City of Kingston
Information Report to Council
Report Number 19-187

To:	**Mayor and Members of Council**
From:	**Sheila Kidd, Commissioner, Transportation & Public Works**
Resource Staff:	**Ian Semple, Director, Transportation Services**
Date of Meeting:	**July 9, 2019**
Subject:	**Wolfe Island Ferry Kingston Dock Redevelopment Project Update**

Executive Summary:

The Ministry of Transportation Ontario (MTO) is planning the reconstruction and expansion of the Wolfe Island Ferry dock located at 295 Ontario Street. This work is part of a broader project that includes the replacement of the current diesel-powered ferry with two larger electric-powered ferries, and the reconstruction and expansion of the Marysville dock on Wolfe Island.

The MTO released the draft detailed design of the Kingston dock site on June 12, 2019, attached as Exhibit A to this report, that includes a dual ferry dock, plans to extend the new dock into the lake by 63 metres, new passenger terminal building, expanded vehicle marshalling areas, removal of on-site commuter parking, expanded pedestrian and cycling facilities, and dredging of an in-water shoal area to permit ferry operation. Vehicle access to the site is being reconfigured to use Queen Street as an entrance, with the primary exit remaining at The Tragically Hip Way. This final design includes the construction, by the MTO, of a small extension of Queen Street to the east to accommodate the new site entry and the creation of a mid-block pedestrian access point through the site from Ontario Street.

The City, as a municipal stakeholder, provides comments to the MTO within the 30-day review period on the proposed design and construction approach. Staff from various departments have reviewed the proposed final design of the site and will provide comments and concerns as it pertains to site design, transportation, extension of Queen Street, stormwater management, site design, and environmental impact, the details of which are included in this report. The MTO is not compelled to adhere to the comments or recommendations provided by the City but has incorporated or addressed a number of concerns throughout the process especially as it pertains to active transportation.

The City will formalize the comments outlined in this report as part of a submission to the public review period and submit to the MTO. Moving forward, the City will continue to work with the MTO to understand implications for Ontario Street particularly as it relates to the intersection design requirements. The MTO has indicated that changes or upgrades required at the intersections are the responsibility of the City, however the full extent or cost is not presently known. Staff will bring a report to Council to outline the anticipated work when these details are finalized.

The process to extend the municipal right-of-way of Queen Street slightly east, to provide access into the ferry site and ensure municipal frontage for neighbouring private sites, is underway. MTO has included the City's requests for vehicle access and turn-around into the current design of the new eastern end of Queen Street that will be constructed as part of this project. The City will be responsible for the long-term operation and maintenance of this extended portion of Queen Street when completed.

To facilitate the construction of the new Kingston dock facility, the MTO is proposing a four-stage approach that would be completed over a number of construction seasons beginning on the Kingston site in winter 2020. Increased construction activity is anticipated as early as fall 2019 as in-water and Marysville Dock construction begin. The MTO has indicated that to expedite the work on both ferry dock sites (Kingston and Marysville) and to facilitate the dredging of the harbour area, the construction operations could be completed over extended hours, including 24 hours per day, and that a noise exemption is likely required. The MTO will follow the City's process related to requesting noise exemptions, which will include notification of the request being publicly posted to allow for public consultation prior to Council considering the matter through a recommend report. The City expects that there will be additional noise, congestion, and delays over a number of constructions seasons, beginning in fall 2019, as this large infrastructure project is completed. City staff will work with the MTO to best mitigate the impacts on the surrounding areas as the phasing details are finalized with the construction firm that is selected by the MTO to manage the on-site works.

City staff also note that a number of planned and potential projects being led by federal agencies and private development exist for the immediate area of the Kingston Ferry dock from 2019 through to 2024. These projects include the multi-year refurbishment of the Fort Frontenac wall beginning in fall 2019, refurbishment of the Frontenac Parking Lot in spring 2020, potential for long-term single lane closures on the La Salle Causeway, and private development opportunities at a number of adjacent sites.

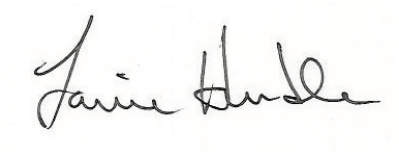
The City will continue to facilitate meetings between municipal, provincial, and federal agencies that are managing projects in this area with an aim to minimize disruption to the transportation network, emergency services, and surrounding residential areas while the various projects are underway. Using this information, the City will develop a communication plan to share information with City residents in a timely manner.

Recommendation:

This report is for information only.

Authorizing Signatures:

Sheila Kidd, Commissioner,
Transportation & Public Works



Lanie Hurdle, Acting Chief
Administrative Officer

Consultation with the following Members of the Corporate Management Team:

Peter Huigenbos, Acting Commissioner, Community Services	PH
Jim Keech, President & CEO, Utilities Kingston	Not required
Desirée Kennedy, Chief Financial Officer & City Treasurer	Not required
Deanne Roberge, Acting Commissioner, Corporate Enterprise Services	Not required

Options/Discussion:

In August 2011, the Ministry of Transportation Ontario (MTO) completed a transportation planning study for Wolfe Island that recommended that a second ferry be added to the service and that the associated existing docking areas on both the Wolfe Island and Kingston sites be upgraded to accommodate this increase in service.

The preliminary design work for the changes to the Kingston docking site began in 2016 as part of the next stage of the provincial environmental assessment (EA). This stage of the EA considered five different configurations with a technically preferred option, confirmed to proceed in March 2018 that outlined the conceptual design for the Kingston Ferry dock.

This preferred technical option, intended to have the lowest impact on neighbouring water lots, the natural environment, and the aesthetics of the waterfront community included the following design recommendations:

- Extending the new dock into the lake by 63 metres from the end of the existing dock
- New two-storey LEED certified terminal building with public washrooms and operations areas
- Separate vehicular ingress/egress to the terminal site
- Expanded marshalling area that allows for more efficient loading and unloading of ferry vehicles and allows for dual ferry operation
- Elimination of commuter parking areas within the site
- Expanded pedestrian and cycling facilities
- Improvements to drainage, stormwater and sewer systems as needed
- Enhanced lighting and passenger information
- Dredging of the shoal area in the Kingston harbor to meet new navigation requirements

The full studies including the conceptual drawings of the Kingston Ferry site can be found at the MTO's Wolfe Island Ferry Study EA website (Wolfe Island Ferry EA).

Detailed Design of the Kingston Ferry Terminal Site

Since the preferred technical design was determined, the MTO has been working on developing the detailed design that will ultimately be constructed at the current Kingston Ferry dock location. This process, which included a number of technical studies, a design workshop, and a number of stakeholder consultation points is nearing completion with the refined design along with the proposed construction phasing, included as Exhibit A in this report and at Wolfe Island Ferry Design Information - June 2019, released on June 12, 2019.

The refined design confirms the design from 2018 with the following changes:

- All vehicular access into the site will be via the Queen Street entrance while vehicles exiting the site will primarily use Tragically Hip Way with an option to use Queen Street
- Changes to the finger piers to provide more space on land

- Revised passenger pick-up/drop-off, pedestrian and cyclist access, including the addition of a mid-block connection from Ontario Street
- Removal of on-site accessible parking areas and changes to the passenger pick-up/drop-off areas
- Conversion of the north finger pier to an open deck structure
- Addition of a turning area at the new easterly extent of Queen Street to allow for Municipal maintenance and snow removal operation

A video showing a rendering of the planned upgraded Kingston Ferry dock is available on the MTO project website that illustrates these design items and the integration with Ontario Street (Ferry Dock Rendering).

To facilitate the construction of the new Kingston dock facility, the MTO is proposing a four-stage approach that would be completed over a number of construction seasons beginning in Winter 2020. The details of the four stages are outlined as follows.

Table 1: Proposed Staging and Planned Works for the Kingston Ferry Site Reconstruction

Stage	Proposed Works
1	• Construction will begin by expanding the footprint of dock and constructing the southern berth. • The existing marshalling, loading ramp, entrance, exit and passenger building will continue to be used but on-site parking for ferry users will be removed during this stage.
2	• Construction of the central portion of the dock. • Ferry will use the existing loading ramp and passenger building. • Existing marshalling area for vehicles will continue to be used during the day. • Temporary area will be created for nighttime marshalling of vehicles as construction activities are carried out on the existing marshalling area.
3	• The new southern berth will be used for ferry operation and construction on the northern berth will be completed. • All vehicles will enter/exit at Queen Street. • Existing passenger terminal will be demolished.
4	• Final vehicle marshalling areas and the primary ferry berth will be operational. • The vehicle entrance (Queen Street) and exit (The Tragically Hip Way) will be configured to final conditions. • New passenger building will be open. • Completion of the staff parking area and final landscaping of the site.

In addition to the construction of the Kingston Ferry site, there is an expectation that in-water material removal from the Kingston site and delivery of equipment and materials to support the Wolfe Island Marysville Dock construction site via the Kingston Ferry Dock will be required. As

such, the City expects that there will be additional noise, congestion, and delays over a number of constructions seasons, beginning in fall 2019, as this large infrastructure project is completed.

The MTO has indicated that, to expedite the work on both ferry dock sites (Kingston and Marysville) and to facilitate the dredging of the harbour area, the construction operations could be completed over extended hours, including 24 hours per day, and that a noise exemption is likely required. The MTO will follow the City's process related to requesting noise exemptions, which will include notification of the request being publicly posted to allow for public consultation prior to Council considering the matter through a recommend report.

Municipal Consultation and Comments

Throughout this process, the City has participated as part of a Municipal Advisory Committee to allow detailed review and comments to be provided from the perspective of the municipal and agency stakeholders. The City's participation as part of the advisory committee has included comments pertaining to the internal site configuration, impacts on the surrounding neighbourhood, stormwater, environment, and transportation network.

As a gateway site into Kingston's historic downtown, the redesign and redevelopment of the Kingston Terminal is very important to the City and the MTO acknowledged this through a stakeholder design workshop held in September 2018. Following the design workshop, the City was encouraged with some of the improvements that had been made to the plan, including the introduction of a mid-block connection from Ontario Street and additional information as to how pedestrian and cyclist movements will function on the site. The MTO also noted a commitment to using high quality materials for the buildings and landscaping at the terminal and making the terminal a place that welcomes people.

With the release of the detailed design on June 12, 2019, the City, as a municipal stakeholder, has been asked to provide comments within the 30-day public review period on the proposed design and construction approach. Staff from various departments have reviewed the proposed final design of the site and have the following comments and concerns as it pertains to site design, transportation, extension of Queen Street, stormwater management, site design, and environmental impact that will be provided as part of the formal submission to the MTO.

Active Transportation and Transit

The Kingston ferry site is well situated to accommodate active transportation users with the proximity to downtown and transit users with the co-location of an Express transit stop.

The addition of the mid-block pedestrian access and connection is a significant improvement to the design, as it allows better access and views into the site. The design drawings note that this will be the main pedestrian entrance; however, as the pathway design connects mid-block to the public sidewalk on Ontario Street, most people will be travelling either north or south, as there is no pedestrian crossing at that portion of Ontario Street. It is likely that pedestrians will be using the intersections of Queen Street and The Tragically Hip Way as the main points of access.

Staff note that the passenger pick-up and drop-off area shown in the south-central portion of the site is some distance from the new passenger building. While this may be the intent of the design, the City contends that many vehicles dropping off or picking up passengers may drive up directly to the passenger building before stopping/waiting in the space between the marshalling area and passenger building. Consideration could be given to having some space closer to the building for picking up and dropping off passengers, particularly persons with accessibility needs.

From a cycling standpoint, the design has included on-road cycling lane connections both into and out of the site from Queen Street. MTO staff have advised the City that they intend to have a place on the new ferry for the storage of bikes and that cyclists will have to walk their bikes on and off the ferry, a change from current practice. Accordingly, the cycling lane included on the north side of the site may not function as intended if cyclists exit the ferry to the south. No cycling facilities that exit to Queen Street have been included in this design.

Maintaining the Express transit stop adjacent to the site is very important to the City, as well as ensuring that there is a clear connection between the transit stop and the users of the ferry. The City will work with the MTO to relocate the existing transit stop and shelter to allow access to the Kingston Transit system. The addition of the mid-block pedestrian access point is well positioned to accommodate transit rider access in and out of the site.

Intersection and Lane Configurations

It is the understanding of the City that MTO does not anticipate making any changes to the Ontario Street corridors or intersections as part of the scope of the ferry dock project and that any upgrades to the existing intersection infrastructure is the responsibility of the City.

Accordingly, the City has reviewed the lane configuration for the primary entry point at Queen Street and exit point at The Tragically Hip Way and notes the following comments:

- As the City has previously noted to MTO, the future traffic signal priority for vehicles exiting the ferry will be evaluated in consideration of the City's transportation priorities along Ontario Street, particularly as it pertains to transit operation. Staff are supportive of the marshalling area design that allows the ferry to unload and load without reliance on vehicles exiting the site.
- The City does not support the encouragement of Queen Street as an alternative permanent exit point for vehicles leaving the ferry as the existing Queen and Ontario streets intersection is not presently configured or timed to accommodate large volumes of vehicles exiting from the ferry site and this could lead to significant delays along Ontario Street if vehicles exit at Queen Street must also be accommodated.
- The exclusion of a right turn lane at The Tragically Hip Way exit could lead to longer queuing within the MTO site. MTO has previously responded that they will monitor ferry operations in the future and make lane configuration adjustments as required within the MTO site however this could lead to future, unplanned changes at the intersection
- At present, there are no upgrades planned for either intersection adjacent to this site but staff notes that while the capital upgrades are expected to be minimal if the current configuration

of Ontario Street is retained, there may be significant operational delays that will need to be addressed.

To that end, the City is completing a transportation study of this area that includes traffic modeling of the two affected intersections and will use the draft designs provided on June 12 as the basis to complete this work and advise on any anticipated issues or capital upgrades required.

Extension of Queen Street

The final design of the Kingston ferry dock site includes the construction, by the MTO, of a small extension of Queen Street to the east to accommodate the new site entry. The proposed configuration satisfies the operations and maintenance requirements of the City. It is understood by the City that access to Queen Street as a municipal roadway for adjacent private landowners is being contemplated as part of the design and expected land transfer from the MTO to the City.

The MTO will need to ensure that the parking operation on private lands acquired is discontinued prior to the City assuming the parcels and the MTO will require a permit/license from the City to construct improvements on Queen Street as part of its project works. Additionally, the City will require a license over a portion of the MTO lands for continued operations and maintenance requirements once the construction is completed.

Stormwater Management

Stormwater management at the intersection of Ontario and Queen is presently challenged and the City has previously noted that any changes to the ferry site must not negatively affect this area. City staff will continue to work with this project to seek any possible improvements to the stormwater management and drainage in this area as part of these planned changes. Additional comments and discussion pertaining to stormwater can occur when detailed design information has been received from the MTO regarding the final changes.

Site Design, Ontario Street Site Frontage, and Interpretive Opportunities

The Ontario Street frontage of the Kingston Terminal site is an important gateway into downtown Kingston. Although it is essentially the rear portion of this waterfront property, the design of the elements of this portion of the site should present an attractive and welcoming front to the public. The mid-block connection that has been added is an important improvement to the design, as it allows better access and views into the site.

The drawings indicate that this area adjacent to Ontario Street contains the staff parking and maintenance area. While the City recognizes that there are operational requirements that MTO has to meet, it encourages the design and redevelopment to take into account the presentation of this portion of the site to the streetscape and to take measures to mitigate any visual impacts especially as it pertains to fencing and walls. Any required buildings on this portion of the property should not present a blank wall to Ontario Street, and should instead be designed to have some street presence and/or incorporate plantings or public art to mitigate any impact.

In terms of design materials, the City notes that the project team showed examples of types of paving, landscaping, and street furniture from Kingston's downtown, as well as some of the Kingston waterfront parks at the design workshop held with the Municipal Advisory Committee. It was noted that the main difference between the examples being shown were that the downtown-style materials were more in keeping with the historic nature of the core (e.g. black metal, granite curbs, etc.), while the examples of furnishings in some of the other waterfront areas were more modern in design (e.g. wood and metal). City staff would encourage MTO to use materials appropriate to the context of the site, even if it means that the terminals in Kingston and Marysville end up with slightly different materials. Staff would like to suggest that continuing the more historic palette of the downtown would be more appropriate for the Kingston Terminal, especially along the Ontario Street frontage.

Staff would also like to note the importance of lighting at the Kingston Terminal. While the City acknowledges the need for MTO to use lighting to address their operational needs, staff would encourage different types of lighting to address both pedestrians and vehicles, and note that the lighting levels on the site should not adversely impact adjacent properties.

Environment

The inclusion of electric powered ships as the planned ferry replacements allows for a reduction in GHG emissions and reduces the risk of petroleum spills at waterfront. This approach is directly aligned with the City's strategic priorities and is encouraged.

Staff have noted previous concerns with dredging of contaminated lake sediment on the Kingston side and noted the requirements for fish exclusion and sediment control within the work area. The MTO has indicated that sediment control best management practices will be used at the site.

Site Construction and Cumulative Impacts of Adjacent Projects

From a construction phasing standpoint, the MTO has indicated that the phasing plan is anticipated to allow the construction of the new ferry site to be fully contained within the property with minimal lane closures or encroachments into the municipal roadway.

During the third phase of the construction, when the existing exit point at The Tragically Hip Way is closed, all ferry traffic will be directed to exit at Queen Street. MTO has indicated that the City will be responsible for all traffic signal changes and upgrades at this intersection to allow this exit to accommodate ferry and existing traffic. The City is anticipating some minor equipment upgrades will be required and that the signal timing along the Ontario Street corridor will need to be modified.

Staff from various City departments, including Transportation, Engineering, By-law Enforcement, Environment, Planning, and Public Works will work with the MTO to best mitigate the impacts on the surrounding areas as the phasing details are finalized with the construction firm that is selected by the MTO to manage the on-site works.

City staff also note that a number of planned and potential projects being led by federal agencies and private development exist for the immediate area of the Kingston Ferry dock from 2019 through to 2024. These projects include the multi-year refurbishment of the Fort Frontenac wall beginning in fall 2019, refurbishment of the Frontenac Parking Lot in spring 2020, potential for long-term single lane closures on the La Salle Causeway, and private development opportunities at a number of adjacent sites.

The cumulative impact of these concurrent projects managed by a variety of different government agencies and private developers within a relatively small area is expected to have an impact on the transportation corridors of Queen and Ontario Streets and will contribute to increased noise in the area. City staff have convened an initial meeting of the government project stakeholders to share this information in June 2019 with the intent of setting up a regular meeting to ensure all parties are aware of the plans within the area.

Next Steps

The City will formalize the comments outlined in this report as part of a submission to the public review period and submit to the MTO.

Moving forward, the City will continue to work with the MTO to understand implications for Ontario Street particularly as it relates to the intersection design requirements at Queen Street and The Tragically Hip Way. The MTO has indicated that changes or upgrades required at the intersections are the responsibility of the City, however the full extent or cost is not presently known. Staff will bring a report to Council to outline the anticipated work when these details are finalized.

The process to extend the municipal right of way of Queen Street slightly east to provide access into the ferry site and ensure municipal frontage for neighbouring private sites is underway. MTO has included the City's requests for vehicle access and turn-around into the current design of the new eastern end of Queen Street that will be constructed as part of this project. The City will be responsible for the long-term operation and maintenance of this extended portion of Queen Street when completed.

The City will continue to facilitate meetings between municipal, provincial, and federal agencies that are managing projects in this area with an aim to minimize disruption to the transportation network, emergency services, and surrounding residential areas while the various projects are underway. Using this information, the City will develop a communication plan to share information with residents in a timely manner

Existing Policy/By-law:

Not applicable

Notice Provisions:

Not applicable

Accessibility Considerations:

The MTO is responsible for the internal site design to ensure provincial accessibility requirements are met. This project is not subject to the City's Facility Accessibility Design Standards (FADS).

All access points from the intersections and mid-block sidewalk connection into the site will adhere to City accessibility standards.

Financial Considerations:

There are no direct financial considerations with this report however there are a number of design items that are still in development particularly as it relates to the extension of Queen Street, intersection configuration, and traffic signal operation on Ontario Street at Tragically Hip Way, and stormwater management within the municipal right of way. The scope of these items will be better understood as the detailed design is finalized however any capital works required within the municipal right of way are not presently funded.

Contacts:

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Other City of Kingston Staff Consulted:

Paige Agnew, Director, Planning, Building & Licensing

Steve Biro, Property Specialist, Real Estate & Environment Initiatives

Sonya Bolton, Senior Planner, Planning, Building & Licensing

Deanna Green, Manager Traffic, Transportation Services

Tyler Lasko, Manager Design and Development, Engineering Services

Paul MacLatchy, Environment Director, Real Estate & Environment Initiatives

Debbi Miller, Manager Communications & Engagement, Communications/Customer Experience

Colin Wiginton, Cultural Director, Cultural Services

Exhibits Attached:

Exhibit A – MTO Information on Detailed Design for the Wolfe Island Ferry Dock Improvements

WELCOME

Detail Design for the Wolfe Island Ferry Dock Improvements

Public Information Centre
June 2019

Please Sign In

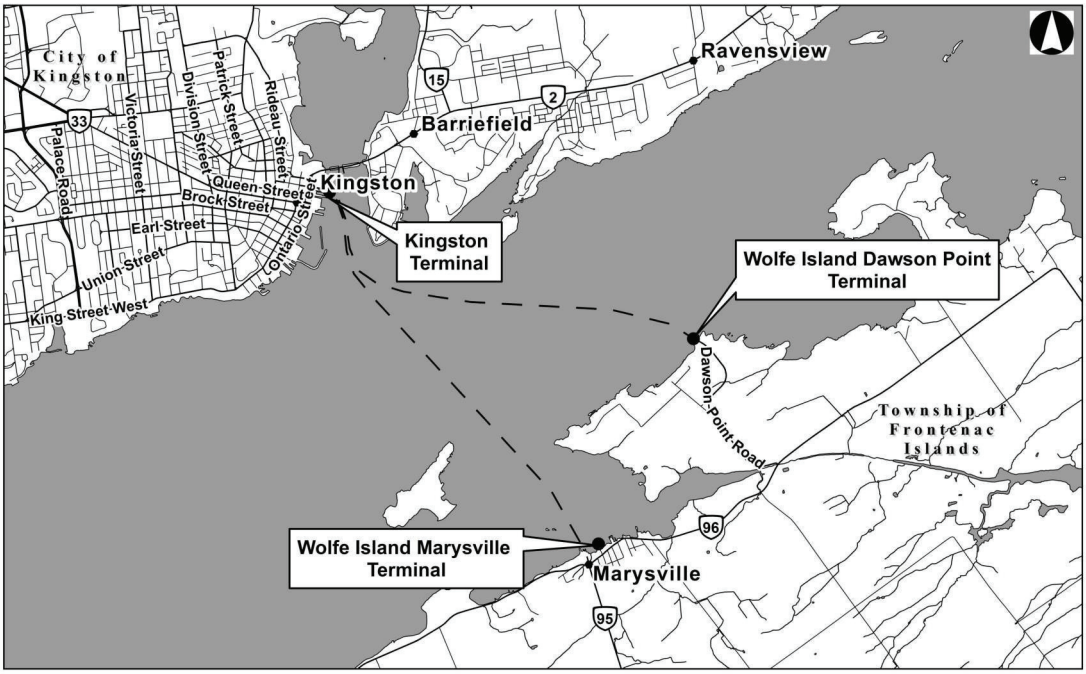
Ontario

Website: www.wolfeislandferryea.ca
Twitter: @WolfeIslandEA

MORRISON HERSHFIELD

PURPOSE OF THIS MEETING

Morrison Hershfield Limited has been retained by the Ministry of Transportation to complete the Detail Design for Wolfe Island Ferry Dock Improvements. The study includes the Kingston Dock in Kingston, and Dawson Point and Marysville Docks on Wolfe Island.



The purpose of this Public Information Centre is to present:

- Work completed since the Class Environmental Assessment.
- Design changes being considered.
- Construction staging.
- Proposed environmental mitigation measures and permitting requirements.
- Next steps.

You are encouraged to comment on this project by speaking with a member of the Project Team in attendance, and by submitting comment sheets. Members of the Public may also request to add their name and contact information to the mailing list to receive all future project communications.

BACKGROUND AND HISTORY

The Ministry of Transportation has completed numerous studies to identify the improvements required to address deficiencies for the Wolfe Island Ferry service. This included the 2011 Planning Study Report and the 2018 Transportation Environmental Study Report.

The 2011 Study was a planning study to identify needs and review solutions within a 20-year horizon. The 2011 Study recommended dual-vessel operation using the existing docks because of the following benefits:

- Shorter wait times.
- Multiple trips per hour.
- High accessibility to current crossing locations.
- Flexibility for emergency services.
- Suitable locations for origin-destination patterns.
- Better pedestrian/cyclist/transit access.
- Benefits to the natural/economic environment.

The purpose of the 2018 Preliminary Design and Class Environmental Assessment was to build on the recommendations of the 2011 Planning Study by examining design alternatives for each of the existing ferry docks to address existing deficiencies as well as to accommodate the increase in capacity to accommodate a second ferry.

The recommended alternative for each dock was presented in the 2018 Transportation Environmental Study Report. The report was filed with the Ministry of the Environment, Conservation and Parks and was available for a 30-day public review period. Environmental clearance to proceed with Detail Design was issued in March 2018.

PURPOSE OF THIS STUDY

The Detail Design study builds upon the Preliminary Designs for the Technically Preferred Alternatives as identified in the 2018 TESR. At the end of the design process, Design and Construction Reports (DCR) will be prepared to document the following:

- Any significant changes in existing environmental conditions from those documented in the Class EA.
- Refinements to the designs documented in the Class EA.
- Description of the final project design.
- Anticipated environmental impacts of the final design and commitments to mitigation measures to lessen those impacts.
- Description of the consultation program.
- Identification of all project approvals, licenses and permits that have been or must be obtained prior to construction.

The DCRs will be made available for a 30-day public review period during which comments and concerns regarding the detail design will be considered. Three DCRs will be prepared, one for Kingston Dock, one for the Marysville Dock and one for the dredging work.

This study is following the approved planning process for a Group “A” project under the MTO Class Environmental Assessment for Provincial Transportation Facilities, 2000 (Class EA).

WORK COMPLETED TO DATE

Since the completion of the Preliminary Design and Class Environmental Assessment in early 2018, the following items have been completed or are ongoing:

- Additional site investigations including fisheries and terrestrial ecosystems, geotechnical drilling, groundwater and soil contamination, and marine and land-based archaeology.
- Consultation with appropriate agencies regarding permits/approvals, design changes and appropriate mitigation measures.
- Identifying any changes required to the design since Preliminary Design (see Refinements to Designs board).

REFINEMENTS TO THE DESIGNS

Design Change	Justification
Electrification and Auto-mooring	The Ministry of Transportation announced in early 2018 that the new Wolfe Island Ferry would be fully electric. As a result several new components needed to be added to the docks including an extra utility building to house components of the charging infrastructure and the charging connection on the dock. Auto-mooring infrastructure will also be incorporated on the piers.
Dawson Point Staged Implementation	MTO has determined that the Preliminary Design for the Dawson Point Dock will not be implemented at this time. See Dawson Point Interim Improvements boards for more information.
Water Flow Mitigation	During the Environmental Assessment the public raised a concern about the potential impacts the extended dock at Marysville would have on water quality in the surrounding water lots. At the time, a water flow mitigation opening was proposed to address this issue. Additional modelling has been undertaken to determine the effectiveness of this opening. The modelling concluded that the opening would not improve existing conditions and that the extended dock would not make the existing conditions any worse. The opening is not cost effective and therefore will not be carried further into design.
Riverbed lowering method	During the Class EA it was assumed that the material resulting from lowering of the riverbed would be disposed of on land. After reviewing the requirements for on-land disposal during Detail Design it was determined, that depending on method of transport, it would add significant time, costs, and impacts to the local community. Therefore, MTO is exploring the opportunity of open water disposal so that two disposal options can be provided to the contractor for flexibility.
Marysville Dock	Mooring dolphins have been converted to a pier with a single dolphin. The finger pier provides access for maintenance and space for the auto -mooring system. Minor refinements have been made to the width of the pier to accommodate a larger utility building required to support electrification. An additional lane of marshalling has been added to reduce the incidences of vehicles marshalling on Main Street. See the Marysville design plan board for additional modifications.
Kingston Dock	Revised finger piers to provide more space on the dock to accommodate a larger utility building to support electrification. Reassignment of the exit lanes to optimize ferry unloading. Revised pedestrian and cyclist facilities to improve circulation. See the Kingston design plan board for additional modifications.

PROJECT IMPLEMENTATION

During construction it will be vital to keep the ferry operating on schedule while completing construction efficiently and reducing impacts to ferry users and the environment. In order to do this the project will be implemented in stages.

Marysville Dock - Wolfe Island

In order to complete construction more efficiently, service will switch to the Dawson Point dock while Marysville is under construction. Depending on the timing of tendering/award and restrictions on in-water work, construction could take up to 3 construction seasons. Lowering of the riverbed in Barrett Bay will need to be completed prior to completion of this dock.

Kingston Dock

The following boards depict how the project will be implemented at the Kingston dock.

Kingston Stage 1

Construction will begin by expanding the footprint of dock and constructing the southern berth while continuing to use the existing marshalling, loading ramp, entrance/exit and passenger building. Parking will be removed during this stage.

Kingston Stage 2

In Stage 2 the central portion of the dock will be under construction. Ferry service will continue to operate using the existing loading ramp and passenger building. The existing marshalling area will continue be used during day time and a temporary marshalling area, currently occupied by the gas station, will be used at night time while construction activities are carried out in the existing marshalling area.

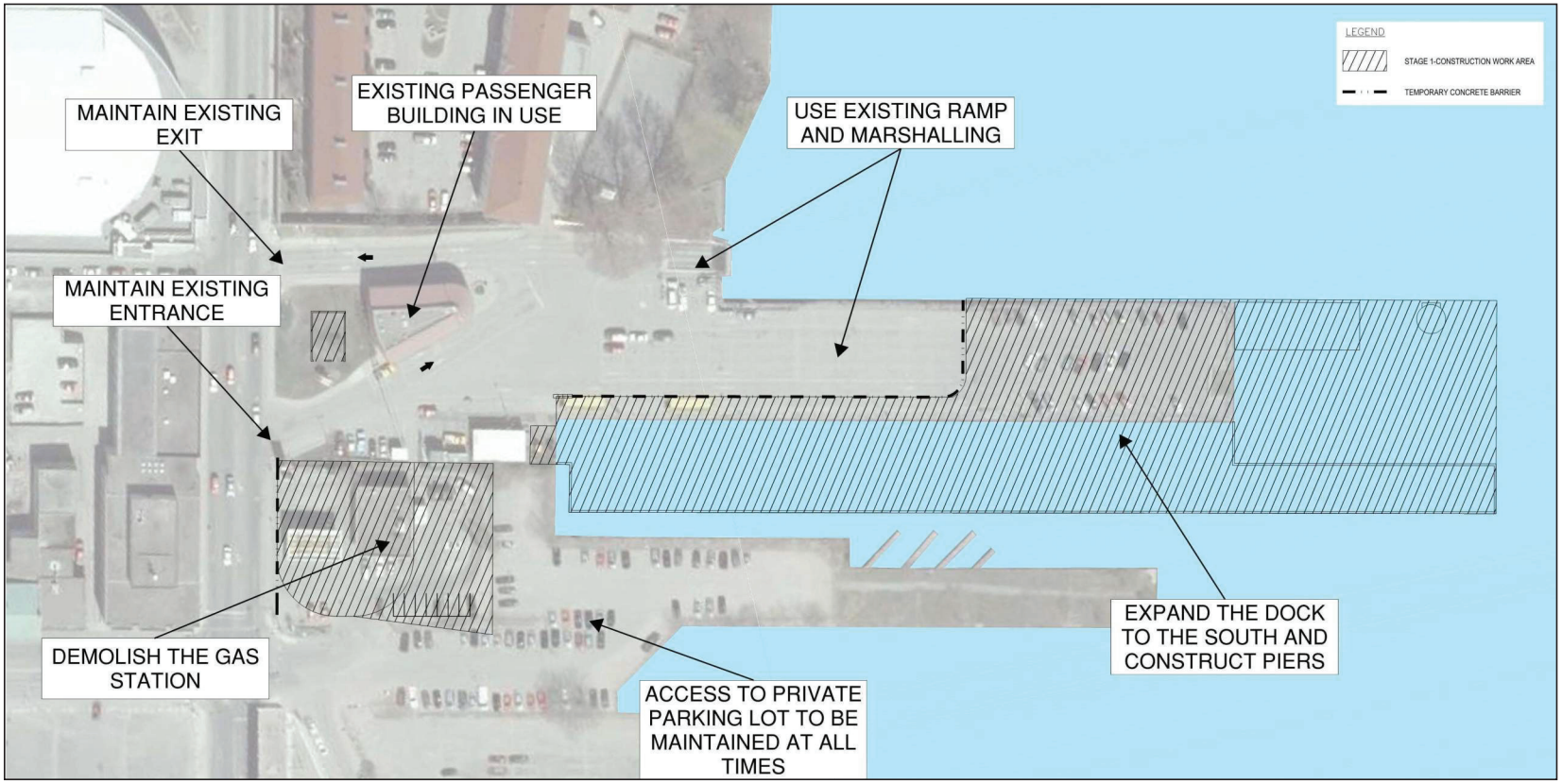
Kingston Stage 3

In Stage 3 the newly constructed southern berth will be used for ferry service while the new northern berth is constructed. As depicted in the next boards, there will be changes to the marshalling areas and the entrance/exit. Temporary shelter near the ramp will be provided for pedestrians in this stage.

Kingston Stage 4

In Stage 4, ferry service will switch to the new marshalling areas and primary berth. The new passenger building will be open for use. Construction will consist of finalizing landscaping, construction clean up, and completing the staff parking area.

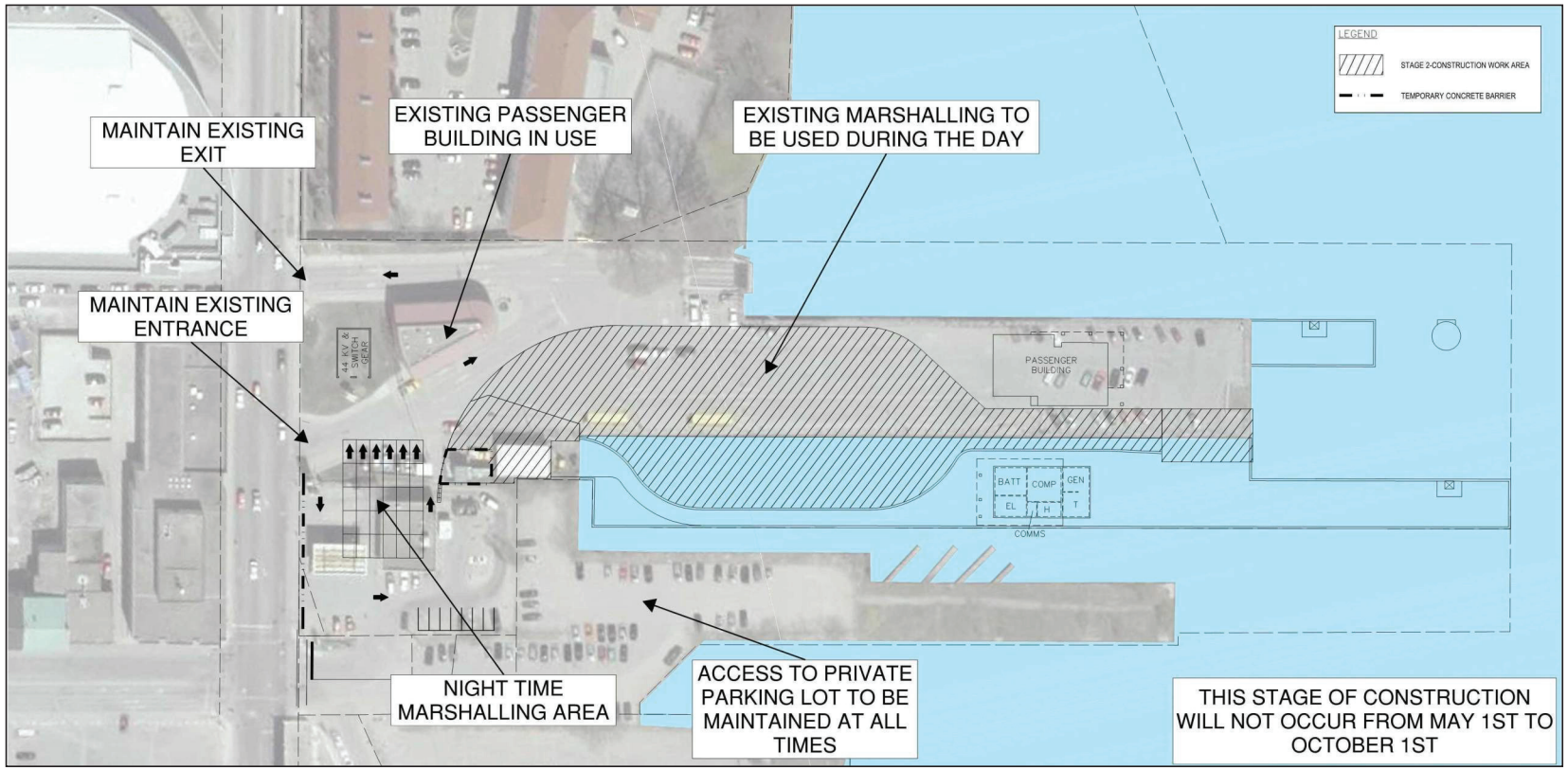
KINGSTON IMPLEMENTATION STAGE 1



STAGING IS SUBJECT TO CHANGE

- Existing entry / exit in use
- Existing marshalling in use
- Existing ramp in use
- Existing passenger building in use
- Public parking removed
- Construction of south dock expansion and finger piers
- Construction of new sub station
- Demolition of gas station area

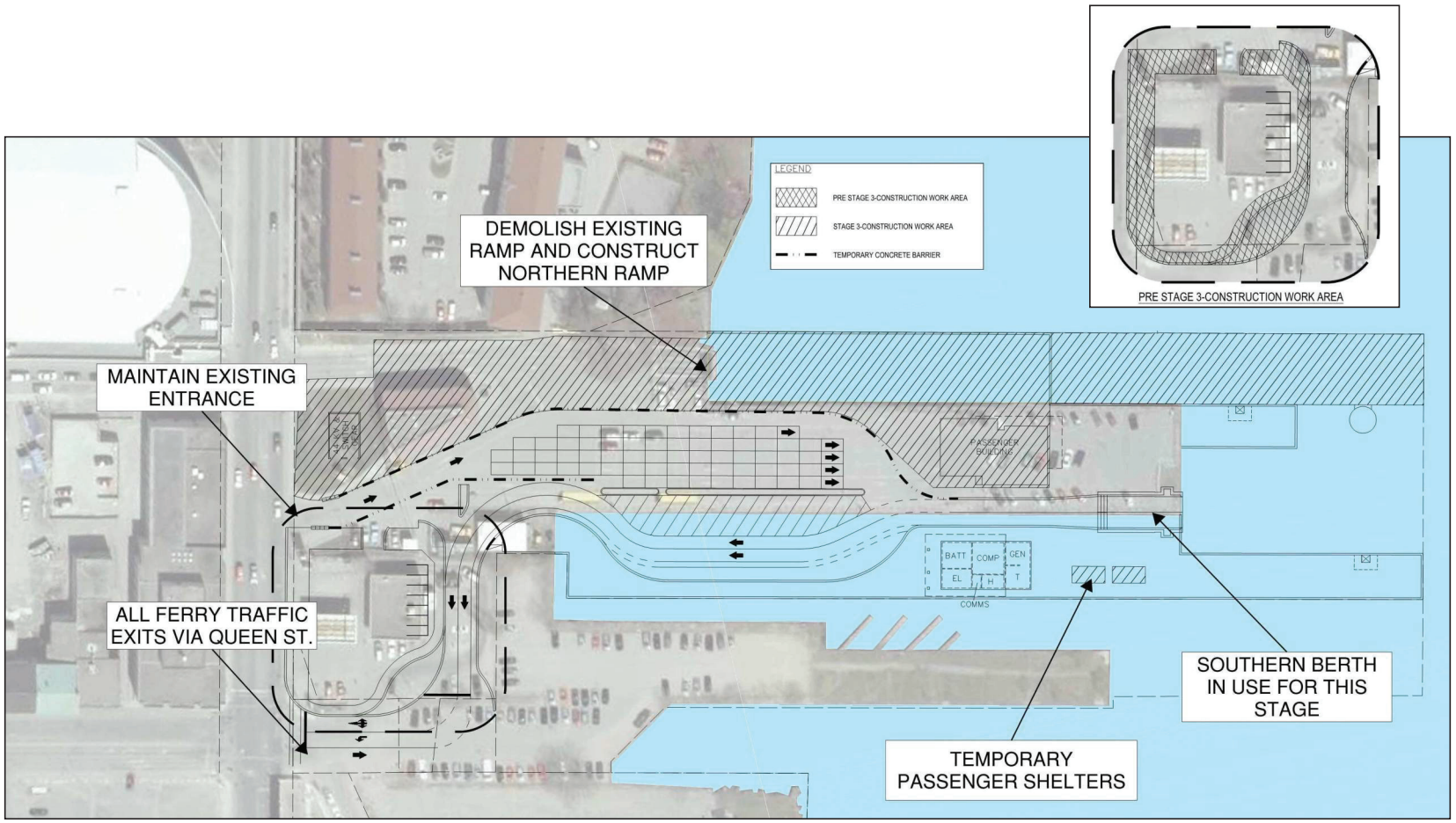
KINGSTON IMPLEMENTATION STAGE 2



- Existing entry / exit in use
- Existing ramp in use
- Existing marshalling in use during day time
- Temporary marshalling in use during night time
- Existing passenger building in use

STAGING IS SUBJECT TO CHANGE

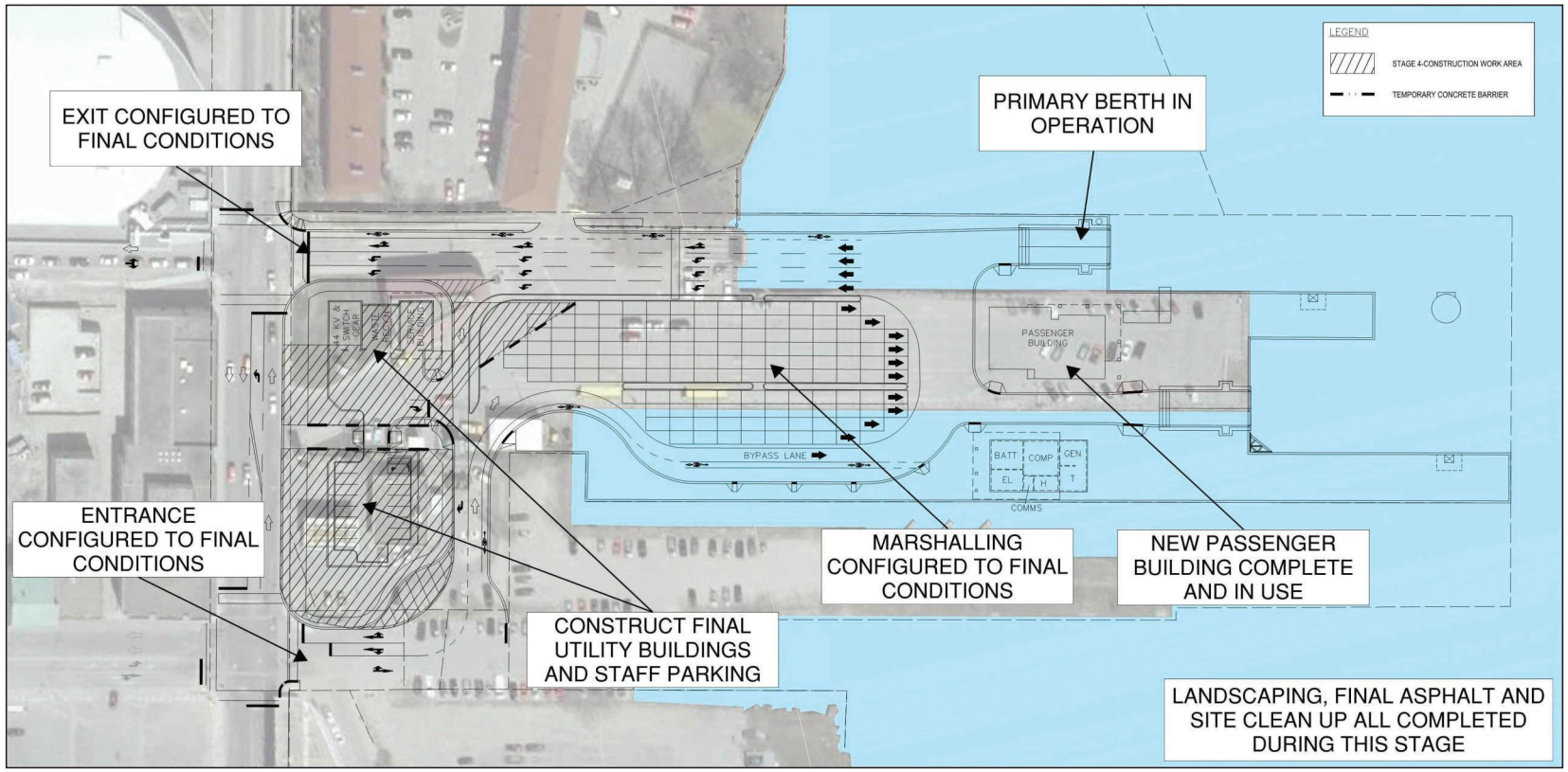
KINGSTON IMPLEMENTATION STAGE 3



- New ramp on the south pier in use
- Existing entrance in use
- Exit via Queen St
- Temporary marshalling in use
- Construction of north dock extension
- Demolition of existing passenger building
- Temporary pedestrian refuge area in use

STAGING IS SUBJECT TO CHANGE

KINGSTON IMPLEMENTATION STAGE 4



- New primary ramp in use
- Entry via Queen St
- Existing exit in use
- New marshalling in use
- New passenger building in use
- Completion of staff parking and service buildings

STAGING IS SUBJECT TO CHANGE

DAWSON POINT DOLPHIN REHABILITATION

MTO has Ontario EA Act approval for dock improvements at Dawson Point, however, MTO does not envision pursuing these improvements at this point in time.

The near shore dolphin at Dawson Point requires rehabilitation to maintain the existing operations and support all vessel types.

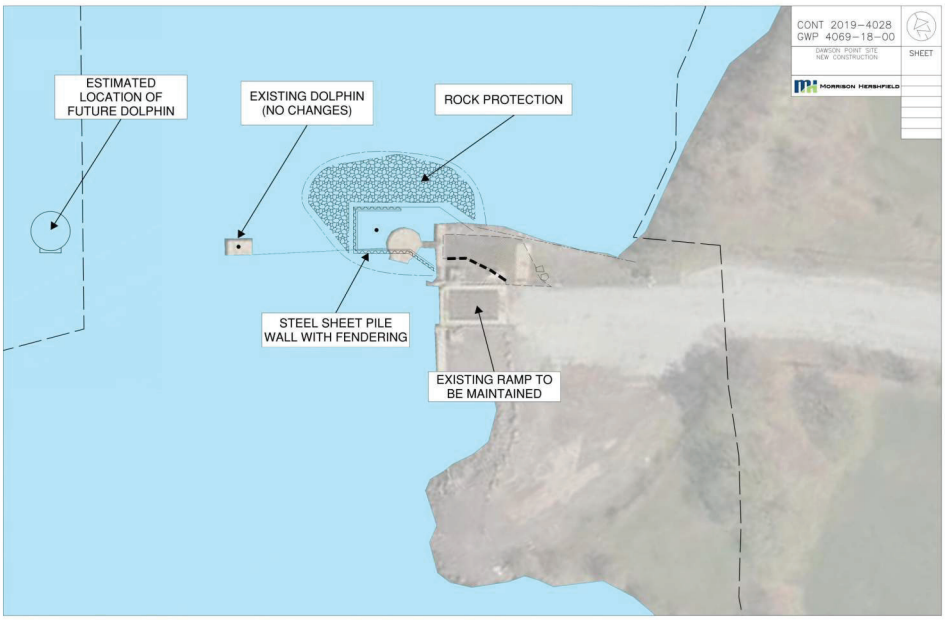
The rehabilitation work is being addressed as a separate undertaking under the MTO Class Environmental Assessment for Transportation Facilities (MTO 2000) as a Group “C”. An Environmental Screening Document has been be prepared to document the design .

The work has been tendered and is scheduled to occur this summer.

In the future, the Dawson Point Dock will be used for emergency service and transporting oversized equipment, etc.

During the future construction of the Marysville Dock (anticipated Fall 2019), the Dawson Point Dock will be used year-round so construction can be completed at Marysville in an efficient manner.

A future second mooring dolphin is required for the larger vessel and will be constructed with the larger project. Construction is anticipated in 2020.



Ontario

Website: www.wolfeislandferryea.ca
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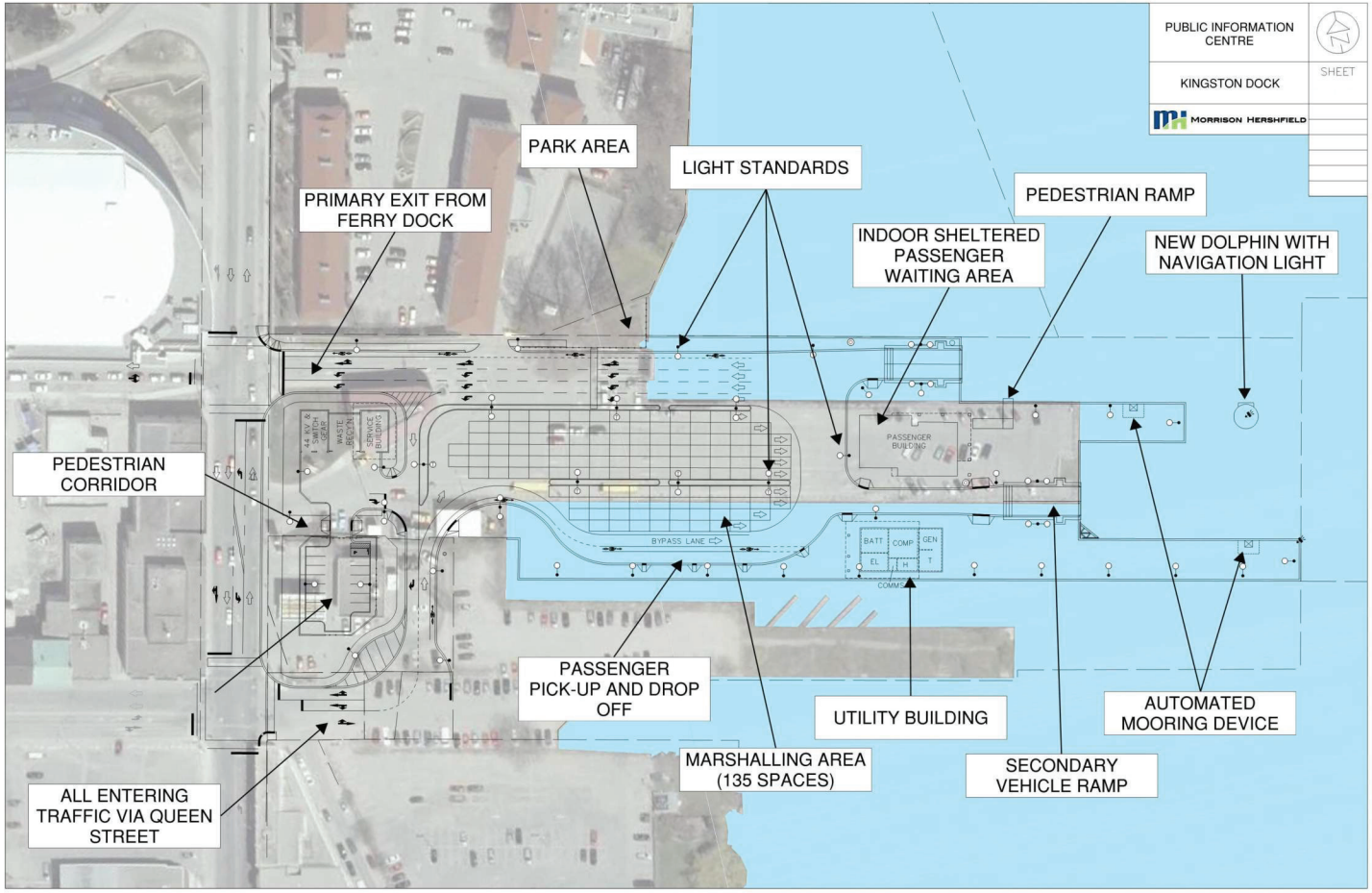
Morrison Hershfield

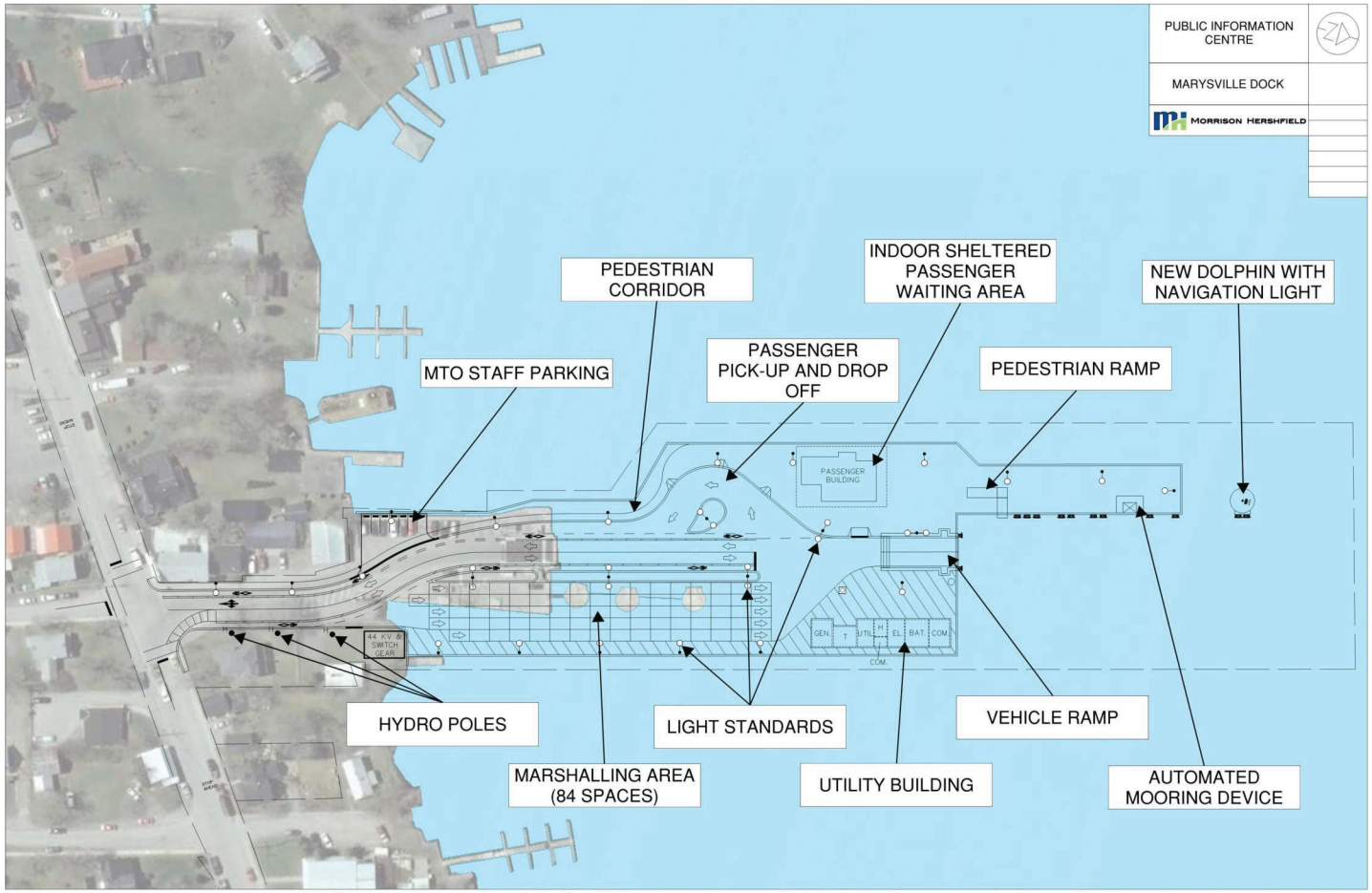
KINGSTON DESIGN PLAN



Refinements from preliminary design:

- Additional utility buildings for electrification
- Revised design of the finger piers to provide more on land space
- Revised pedestrian ramp
- Reassigned exit lanes to optimize unloading of ferry
- Revised pedestrian and cyclist circulation
- North finger pier converted to open deck structure
- Addition of turning area at Queen Street for snow plows
- Accessible parking removed

MARYSVILLE DESIGN PLAN



Refinements from preliminary design:

- Additional utility buildings for electrification
- Mooring dolphins converted to partial pier with one dolphin
- Revised pedestrian ramp
- Eliminated emergency ramp and 2 associated dolphins
- Water flow mitigation channel deleted
- Additional lane of marshalling added
- Minor refinements to pier width and finger pier design
- Staff parking relocated
- Accessible parking removed

MARYSVILLE RENDERINGS

Bird's eye view of the dock

Approaching the dock looking south

KINGSTON RENDERINGS

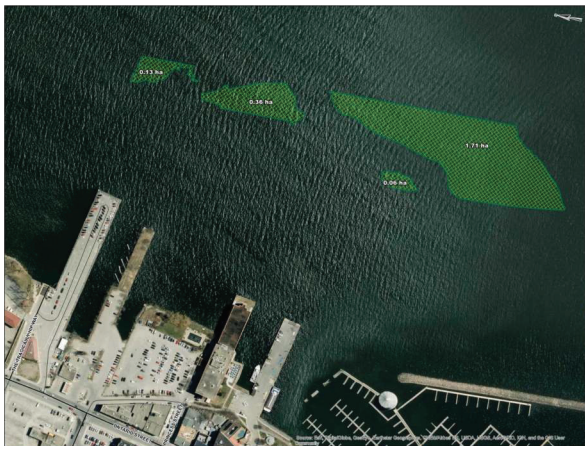
Bird's eye view looking south west

Looking north east from above Ontario St. and Queen St. intersection

RIVERBED LOWERING

As a result of changes to the minimum water levels allowed in Lake Ontario by the International Joint Commission, lowering of the riverbed along the navigation channel is required to ensure existing and future service can continue to operate.

Two locations are required to be lowered: a shoal in the Kingston harbour and the navigation channel in Barrett Bay leading to Marysville dock (see maps below).



Disposal of the removed material from the Kingston harbour will be done at an approved non-hazardous facility due to the levels of contamination in the material.

During Preliminary Design on-land disposal was assumed for the material from Barrett Bay (Marysville). After reviewing the requirements for on-land disposal during Detail Design it was determined, that depending on the method of transport, it would add significant time, costs, and impacts to the local community.

The removed material will require a significant site for disposal as there is roughly 140,000m^3 of material to be removed (or 14,000 standard dump truck loads).

MTO is currently exploring the opportunity for open water disposal to provide contractors with an alternate disposal option which would alleviate the impacts mentioned above.

The Ministry will tender this work with the disposal method for the removed material from Barrett Bay to be determined by the successful contractor to allow the greatest flexibility and costs savings.

LIGHTING

To decrease the impact of lighting on the surrounding natural environment and private property, the lighting design includes the following measures:

- Provides shielding to minimize ‘up-lighting.’
- Provides dimmable/turn-off functionality during non-operational times.
- Light poles located close to the water will use a forward throwing fixture to reduce light spillage outside of the MTO property and to reduce impacts to the aquatic environment.
- The lights will be a warmer colour LED fixture, instead of the white/ blue colour a standard LED provides. The design will use a more yellow colour to mitigate the impacts to aquatic habitat. Although this is most important near the waters edge, the same colour will be used throughout the terminal.

See renderings and design plan boards for placement of lights.

Marysville Lighting Layout

FISH HABITAT OFFSETTING

Due to the size of the increased dock footprints and the lowering of the riverbed, a habitat offsetting plan will be implemented to replace impacted fish habitat.

The intent is to create fish habitat both onsite and offsite to account for the loss and modification of fish habitat as a result of the project. To the greatest extent possible, efforts have been made to restore habitats onsite however, the bulk of the habitat offsetting will occur at an offsite location.

The offsetting project will include the creation of approximately 18,000 m^2 of costal wetland habitat.

MTO has partnered with Ducks Unlimited Canada to carry out the habitat offsetting project. The location will be on Howe Island. Ducks Unlimited is currently in the process of acquiring the property and creating a conceptual design for costal wetland habitats.

It is anticipated that offsetting construction will commence over the winter in 2020/21, dependent on funding and scheduling.

ENVIRONMENTAL PROTECTION

Details on the mitigation measures will presented in the Design and Construction Report to be completed at the end of the Design Process. The below summarizes the types of mitigation measures that the contractor will follow/implement.

Fish and Fish Habitat

- Minimize in-water work. Required in-water work at the docks will be isolated using turbidity curtains.
- Turbidity (water quality) measurements will be taken during riverbed lowering operations and if levels are too high, turbidity curtains will be used or work will stop until quality improves.
- All in-water works will be completed between July 16 and March 14 to avoid impacts to aquatic species during sensitive stages of their lifecycle.
- Shoreline areas to be stabilized following disturbance to prevent erosion.

Terrestrial Habitat

- Bird nests will not be disturbed during the migratory bird nesting period (April 1 to August 31).
- Stockpiles will be located and isolated so that material will not enter any watercourse or drainage ditch.
- Refueling areas will be located away from any watercourse or drainage ditch.
- See Lighting Board for measures to reduce impacts from lighting.

Air Quality

- Standard best practices to reduce air quality impacts, such as minimized equipment idling, covered loads and stockpiles, and regular dust suppression.

Groundwater & Wells

- Minimize the need for dewatering during construction.
- A Spill Prevention and Control Plan will be implemented
- A well monitoring program will be implemented during construction.

Waste & Excess Materials

- No waste from construction activities will enter the natural environment.
- Manage waste and excess materials through MTO standard specifications.
- Management of contaminated material using appropriate protections and disposal at approved hazardous waste facilities.

Archaeology & Heritage

- Additional Archaeological Assessment work will be completed to ensure lands affected by the project are clear of archaeological potential.
- Work will immediately cease if archaeological resources are unexpectedly uncovered during construction and the appropriate authorities will be notified.

APPROVALS & MONITORING

The following permits and approvals are required in order to construct the project.

Navigable Waters Act

- A Notice to Minister package is required under the Navigation Protection Act. The approval will provide any requirements for reducing/preventing impacts to navigation during construction.

Fisheries Act Authorization

- Due to the increase in the size of the docks and required dredging, Fisheries and Oceans Canada requires the implementation of an offsetting program to replace impacted fish habitat. The project team is working with Fisheries and Oceans Canada to identify potential on-site and off-site opportunities (see Fish Habitat Offsetting board).

Noise By Law Exemption

- It is anticipated that some night work will be required to complete the project. Night work may be required to facilitate construction activities that cannot be complete while the ferry is operating. When feasible, noisy activities will be limited to day time hours. Exemptions to Noise By Laws will be requested from the City of Kingston and the Township of Frontenac Islands.

Archaeological Clearance

- Archaeological investigations have been ongoing to support the issuance of archaeological clearance for the project. To date there are no impacts to any archaeological resources expected.

Barn Swallow Registration

- Given the presence of Barn Swallow nests at the docks, the project has been registered under O.Reg. 242/08 of the Endangered Species Act and a Barn Swallow kiosk with nest cups will be installed to replace lost habitat.

Endangered Species Act Permit

- An American Eel was caught at the Dawson Point dock during field investigations. The American Eel is an endangered species under the Endangered Species Act. After discussions with MNRF, it has been determined that a permit will not be required given the minor impacts of the rehabilitation work.

Environmental Monitoring

- Regular environmental monitoring will be completed to ensure environmental protection/mitigation measures are performing as intended.
- Monitoring while removing material from the riverbed will be undertaken to ensure turbidity (water quality) stays within reasonable limits. If limits are reached, additional measures are to be implemented (i.e. stopping work or using turbidity curtains).

NEXT STEPS

1. Continued consultation with agencies to discuss impacts, proposed mitigation, and permitting.
2. Complete detailed impact assessments.
3. Complete engineering design drawings.
4. Finalize proposed mitigation measures and acquire permits and approvals from appropriate agencies.
5. Prepare and file Design and Construction Reports (DCR) for 30-day Public Review periods.
    - A total of three DCRs will be published for review (one each for Marysville Dock, Kingston Dock, and the Dredging)
6. Upon completion of the DCR review periods, the projects will be eligible to proceed to construction pending acquisition of required permits/approvals.
7. Prepare and Finalize Contracts for Tendering (tendering is subject to approvals and funding):
    - Lowering the Riverbed could start late fall 2019
    - Marysville could start late fall 2019
    - Kingston could start winter 2020