they can be considered as the study progresses.

Follow-up consultation activities will be held, as necessary, throughout the study. It is expected that these activities will be very helpful to facilitate additional dialogue and attempt to resolve any outstanding concerns and issues during the EA process. The format of these activities will be flexible to reflect the type of Study Team–stakeholder interaction required to address a particular issue.

Summary Reports for PICs, follow-up activities and other consultation events will be prepared and posted on the study website in a timely manner.

4.2 Government Agencies

Government agencies to be contacted during the study start up include:

• Ministry of Environment and Climate Change (MOECC)
• Ministry of Aboriginal Affairs (MAA)
• Ministry of Natural Resources and Forestry (MNRF)
• Ministry of Tourism, Culture and Sport (MTCS)
• Ministry of Municipal Affairs & Housing (MMAH)
• Ministry of Energy (MOE)
• Ministry of Agriculture, Food and Rural Affairs (OMAFRA)
• Ministry of Citizenship, Immigration, and International Trade (MCIIT)
• Infrastructure Ontario (IO)
• Ontario Provincial Police (OPP)
• Aboriginal Affairs and Northern Development Canada (AANDC)
• Transport Canada (TC)
• Fisheries and Oceans Canada (DFO)
Consultation with government agencies will involve reviewing, commenting and providing input to the environmental assessment study, the technical analysis and the ongoing comment/input to the consultation process. Liaising with representatives of provincial ministries and agencies will assist the Study Team in obtaining information on study area features, and allow for the exchange of pertinent study information.

Ministries and agencies will be kept apprised of study activities and be sent notices regarding all consultation activities (e.g. study commencement, each round of PIC, filing of TESR etc.). In addition, agency briefing sessions will be held before each PIC. Agencies will be invited to the agency sessions to review the PIC display material and to provide input into the study process.

It is recognized that certain agencies will have more interest in this study than others. Additional consultation activities (e.g. meetings, teleconferences, field visits) will be held with these agencies as required to ensure that the Study Team has a good understanding of potentially significant and sensitive issues early in the process, to resolve concerns, and to develop appropriate mitigation measures.

4.3 First Nations/Aboriginal Groups

Consultation with First Nations and Metis Communities will be undertaken in accordance with the Consultation with Aboriginal Peoples – Interim Directive (August 2009, updated April 2011).

The websites of the Ontario Ministry of Municipal Affairs (MAA) and Aboriginal Affairs and Northern Development Canada (AANDC) were reviewed to identify potential First Nation Communities who may have an interest in this study. Based on this review the following communities were identified as having a potential interest in the study:

- Mohawks of the Bay of Quinte;
- Mohawk Council of Awkwesasne; and
- Métis Nation of Ontario

As part of the notice of study commencement process letters will be sent to MAA and AANDC to see if they have any further advice with regard to First Nation’s communities to be consulted. In addition, letters will also be sent the above noted communities to understand their interests and assess if they have any issues with the study.
Given the nature of the study (improvements to an existing service and improvement to existing facilities), it is not anticipated that there will be many concerns identified. However, this will be better known based on the results of the initial notification. If there are issues and concerns, meetings, teleconferences and/or field visits may be warranted. If these activities are required, they will be led by the MTO PM with support from MH staff.

4.4 Municipal

The municipalities within the study area include:

- Township of Frontenac Islands
- City of Kingston
- County of Frontenac

The above listed Municipalities will be consulted through all phases of the study to obtain information on study area features, exchange study information and obtain input on study issues pertaining to each municipality.

A Municipal Advisory Committee (MAC) will be established and include membership from the Study Team, City of Kingston, County of Frontenac, and Township of Frontenac Island, as well as any others considered appropriate such as Utilities Kingston and the local Conservation Authority. The purpose of these meetings will be:

- MAC #1: Introduce the study and obtain information
- MAC #2: Review and discuss progress made up to 30% completion
- MAC #3: Review and discuss material to be presented at PIC #1
- MAC #4: Review and discuss results of PIC #1 and material for PIC #2

In addition to these meetings, offline discussions or meetings may be required with certain municipalities. These meetings will be held if required or requested by municipal staff. Minutes of all meetings will be prepared and will form part of the public record.

Presentations to local councils may be made to present the study and to discuss the Technically Preferred Alternative. The Study Team will secure a position on the agenda on the Council Meeting for this purpose if requested/required by elected officials, municipal staff, or members of the MAC.
4.5 French Language Services Act

The City of Kingston is a designated area under the *French Languages Service Act* and is thus subject to the requirements of the Act. Advertisements will be published in English and French and all other public material, with the exception of technical information, will be shown in both English and French. A fluent French speaker will also be present at all PICs.

4.6 Issues/Concerns and Approaches Toward Resolving Concerns

To understand the potential issues or concerns associated with this study, an extensive review and analysis of existing and future conditions is required. The possible issues that may develop will be grouped under the following factors:

- Natural Environment
- Social and Economic Environment
- Cultural Environment
- Cost
- Constructability
- Transportation

It is recognized that it may not be possible to resolve all issues and concerns to the full satisfaction of each interested party. The Study Team will strive to balance all issues, concerns and opportunities to identify an appropriate, economical and supportable solution. Where issues remain unresolved, they will be documented as such in the TESR. In addition, proposed commitments to mitigation and future steps will be outlined as appropriate. In the event of a "bump-up" request, the MOECC will take into account the final TESR, how the study was carried out, the overall study recommendations and the conditions surrounding any unresolved issues in making any decisions pertaining to a reclassification of this study.

4.7 Consultation Undertaken to Finalize the SDR

The Draft SDR was released for review on November 9, 2015 for a 45-day review period ending December 23, 2015. To facilitate input on this document, the following was undertaking:

- Notice of Study Design Report Review was published on November 5 and 7, 2015 in Kingston Whig Standard and Kington Heritage;
- Letters were sent to public and government stakeholders advising of the availability of the SDR;
The SDR was posted on the Project Website and made available at Township, County and MTO Offices and local libraries;

The first MAC meeting was held on December 4, 2015 to assist in facilitating comments on the SDR;

A meeting with Friends of Wolfe Island Ferry Service was held on December 4, 2015 to introduce the project, better understand local community issues and assist in facilitating comments on the SDR;

As of January 25, 2016 the study website has received over 900 individual IP address visits since its launch in September 2015. In total we have received over 40 letters, emails and telephone calls about the project. However only 5 were related to the SDR.

Table 1 summarize the comments received and how the SDR has been modified.
### Table 1: Study Design Report Comment Summary

<table>
<thead>
<tr>
<th>Group</th>
<th>Summary of Comment</th>
<th>Resolution</th>
</tr>
</thead>
<tbody>
<tr>
<td>City of Kingston</td>
<td>Indicated that minor changes are required to SDR references including the Official Plan date, adding a reference to cultural heritage and including information on enhanced consultation.</td>
<td>References adjusted as per the comment. Changes to Official Plan made in Sections 2.2. Addition of Cultural Heritage to Section 3.4. Enhanced consultation added to Section 4.1.</td>
</tr>
<tr>
<td>City of Kingston</td>
<td>Informed of the name change of Barrack Street to The Tragically Hip Way as well indicated that the City has no planned projects in the area and that past projects have required significant archaeological investigations.</td>
<td>Some references to Barrack Street were changed when referring to the intersection or the street. However, the reference to the ferry terminal in Kingston was changed from Barrack Street Terminal to Kingston Terminal.</td>
</tr>
<tr>
<td>Various Stakeholders</td>
<td>Suggestions for enhanced consultation.</td>
<td>Major enhancements include formation of a Community Advisory Group, establishing a twitter accounts, and mailing directly to all property owners on Wolfe Island (See Section 4.1).</td>
</tr>
<tr>
<td>Public</td>
<td>Requested information on statements made in Section 2.2 and Section 3.4 in regards to the required information on the new ferry design being essential to the development of the alternatives</td>
<td>No changes required</td>
</tr>
<tr>
<td>Public</td>
<td>Provided suggestion for alternatives relating to the Travel Demand Management and Intelligent Transportation Systems section In Section 3.1.</td>
<td>No changes required</td>
</tr>
<tr>
<td>Public</td>
<td>Highlighted the most important part of the study is the recommendation in Section 3.1 for &quot;dual-vessel ferry operations&quot;</td>
<td>No changes required</td>
</tr>
<tr>
<td>Public</td>
<td>Provided suggestions for alternatives relating to the features as Section 3.4.</td>
<td>No changes required</td>
</tr>
</tbody>
</table>
5. PROPOSED DOCUMENTATION

To provide a clear, understandable and traceable planning process, the information gathered in preparation for and during the study will be documented as follows:

1) Various working and technical papers will document the inventory and analysis of existing and planned future conditions (including identification of data sources, methodology, and their limitations). These will include but are not restricted to:
   - Fisheries and Aquatic Ecosystems Existing Conditions and Impact Assessment Reports;
   - Terrestrial Ecosystems Existing Conditions and Impact Assessment Reports;
   - Stage II Archaeological Assessment Report;
   - Marine Archaeology Report;
   - Heritage Impact Statement;
   - Noise Assessment Report;
   - Phase I Environmental Site Assessment Report;
   - Landscape Design Technical Memo; and
   - Checklists, as per Environmental Standards Guide Requirements.

2) A Transportation Environmental Study Report (TESR) will document the following:
   - Study objectives;
   - Study process;
   - Analysis and evaluation of alternatives;
   - Study specific and related work;
   - Significant transportation engineering issues;
   - Significant environmental issues;
   - Alternatives developed and evaluated;
   - Consultation (initiation and formulation of the study process and the public/agency input into the study);
   - Changes made as a result of consultation;
   - The recommended Technically Preferred Alternative (incorporating environmental protection measures); and
   - Commitments to future action, including external approvals known to be required.
The TESR will be filed on the public record for government agency and public review for 30 days. Reference copies of the TESR will be made available at the MTO Regional and/or District office, and the MOECC Regional and/or District office. Copies of the TESR will also be available on the Study Website, at the Clerk’s office of the municipalities (Township of Frontenac Islands, City of Kingston, and County of Frontenac), and in other locally accessible institutions such as public libraries.

All affected government ministries/agencies, municipalities, property owners, interest groups and other individuals/groups on the study’s mailing list will be notified of the filing of the TESR. A newspaper notice will also be published in local papers to advise interested persons where the report may be reviewed for a 30-day review period.
6. MONITORING STRATEGY

The Study Team will develop a monitoring program for the implementation of the selected preferred alternative. The Transportation Environmental Study Report (TESR) will include a comprehensive list of all commitments made during the study to guide future environmental work and consultation as well as effects and compliance monitoring.

A monitoring strategy will be developed to ensure that the future implementation of proposed mitigating measures and key design features are consistent with study commitments outlined in the TESR and any subsequent environmental study documentation. The duration of the monitoring and follow-up programs will vary and will depend on the conditions of permits and approvals granted by regulatory agencies.
7. STATUTORY, POLICY, APPROVALS AND RELATED PLANNING CONTEXTS

Previous, concurrent or anticipated approvals, as well as legislation or planning strategies for related undertakings, may affect or bind the manner in which the EA process for the current study is conducted. In this section, some of those key contextual elements are highlighted as they affect this study.

7.1 Statutory Context

7.1.1 Environmental Assessment Act of Ontario

This study will follow the *Ontario Environmental Assessment Act* through the application of the MTO Class Environmental Assessment for Provincial Transportation Facilities (2000). The EA Act sets out the required elements of a Class EA and the process by which it may be accepted, reviewed and approved. The EA Act is administered by the Ontario Minister of the Environment and Climate Change. Projects and activities included under the Class EA do not require formal approval provided the process is followed.

If a Part II Order request is received, the MOECC will advise the requestor and the proponent of his/her decision to reject or accept the “bump-up” request within 45 days of its receipt.

7.1.2 Other Provincial Statutes

This study is subject to, and will be carried out in accordance with, all applicable provincial legislation, including the *Environmental Protection Act*, *the Endangered Species Act*, *the Ontario Heritage Act*, and the *Freedom of Information Act*.

7.1.3 Other Federal Statutes

This study is subject to, and will be carried out in accordance with, all applicable federal legislation, including the *Canadian Environmental Assessment Act*, *the Navigation Protection Act*, *the Species at Risk Act*, and the *Fisheries Act*.

7.1.4 Canadian Environmental Assessment Act Requirements

Under CEAA (2012) only certain designated projects, as listed in the new Regulations Designating Physical Activities, now require a federal environmental assessment; one of which is the “construction, operation, decommissioning and abandonment, in a wildlife area or migratory bird
sanctuary, of a marine terminal”. The City of Kingston, Lake Ontario and Wolfe Island are not designated under the *Wildlife Area Regulations* or *Migratory Bird Sanctuary Regulations*.

Consequently, it is unlikely that CEAA will be triggered; however, it will be monitored as the project progresses.

### 7.2 Government Policies Potentially Affecting Study

#### 7.2.1 Federal Policies

Federal agencies with an interest in the project will be represented in the stakeholder mailing list. Consultation with these agencies will be maintained throughout the planning process to ensure federal policies are complied with.

#### 7.2.2 Provincial Policies

Provincial agencies with an interest in the study are represented in the stakeholder mailing list. Consultation with these agencies will be maintained throughout the planning process to ensure provincial policies are complied with.

#### 7.2.3 Municipal Policies

Municipal transportation, development, and planning policies as exemplified in the Official Plans of the affected municipalities will be considered in the development, analysis and evaluation of alternatives. However, municipal policies are not binding on the provincial government.

#### 7.2.4 Formal Approvals Required

Ministerial approval may be necessary based on conditions or commitments as a result of the recommendations of this study (for example, permits to take water, Fisheries Act Authorization etc.).

Decisions regarding funding, construction timing or priority relative to other projects are made within the MTO and are not subject to a formal external approvals process. Such decisions will be addressed following completion of this study.
8. **FUTURE WORK REQUIRED AFTER STUDY COMPLETION**

The following outlines additional MTO work, approvals and studies required prior to construction.

### 8.1 Detail Design – Contract Package Preparation

Additional engineering studies will be undertaken to develop the detail design of the preferred undertaking. This will include geotechnical, structural and environmental studies. Additional consultation with agencies and the public will occur to resolve outstanding issues.

### 8.2 Detail Design – Environmental Requirements

Additional environmental investigations will occur at the detail design stage. These investigations will address the commitments to future work outlined in the TESR, develop detailed mitigation measures, and assist in obtaining external approvals. This work will be documented in a Design and Construction Report (DCR).

It is anticipated that the following permits may be required and agreements-in-principle will be sought for the permits and authorizations as required:

- Ministry of the Environment and Climate Change (MOECC) - if temporary dewatering is required during construction that exceeds 50,000 litres of water/day, a Permit to Take Water will be required from MOECC.

- Fisheries and Oceans Canada (DFO) – if identified, authorization under Section 35(1) of the Federal Fisheries Act must be obtained where proposed works may cause serious harm to Fish that are part of a commercial, recreational or Aboriginal fisheries, or to fish that support such a fishery.

- Transport Canada (TC) – Notice to the Minister must be provided by anyone who proposes to construct, place, alter, repair, rebuild, remove or decommission a work in navigable water as per the Navigation Protection Act schedule.

- Ministry of Natural Resources and Forestry (MNRF) – if identified, authorization under the Endangered Species Act must be obtained where proposed works may cause damage to a species, or its habitat, listed in the Schedules of the Act.

- Environment Canada (EC) – if identified, authorization under the Species at Risk Act (SARA) Section 73 must be obtained if proposed works may affect a listed wildlife species, any part of its critical habitat or its residences.
8.3 Property Acquisition

Property acquisition may only commence after the completion of preliminary design and upon receiving environmental clearance. Affected property owners are contacted throughout the study process. Contact with affected property owners prior to PIC’s will be made regarding impact to their lands. Meetings with impacted owners will be offered as part of the consultation process.

8.4 Advertise and Award Contract

To commence at the completion of detail design once the project is eligible for environmental clearance.

8.5 Commence Construction

To commence at the completion of detail design once the project is eligible for environmental clearance.