

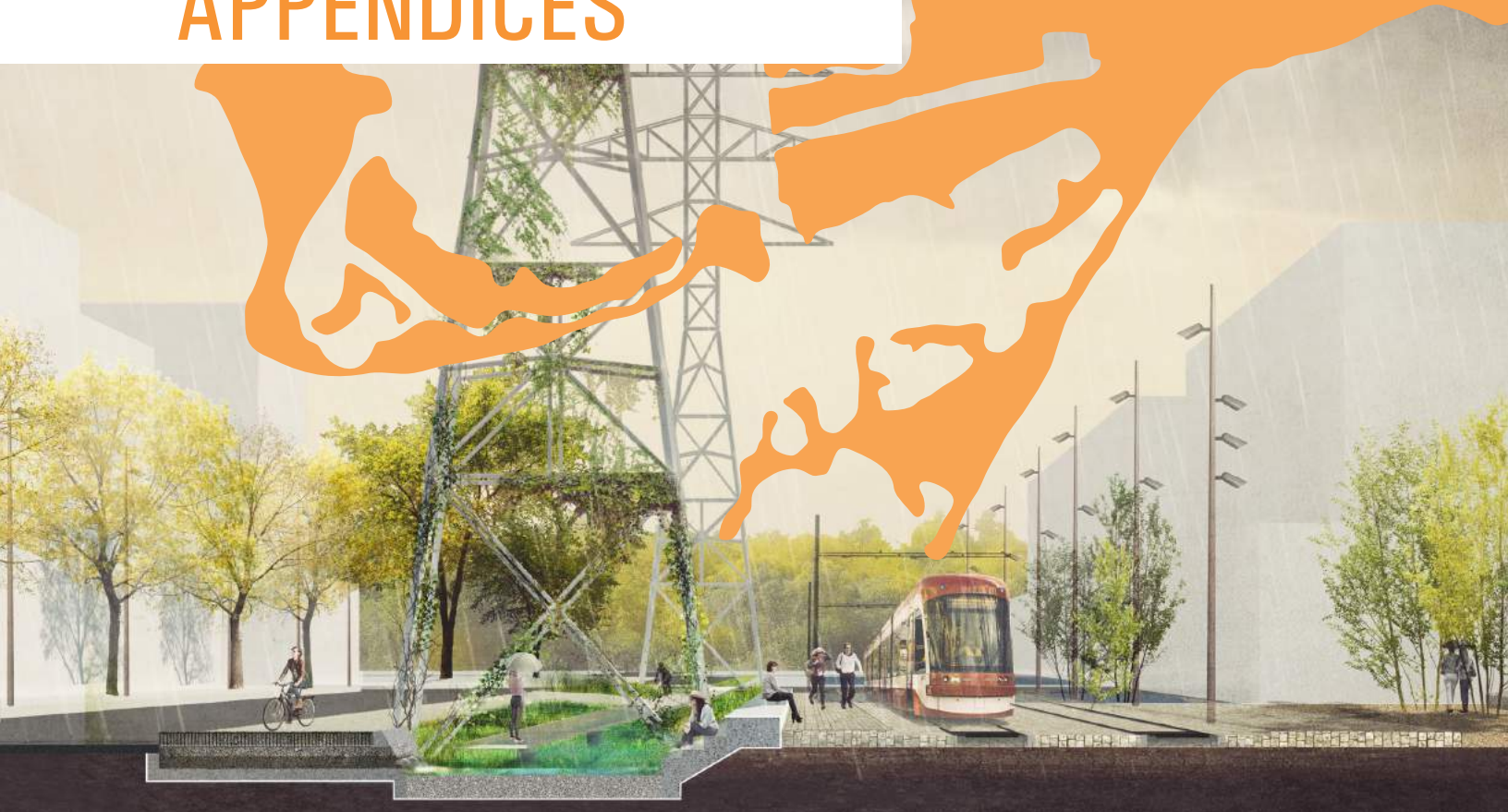


PORT LANDS + SOUTH OF EASTERN

TRANSPORTATION + SERVICING

MASTER PLAN

ENVIRONMENTAL ASSESSMENT APPENDICES



PUBLIC WORK



APPENDICES

APPENDIX A:
CONSULTATION
SUMMARY REPORT



**Shaping the Future:
Placemaking in the Port Lands + Connecting South of Eastern
Consultation Process Summary Report**

Prepared by Lura Consulting for:
The City of Toronto and
Waterfront Toronto

January 2016

This report was prepared by Lura Consulting, the independent facilitator and consultation specialist for the Port Lands Planning Framework and Transportation and Servicing Master Plan. If you have any questions or comments regarding this report, please contact:

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Executive Summary

Background

Following direction from City Council in 2012, the City of Toronto and Waterfront Toronto in partnership with the Toronto and Region Conservation Authority (TRCA) have been leading the development of several planning initiatives to revitalize the Port Lands as part of the second phase of the Port Lands Acceleration Initiative (PLAI). Two plans are concurrently being advanced – the Port Lands Planning Framework and the Port Lands and South of Eastern Transportation and Servicing Master Plan (TSMP).

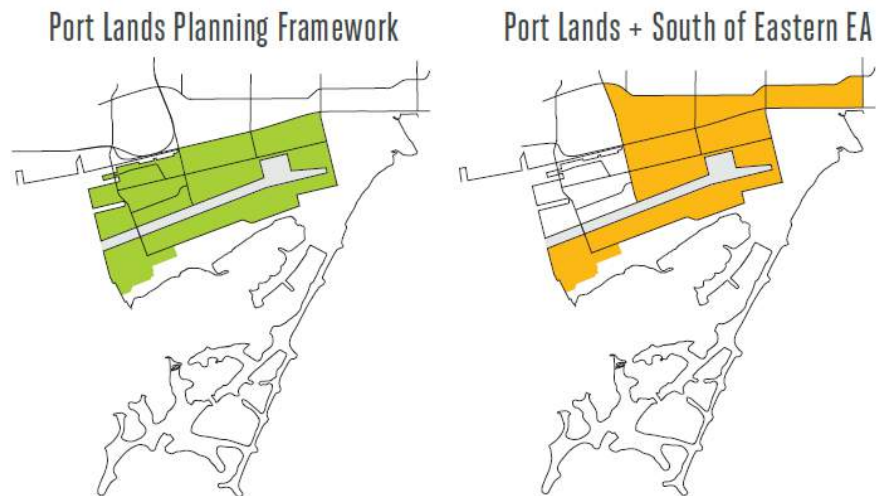


Figure 1: Maps identifying the study areas of each planning initiative.

This report provides an overview of the public consultation process implemented in tandem with the phased process to develop the plans, and summarizes the feedback obtained during consultation activities.

Consultation Program Overview

The consultation program was designed to meet regulatory requirements for consultation, and in particular to satisfy the requirements under the Municipal Class Environmental Assessment (EA) process, as well as to promote broad participation from stakeholders and members of the public as part of the development of the plans. To fulfill the objective of providing a robust consultation program as directed by City Council in October 2012, a variety of communication tools (e.g., public notices, notices to First Nations, mailed notices, the project website and social media) were utilized to inform stakeholders and the public about opportunities to participate and provide feedback. A range of consultation mechanisms and resources were also used to engage and obtain feedback from specific audiences (e.g., stakeholder meetings, land owners

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and users meetings, community consultation meetings, community workshops, a design charrette and online engagement tools).

Consultation Summary

The consultation program was implemented over a two year period, beginning in November 2013, with four Stakeholder Advisory Committee (SAC) and Land Owners and Users Advisory Committee (LUAC) meetings, respectively, at key stages of the process and three major public consultation events, engaging well over 500 individuals and 24 stakeholder groups in the planning process. A combined total of 122 hardcopy and online feedback forms were received through consultation activities.

The City of Toronto and Waterfront Toronto completed additional consultation activities for the project throughout the process, forming an iterative dialogue with stakeholders and the public that helped shape and inform the directions for the various plans. This additional engagement included:

- Separate consultation for the Villiers Island Precinct Plan, including SAC and LUAC meetings and a public consultation meeting in May 2014;
- An additional SAC meeting on March 31, 2015 that focused specifically on a preliminary preferred street network and emerging urban structure;
- Individual land owner and user meetings throughout March and June 2015;
- Industry meetings in May 2015 and November 2015;
- Outreach specific to the South of Eastern area, including a community workshop in July 2014 and the establishment of a traffic working group as part of the review of the development application for 629 Eastern Avenue;
- Consultation with the film sector, including a meeting with location managers, production managers and producers in December 2014, individual meetings with film studio owners and operators throughout 2015, and meeting with representatives from Film Ontario in early 2016;
- Meetings with the Mississaugas of Scugog Island First Nations in August 2013 and the Mississaugas of New Credit First Nation in March 2015. Additionally Waterfront Toronto and City Staff attended the Mississaugas of New Credit First Nations BBQ on September 24, 2015;
- The establishment of a Biodiversity Working Group with members of the SAC and industry representatives, as well as other organizations; and
- Additional outreach with individual stakeholders on an as needed basis.

These additional activities were important in shaping the overall directions, but are not summarized in detail in this Consultation Process Summary Report. This Report focuses on summarizing the SAC and LUAC meetings and major public consultation events undertaken for the Port Lands Planning Framework and Port Lands and South of Eastern Transportation and Servicing Master Plan. Highlights of the feedback collected are summarized below.

Summary of Participant Feedback

Stage One – Port Lands Profile

The first round of stakeholder and public consultations was held from November 21 to December 12, 2013, and engaged over 100 individuals and 24 stakeholder groups. The purpose of this initial round of consultation was to introduce and obtain early feedback on the planning studies initiated to revitalize the Port Lands. Participants provided input on key issues and opportunities to be addressed in the Port Lands Planning Framework; draft objectives for the study; and potential improvements for the Port Lands and South of Eastern EA. The key issues and opportunities identified by participants focused on:

- Enhancing connectivity between the Port Lands and the City and within the Port Lands through multi-modal transportation options;
- Defining urban form and structure to support a vibrant public realm;
- Building on the area’s industrial and natural heritage;
- Promoting a balanced mix of land uses, with distinct character areas;
- Completion of a Stage I archaeological assessment as required by the Municipal Class EA process;
- Maximizing greenspace and access to the waterfront; and
- Increasing recreational opportunities.

Stage Two – Land Use Direction and Infrastructure Alternatives

A second round of stakeholder and public consultations was held from February 3, 2014 to March 19, 2014, and engaged over 190 individuals and 24 stakeholder groups. The purpose of this round of consultations was to present and seek feedback on ideas and alternative options for land use, streets and municipal servicing in the Port Lands. Participant feedback recommended:

- Taking cues from the area’s existing features (e.g., waterfront, natural heritage, industrial heritage, etc.);
- Refining the proposed mix, location and total area of different land uses throughout the Port Lands;
- Prioritizing parks and greenspace for public use, particularly south of the Ship Channel;
- Improving north-south and east-west connectivity, while increasing options for public transit and alternative transportation;
- Separating water and wastewater systems and managing future demand through conservation strategies;
- Integrating innovative stormwater management and energy planning as part of the Port Lands landscape;
- Identifying an overall vision for the Port Lands revitalization;
- Emphasizing the role of the Ship Channel in the vision for the Port Lands; and
- Activating and animating the area.

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Stage Three – Vision Workshop

A design charrette was hosted by the City of Toronto with Waterfront Toronto and the TRCA on July 23-24, 2014, and engaged approximately 50 entrepreneurs, residents, designers and community advocates. The two-day participatory, urban design driven workshop, included a boat and walking tour and focused on defining a cohesive vision and priorities for two key areas within the Port Lands: 1) the Ship Channel; and 2) Lands south of the Ship Channel. The objectives of the charrette were to build a common vision for the Ship Channel, and to identify and define opportunities for improving public access south of the Ship Channel. A total of 57 overarching ideas were generated at the charrette that informed the development of the overall vision and urban structure for the Port Lands and surrounding area, including the following core themes:

- Celebrate industrial heritage;
- Support existing port uses and activities;
- Expand the way water is conceptualized and experienced;
- Consider the needs of all life forms;
- Design streets and crossings with distinct characters;
- Enhance connectivity to the City; and
- Activate the Ship Channel.

Stage Four – Emerging Directions

The third round of stakeholder and public consultations was held from November 4-27, 2015 and engaged over 290 individuals and 24 stakeholder groups. The purpose of this round of consultations was to obtain feedback on elements of the emerging plans that will guide revitalization and redevelopment in the Port Lands (e.g., vision and urban structure, character and place, and transportation and servicing). Recurring feedback and comments included:

- General support for the overall vision and defining elements of the emerging plans (e.g., vision and urban structure, character and place, Broadview extension and transportation and servicing); and
- Suggestions for refinements to the proposed block sizes, the mix of land uses at a precinct and block-by-block scale, and further consideration of compatibility between existing uses and future development.

Next Steps

The City of Toronto and Waterfront Toronto are currently in the process of refining the directions for the Port Lands Planning Framework and TSMP, based on the input and feedback received in the last round of consultation. Consultations with the public and stakeholders will be undertaken as needed as refinements are completed. It is anticipated that the project team will report to City Council in July 2016 through the Planning and Growth Management Committee, on the final Planning Framework, Official Plan amendments and the recommended TSMP. Subject to Council's endorsement of the TSMP, the TSMP would subsequently be posted

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on the Ministry of the Environment and Climate Change's Environmental Registry for 30 days in accordance with the Municipal Class EA process.

1. Introduction

Background – The Port Lands Planning Studies

The Port Lands present an unparalleled revitalization opportunity for the City of Toronto. Located east of Toronto's downtown core between the Inner Harbour and Leslie Street, south of Lake Shore Boulevard East, these lands were created through the filling of Ashbridges Bay in the early 20th century. The 325 hectare (800 acre) district initially served the City's growing industrial sector.

While still used for industrial and port purposes today, the lands are generally underutilized and were identified for revitalization by the Toronto Waterfront Revitalization Task Force in *Making Waves – Central Waterfront Plan* in 2001. This plan served as the foundation of the Central Waterfront Secondary Plan that was adopted by City Council in 2003.

Since the adoption of the Central Waterfront Secondary Plan, a significant amount of detailed planning has occurred in the Port Lands' area, primarily centred on the Lower Don Lands and the creation of a new river mouth for the Don River. Phase I of the Port Lands Acceleration Initiative (PLAI) investigated approaches to expedite and accelerate development in the Port Lands. City Council adopted the recommendations developed during Phase I of the PLAI in October 2012, and directed the Deputy City Manager, Waterfront Toronto and the Chief Planner to develop a high-level planning framework for the Port Lands and to complete precinct planning for a number of different precincts as part of Phase II of the PLAI.

The City of Toronto and Waterfront Toronto, in partnership with the Toronto and Region Conservation Authority (TRCA), have since led the development of several planning studies, with extensive stakeholder and public consultation, to guide the long-term revitalization of the Port Lands and better connect the Port Lands and South of Eastern areas. Emerging from these studies are two plans – the Port Lands Planning Framework and the Port Lands and South of Eastern Transportation and Servicing Master Plan (TSMP).

Port Lands Planning Framework

The Port Lands Planning Framework builds on the Central Waterfront Secondary Plan to provide more robust direction for the long-term transformation of the Port Lands. The Framework continues the work completed as part of the PLAI that was adopted by City Council in 2012 and integrates the planning work completed for the Lower Don Lands and the naturalized valley of the Don River.

Port Lands + South of Eastern Transportation + Servicing Master Plan

A Master Plan under the Municipal Class Environmental Assessment (EA) process was developed in parallel with the Port Lands Planning Framework to identify the street and transit

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network and municipal servicing required to support future revitalization. The Master Plan applies to most of the Port Lands and to the area referred to as “South of Eastern” (located north of Lake Shore Boulevard East, south of Eastern Avenue, between the Don River and Coxwell Avenue). The Master Plan provides a coordinated transportation and servicing strategy to connect the two areas, and was developed in accordance with Ontario’s Environmental Assessment Act.

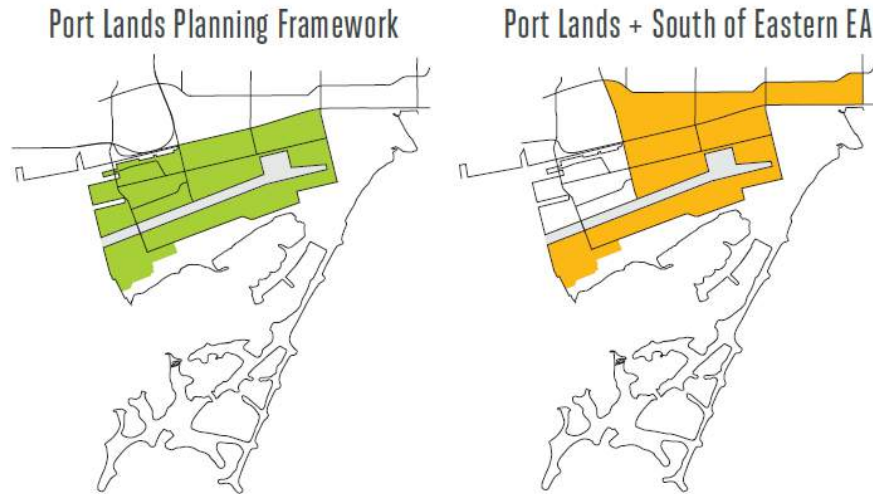


Figure 2: Maps identifying the study areas of each planning initiative.

Report Contents

This report summarizes the consultation program and key consultation activities undertaken as part of the phased planning process to develop the Port Lands Planning Framework and TSMP, as well as the feedback received during consultation activities.

While the Villiers Island Precinct Plan was developed in tandem with the Port Lands Planning Framework and the TSMP, a separate public consultation program was implemented for the precinct plan, except during Stage Four (Emerging Directions) when the consultations for the three plans were fully integrated. Summary reports of consultation activities specific to the Villiers Island Precinct Plan are available on the [project website \(www.portlandsconsultation.ca\)](http://www.portlandsconsultation.ca).

Section 2 of this report provides an overview of the consultation program and key consultation mechanisms to engage different audiences. Section 3 provides an overview of the feedback received, while Section 4 outlines the next steps in the planning process.

2. Consultation Process Overview

Consultation Objectives

The City of Toronto, Waterfront Toronto and TRCA recognize the value and importance of engaging stakeholders and the public in the development of the emerging plans for the Port Lands. The consultation program was designed to:

- Build on the robust consultation approach undertaken as part of the PLAI;
- Raise awareness of the continued planning efforts underway in the Port Lands, mobilize interest, and encourage broad participation;
- Meet the public consultation requirements of all regulatory regimes within which the City of Toronto, Waterfront Toronto and TRCA operate, including those of the Planning Act and Municipal Class EA;
- Present information in a manner that fosters an understanding of the emerging plans and provides opportunities for meaningful dialogue that embraces different perspectives; and
- Identify and work toward a common ground, ultimately building trust and support for the recommendations that will be contained in the final plans.

Municipal Class EA Requirements

The Municipal Class EA process, which is an approved process under the Ontario Environmental Assessment Act, establishes a simplified multi-phased planning process to streamline the planning of municipal infrastructure projects. Master plans, long range plans which integrate infrastructure requirements for existing and future land use, are also governed by this process and at minimum must address Phases 1 and 2 of the Municipal Class EA process, visualized in Figure 3.

This process identifies mandatory points for consultation to ensure stakeholders and the public are notified of the project and provided with the opportunity to learn about and comment on any proposed recommendations or actions. It is up to the project proponent to design a consultation program that reflects the needs of stakeholders and the public. The consultation program for the Port Lands Planning Framework and TSMP satisfies and exceeds the minimum requirements outlined by the Municipal Class EA and listed below:

- ✓ Consultation with stakeholders and the public during each phase of the study process, and specifically at the initiation of the study process to ensure the scope and study purpose are understood; and
- ✓ At the selection of the preferred set of alternatives.

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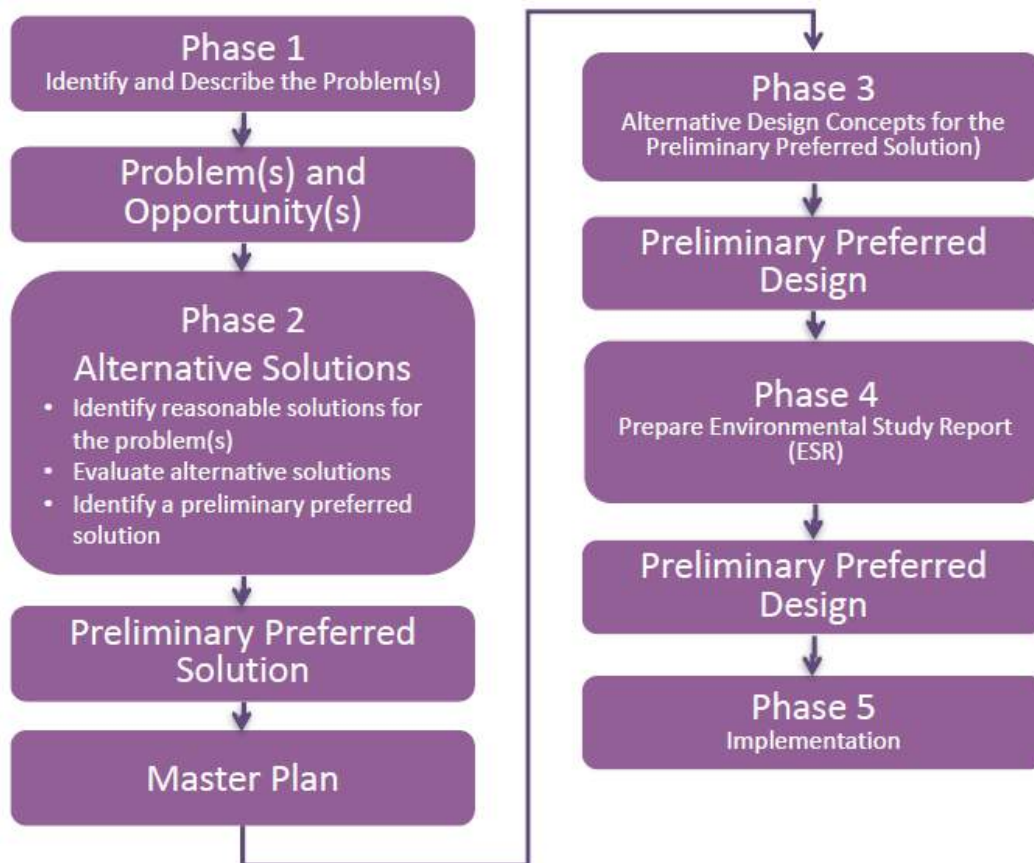


Figure 3: Municipal Class EA Process

Consultation Program

To fulfill the objectives of the consultation program, a multi-faceted approach targeting key stakeholders and the general public through complementary communication, promotional and consultation activities was implemented in tandem with the phased process to develop the plans (see Figures 4 and 5).

Communication and Promotional Tactics

The complementary communication and promotional tactics that were utilized to inform stakeholders and members of the public about opportunities to participate and provide feedback are described below.

Notice of Commencement and Public Meeting

A formal Notice of Commencement for the Port Lands and South of Eastern Transportation and Servicing Master Plan was combined with notice for an introductory public meeting held in November 2013 on the various planning initiatives being undertaken in the area. The notice was posted in the Toronto Sun on November 18, 2013 and in the Beach Riverdale Mirror on 21,

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2013. Additionally, approximately 5,000 notices were mailed-out through Canada Post during the week of November 11-15, 2013. The distribution area included all properties in the Port Lands and South of Eastern areas, plus the surrounding area bounded by Queen Street East to the north, the Don River to the west, and Coxwell Avenue to the east.

The Notice of Commencement and Public Meeting was also included in a Waterfront Toronto newsletter emailed to approximately 6,500 members of the public and 40 stakeholder groups or agencies.

The purpose of the newspaper notices, mailed notices and e-blast was to announce the start of the studies, including the TSMP, describe the different studies, invite people to attend the public meeting and provide people with an opportunity to be added to the project mailing list for future study notification.

Public Notice

Formal public notices were published in local newspapers approximately two weeks before scheduled Community Consultation Meetings (CCM) to notify stakeholders and interested persons and to promote and encourage participation. The table below lists the dates public notices were printed in local newspapers.

Table 1: Publication of Public Notices

CCM	Publication Date	Publications
1	November 18, 2013 November 21, 2013	Toronto Sun Beach-Riverdale Mirror
2	January 30, 2014 January 31, 2014	Beach-Riverdale Mirror Toronto Sun
3	October 30, 2015 November 1, 2015	Metro News Beach-Riverdale Mirror

Copies of the meeting notices are included in **Appendix A**.

Notice to First Nations and Aboriginal Communities

Formal notices were also circulated to First Nations and Aboriginal communities, offering to meet with the different communities and inviting participation during each round of consultation, as well as providing information about additional opportunities to learn about the planning studies and provide feedback. The First Nations and Aboriginal communities notified included:

- Haudenuasaunee Confederacy Chiefs Council;

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- Mississaugas of the New Credit First Nation;
- Mississaugas of Scugog Island First Nation; and
- Miziwe Biik Aboriginal Employment and Training

Mailed Notices

Prior to Community Consultation Meeting #1, approximately 5,000 notices were mailed out through Canada Post during the week of November 11-15, 2013 to properties in the study area plus the surrounding area bounded by Queen Street East to the north, the Don River to the west, and Coxwell Avenue to the east. For the subsequent meetings, notices were mailed to interested parties only.

Online Presence

The [project website](http://www.portlandsconsultation.ca) (www.portlandsconsultation.ca) that was established during the first phase of the Port Lands Acceleration Initiative was updated and used as a landing spot for information about the three planning studies as well as consultation events. The site includes a comprehensive overview of the planning studies, relevant documents and resources, information about consultation events and opportunities to participate online. Webpages on the [City of Toronto](http://bit.ly/1fmCMI) (<http://bit.ly/1fmCMI>) and [Waterfront Toronto](http://bit.ly/1QYTeXq) (<http://bit.ly/1QYTeXq>) websites also provided additional background information about the study and public consultation opportunities.

Social Media

City of Toronto and Waterfront Toronto Twitter accounts – @CityPlanTO and @WaterfrontTO – were used to increase awareness about the public consultation events and to encourage broad participation. The hashtags #portlandsconsult and #portlandsTO were also used on all tweets to promote and track discussion.

Consultation Mechanisms

The key consultation mechanisms utilized to provide multiple opportunities for participation through complementary face-to-face and online activities are described below.

Government Agency Consultations

A number of government agencies were contacted and consulted with throughout the process. City and Waterfront Toronto staff, with the TRCA, held meetings at various times in the process with:

- Ports Toronto;
- The Ministries of Municipal Affairs and Housing, Environment and Climate Change and Natural Resources;
- Metrolinx;
- Ontario Power Generation;
- Hydro One Limited; and
- Canada Post.

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PORT LANDS PLANNING FRAMEWORK PLANNING PROCESS

NOVEMBER 2013 → JUNE 2014 → JULY 2014 → NOVEMBER 2015 → MAY 2016



This report provided a comprehensive review of the Port Lands, addressing existing conditions and the current policy framework. It provided a current understanding of the opportunities and constraints and the issues surrounding land use, built form, mobility, open space and other elements explored in the development of the Port Lands Planning Framework.

The Port Lands Planning Framework: Land Use Direction was adopted by City Council in June 2014. It presented the land use vision for the Port Lands that balanced competing interests and established areas for new and emerging employment sectors, new mixed-use communities and parks, and protection for port-related operations and businesses. The vision was developed through extensive consultation with the public and stakeholders to provide greater clarity and certainty about activities and uses in the Port Lands, as well as direction to eliminate or mitigate potential conflicts between different land uses. Infrastructure alternatives had also been developed as part of this stage and presented to the public for feedback and input.

The Port Lands design charrette took place on July 23-24, 2014. Hosted by the City of Toronto City Planning Division, with Waterfront Toronto and the TRCA, this two-day participatory, urban design driven workshop focused on defining a cohesive vision and priorities for two key areas within the Port Lands:

1. The Ship Channel; and
2. Lands south of the Ship Channel.

The objectives of the charrette were to elevate the Ship channel and build a common vision, and to identify and define opportunities for improving public access south of the Ship Channel (excluding the Lake Ontario Park Master Plan).

57 overarching ideas were generated at the Port Lands Charrette that informed the development of the overall vision and urban structure for the Port Lands and surrounding area.

The Shaping the Future consultation in November 2015 comprehensively presented the emerging directions and preferred solutions for the Port Lands Planning Framework and Port Lands and South of Eastern Transportation and Servicing Master Plan, organized into three areas:

1. Vision and Structure;
2. Character and Place; and
3. Transportation and Servicing.

Five Vision and Structure elements, together, established a resilient framework for creating diverse places in the Port Lands. The Character and Place elements defined the function and character of the diverse places, refined land use direction and additional emerging direction for built form, sustainability, biodiversity, creating complete, inclusive communities and culture and art. The Transportation and Servicing elements focused on how the project team arrived at the preferred street network, the complete street principles established for the area and character of streets, as well as the integration of future municipal servicing.

Feedback from the consultation assisted the project team in further refining the directions for the final Port Lands Planning Framework.

Figure 4: Port Lands Planning Framework Planning Process

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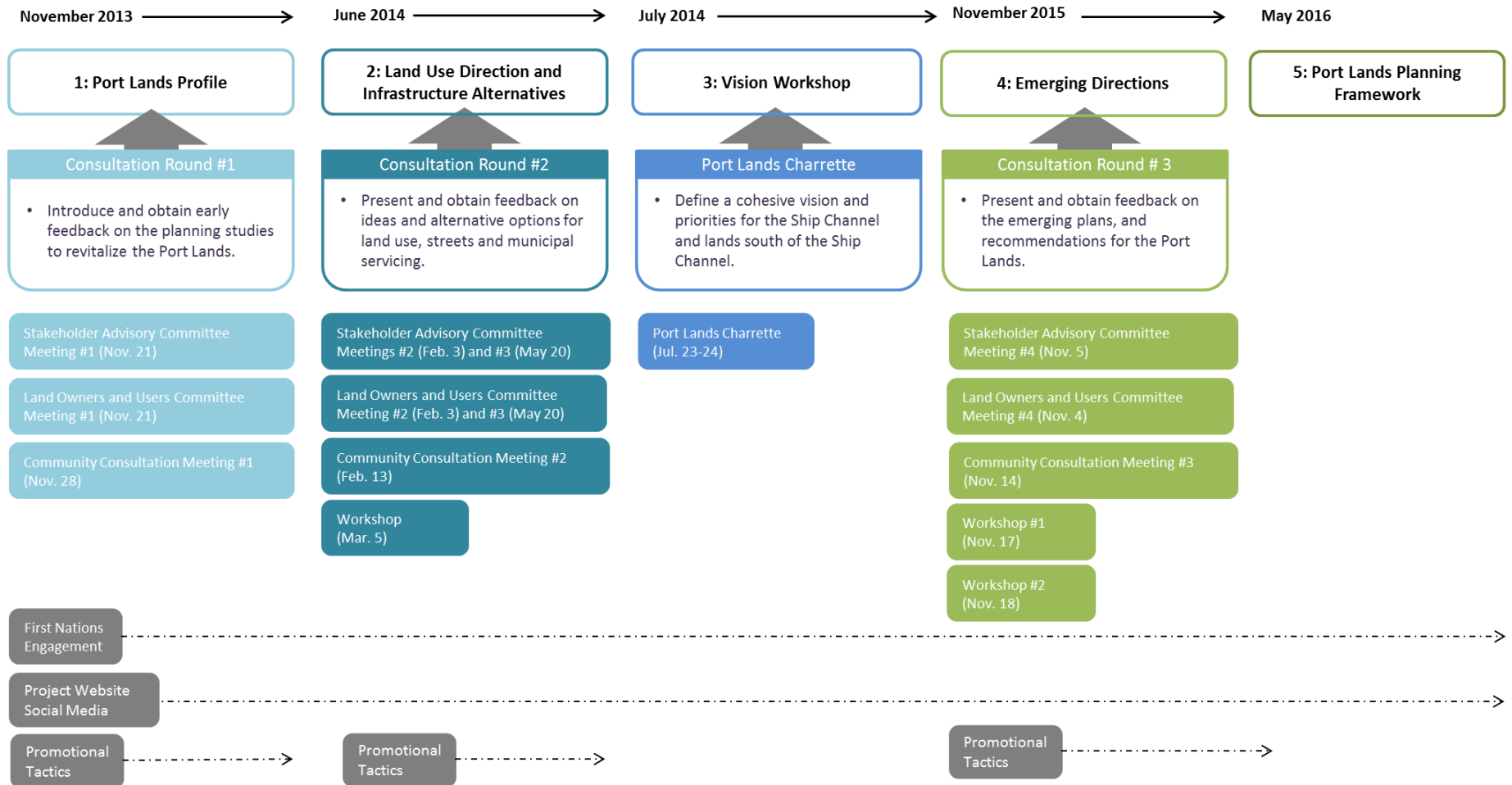


Figure 5: Overview of the consultation process and key consultation activities.

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First Nations and Aboriginal Communities Outreach

A number of opportunities were provided to gain feedback and insight from First Nations and Aboriginal communities. Representatives from the Mississaugas of New Credit First Nations and Miziwe Biik Aboriginal Employment and Training are included in the project's Stakeholder Advisory Committee. The Mississaugas of New Credit First Nations attended a number of the SAC meetings and provided suggestions for recognizing First Nations heritage in the Port Lands redevelopment (e.g., art work, greenspace, moccasin identifier, street naming, bring people to the water, use of native plants, rice gardens and thinking more natural in general).

Individual meetings were also offered to the First Nations and Aboriginal communities noted above. City and Waterfront Toronto staff, with TRCA, met with the Mississaugas of Scugog Island First Nations in August 2013 and the Mississaugas of New Credit First Nation in March 2015. Additionally, Waterfront Toronto, TRCA and City staff attended the Mississaugas of New Credit First Nations BBQ on September 24, 2015.

Stakeholder Advisory Committee (SAC)

A Stakeholder Advisory Committee consisting of representatives of public interest groups and community associations was formed to provide an ongoing mechanism for input and advice to the Project Team at key points during the planning process. Specifically, the mandate of the SAC was to:

- Act as a sounding board for the Project Team to share and discuss ideas and findings;
- Provide guidance, critiques and suggestions on proposed study approaches, concepts and materials (including materials to be presented at public meetings);
- Provide feedback on any other relevant matters that the Project Team refers to the SAC for comment.

Approximately 40 interested and affected stakeholder organizations representing a balance of geographic interests from the following sectors were invited to participate on the SAC:

- Business and Economics;
- Community; and
- Other.

A total of four SAC meetings were held throughout the project; the third meeting was a joint meeting of both the SAC and LUAC.

SAC meeting summaries are available in **Appendix B**.

Land Owners and Users Advisory Committees (LUAC)

An advisory committee consisting of land owners and users in the Port Lands as well as industry associations was also convened to provide an ongoing mechanism for input and advice to the

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Project Team at key points during the planning process. Specifically, the role of the LUAC was to:

- Act as a sounding board for the Project Team to share and discuss ideas and findings;
- Provide guidance, critiques and suggestions on proposed study approaches, concepts and materials (including materials to be presented at public meetings); and
- Provide feedback on any other relevant matters that the Project Team refers to the LUAC for comment.

Membership on the LUAC was open to all landowners, tenants, leasees and users in the Port Lands that expressed an interest in participating.

A total of four LUAC meetings were convened during the project; the third meeting was a joint meeting of both the SAC and LUAC.

LUAC meeting summaries are available in **Appendix C**.

Vision Workshop

In response to stakeholder and public feedback identifying the need to establish a vision for the Ship Channel, an interactive two-day Charrette was held on July 23-24, 2014 to help define a cohesive vision and priorities for two key areas within the Port Lands: The Ship Channel and Lands South of the Ship Channel. Approximately 50 entrepreneurs, residents, designers and community advocates participated in the charrette, which included a boat and walking tour, overview presentations by the City and consultant team and participatory small-group creative sessions. The creative sessions consisted of two parts: a quick group exercise to explore thematic points for the visioning process, followed by a rotational group visioning component covering a focus area and subject. A total of 57 overarching ideas emerged from the charrette that informed the development of the overall vision and urban structure for the Port Lands and surrounding area.

Community Consultation Meetings (CCM)

Community Consultation Meetings were held during each phase of the study process to obtain public feedback and comments on the research results, visioning and land use alternatives and recommendations as they were developed throughout the study. A variety of meeting formats (e.g., open house, presentations, and facilitated discussions) were utilized at each CCM to encourage public participation and dialogue.

Community Workshops

Interactive workshops were also held to provide additional opportunities for public comment and feedback on specific topics and issues following CCMs in Rounds Two and Three.

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Online Engagement

In parallel with the face-to-face consultation activities, online options were also available via the [project website](http://www.portlandsconsultation.ca) (www.portlandsconsultation.ca) to facilitate and further encourage broad participation (e.g., e-versions of discussion guides, PDFs of presentations and display panels, videos, and email).

Additional Consultation Activities

The City of Toronto and Waterfront Toronto conducted additional outreach and consultation activities, establishing an iterative dialogue with various stakeholders and the public, throughout the planning process. These activities included:

- Separate consultation for the Villiers Island Precinct Plan, including SAC/LUAC meetings and a public consultation meeting in May 15, 2014;
- An additional SAC meeting on March 31, 2015 focused specifically on a preliminary preferred street network and emerging urban structure;
- Individual land owner and user meetings throughout March and June 2015;
- Industry meetings in May 2015 and November 2015;
- Outreach specific to the South of Eastern area, including a community workshop in July 2014 and establishing a traffic working group as part of the review of the 629 Eastern development application;
- Consultation with the film sector, including a meeting with location managers, production managers and producers in December 2014, individual meetings with film studio owners and operators throughout 2015, and meeting with representatives from Film Ontario in early 2016;
- Meetings with the Mississaugas of Scugog Island First Nations in August 2013 and the Mississaugas of New Credit First Nation in March 2015. Additionally Waterfront Toronto and City Staff attended the Mississaugas of New Credit First Nations BBQ on September 24, 2015;
- The establishment of a Biodiversity Working Group with members of the SAC and industry representatives, as well as other organizations; and
- Additional outreach with individual stakeholders on an as needed basis.

These additional activities were important in shaping the overall directions, but are not summarized in detail in this Consultation Process Summary Report. This Report focuses on summarizing the SAC and LUAC meetings and major public consultation events undertaken for the Port Lands Planning Framework and Port Lands and South of Eastern Transportation and Servicing Master Plan.

Consultation Resources

Several resources were developed to enable participation during each round of consultations. The resources were presented at consultation events and subsequently made available on the project website. Each resource is briefly described below.

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Discussion Guides

Discussion guides were developed for each round of consultations to inform and educate participants about the study process, objectives and identify the topics for discussion. The discussion guides also included discussion questions, enabling participants to provide feedback on specific topics and issues during each phase of the study. Electronic versions of each discussion guide were made available on the [project website \(www.portlandsconsultation.ca\)](http://www.portlandsconsultation.ca) after each CCM.

PDF versions of the Discussion Guides from each CCM are included in **Appendix D**.

Presentations

A presentation was prepared for each CCM and workshop to provide stakeholders and participants with an overview of the planning initiatives, work completed to date and next steps in the study process. Electronic versions of the presentations were made available on the [project website \(www.portlandsconsultation.ca\)](http://www.portlandsconsultation.ca) after each CCM.

PDF versions of the presentations are available in **Appendix E**.

Open House Display Boards

Large panels featuring information about the planning initiatives (e.g., background research, visioning and land use alternatives, and land use direction) were displayed at CCMs and workshops to provide participants with the opportunity to learn more about the topics and issues of interest to them. Electronic versions of the display panels were made available on the [project website \(www.portlandsconsultation.ca\)](http://www.portlandsconsultation.ca) after each CCM.

PDF versions of the display boards are available in **Appendix F**.

Open House Maps

Large maps (e.g., current conditions, vision, recommended land use direction, etc.) were provided at some of the CCMs and workshops to encourage participants to provide comments and feedback directly on the maps.

3. Summary of Participant Feedback

Highlights of the input received during each round of the consultation process are provided below. Consultation summary reports from the CCMs and community workshops are included in **Appendix G**.

Stage One – Port Lands Profile

The first round of consultations was held from November 21 to December 12, 2013, and engaged over 100 individuals and 24 stakeholder groups. Consultations included a SAC meeting, a LUAC meeting and a CCM. The purpose of this round of consultations was to introduce the

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planning process, provide background information about the planning studies and seek feedback on the vision, draft objectives and issues and opportunities for the Port Lands and South of Eastern areas. A combined total of 18 hardcopy and online feedback forms was received during this round of consultations.

Topics

As the initial meeting in the planning process, several topics were introduced for discussion at CCM 1, including:

- The five planning initiatives underway, identified below, for the Port Lands and South of Eastern Areas, how they fit together, and the overall planning process:
 1. Port Lands Planning Framework;
 2. Villiers Island Precinct Plan;
 3. Film Studio Precinct Plan;
 4. South of Eastern Strategic Direction; and
 5. Port Lands and South of Eastern Transportation and Servicing Master Plan.
- Draft objectives, listed below, to inform and guide the development of the Port Lands Planning Framework and Precinct Planning;
 - Create an interesting and dynamic urban mix;
 - Connect the Port Lands to the City;
 - Leverage the Port Lands assets;
 - Develop a high quality public realm;
 - Contribute to the sustainable future of the City;
 - Provide flexibility and certainty in the Plan's implementation.
- Important considerations for the South of Eastern Strategic Direction; and
- Problems and opportunities in the Port Lands and South of Eastern areas specifically related to streets and municipal servicing.

The Port Lands Profile, a summary report providing a comprehensive review of existing conditions and the current policy framework in the Port Lands, was made available to participants at the CCM and through the [project website \(www.portlandsconsultation.ca\)](http://www.portlandsconsultation.ca) to provide additional context.

Discussion Questions

Port Lands Planning Framework

1. What do you see as the two or three key issues and/or opportunities that need to be addressed in the Port Lands Planning Framework?
2. What types of land uses and/or character would you like the different areas in the Port Lands to have?

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Figure 6: CCM #1 Open House

Port Lands Draft Objectives

1. Do the draft objectives reflect how you see the Port Lands developing? Provide us with your ideas and suggestions on how to improve these objectives.

South of Eastern

1. Are there specific improvements that you would like to see in the South of Eastern area? Are there areas that you think need special attention?
2. What types of businesses and economic activity would you like the City to promote in the South of Eastern area?

Port Lands and South of Eastern Transportation and Servicing Master Plan

3. Do you think these problems and opportunities reflect the issues to be addressed in the Port Lands and South of Eastern area from a transportation and servicing perspective? Are there other problems and opportunities that should be considered?

What We Heard

Port Lands Planning Framework

Participants identified a long list of key issues and opportunities to be addressed in the Port Lands Planning Framework. In particular, participant feedback identified the need to enhance

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connectivity between the Port Lands and the City, and surrounding areas through a variety of transportation options. The need for urban design guidelines was also identified to ensure future developments are sustainable (e.g., green building standards), human in scale and contribute to a vibrant public realm. Participants also highlighted the importance of balancing future development with the needs of existing industrial uses (e.g., land use compatibility) to support mixed-used development while maintaining and strengthening regional economic activity. Other priorities identified by participants included maximizing greenspace, access to the waterfront and recreational opportunities in the Port Lands.

Participants also provided feedback to help inform the land use types and character of the overall study area as well as precincts. In terms of the overall study area, they suggested that the Port Lands should include a diverse mix of uses (e.g., residential, employment, commercial, retail, etc.) with greenspace and amenities to support the creation of a vibrant urban area. The creation of distinct character areas, particularly at the precinct level, was also suggested through architectural styles and materials, taking cues from the area's industrial and natural heritage, enhancing access to the area's unique waterfront setting, and encouraging the development of clusters (e.g., film sector in the Film Studio District). Participants also submitted ideas for programming and amenities to animate the Port Lands (e.g., artists and farmers markets, cycling, birding, events spaces, boating, etc.).

Draft Objectives for the Port Lands

While relatively little specific feedback on the draft objectives for the Port Lands was received, the input submitted by participants during this round of consultation suggested that they generally supported the direction of the draft objectives.

Port Lands and South of Eastern Transportation and Servicing Master Plan

Feedback on improvements to the South of Eastern area highlighted the importance of enhancing local and regional connectivity, and promoting the development of a complete and self-sustaining, vibrant community. A diverse range of business and economic activities (e.g., information and communications technologies, insurance, clean technology incubator, etc.) and supporting amenities (e.g., restaurants, retail) were also identified to enhance existing employment uses in the area.

Feedback on the transportation and servicing components of the plan emphasized the need to improve and enhance north-south and east-west connections between the Port Lands and the City and within the Port Lands, using a variety of transportation modes, to support the long-term revitalization of the area. Participants also suggested separating storm and sanitary sewers in the study area.

Stage Two – Land Use Direction and Infrastructure Alternatives

A second round of consultations was held from February 3, 2014 to March 19, 2014, and engaged over 190 individuals and 24 stakeholder groups. The purpose of this round of consultation was to present and seek feedback on ideas and alternative options for land use,

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transportation routes, and municipal servicing in the Port Lands. The consultation included a SAC meeting, LUAC meeting, a CCM and a follow-up community workshop on March 5, 2014. A combined total of 70 hardcopy and online feedback forms was received during this round of consultations.

Topics

Discussion topics at during this round of consultations focused on land use options and alternatives for streets and municipal servicing in the Port Lands. Four land use topics were developed for the Port Lands using different combinations of the following three broad land use categories:

- Live-Work Communities;
- Creative Industry District; and
- Port / Employment District.

The main differences in the land use options were concentrated in the Film Studio District and South of the Ship Channel, west of the Hearn; different amounts of live-work, creative industries and port and employment uses were proposed in these areas.

Alternatives were also prepared to enhance connectivity within the Port Lands and between the Port Lands and the City. Transportation alternatives included options for east-west connectivity, north-south connectivity, connections across the Ship Channel and establishing a transit network within the system of roads. The transportation routes in the alternatives were designed as complete streets, providing safe and comfortable access for all transportation modes.

Alternatives for water, wastewater and stormwater municipal services in the Port Lands were also developed and presented at CCM 2 and the subsequent community workshop.

Discussion Questions

1. Long-term revitalization will unfold over 50+ years and will take its cue from the new, naturalized Don River mouth. What other features should inform revitalization in the rest of the Port Lands?
2. Thinking about the four land use options for the future of the Port Lands...
 - a. Which land use option best captures your vision for the long-term revitalization of the Port Lands? Why?
 - b. What improvements would you suggest we make to your preferred land use option? Why should these improvements be considered?
3. Transportation alternatives focused on east-west connectivity, north-south connectivity, connections across the Ship Channel and for establishing a transit network to support population and employment level have been identified. Thinking about these different transportation alternatives...

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- a. Which alternatives do you prefer? Why?
 - b. Are there alternatives that we should not be considering? Why?
4. Water, wastewater and stormwater management alternatives have been identified. Thinking about the servicing alternatives, which water, wastewater and stormwater alternatives do you prefer? Why?

What We Heard

Features to Inform Port Lands Revitalization

Recurring comments submitted by participants identified several features that should inform the revitalization of the Port Lands including: the waterfront and harbour, natural heritage, industrial heritage (e.g., Ship Channel, the Hearn), existing and new employment uses and existing and new recreational opportunities.

Land Use Options

Several key themes emerged in the feedback submitted by participants regarding the four land use options presented during this round of consultations (participants did not typically specify their preference for one land use option over another). Varying views were expressed regarding the mix, location and total area of different land uses (e.g., residential, industrial, creative, etc.) throughout the Port Lands. There was however consensus among participants on the need to separate residential and industrial uses and a preference for low to mid-rise developments over high-rises. Varying views were also expressed about the existing features (e.g., industrial uses and heritage) in the Port Lands, specifically whether they should be maintained, relocated or removed.

Participant feedback also emphasized that parks and greenspace should be prioritized for public use in the Port Lands. Feedback also highlighted the need for more emphasis on energy generation and distribution to support self-sufficiency in the Port Lands. A few participants also suggested that an overall vision/concept for the Port Lands revitalization is required before deciding on land uses.

Transportation Alternatives

Transportation alternatives focused on east-west connectivity, north-south connectivity, connections across the Ship Channel and establishing a transit network within the system of roads. Participant feedback supported extending Broadview Avenue and a new north-south street between Carlaw Avenue and Leslie Street into the Port Lands, however there was no consensus on the alignment.

Participants also noted the need for an east-west connection south of Lake Shore Boulevard and to carefully consider the location of channel crossings and the impact of street improvements on different users. Feedback also included several suggestions and ideas to enhance connectivity such as: prioritizing transit to support future development and improving pedestrian and cyclist access throughout the Port Lands.

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Feedback was also provided about new alternatives to be considered in the Environmental Assessment, including a two-lane Unwin Avenue, a new potential alignment for the Broadview Extension and generally creating more urban conditions for the alternatives with a focus on pedestrians, cyclists and transit.

Servicing Alternatives

Alternatives for water, wastewater and stormwater were also presented for review and comment. While, there was little consensus or preference expressed for any particular alternative for water or wastewater, feedback highlighted support for separating the two existing systems and promoting conservation to reduce water usage. Some participants identified that a sanitary servicing alternative that would take the Port Lands off the grid should be included.

For stormwater, there was a preference for Alternative 2: Integrated Community Stormwater Management, with stormwater management forming an important part of the landscape of the Port Lands.

Stage Three – Vision Workshop

Based on feedback received at CCM 2 and the subsequent community workshop, a two-day charrette was hosted by the City of Toronto, with Waterfront Toronto and the TRCA, in July 2014 to engage stakeholders in the development of a common vision for a critically important feature of the Port Lands – the Ship Channel – and to improve public access south of the Ship Channel.

Topics

Interactive plenary and small group sessions explored four key areas for the Ship Channel and the lands South of the Ship Channel as part of the overall visioning exercise.

Ship Channel:

1. Water's Edge and Built Form Interface
2. Turning Basin
3. Crossings
4. Activating the Ship Channel

Lands South of the Ship Channel:

1. Role of Open Space South of the Ship Channel
2. North South Streets and the Places Around Them
3. Heard Hub and Unwin Avenue
4. Activating the Lands South of the Ship Channel

What we Heard

Two key points emerged from the ideas shared at the charrette:

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- The importance and role of the Ship Channel should be emphasized in the vision for the Port Lands; and
- Enhancing open space and parkland south of the Ship Channel should be addressed in the vision for the Port Lands, with an emphasis on improving public access and interface with active port and industry.

The visioning sessions produced a wealth of ideas, ranging from immediate actions to long-term strategies. A common sentiment was the need to amplify place-specific qualities and celebrate contrasts as central features of the Port Lands' public realm experience. The charrette visioning sessions resulted in a list of core ideas, a sample of which, include: celebrate industrial heritage, support existing port uses and activities, expand the way water is conceptualized and experienced, consider the needs of all life forms, design streets and crossings with distinct characters, enhance connectivity to the City, and activate the Ship Channel.

Stage Four – Emerging Directions

The third round of consultation was held from November 4 - 27, 2015 and engaged over 275 individuals and 24 stakeholder groups in a two-step process. Step one consisted of a full day Open House held on Saturday, November 14, 2015 featuring display panels in a central area with content experts available to answer questions, and a program that included identical morning and afternoon sessions. Each session began with a Welcome and Overview presentation, followed by four information sessions on the four emerging plans:

- Vision and Structure;
- Character and Place;
- Transportation and Servicing; and
- Villiers Island Precinct Plan.

for a total of 34 presentations. Two evening workshops focusing on different topics were held during the week following the Open House, as step two of the consultation process, to provide additional opportunities for public comment and feedback on the emerging plans.

The purpose of this round of the consultation process was to obtain feedback on elements of the emerging plans and recommendations pertaining to vision and urban structure, character and place, and transportation and servicing that will guide revitalization and redevelopment in the Port Lands. A combined total of 34 hardcopy and online feedback forms was received during this round of consultations.

Topics

The consultations held in November 2015 comprehensively presented the emerging directions and preferred solutions for the Port Lands Planning Framework and TSMP, organized according to the following three areas:

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1. **Vision and Structure:** Five Vision and Structure Elements established a resilient framework for creating diverse places in the Port Lands.
2. **Character and Place:** The Character and Place elements defined the function and character of the diverse places, refined land use direction and additional emerging direction for built form, sustainability, biodiversity, creating complete inclusive communities and culture and art.
3. **Transportation and Servicing:** The Transportation and Servicing elements focused on how the project team arrived at the preferred street network, the complete street principles established for the area and character of street, as well as the integration of future municipal servicing.

As noted earlier, a separate public consultation program was implemented for the Villiers Island Precinct Plan, except during this stage when consultations for the three plans were fully integrated. Summary reports of consultation activities specific to the Villiers Island Precinct Plan are available on the [project website \(www.portlandsconsultation.ca\)](http://www.portlandsconsultation.ca).

Discussion Questions

Vision + Urban Structure

1. What do you like about the directions for the overall vision and urban structure?
2. What, if anything, concerns you? Why?
3. What refinements, if any, would you like to see explored?

Character + Place

1. What do you like about the different character and place elements of the plans?
2. What, if anything, concerns you? Why?
3. What refinements, if any, would you like to see explored?

Transportation + Servicing

1. What do you like about the preferred solutions for streets, transit and municipal servicing?
2. What, if anything, concerns you? Why?
3. What refinements, if any, would you like to see explored?

What We Heard

Vision + Structure

Participants expressed support for the overall vision and urban structure presented to guide the long-term revitalization of the Port Lands. Specifically, participants liked the vision to:

- enhance connectivity, effectively “stitching” the Port Lands to the City through new north-south and east-west connections that include the Ship Channel;

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- establish a core grid that is human in scale and integrates different systems (e.g., transit, greenspace, etc.);
- distribute greenspace throughout the framework;
- maintain and re-imagine the area's industrial heritage; and
- the emphasis on water and the waterfront and the conceptualization of water as a resource.

Suggested refinements emphasized the need to consider additional north-south and east-west connections, further reducing some of the block sizes and enhancing water-based connections between the Port Lands and the Harbour, Toronto Islands and the Leslie Street Spit.

Character + Place

There was broad support for the character and place elements of the emerging plans. Recurring comments highlighted positive perspectives about: the types of uses and the mix of uses in the preferred land use direction; the built form approach, which supports other framework objectives (e.g., protecting view corridors); the inclusion of biodiversity and sustainability in city building processes; and the inclusion of an affordable housing target in the plans.



Figure 7: Facilitated discussion at Round 3 community workshop.

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Suggested refinements underscored the need to integrate a broader mix of uses within precincts and buildings; ensure compatibility between sensitive uses and existing industrial uses; and to increase the proposed residential population as well as community infrastructure to animate the area.

A key concern and the subject of varying opinion was the issue of maintaining Lafarge's cement operations on Polson Quay. Lafarge would like its operation to be recognized as an existing and permitted use, while comments from community stakeholders suggest that the plans should reflect long-term aspirations for South River and Polson Quay's transition into a vibrant mixed-used community.

Transportation + Servicing

Participants were also generally supportive of the preferred transportation and servicing solutions presented particularly the proposed transit, cycling and pedestrian network and new innovative/integrated approaches to managing stormwater.

A key topic of discussion was the preferred alignment for the Broadview Extension. While participants generally agreed that an extension is needed to enhance connections, recurring comments from a few participants revealed some concerns about the alignment. Most participants liked the diagonal "spine" which they noted is a nice design feature that provides views to the Hearn while others expressed concerns about this alignment's impact on future plans for properties owned by Frist Gulf, Castlepoint and in the McCleary District as well as transit service and connections to destination areas near the Port Lands.

Participant feedback (particularly from industry) recommended that the strategy for goods movement should be further refined to ensure it supports the needs of existing industrial uses.

4. Next Steps

The City of Toronto and Waterfront Toronto are currently in the process of refining the directions for the Port Lands Planning Framework and TSMP, based on the stakeholder and public input received in the last round of consultation. Consultations with the public and stakeholders will continue as needed as refinements are completed. It is anticipated that the project team will report to Council in July 2016 through the Planning and Growth Management Committee on the final Planning Framework, Official Plan amendments and the recommended TSMP. Subject to Council's endorsement of the TSMP, the TSMP would subsequently be posted on the Ministry of Environment and Climate Change's Environmental Registry for 30 days in accordance with the Municipal Class Environmental Assessment process.

**APPENDIX A –
PUBLIC NOTICES**

PORT LANDS AND SOUTH OF EASTERN PLANNING STUDIES

NOTICE OF STUDY COMMENCEMENT AND PUBLIC MEETING

Waterfront Toronto and the City of Toronto are undertaking the following studies in the Port Lands and area south of Eastern Avenue.

Port Lands Planning Framework:

At 356 hectares, the Port Lands are a tremendous redevelopment opportunity for the City. Waterfront Toronto and the City of Toronto are developing a planning framework for the Port Lands that builds on the momentum from the Port Lands Acceleration Initiative adopted by City Council in 2012. The planning framework will guide revitalization efforts in the Port Lands and will provide the foundations for affirming and refining the vision for the Port Lands in the Central Waterfront Secondary Plan.

Precinct Planning in the Port Lands: Cousins Quay Precinct Plan and Film Studio Precinct Plan:

Precinct planning is being undertaken by Waterfront Toronto and the City of Toronto for Cousins Quay and the Film Studio District. Precinct Plans outline development principles and guidelines at a more detailed level and illustrate how lands can be developed to meet the policies of the Central Waterfront Secondary Plan. Precinct planning forms the bridge that allows the City to move from Secondary Plan policies to Zoning By-law provisions.

South of Eastern Strategic Direction:


The City of Toronto is undertaking the South of Eastern Strategic Direction, which applies to an employment area and will build upon the South of Eastern Planning Study completed in 2008 that resulted in proposed amendments to the Official Plan and Zoning Bylaw. The Strategic Direction will focus on economic development, urban design and transportation.

Transportation and Servicing Master Plan – Municipal Class Environmental Assessment (EA)

The City of Toronto is undertaking a Transportation and Servicing Master Plan (TSMP) for sections of the Port Lands and South of Eastern area in accordance with the requirements of the Municipal Class EA. The TSMP will identify the necessary infrastructure (streets, transit, watermains and sewers) to support revitalization in the Port Lands and continued economic growth in the South of Eastern area.

UPCOMING PUBLIC MEETING

Public consultation is a key component of the Port Lands and South of Eastern studies. Consultation on the studies in different public forums will occur. This is the first consultation meeting to introduce these studies. You are invited to learn more about these studies, as well as provide input and feedback:

- Date:** Thursday, November 28, 2013
- Time:** Open House – 6 to 7 p.m.
Presentations and Q & A – 7 to 9 p.m.
- Location:** Riverdale Collegiate – Atrium and Auditorium 
1094 Gerrard Street East
- TTC:** 506 Carlton streetcar (to Jones Ave) or
83 Jones bus (to Gerrard Ave)
- Parking:** On-street – Gerrard Avenue or Jones Avenue

More information about the studies is available at <http://www.portlandsconsultation.ca>.

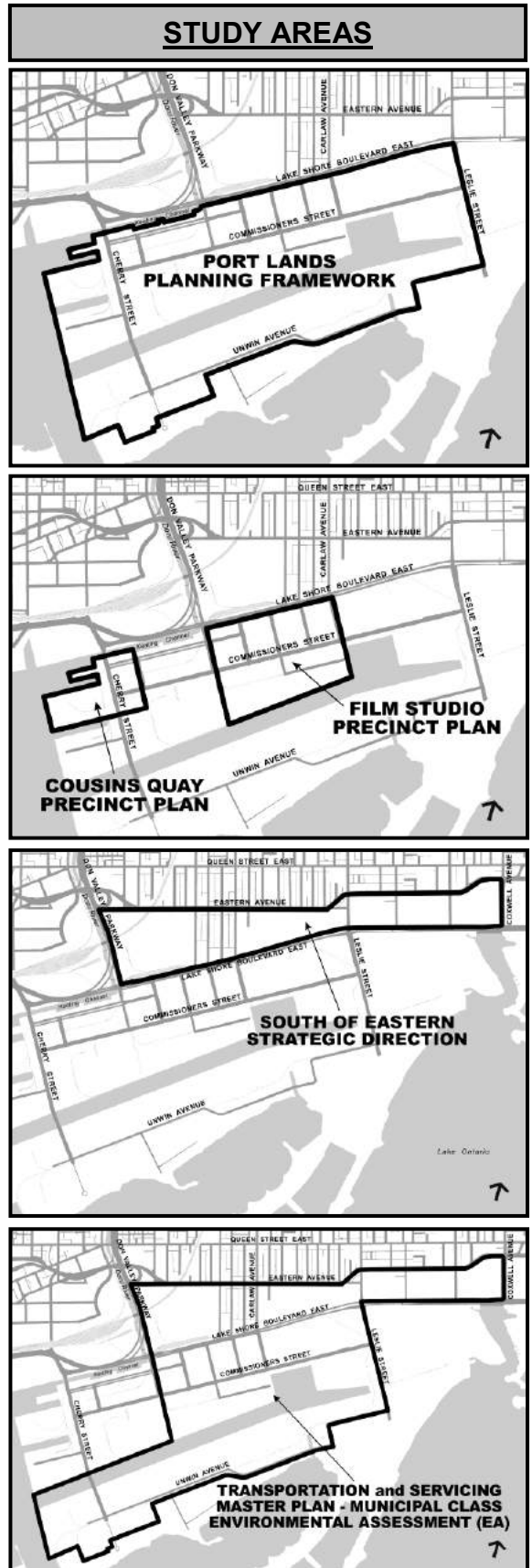
If you wish to receive further information on the studies or be added to a mailing list, please contact:

PORT LANDS:

Cassidy Ritz, Senior Planner
Community Planning
100 Queen Street West, 18th Floor, East Tower
Toronto, ON M5H 2N2
Tel: 416-397-4487 Fax: 416-392-1330
Email: portlands@toronto.ca

SOUTH OF EASTERN STRATEGIC DIRECTION:

Angela Stea, Senior Planner
Community Planning
100 Queen Street West, 18th Floor, East Tower
Toronto, ON M5H 2N2
Tel: 416-392-7215 Fax: 416-392-1330
Email: astea@toronto.ca



Help us plan the future of the Port Lands

PORT LANDS PLANNING FRAMEWORK & TRANSPORTATION AND SERVICING MASTER PLAN

PUBLIC MEETING

We invite you to attend this public meeting where different options for land use, transportation and municipal services for the Port Lands will be presented. The purpose of this meeting is to discuss these options and get your feedback. Your participation and ideas are important and will help shape the future of the Port Lands.

Date: Thursday, February 13, 2014

Time: Drop-in – 6:30 to 7:00 p.m.
Presentation, followed by Facilitated Discussion – 7 to 9 p.m.

Location: Fire Academy, 895 Eastern Avenue
(southwest corner of Eastern Avenue and Knox Avenue)



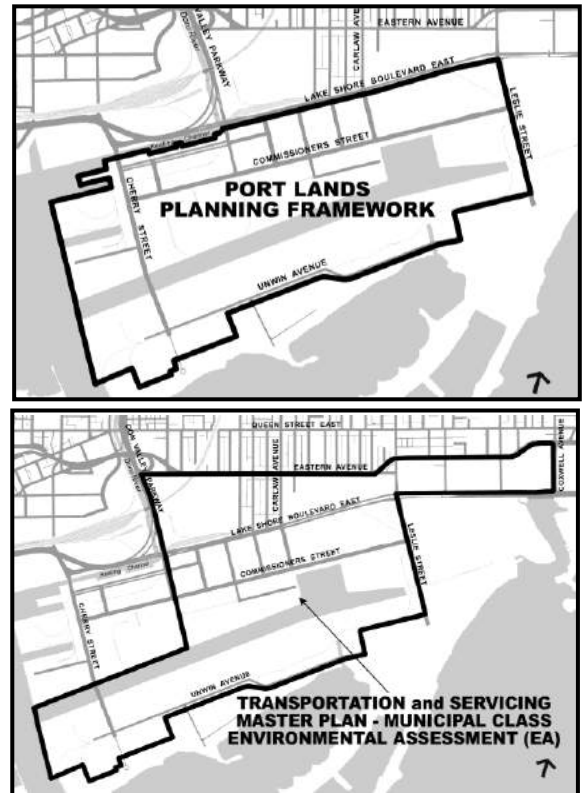
The City of Toronto and Waterfront Toronto are developing a comprehensive long-term plan to guide the revitalization of the Port Lands. The plan will include direction for the transformation of the Port Lands into a number of new districts with a variety of uses including residential, commercial and parkland. This plan will build on the direction from the Port Lands Acceleration Initiative that was adopted by City Council in 2012.

A Master Plan under the Municipal Class Environmental Assessment (EA) process is also being developed to establish the street network (including transit), and the water, wastewater and stormwater infrastructure needed to support revitalization. The Master Plan applies to most of the Port Lands and to the area referred to as "South of Eastern" (located north of Lake Shore Boulevard East, south of Eastern Avenue, between the Don River and Coxwell Avenue). The Master Plan will provide a coordinated transportation and servicing strategy between the two areas.

South of Eastern Strategic Direction:

A separate community consultation meeting for the planning study for the South of Eastern area will be held on February 18, 2014. A meeting notice will be issued shortly.

More information about the studies is available at:
<http://www.portlandsconsultation.ca>.



If you wish to receive further information on the studies or be added to a mailing list, please contact:

Cassidy Ritz, Senior Planner
Community Planning
100 Queen Street West, 18th Floor, East Tower
Toronto, ON M5H 2N2
Tel: 416-397-4487 Fax: 416-392-1330
portlands@toronto.ca

During the planning process for the above studies, the City of Toronto and Waterfront Toronto will be collecting comments and information from the public under the authority of the City of Toronto Act, 2006, s. 136© and the Planning Act, 1990. Personal information collected will be maintained in accordance with the Municipal Freedom of Information and Privacy Protection Act and may be used to provide updates on this file. Questions about the collection of this information can be directed to the City Planning Division, City of Toronto.

Help us plan the future of the Port Lands

PORT LANDS PLANNING FRAMEWORK & TRANSPORTATION AND SERVICING MASTER PLAN

WORKSHOP

We invite you to attend this workshop where you can further review and comment on the different options for land use, transportation and municipal services for the Port Lands that were presented at the community consultation meeting held on February 13, 2014, at the Fire Academy. This workshop is a further opportunity to understand the material, ask questions and provide feedback.

Date: Wednesday, March 5, 2014

Time: 7 – 9 p.m.

Location: Ralph Thornton Centre, 765 Queen Street East



Please RSVP to portlands@toronto.ca by March 3, 2014, if you are planning to attend.

The Port Lands Planning Framework will include direction for the transformation of the Port Lands into a number of new districts with a variety of uses including residential, commercial and parkland. This plan will build on the direction from the Port Lands Acceleration Initiative that was adopted by City Council in 2012.

The Transportation and Servicing Master Plan – Municipal Class Environmental Assessment (EA) is being developed to establish the street network (including transit), and the water, wastewater and stormwater infrastructure needed to support revitalization.

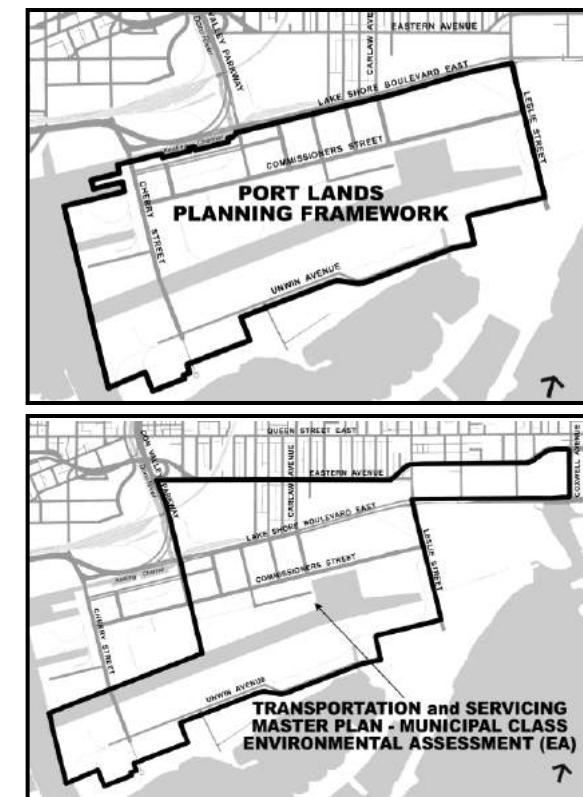
More information about the studies is available at:
www.portlandsconsultation.ca.

The materials that were presented and provided at the community consultation meeting held on February 13, 2014, are available online:

- [Presentation](#)
- [Port Lands Planning Framework – Display Boards](#)
- [Transportation & Servicing Master Plan – Display Boards](#)
- [Discussion Guide](#)
- [Discussion Questions](#)

If you wish to receive further information on the studies or be added to a mailing list, please contact:

Cassidy Ritz, Senior Planner
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Toronto, ON M5H 2N2
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asanto@waterfronttoronto.ca

SHAPING THE FUTURE: PLACEMAKING IN THE PORT LANDS & CONNECTING SOUTH OF EASTERN

Final Public Consultation

Open House: Presentations and Information Sessions

November 14, 2015
George Brown College
51 Dockside Drive
Session 1: 9:00 am to 12:00 pm
Session 2: 1:00 pm to 4:00 pm

Workshop: Placemaking in the Port Lands

November 17, 2015
Morse Junior Public
School
180 Carlaw Avenue
6:30pm - 9:00pm

Workshop: Connecting the Port Lands+ South of Eastern Areas

November 18, 2015
Fire Academy
895 Eastern Avenue
6:30pm - 9:00pm

The City of Toronto and Waterfront Toronto are nearing the completion of a series of plans that will guide the transformation of the Port Lands and better connect the Port Lands and South of Eastern areas. Public input has played a key role in shaping the plans to date. We are again inviting your participation to help to refine and shape the final plans.

A final public consultation meeting is being held to present findings from three concurrent studies – the Port Lands Planning Framework, Villiers Island Precinct Plan and the Port Lands and South of Eastern Transportation + Servicing Master Plan Environmental Assessment. Given the amount and complexity of information, this final round of consultation will be a two-step process. Key findings, emerging directions and preferred solutions will be presented at an open house running throughout the day on November 14, 2015, with presentations and information sessions recurring in the morning and afternoon. Public input and comment will then be sought at two evening workshop meetings on November 17, 2015 and November 18, 2015.

If you are unable to attend the meetings in person, you can participate online at www.portlandsconsultation.ca. If you have specific accommodation requirements, please email info@waterfronttoronto.ca or call 416-214-1344 x. 244.

After the open house, the presentations and information, including video recordings, will be made available on the web site and feedback can be provided by completing an online discussion guide. If you wish to receive further information on the plans or be added to a mailing list, please contact:

Cassidy Ritz, Project Manager
City Planning Division
Tel: 416-397-4487
portlands@toronto.ca

Amanda Santo, Director
Waterfront Toronto
Tel: 416-214-1344 ext. 292
asanto@waterfronttoronto.ca

During the planning process for the above studies, the City of Toronto and Waterfront Toronto will be collecting comments and information from the public under the authority of the City of Toronto Act, 2006, s. 136© and the Planning Act, 1990. Personal information collected will be maintained in accordance with the Municipal Freedom of Information and Privacy Protection Act and may be used to provide updates on this file. Questions about the collection of this information can be directed to the City Planning Division, City of Toronto.

**APPENDIX B –
STAKEHOLDER ADVISORY COMMITTEE MEETING SUMMARIES**

**Port Lands and South of Eastern Planning Studies
Stakeholder Advisory Committee
Meeting 13-1**

**Thursday November 21, 2013
City Hall, 100 Queen Street West, Committee Room 4
7:00 – 9:00 PM**

1. Agenda Review, Opening Remarks and Introduction

Ms. Liz Nield, CEO of Lura Consulting, began the Stakeholder Advisory Committee (SAC) meeting by welcoming committee members and thanking them for attending the session. She introduced the facilitation team from Lura Consulting and also led a round of introductions of SAC members and staff from the City of Toronto, Waterfront Toronto and TRCA. Ms. Nield reviewed the meeting agenda and reminded SAC members that a key role of the committee is to provide feedback and guidance to the project team throughout the study, particularly ahead of community consultation meetings.

A copy of the agenda is provided in Appendix A. A list of SAC members that participated at the meeting is included in Appendix B and Questions of Clarification posed by the SAC are provided in Appendix C.

2. SAC Briefing

The purpose of the first round of consultation was to introduce the current planning initiatives that the City, Waterfront Toronto and TRCA are working on in the Port Lands and South of Eastern areas.

A presentation by Cassidy Ritz, City of Toronto, City Planning Division, Shalin Yeboah, Waterfront Toronto and Angela Stea, City of Toronto, City Planning Division introduced the Port Lands and South of Eastern studies to SAC members and included:

- Overview of Initiatives;
- Port Lands Planning Framework and Precinct Planning;
- South of Eastern Strategic Direction;
- Port Lands and South of Eastern Transportation and Servicing Master Plan EA.

It was noted the presentation will be available online at www.portlandsconsultation.ca following the November 28, 2013 community consultation meeting.

3. Facilitated Discussion - Feedback and Advice

SAC members provided the following feedback and advice after the briefing:

Presentation

- Simplify the scope and content of the planning studies being presented to avoid overwhelming people with too much information.
- Avoid using acronyms and use plain language wherever possible.

- Be clear about the project and public consultation timelines.
- Clarify the study area boundaries and clearly label all maps and diagrams to help people orient themselves.
- Use different colours to differentiate each study area.
- Remove the section of the presentation with the neighbourhood overlays and show examples of different street grid patterns only.
- Include a reference map in the corner of every slide so people can orient themselves to each particular initiative being presented.
- Include a panel or slide that documents some of the changes currently taking place in the Port Lands to give people a sense of the current conditions.

Consultation Materials

- Provide people with a discussion guide that includes background information to take away with them.
- Include links to online resources or the project website in the workbook.
- Carefully think about what kind of feedback you would like to receive from the public and revise your questions to be more targeted and focused. Be clear with people what you are asking them to tell you.

Port Lands and South of Eastern Planning Study

- Ensure that each area is developed with a distinguishing character or identity.
- The Planning Framework should be bold and visionary.
- Identify what heritage resources and buildings are in the Port Lands as well as any views that should be protected.

Transportation and Servicing Master Plan

- Rename this initiative to avoid confusion given that the areas referenced in this study are not consistent with the definition of the Port Lands.

A more detailed summary of the feedback session (including questions and answers) is provided in Appendix C.

4. Proposed Format for Upcoming Community Meeting

Ms. Nield informed SAC members of the upcoming community consultation meeting scheduled for November 28, 2013 at Riverdale Collegiate. Ms. Nield briefly outlined the format of the meeting which will include an open house and presentation as well as several opportunities to ask questions of clarification and provide feedback.

5. Upcoming SAC Meeting Dates

Ms. Nield thanked SAC members for providing feedback and assured them that the project team will revise the presentation based on the comments and suggestions raised at the meeting. Ms. Nield also informed SAC members that the project team will be canvassing for SAC members for each specific initiative at the community meeting. Ms. Nield then thanked the project team and SAC members for attending and adjourned the meeting.

Next SAC meeting: January 2014



**Port Lands Planning Framework
and Port Lands and South of Eastern Municipal Class EA**

Stakeholder Advisory Committee (SAC) Meeting – 13-#1

City Hall, Committee Room 4

Thursday November 21, 2013

7:00 – 9:00 pm

AGENDA

- 7:00 pm** **Agenda Review, Opening Remarks and Introductions**
- Liz Nield, Facilitator, Lura Consulting
- 7:15 pm** **SAC Mandate and Responsibilities – Quick Refresher**
- 7:20 pm** **SAC Member Briefing – Cassidy Ritz, City of Toronto & Shalin Yeboah**
1. Overview of Initiatives
 2. Port Lands Planning Framework and Precinct Planning
 3. South of Eastern Strategic Direction
 4. Port Lands and South of Eastern Transportation and Servicing Master Plan EA
- 8:20 pm** **Facilitated Discussion – SAC Questions, Feedback and Advice**
- Thinking about the material presented and the main topics covered in the presentation, what feedback or advice do you have to improve the clarity of the material in preparation for the upcoming community meeting?
 - Feedback on the material itself?
- 8:50 pm** **Proposed Format for Upcoming Community Consultation Meeting**
- 8:55 pm** **Next Steps and Closing Remarks**
- 9:00 pm** **Adjourn**

Appendix B – List of Attendees

SAC Attendees :

- Citizens for a Safe Environment
- Corktown Residents and Business Association
- Craig Scott, Member of Parliament
- Cycle TO
- Don Watershed Regeneration Council
- Gooderham Worts Neighbourhood Association
- Lake Ontario Waterkeeper
- Toronto Field Naturalists
- Rocket Riders
- Walk Toronto
- West Don Lands Committee

Appendix C – SAC Questions of Clarification

A summary of the discussion following the SAC Briefing is provided below. Questions are noted with **Q**, responses are noted by **A**, and comments are noted by **C**.

Q. What is a PGM?

A. It's the Planning and Growth Management Committee.

C. Label the street names in every diagram large enough to give people, especially at the public meeting, a frame of reference.

Q. What is the issue between the streetcars and the hydro wires?

A. Installing streetcar infrastructure on Commissioners Street is problematic due to the existing hydro towers in the middle of the road. Certain clearances would be required. The hydro towers are also a physical impediment to development and it has been indicated that the transmission wires affect broadcasting capabilities. They do present a challenge and we are interested in exploring ways to address those challenges.

C. You could do what is being done elsewhere in the waterfront and put the right of way on one side of the corridor and traffic on the other side.

Q. How does the master transit plan that was completed in 2005 fit into this plan?

A. Was that the Terms of Reference developed?

Q. No, it was the transportation plan for the Port Lands.

A. We are looking at all the previous work that was done in the Port Lands and building on it. There are definitely things that need to be updated. We're doing that as part of this planning process.

Post Meeting Note: In 2006, the TTC and Waterfront Toronto prepared a draft Terms of Reference for an Individual Environmental Assessment to identify the transit improvements required to support planned development in the Eastern Waterfront. The Environmental Assessment process did not proceed following the completion of the draft Terms of Reference.

Q. What do you want people who come to the public meeting to do? Too much information was presented this evening for people to absorb.

A. The main idea is to introduce all of the studies together because of the interconnections between them. We did discuss the possibility of organizing separate meetings for each initiative, but due to the overlap between the studies we thought it would make more sense to streamline the process. This first meeting is intended to be an introductory meeting to 1) present the different initiatives that we're working on, 2) explain some of the work that will be completed as part of those initiatives, and 3) to find out what the public thinks about what we are doing.

A. To clarify the format of the public meeting will include an open house with information booths set-up for each initiative, followed by a presentation and question and answer period. There will be time after the question and answer period for people to revisit the open house booths and share their feedback, or ask additional questions. Project team members will be at each station to answer questions or to provide more information about the specific initiatives.

Q. What did you want to emphasize at the end of the South of Eastern Study part of the presentation?

A. The end of that part of the presentation was about what ties both of the areas together and that's the Transportation and Servicing Master Plan.

Q. So you're talking about the two precincts?

A. We don't refer to South of Eastern as the two precincts, but the Transportation and Servicing Master Plan ties together the South of Eastern area and the Port Lands.

Q. It seems to me that what is being suggested is the need for precinct planning. Are there two precincts that you want people to comment on? And then there is the servicing that connects the two. I don't know how you are going to deal with sustainability. You mentioned several times that this has to be sustainable. What I saw presented were things done in the past, sustainability is about looking forward and exploring new ideas. I don't see any. Maybe we need to talk about what sustainability is and building new buildings and providing new opportunities for servicing. It's not the old model that we should be striving for, especially if we're talking about implementation over 50 years.

A. Thank you for your comments. We will revise the presentation to address those points.

C. I'm concerned about capturing your audience and not losing them in the first five minutes. You spoke about a lot of studies and used a lot of acronyms. Ramp up the beginning of presentation to the top level and tell people we have a plan for the Port Lands which has been endorsed by Council and now we need to create a framework to guide future development in the Port Lands. Tell them about the South of Eastern Strategic Direction and why that is being included and then from there introduce the individual precinct plans. Simplify the message so you're not giving them mountains of detailed information.

A. What you're suggesting is a simplified, tiered approach. Sounds good, thank you.

C. I have two suggestions, one for the whole project and one for next week's meeting. I would like to see an informing principle for the whole project that each precinct area has a distinct or identifying feature. As the City redevelops, all the funky areas are getting turned into a bland rash of not bad looking condo buildings with retail at grade. Soon you won't know whether you are in Mirvish Village or the Distillery District because they are all going to end up looking exactly the same and I think that's depressing. In the Port Lands, which is quite flat, this may be challenging but there are some interesting old buildings and it's close to the water. I think a guiding principle that every area plan should have some distinctive feature that gives people a sense of place is important.

A. Building on that, what I'm hearing is that each area in the Port Lands should have its own unique identity.

Q. My suggestion for the public meeting is that it would be helpful if people had something on paper to take away. It's comforting for people to know they have some background information to refer to later.

A. We have drafted a workbook for the meeting next week that provides a snapshot of each initiative and some focused discussion questions. Is that something that would be helpful?

C. Yes, if it includes some maps and diagrams.

Q. It's crucial at beginning of the public meeting for people to know whether they should be taking notes or not. The workbook should also have links to online resources. Also, the Transportation and Servicing Master Plan does not fit the definition of the Port Lands because you're excluding the Lower Don Lands. It's confusing when you refer to it as South of Eastern and the Port Lands when it's not the Port Lands.

A. We'll try to come up with a better name for it.

Q. Can you remind me why the Polson Precinct Plan is not included as part of this study?

A. Quite frankly, we have enough work to do at the moment. We decided to temporarily put that initiative on hold until we complete these other initiatives.

Q. So there isn't another reason why the study is on hold?

A. It's a workload reason and it's an interest reason. There are also long-term lease holders on Polson Quay who haven't expressed a lot of interest in a new precinct plan. So given our workload, we decided to put it on hold, but it is still part of the overall plan.

Q. Is there a list of the OMB appeals that we can access to give us a sense of what is being challenged?

A. The issue is that the Waterfront Secondary Plan, with the exception of the Easy Bayfront and West Don Lands is under appeal, so it's more than just the Port Lands. I [C. Ritz] can see if something can be pulled together with respect to appeals specifically in the Port Lands.

C. I have a comment that builds on something that was mentioned earlier. What jumped out at me during the presentation is the overlay of the Port Lands over distinct areas and downtown neighbourhoods. That's something that people can relate to. I agree that each area needs to be defined by a specific identity or character. Typically during the development process, things get watered down. To aim for something really characteristic and really unique in each area gives it a better chance of being implemented.

Q. I mentioned the need to label streets and long-term buildings in the diagrams. Most people don't know what anything is in the Port Lands. Also, there was a whole section in the presentation with overlays of Liberty Village and some other neighbourhoods to show examples of different development patterns. I think it's better to leave out those overlays and just show examples of street grids. It just seems like a chunk thrown in for no particular reason. You could put those overlays on panels around the room instead. It would also be helpful to have a reference map in the corner every slide so we know where the particular initiative you are talking about is in the Port Lands, or colour code them. One last thing, try to use plain language whenever you can.

C. Use different colours to differentiate each study area. Most people coming in to the public meeting won't understand what they're looking at.

C. You need to articulate that we're planning a future, and that we need a bold vision of what the Port Lands should like, which requires creative thinking. Transit infrastructure has to go in first and should be prioritized regardless of what's there. We don't want to encourage auto reliance.

A. We will take a look at the transit routes and where they should be provided. We are not in a position to guarantee that we'll be able to put transit on every street located within the Port Lands; it costs money. We would like to put forward a realistic plan that the City can afford and one that services the needs of the area.

Q. You mentioned the Broadview extension during the presentation. In previous discussions going back a few years the emphasis was on the Carlaw extension across the Ship Channel. It appears as if the Carlaw extension has been downgraded and the Broadview extension is now being emphasized. What is the story behind this change?

A. None of the connections across the ship channel are being downplayed. The intent is to look at where connections should be provided across the Ship Channel. The Carlaw extension is a bit problematic as Hydro One recently completed a new switching yard across the ship channel at the end of Carlaw. The location of the Portlands Energy Centre also makes that connection difficult to achieve.

Q. How does it work when a ship needs to pass under the bridge? Is there someone attending that bridge all the time?

A. The bridge across the ship channel is owned and managed by the Toronto Port Authority (TPA).

Q. Does someone have to be there all the time, or given that there's fairly little traffic on the ship channel, is there a schedule?

A. We are not familiar with TPA's operations. It's something we can look into. We do recognize that the Ship Channel is actively used, and will continue to be used. Any additional connections will have to accommodate ships moving through the Channel.

C. As you move forward in your review of what's in the Port Lands, it's possible that the heritage resources (e.g., the views, buildings, etc.) within the study area are the defining characteristics you're looking for. You should take a cue from what's already there. You could identify what heritage resources and buildings are in the Port Lands as well as any views you would like to preserve.

Q. You mentioned that you are hiring a consultant for South of Eastern. What is that consultant going to do?

A. The consultant will be doing the background economic study for the South of Eastern Strategic Direction. This includes doing surveys on what kind of employment uses are currently there, providing projections on what kind of employment uses are best suited for the area and what services those employment uses would need. That analysis will be used by other consultants to outline the built form and urban design considerations for the area. Once that information is brought forward by the consultants in a summary report, they will be integrated into the Strategic Plan.

Q. As a member of the public, I do not like to be asked my opinion about something if the decision has already been made. I think it's fair to ask the public for feedback on things that you actually want public input on and that people have an opportunity to influence. But don't ask them for input on something that you're not going to give them a vested interest in. It's up to you to decide what it is that you want the public input on.

A. What we're saying is that this is an employment area. We're not looking to change this into a residential neighbourhood. The fact that the South of Eastern Area has these employment uses is really important to the City. The intent of this study is not to go in with a blank slate for things that are not supportable under the Official Plan. We need a certain amount of employment lands, and this area has been designated for employment uses.

A. We'll be sure to carefully think about what kind of input we're asking for, and clarify our questions.

C. We've been through so many of these processes. The public would like to see what kind of effect they've had on the process.

C. You should include a panel or include a slide in the presentation to give people an idea of some of the changes that are currently taking place in the Port Lands and to let them know this isn't a plan for more plans.

Q. What kind of feedback are you expecting from people? What kind of questions are you going to ask?

A. That is something we should have conveyed earlier. We will be sure to clarify that at the public meeting. We're looking for feedback on the initiatives that you're interested in. We understand that some people have been more focused on the Lower Don Lands who would be more inclined to provide feedback on the Cousins Quay Precinct Plan for instance. There are other people who are more passionate about the South of Eastern Area and what should happen there. The intent is to collect feedback on the initiatives that you are interested in. The workbook will also have some structured questions about each of the initiatives.

C. I think every time you show a map you should include some kind of symbol to give people a sense of place and help orient them in relation to other things.

Q. What exactly are you going to do at the discussion stations? The word discussion conveys sitting down and reaching a consensus on something which doesn't work in the given timeframe. It also is not consistent with what you're asking for; what you're really asking for is ideas. I'd be more inclined to rename them to something like Brainstorming Stations. I am also interested to know what the schedule is for future community meetings. There's a limited amount of time for something the public will be strongly interested in. Do you have any online engagement plans for people to go to after the meeting?

A. There was a website created as part of the Port Lands Acceleration Initiative which we will continue to use. All of the information from the meetings will get posted there. The workbook will also get transformed into an online survey. We are creating a web presence. That website is www.portlandsconsultations.ca.

C. You need to emphasize that this is a Master Plan. When you consult with the public, ask how they envision the connections between these areas.

C. The questions need to be more focused to get substantive feedback.

A. We will work clarifying and focusing the questions. One of the other ideas we are considering to do at the open house is to have different activities (e.g., dotmocracy, flip charts and post-it note activities) so that people can interact with the material at each station.

**Port Lands and South of Eastern Planning Studies
Stakeholder Advisory Committee
Meeting 13-2 – Summary**

**Monday February 3, 2014
City Hall, 100 Queen Street West, Committee Room 4
7:00 – 9:00 PM**

1. Agenda Review, Opening Remarks and Introduction

Ms. Liz Nield, CEO of Lura Consulting, began the Stakeholder Advisory Committee (SAC) meeting by welcoming committee members and thanking them for attending the session. She introduced the facilitation team from Lura Consulting and also led a round of introductions of SAC members and staff from the City of Toronto, Waterfront Toronto and TRCA. Ms. Nield reviewed the meeting agenda and reminded SAC members that a key role of the committee is to provide feedback and guidance to the project team throughout the study, particularly ahead of community consultation meetings. Ms. Nield also reviewed the SAC mandate and responsibilities with members, which is to help the project team: understand community perceptions of the draft plans and alternatives, prepare for community consultation meetings (CCM), and spread the word about the project. Ms. Nield also reminded SAC members of the CCM on Thursday, February 13, 2014.

A copy of the agenda is provided in Appendix A. A list of SAC members that participated in the meeting is included in Appendix B. Questions of Clarification posed by SAC members are provided in Appendix C.

2. SAC Briefing

The purpose of the second round of consultation was to discuss and collect feedback on the options for land use, transportation and municipal services developed by the City, Waterfront Toronto and Dillon Consulting.

A presentation by Cassidy Ritz, City of Toronto, City Planning Division, Amanda Santo, Waterfront Toronto, and Ann Joyner, Dillon Consulting reviewed the Port Lands Planning Framework and South of Eastern Transportation Servicing Master Plan with SAC members and included:

- Emerging Vision and Objectives;
- Land Use Options for the Port Lands, and;
- Transportation and Servicing Alternatives.

It was noted that the presentation will be available online at www.portlandsconsultation.ca following the February 13, 2014 community consultation meeting.

3. Facilitated Discussion - Questions of Clarification, Feedback and Advice

SAC members provided the following feedback and advice after the briefing:

Presentation

- Reduce the amount of information to be presented - focus on the planning options and provide enough context about each to enable participants to provide substantive feedback.
- Clarify the presentation narrative.
- Replace the first image of the slide deck with one that speaks to the project area (e.g., river).
- Use lessons learned from local examples to inform the study (e.g., Thorncliffe Park)
- Highlight the existing uses in the Port Lands that will likely be there in perpetuity.
- Use different colours in the slide deck – it’s difficult for someone who is colour blind to distinguish the colours currently being used.

Planning Options

- Replace the suggested commercial strip on Leslie Street with parks or greenspace.
- Include more parkland and greenspace in all of the planning options. Green space is also needed to provide green infrastructure and reduce dependency on centralized water/waste water management systems.
- Protect the waterfront.
- Be clear about what is a restriction (e.g., hydro towers, dock wall) and what is an assumption.
- Be visionary and creative, and continue to focus on sustainability.
- Consider options to reuse the shipping channel in the event shipping becomes redundant.
- Explain that each precinct will have its own vision, character and identifying quality – don’t want the Port Lands to be entirely uniform.
- Highlight what is unique about the Port Lands and how those characteristics inform the planning options.

Transportation

- Clarify how connectivity between the Port Lands and South of Eastern will be improved.
- Reconsider the proposed modal split – the percentage for active transportation should be higher.
- Consider showing the transportation options only as panels at the public meeting to condense the presentation.
- Include “complete streets” in the transportation options.
- Display the complete trail system.
- Use different colours to distinguish features in the transportation network and use arrows to indicate which routes continue off the slide.
- Include options for travel by water.

Heritage

- Recognize First Nations heritage in the Port Lands redevelopment (e.g., art work, greenspace).
- Recognize other forms of heritage (e.g., built, cultural) in planning options.

Employment

- Protect employment lands in Port Lands for employment uses through zoning and other planning tools (i.e. do not introduce sensitive uses like residential that would negatively impact operations).

A more detailed summary of the feedback session (including questions and answers) is provided in Appendix C.

4. Proposed Format for Upcoming Community Meeting

Ms. Nield informed SAC members of the upcoming community consultation meeting scheduled for February 13, 2014 at the Fire Academy, 895 Eastern Avenue. Ms. Nield briefly outlined the format of the meeting which will include an open house and presentation as well as several opportunities to ask questions of clarification and provide feedback.

5. Adjourn

Ms. Nield thanked SAC members for providing feedback and assured them that the project team will revise the presentation based on the comments and suggestions raised at the meeting. Ms. Nield also informed SAC members that the project team is canvassing for SAC members for each specific initiative. Ms. Nield then thanked the project team and SAC members for attending and adjourned the meeting.



**Port Lands Planning Framework
and Port Lands and South of Eastern Municipal Class EA**

Stakeholder Advisory Committee (SAC) Meeting – 13-#2

Location: City Hall, Committee Room 4

Monday February 3, 2014

7:00 – 9:00 pm

AGENDA

Purpose:

- Present land use options and parks and open space opportunities for the Port Lands, and the transportation and servicing alternatives.
- Seek feedback on material presented in preparation for the upcoming community meeting.

7:00 pm Agenda Review, Opening Remarks and Introductions

Liz Nield, Facilitator, Lura Consulting

7:10 pm SAC Mandate and Responsibilities

7:15 pm Proposed Format for Upcoming Community Consultation Meeting

7:30 pm SAC Member Briefing – Cassidy Ritz, City of Toronto & Amanda Santo, Waterfront Toronto

1. Emerging Vision and Objectives
2. Land Use Options for the Port Lands
3. Transportation and Servicing Alternatives

8:15 pm Facilitated Discussion – SAC Questions, Feedback and Advice

- Thinking about the material presented and the main topics covered in the presentation, what feedback or advice do you have to improve the clarity of the material in preparation for the upcoming community meeting?
- Thinking about the material presented and the main topics covered in the presentation:
 - a. What did you like?
 - b. What do you suggest we change?

8:55 pm Next Steps and Closing Remarks

9:00 pm Adjourn

Appendix B – List of Attendees

SAC Meeting List of Attendees :

- Martin Prosperity Institute
- Don Watershed Regeneration Council (DWRC)
- Toronto Green Community
- Friends of the Spit
- Gooderham & Worts Neighbourhood Association (GWNA)
- Cycle Toronto
- West Don Lands Committee
- Walk Toronto
- Mississaugas of the New Credit First Nation
- Toronto Historical Association
- Redpath Sugar
- Toronto Industry Network
- University of Toronto
- Film Ontario
- Waterfront Action

Appendix C – SAC Questions of Clarification, Feedback and Advice

A summary of the discussion following the SAC Briefing is provided below. Questions are noted with **Q**, responses are noted by **A**, and comments are noted by **C**.

Q. What happens to the transfer station in Option 4?

A. The transfer station would be relocated to another site.

Q. Has there been a study on Thorncliffe Park? It is a great example of mixed-use development in Toronto. What were its successes and failures? We're moving into a similar vision for the Port Lands that was used in Thorncliffe's development. It would be beneficial to learn from that example.

A. We can look into that.

C. A lot of information was covered in the presentation. I don't feel like I can make a choice or provide feedback on the land use alternatives. You need to give people something to take away, especially with information on the planning options, this would give them the chance to review the alternatives and provide comments or submit comments at a later time online. I'd also like to suggest that the very first picture at the beginning of the presentation should be the Don River since it's the heart and soul of the area. Over the years that is what people will continue to care about.

Q. None of the land use options provide details about parkland. I think parkland has been left out of the planning options. The four options are too prosaic; you are also asking people to comment on them in a limited time.

A. Part of the conversation that we are trying to have is to convey that different land use options would generate different parkland options. Industrial land uses would require less parkland, while residential uses would require more.

C. Those are odd assumptions. People view the Port Lands as a giant park. This is a visioning time, I'm not seeing the vision here.

A. The alternatives do show Lake Ontario park, which we are not revisiting as part of this process, and other opportunities for other parks and open spaces are included as a separate slide. This is the approach we decided to take.

C. I agree that this is development or business as usual. We need to start looking at water treatment infrastructure and how we are going to reduce our dependency on a centralized system. There is not enough open space in the alternatives. They are all road – there are no trees and no greenspace that would afford opportunities for stormwater management, recreational amenities or the considerations Dillon referred to in the forward movement toward sustainability. There needs to be way more open space.

C. The existing uses that are realistically going to be there forever should be highlighted. This is a long term plan with a 30-50 year horizon. No thought has been given to the potential reuse of the Ship Channel in the event shipping becomes redundant. It could be repurposed as a potential recreational feature.

C. I can't imagine any useful feedback with respect to the land use alternatives presented because there is too much information to consider. There was not enough context to think about the particular options. Potential residential areas are important, but what are the implications for infrastructure and servicing? What's imagined for those commercial lands? I can't picture it, so I don't know how I could

contribute to this discussion in a useful way. There needs to be a high level planning framework with clear ideas about servicing. There is too much to cover in one meeting. The other thing to consider is ensuring that transit planning and land use planning are integrated south of Eastern Avenue to create connections with the residential area north of Queen Street East. I don't understand why that's not happening. Why is all the employment concentrated south of Eastern Avenue? Would anyone living north of Eastern Avenue walk down into the Port Lands – I'm not sure those connections are being created. I suggest working on the narrative of how the options are presented.

A. The area south of Eastern Avenue is designated as employment land in the City's Official Plan. No residential uses are contemplated for that area. The City recently completed a provincially mandated review of employment areas across the city and maintained it as an employment area.

A. There is a small pocket of residential development in south of Eastern Avenue, it could be useful to highlight the pocket or refer to it during the presentation.

C. I'm worried that we're setting ourselves up for the same scenario that's happened at King Street and Spadina Avenue due to lack of investment. What is the narrative and vision connecting South of Eastern to the Port Lands?

A. The connections are really what we are looking at in terms of the transportation connections to allow the people who live north of Eastern Avenue to make their way down to the Port Lands. That could be achieved through parks and greenspace connections or smaller streets. Right now what you see are large blocks, but as we go forward and redevelop the area we will be looking at streets.

C. Nobody wants to use the north-south connections.

A. What I'm hearing is that whatever we do in the South of Eastern area, even if it is maintaining an employment area, we should be creating destinations that draw people through an attractive mix of uses.

C. The film, television and interactive video game industry is the second largest employer in Toronto. We work very hard to protect employment land uses for our employees. Option 1 considers increasing creative uses in the Port Lands, but our sector operates more like light industry. We work 24 hours a day, 7 days a week, require hundreds of parking spaces, and trucks stopping and starting – we don't want residential uses introduced beside us. If you want to hang on to this industry in the City of Toronto, don't zone them out of the existing land uses. They will move to other cities or provinces. We're not being invited into the space; we're already in the space often with long-term leases. Don't push those jobs out of the space.

Q. How do you envisage south of Commissioners Street as a live/work area compared to Leslie Street? Roncesvalles Street and Port Credit were shown as examples in the presentation.

A. The vision for Leslie Street is to be developed with low-rise office buildings like Chorus Quay. The frontage on the site is narrower may not accommodate taller or large buildings.

Q. It was mentioned during the presentation that some of the north-south street connections would be going over or under Lake Shore Boulevard – could you clarify this?

A. That was referring to Broadview Avenue crossing the rail corridor embankment not Lake Shore Boulevard. The new connections would have to go over or under the rail embankment.

Q. The idea of connecting an existing neighbourhood with a new one is not reflected in the transportation plan. What about the idea of creating complete streets? We have to rethink transportation given the high cost of fuel. Ten percent for active transportation is too low in terms of modal split. There also needs to be street calming features. Can you explain the 20/80 split?

A. It's a combination of service and urban design considerations. What we are showing in the alternatives is from a servicing perspective. We are identifying options and assessing which ones are more effective to serve automobiles and transit. The split you saw is going to generate trips, the question is how are by car and how many are by transit. That split you saw is indicative of a highly urban area in Toronto.

C. The vision should be 30 percent for active transportation. I thought this was a vision for sustainability.

A. We can go back and review the mode split being suggested for active transportation. The intention is to provide choices on all new streets so that they are complete streets. We can go back and look at that and assess whether or not 10 percent achieves that.

C. Identify the function of the roads, and the services needed to support that function. What does land use look like? There's a functional perspective about what is needed.

C. Complete streets road may require a wider footprint.

Q. A large volume of traffic moves through the system (i.e., Lake Shore Boulevard and Eastern Avenue), are you taking into consideration that volume as well?

A. Yes, we are assessing the complete system.

C. I find this to be a "tsunami" of information. I don't think you will be able to get fulsome feedback. It's going to be hard for the general public to understand what is being presented. The integration of the South of Eastern area into the Port Lands is driving the framework of the land use options. It's important to understand that while considering the criteria that would be applied to the various land use options, it would be wise to schedule a workshop beyond one public meeting to help people understand the material. You could also put the materials online to give people additional time to consider them more thoroughly before providing comments. Also, I want to add that I do not understand the Leslie Street commercial area south of Commissioners Street. The only way I can see it working is if there is something to draw or attract people further into the Port Lands.

Note: A workshop was organized for March 5th to ensure participants were provided with additional time and opportunities for comment.

Q. I'm assuming the different precincts will each have their own vision, we don't want the Port Lands to redevelop in a uniform way. Surely each precinct will have its own local street and central plaza, something that makes that area special. I also don't understand the Leslie Street commercial area, no one would use. I want to add that catalyst uses (e.g., entertainment uses and residential uses) sometimes make uncomfortable neighbours.

A. I'm hearing the comments about the Leslie Street main street. The thinking behind it was to provide something that would animate the frontage while people are crossing into the Port Lands.

Q. Why do you need to animate it?

A. It's a long stretch. I've walked it. It felt like a long distance which required something to encourage or draw people into the area. That said, there are some vacant lands in that area - what do you think should go there?

C. Park Land. We've been asking for parkland going back 20 years. It's about the greening of Leslie Street.

C. Keeping things as wild as possible coming out of the Leslie Street spit is important. I want to emphasize that to the City and Waterfront Toronto.

C. You've done a great job making an impossible set of compromises. There are few challenges to consider: 1) Be realistic, this is an environmental assessment process, and 2) Be visionary (we're talking about 50 years into the future). Also, be clear about what a restriction is and what an assumption is (e.g. port space, salt, etc.).

C. You may want to consider showing the transportation component of the presentation on panels during the open house – there's not enough time to review them in depth. I didn't hear much about the isolation of this neighbourhood from transit point of view. It doesn't fit the transit grid very well, so it's hard to drive, walk, or transit from Queen Street down into this space. I would like to see that addressed. Also, I'd like the major and minor streets to be identified more clearly. There's a really impressive park trail system along the perimeter of Tommy Thompson Park that wasn't included in the renderings. Show more colours on the diagrams to separate out what is proposed or existing (i.e., cycling network). For trails or routes that disappear off page include arrows to indicate they continue.

C. We're at least 50 years away before anything we are discussing here will be achieved. Would caution that too much is being pushed into one presentation. Maybe it needs to be broken down and considered over a series of meetings. Maybe we can't do the decision-making in such a short series of meetings, and maybe we don't need to. Also, it's difficult to discern some of the colours, especially for someone who is colour blind. You also need to give people more time to review and understand the material – don't force it all into one presentation or meeting. That said, you've done an enormous amount of work and I do appreciate.

C. I have a few comments from a First Nations perspective. What I am hearing is that heritage matters. This is our land, and it's been built over. Everyone in the city is now worried about their built history. We as First Nations are asking for recognition. You have to consider our perspective by law, whether its green space or art work. It's time for recognition for our side of things. Also, there was no mention about how the waterfront is going to be protected. Are the MOE and Waterfront Toronto going to protect the waterfront? I don't understand how these options protect the water. There are things here that are not going to move. How do you get creative about a brick wall? Keep in mind people want to keep what they know. We're planning for something that is 30 – 50 years down the road. Who are we building this for? We need to start making changes and protect the heritage that is important people. The only thing I heard mentioned about heritage was the Hearn. I'm sure that people who live near here want to preserve something. We were promised by Waterfront Toronto that we will get some kind of recognition here.

C. As part of narrative of the land use options you should talk about all of them at the same time in order to compare them in terms the number of jobs, residences, etc. they provide. What is unique about the Port Lands? Lake Ontario Park is unique in terms of what it brings to the city. Highlight the relationship of the natural features (e.g., Cherry Beach, river mouth, Ship Channel). What's missing from the presentation is the case for each of the options.

A. The beginning of the presentation sets the stage and highlights the existing conditions and constraints. This is followed by the land use options. Should we set the context at the beginning, or talk about them as we present the land use options?

C. However you do it, there needs to be more discussion about the land use options. Highlight the unique opportunities about these lands. The first image is generic, tweak it to be emblematic of the Port Lands. The image could be anywhere, not Port Lands.

C. I like the comment about who are we building this for. Protecting the water is important. I agree that some of the images need to be changed and that restrictions vs. assumptions should be clarified. I don't think any organization that holds public consultation in Toronto is transparent about how comments are received and analysed. Suggest that you highlight why you have picked certain comments [referring to slide with summary of feedback].

C. Consider including a different kind of transportation map. The feature most people are interested in down here is the waterfront. Include a map of the Port Lands showing routes of small water craft. It could offer another option to enhance connectivity between the Port Lands and the city.

**Port Lands Planning Framework
and Port Lands and South of Eastern Municipal Class EA**

**Stakeholder Advisory Committee (SAC) and
Land Owners and Users (LUAC) Advisory Meeting #3**

**Tuesday, May 20, 2014
Metro Hall, 55 John Street, Room 310
7:00 – 9:00 PM**

Meeting Summary

1. Agenda Review, Opening Remarks and Introduction

Liz Nield, Lura Consulting, began the Stakeholder Advisory Committee (SAC) and Land Owners and Users Advisory Committee (LUAC) meeting by welcoming committee members and thanking them for attending the session. She noted that this was a joint meeting of the two committees and that the main purpose of the combined meeting was to present an emerging land use strategy for the Port Lands for discussion and feedback. Ms. Nield noted that the draft minutes from the last SAC and LUAC meeting were available for review and feedback by committee members. She introduced the facilitation team from Lura Consulting and led a round of introductions of SAC and LUAC members and staff from the City of Toronto, Waterfront Toronto and TRCA.

A copy of the agenda is provided in Appendix A. A list of SAC/LUAC members who participated in the meeting is included in Appendix B.

2. SAC & LUAC Briefing

A presentation by Cassidy Ritz, City of Toronto, City Planning Division provided a detailed update on the planning process for the Port Lands Planning Framework and outlined the emerging land use strategy for the Port Lands. She provided a handout to SAC/LUAC members, which included key aspects, illustrations and maps from the proposed land use strategy. She added that City staff intend to report on strategy development to the City's Planning and Growth Management Committee meeting in June.

3. Facilitated Discussion - Questions of Clarification, Feedback and Advice

Following the presentation, SAC/LUAC members provided feedback on the emerging land use strategy. The discussion centred on the following discussion questions:

1. Thinking about the proposed land use strategy...
 - What do you like?
 - What concerns do you have?
 - What would you change and why?

2. Do you have any other advice or suggestions for the project team?

Below is a high level summary of the feedback received during the facilitated discussion. Appendix C contains a summary of questions of clarification from committee members and answers from City staff, as well as a more detailed summary of SAC/LUAC feedback.

Positive Feedback from SAC/LUAC Members – What They Like

About the Land Use Strategy

- Strategy is comprehensive, based on detailed information and attempts to balance existing conditions/uses with long-term future plans
- Level of detail is good
- Vision is “very progressive”, “magnificent”, “great”
- Overall flexibility of strategy to adapt over time as market conditions evolve
- Overall focus on mixed-use development
- Connectivity throughout the plan
- Concept of the film studio cluster and creative district
- Strategic land reserve
- Mixed-use vision for Villiers Island
- Consideration of commercial traffic
- Green space south of Unwin remains untouched
- Strategy includes consideration to straighten Unwin Avenue
- Pedestrian and cycling network links to various green/open spaces
- Green space located along the turning basin

About the Planning Process

- The process has slowed down; time is being taken to collect and analyze the necessary background data and information
- More inclusion of market-oriented and economic-related information
- Focus on compatibility of industrial uses with other uses; good that compatibility analysis is being undertaken
- Inclusion of PPS guidelines and principles
- Land ownership has been reflected in the strategy
- Good explanation of why decisions have been made and rationale for proposed future directions
- Proposed design charrettes to flesh out additional aspects of the strategy over the summer

Concerns about the Land Use Strategy

- Too much focus on the “golden ticket”/“magic bullet” idea of protecting land for a future Olympics, World’s Fair or similar large event
- Concern that compatibility/buffer studies will slow the process down; concern that this may also preclude creative examination of compatibility and achievement of overall vision
- Many unknowns and challenges associated with relocating the waste transfer facility
- No mention of how repurposing the Hearn will fit into the strategy

- Concern that film studios should be incorporated as part of a mixed use strategy and not as an isolated cluster on their own; building more film studios is not the answer
- Concern that this a very long-term planning process and what is missing is an elaboration of compatible land uses to deal with market forces
- Approach to green network/connectivity/ecological concept is “minimalist” and needs to be expanded
- Concern that there may be too much flexibility in the strategy (e.g., South of Eastern Strategic Direction could have an impact on the future of the Port Lands)
- Concern about the financial shortfall and the potential impact on strategy implementation

Recommendations for Improvement and Next Steps

- Illustrate the green corridor/network connections to Lake Ontario Park and Tommy Thompson Park; existing parks to the south need to be clearly identified on all plans
- Locate employment intensive uses adjacent to proposed transit hubs
- As part of compatibility analysis, consider buffers around waste transfer facility
- Incorporate what was presented for Villiers Island Precinct Plan last week in strategy
- Show connectivity between roads/transportation facilities in the Port Lands and communities to the north
- Consult with film studio operators about appropriate inclusion of studios as part of future mixed use development
- Need to strengthen the green network/connectivity/ecological concept component of the strategy
- Elaborate on the compatibilities of the land uses (i.e. create a longer list of uses to clarify what the mix could be in order to address market forces over time)
- Undertake proper modelling studies to fully understand compatibility of uses
- Aim high with the vision and building standards to ensure future development meets the most progressive standards
- Establish a realistic timeline that recognizes there likely won't be a market for a large amount of residential development in the area for decades
- Consider using a vacuum waste collection program that takes waste to a central Energy From Waste (EFW) facility
- Incorporate statistics on the Port usage from the Toronto Port Authority into analysis of future port and land uses

4. Adjourn

Ms. Ritz encouraged SAC and LUAC members to provide any additional comments and feedback on the draft land use strategy by early next week. Ms. Nield thanked SAC and LUAC members for attending and providing their input.



**Port Lands Planning Framework
and Port Lands and South of Eastern Municipal Class EA**

**Stakeholder Advisory Committee (SAC) and
Land Owners and Users (LUAC) Advisory Meeting #3**

Location: Metro Hall, 55 John Street, Room 310

Tuesday, May 20, 2014

7:00 – 9:00 pm

AGENDA

Meeting Purpose:

- Bring SAC and LUAC members together in a joint meeting to provide a detailed update on the planning process and next steps; and
- Present an emerging land use strategy for the Port Lands for discussion and feedback.

7:00 pm Agenda Review, Opening Remarks and Introductions
Liz Nield, Facilitator, Lura Consulting

7:10 pm Process Update and Presentation – Cassidy Ritz, City of Toronto & Amanda Santo,
Waterfront Toronto

- Process Update and Next Steps
- Proposed Land Use Strategy for the Port Lands
- Upcoming Workshops/Charrettes

7:50 pm Facilitated Discussion – SAC/LUAC Questions, Feedback and Advice

1. Thinking about the proposed land use strategy...
 - What do you like?
 - What concerns do you have?
 - What would you change and why?
2. Do you have any other advice or suggestions for the project team?

8:55 pm Wrap-up and Closing Remarks

9:00 pm Adjourn

Appendix B – List of Attendees

Participating Organizations:

- 33 Villiers Street (Cherry Beach Sound Ltd)
- 440 Commissioners
- Castlepoint
- Chai Poultry
- City of Toronto
- Code Blue/West Don Lands Committee
- Corktown Residents and Business Association
- Cycle Toronto
- Don Watershed Regeneration Council
- First Gulf
- Gooderham & Worts Neighbourhood Association (GWNA)
- LaFarge
- Sherwood Park Residents Association
- Toronto Green Community
- TRCA
- Toronto Port Lands Company
- Toronto Real Estate Board
- Toronto Region Board of Trade
- Waterfront Action
- Waterfront Toronto

Appendix C – Questions of Clarification and Detailed Summary of SAC/LUAC Feedback

A summary of the questions and answers and discussion following the SAC/LUAC briefing is provided below. Questions are noted with **Q**, responses are noted by **A**, and comments are noted by **C**.

Questions of Clarification

Q. Will the compatibility analysis include night clubs? They are louder than many factories.

A. MOE doesn't address night clubs because it's not an industrial use, but we will take note and look into it.

Q. You mentioned you had discussions with Metrolinx about a GO connection. Where exactly would that connection be?

A. It would be here (point to map). In order to have the connection, a few changes would be required. Metrolinx would need to electrify the line and in order to do that they would need to have both local and express routes. We will continue to work with Metrolinx on the feasibility and location of GO connections.

C. This comment is regarding the solid waste transfer station. At risk of alarming people from South Riverdale, why don't we just have vacuum waste collection from all the construction sites and take it to a central energy from waste plant? This could contribute to Port Lands energy needs. This is done in many other places and could be an improvement to the quality of the Port Lands. This is something that we should make a target.

Q. Are the different uses equally employment intensive? Why not put the employment uses adjacent to where we think the transit hub will be? This will mean there is less traffic travelling into the Port Lands. If employment lands are located at the farthest point of the precinct, people will be more likely drive, increasing traffic. Not everyone who lives there is going to work there so it makes sense to locate the employment uses near the transit hub.

A. We did identify a second transit hub at the intersection of Commissioners and Bouchette. This is a good point and I'm sure the transportation experts would agree with you to a certain extent. This is something that we are planning. We are going to take a look at where certain land uses will be and what transit is associated with that. We will be doing a more detailed modal split analysis for the entire site area as part of next phase.

Q. How much are we worried about the PPS buffers? They look a bit concerning to me as setbacks from several of the industrial uses. If we move the transfer station and de-classify it as heavy industry surely that would make a big difference, but still the international examples presented seem to have much smaller buffers than what the Province requires at this point. Is this something that we can negotiate?

A. Those are the minimum separation distances, but you can do a more detailed study and if that study shows smaller buffer requirements, than those can be used. We are going to do a more detailed study to help us determine the buffers required. We know that there are many different ways to address the impacts, but we did want to look at what the guidelines originally say so that we can take that into consideration.

Q. What is a community hub? How is that playing into the long-term vision for the entire precinct, especially in terms of the buffers around land uses?

A. We don't know at this stage what the community hub would be. That would be something that we would try and sort out through precinct planning as well as through the next stage. That is something that feedback and suggestions will be welcome on as well.

Q. The reason that I ask is because a lot of the land use decisions have been made based on establishing appropriate buffers from the waste transfer station, but if the waste transfer station moves, does that impact the overall land use across the precinct?

A. Yes and I would suggest that was reflected in the presentation. If the waste transfer station remains, the ability to get mixed-use residential in this area would be much more limited.

Q. Did Solid Waste Management Services give you the timing of their EA and possible relocation options? And while they are doing that, will you be looking at the D-6 guidelines and determining whether it's appropriate to locate residential next to the station?

A. They have retained a consultant to do their long-term waste management strategy for the city, and that process is already underway. That strategy will inform anything that happens with waste transfer facility here. The EA will be initiated following a decision from Council. They have identified that it would be a challenge to move the facility, so in the interim we won't be suggesting that you can put residential uses next to the waste transfer station until a decision has been made that it can be relocated.

Q. In the interim are you going to determine if it's appropriate to have residential next to the station at the 300m buffer?

A. We could. We didn't think about that, but we could consider that. One of the challenges is the location within the precinct. We need to consider the odour and truck traffic associated with the transfer station.

Q. Are you simply dismissing it as an impossible idea? The plants in Sweden don't require a lot of truck traffic because the waste is used. I wonder how big of a buffer they need.

A. That is something that would have to be explored through the EA, but it is something that we can relay to them. They would have to look at a number of different alternatives and different types of technologies. Doing something that is sustainable and great for the environment has been a cornerstone of the Port Lands plan from the beginning.

Q. Port uses are essential for the planning of the area, but having them the way that they are right now is not necessarily right. Are there statistics about port usage? For example, where does traffic go? Where does traffic come from? Can this be fit into the overall discussion, instead of just assuming that the port uses should be retained as they are right now?

A. What we are saying is that we don't want to retain the port uses as they are right now. We do have information on the tonnage and types of cargo coming into the Port from the Toronto Port Authority over the last 10 years. Last year, there was 1.1 million tonnes of cargo, not including sugar (mainly salt and concrete materials). The other aspect to consider is that we have to get in and out via the St. Lawrence River Seaway and that limits the size of vessels. For instance, we can't have the large container ships, because they are too big and the Seaway isn't deep enough. So we are limited to Great Lakes shipping to a certain degree. That isn't necessarily a bad thing because we do already get a lot of product via the Great Lakes. It is also important to note that the Port is seasonal, operating from March to September.

Q. Do we already have the statistics?

A. We would have to check with the Toronto Port Authority to see if we can release their statistics regarding tonnage.

Q. During the talks with Metrolinx for the GO Station did you talk about a commercial hub there?

A. We have talked about having a transit hub at that site. It is outside of our study and is part of a separate study happening for the relief line. GO would also have to initiate their own study. It is an idea that we are putting forward, and the concept is to have multiple modes.

Q. How is the film studio precinct plan process integrated with this process?

A. Land use is really important in the precinct plan. We are still moving ahead in developing street and block concepts, but we are waiting until we have some endorsement on the land use direction before we move forward with the precinct plan.

Q. Do you think it will move forward through the summer for the film studio precinct?

A. We are still working out those details, but ideally we would like to.

Q. Lake Shore Boulevard acts as a barrier and a lot of the planning here is about connectivity. Did we consider reducing the grand boulevard to an ordinary avenue?

A. In the past couple of meetings we have had we have presented hand in hand with the Transportation and Servicing Master Plan EA that is underway so you really got to see the relationship between the land use plan and the connectivity from the Port Lands to the north. Tonight we really wanted to focus on the land use plan, in part, because we need this land use plan in place before they can move forward with their EA. That is why tonight you didn't see a lot about those connections and about infrastructure and transportation. Lake Shore, to a certain degree, will also be informed by Gardiner EA.

Detailed Feedback Summary

1. Thinking about the proposed land use strategy...

- **What do you like and why?**

C. I like the concept of the film studio and the creative district. This is an area that is growing in the Toronto economy and has broader implications than just film. If you look at studies that have recently been done by the City of Toronto, a lot of this kind of development is happening along the southern region of the City.

C. I really like the fact that you have slowed down and are going much deeper into the questions that are puzzling us. Looking deeper into some of the industrial issues, and commercial and business opportunities that are there is a good idea. At other meetings we are getting into good discussions about environmental issues and natural habitat issues that mean a lot to me, which I appreciate. What I see here has a lot more substance than what we have seen in the past.

C. I agree and would like to compliment the project team. This presentation is more market-oriented and economic specific. I am also happy to see there is a focus on industrial compatibility. All these aspects had to be considered in this area and they were demonstrated in this presentation.

C. I really like the strategic land reserve from a real estate perspective. Land is finite resource and you need to use it wisely.

C. It is essential to get all the background data done before any detail planning is done. That is something that was missing previously. It is great that the process has slowed down and we are taking the time to look at the background information, because without that we are going to get it wrong.

C. I like the idea about planning for the future. For example, the CNE is getting built up and might need more space.

C. Great job. I like the connectivity as a whole. We are going to have some challenges moving forward and transitioning from where we are today to where we want to be, but we are making some headway.

C. We are private land owners and are down there every day. We are supportive of everything you guys are doing. This is very exciting because not much is around us right now. We would like to thank you for honouring your word and showing us as private lands on the map. Please continue to do so.

C. I have been coming to these meetings for 32 years. This is the most detailed work of all the years. You are actively trying to achieve a balance in order to accommodate the present and the future, as well as different public and stakeholder opinions, and I don't know how you can do much better than you have done. I think you have done a marvellous job and I am really happy with the detail.

C. I am hearing that we have come a long way and it sounds good.

C. I agree that you have done a lot of work. Tonight is much more informative for us, and you have provided more of an explanation about why you have made your decisions.

C. I am really impressed and it is great to be included in this thinking. It helps us understand the decisions being made. I am happy about the charrettes.

C. I love the concept of having residential in the film area and really love that you have recognized that south of Unwin is completely green, and will remain green.

C. The general land use strategy looks quite good. I like the attempt to maximize mixed-use and balance these areas with the industrial uses. I notice that the performance standards still to be developed so more detail will come in the future.

C. I am encouraged to see the compatibility analysis laid out in the slides. I know that the PPS was recently updated; however it's nice to see the principles reflected in the presentation.

C. I like what I see with regard to the pedestrian and cycling network that would link to various open spaces. This seems to be a very pleasant environment for someone travelling in something other than a motor vehicle.

- **What concerns do you have? What would you change and why?**

C. I don't see you making much use of Lake Ontario Park and Tommy Thompson Park. They need to be better connected to the area.

C. I am concerned about this idea of the 'golden ticket', such as the Olympics or World Fair unlocking the Port Lands. We need to start doing things today, and start planning for a vibrant urban destination now.

C. I am supportive of the mixed-use vision on Villiers Island, but I have some concerns about timing. How will the noise and air quality study play out with the precinct planning process?

C. In terms of the film studio precinct, we have some significant concerns that they can grow about 50 thousand square metres on that site. Being able to support the entire area is problematic. We know that the film studio needs to be embedded as part of a mixed-use community. People do not want to be based out of an employment type environment. They want to be part of something vibrant, active and urban. In order to do that, you need a real true mixed-use plan that is blended and integrated.

C. My concern is related to one of the basic principles, which is 'to create network of green corridors'. That seems to be a minimalist approach. The connectivity is almost missing and seems to be dependent on utilizing the street right-of-way. There is no ecological concept here. We still have a number of opportunities, as you said in your presentation, along the ship channel. I would like to see the principle expanded and better imprinted into this whole exercise.

C. This is a very long-term process. The ones that I have been involved in before have had to have flexibility. What is missing here is an elaboration of the compatibilities of land uses. A longer list to clarify what the mix could contain in order to deal with market forces at play is required.

C. You have done a great job. I do have some concerns about flexibility. I think infrastructure will be a challenge for a number of different reasons. I am happy to see commercial traffic is being looked at. I am pleased with the amount of detail. I am concerned about the transfer station and challenges associated with that. We have done a lot of planning for that area and I think it hinges on the relocation of the waste transfer station.

Q. I am concerned about the area south of the ship channel. There is a lot of talk about repurposing the Hearn and that has not been mentioned tonight. How does this fit in? There are a lot of Port uses south of ship channel, so how will the Hearn fit in? It certainly won't be compatible unless you do something more exciting. Also, the relationship between that area and park below needs to be further developed.

A. That is one of the reasons why we want to hold the design charrettes. The purpose of the charrettes will be to explore those types of issues in more detail.

Q. Can the issues around Lake Ontario Park be straightened out?

A. It will be an uphill battle, but we will try.

C. I want to congratulate you on amount of detail included. I also picked up on the island straightening and am happy that it is actually being verbalized. In terms of the timeline, we have to keep in mind that most of us at this table are not likely to walk along the future plans illustrated on these papers. We need to keep that in mind and remain flexible, because who knows what we are going to be moving around in, what kinds of transit we will have, and how we are going to deal with our waste and energy sources in the years to come. Trying to plan for residential in this area is a challenge because it will be decades before there is going to be a market for a large amount of residential development here. We have to be flexible in the uses and build into the program how the uses are not going to negatively impact the future uses. The uses need to be flexible from short-term, to mid-term, to long-term. In the long-term we will want to have residential so that we have people living here. We will need to draw people to want to live here. Let's keep a realistic timeframe as we move forward.

Q. I have one comment around noise and air quality assessments that overlap with the Cousins Quay (Villiers Island) precinct planning area. I had the opportunity to attend the meeting last week on that

precinct planning area and I did not see anything similar discussed in that presentation. What is the tie in? How do the two processes work together?

A. This type of detail will come as part of the City's study of noise. The results of the study will get embedded into precinct plan. We are still doing all of these studies together. Keep in mind that the hatched area on the map represents the air quality and noise assessment zone and is not the buffer zone. It is an area that requires further study.

Q. The level of detail is very good, it is very thorough. From the financial side, you mentioned that there was a bit of a shortfall, and I am curious to learn how the shortfall will impact potential land use strategies?

A. I don't think that it necessarily does impact the land use strategies. There was a shortfall before, there is still one today. It is about looking at a variety of different sources to make up for that shortfall. That includes looking at public/private partnerships, which is why the land owners group was established. Waterfront Toronto is looking to the province and federal government, but we need to get the EA approved before we can look for funds. That being said, there are a number of different ways that we are looking to make up the shortfall.

C. I appreciate the hard work. I think existing parks should be quite clearly identified to the south. It would also be helpful to see an overall plan that depicts the connectivity to everything north (i.e. showing the relationship to transit, to Lake Shore, to Cherry, and to future Broadview). It would be good to have an overall map that identifies those specific items and their impacts on land use.

C. I am concerned about the approach in linking environmental considerations and assessments of air quality and noise with the precinct planning process. I think the guidelines in the PPS is going to be hugely instructive to ensure compatibility can be achieved between different uses. The guidelines affect both industry and industrial development. The guidelines recognize that it is not a one size fits all solution. What I don't want to see is the potential of the Port Lands disregarded because we take a broad brush approach to land use compatibility. For example, you really can't understand the impacts unless you are modelling what the development will look. How are you doing to conduct those studies? Are you actually going to model developments and massing in the precincts? If you don't do that the studies are useless. You won't be able to really understand how the two uses will work together. It would be a shame to turn down a vision, because we have not modelled this properly. We don't want to preclude a magnificent vision because we haven't approached it properly in terms of the study. We have to consider what massing studies are going to be done to see what mitigation measures might be required on both sides of the fence.

C. I have a concern about the film studios. I heard you say 'more studios, more studios, more studios'. I caution using the approach 'build it and they will come'. I encourage this group to talk to Revival, Cityspace, and Castlepoint very seriously about how our business works. Just building more studios is not the answer. It is about a mix of spaces and the quality of these spaces. Examples of parks that did not work include: Techno Park in Montreal, park in Spain, and Chicago. We have to be really careful. While the film board is telling you to build more studios, their offices are located in a mixed-use area. You need to listen carefully to the operators and how their business works.

C. I like the detail and the vision: it is very progressive. I was apart of initial unlocking report and I can see we are building on that. I am also concerned about the 'magic bullet' events like Olympics. The result of those events are supposed to bring you the legacy items like the Don River, and water's edge promenade, but we are getting closer to those without these 'magic bullets'. These 'magic bullets' have

tended to sterilize these opportunities. We need to stop relying on these 'magic bullets' and move forward with the resources at hand. It seems like we are getting much closer to that. These are important legacy builders and I don't think we should be relying on these big events to move the city forward in city building process. I am really excited about the direction we are heading.

C. I keep hearing the reference to the waste transfer station as being a question about whether it's going to be residential or commercial uses. That type of facility that has air quality issues has sensitive uses around it already (i.e. parks, roadways). If you are serious about the vision for the entire precinct, it's not about just residential, it's about moving forward with a better community – both for people that live there and work there. The waste transfer station is not about residential versus commercial, it's about the past and the future and it's about an underutilized space. If you want to create a higher better order of place, then the option to move the facility has to be seriously considered.

C. We shouldn't just be building the way we build things now. Let's have in 20 years time, people from Europe showing pictures of Toronto as a way of how to build things. This is a special opportunity and we need to aim high.

C. I like the idea of bringing the green space to the west side of Leslie and along the turning basin.

**Port Lands Planning Framework
and Port Lands and South of Eastern Municipal Class EA**

Stakeholder Advisory Committee Meeting #4

**Thursday, November 5, 2015
Metro Hall, 55 John Street, Room 303
6:30 – 8:30 pm**

Meeting Summary

1. Agenda Review, Opening Remarks and Introduction

Liz Nield, Lura Consulting, welcomed Stakeholder Advisory Committee (SAC) members and thanked them for attending the session. She introduced the facilitation team from Lura Consulting and led a round of introductions of SAC members and staff from the City of Toronto, Waterfront Toronto and Public Work. Ms. Nield reviewed the meeting agenda and explained that the purpose of the meeting was to present and obtain feedback on the emerging vision for the Port Lands.

Councillor Paula Fletcher thanked the project team and members of the SAC committee for their contributions to the framework's development over the past two years. She acknowledged the tremendous amount of work completed for such a large area of the City during the relatively short amount of time since the Port Lands Acceleration Initiative was endorsed by Council.

A copy of the agenda is provided in Appendix A. A list of SAC organizations that participated in the meeting is included in Appendix B.

2. Process Update and Presentation

Cassidy Ritz, City of Toronto, Amanda Santo, Waterfront Toronto and Adam Nicklin, Public Work provided LUAC members with an overview of the work completed to date, the format of the upcoming public consultations and the emerging vision for the Port Lands.

The presentation will be available online at www.portlandsconsultation.ca following the November 14, 2015 open house and information session.

3. Facilitated Discussion - Questions of Clarification, Feedback and Advice

Following the presentation, SAC members addressed the following discussion questions:

- 1 What do you like about the emerging vision?
- 2 Has anything major been missed or of concern to you?
- 3 What refinements would you suggest ahead of the upcoming public consultations?

A summary of the feedback and advice is provided below. A more detailed account of the discussion can be found in Appendix C.

Emerging Vision

- It is fantastic – the framework captures what stakeholders have been dreaming about for the Port Lands.
- Committee members also liked:
 - The distinct areas taking shape within the Port Lands.
 - The focus on the relationship between Blue-Green (i.e., water and natural areas).
 - The work done to integrate biodiversity into the framework.
 - The work to maintain the industrial heritage of the Port Lands.
 - The view corridor to the Hearn from the proposed Broadview Extension alignment.
 - The focus on water and daylighting hydrologic processes (e.g., bioswales, etc.).
 - Consideration of truck routes and goods movement within the plan.
 - The 20% goal for affordable rental housing in the plan.
 - The phenomenal work completed in the past two years, including public consultations.

Biodiversity

- Ensure the biodiversity framework supports a diversity of flora and fauna.

Emerging Land Use Direction

- *Character*
 - Ensure each district within the Port Lands has a distinct character and sense of place.
- *Density*
 - Increase the recommended density for residents in the Port Lands to ensure the necessary critical mass.
 - Consider combining uses to support more efficient land use or to lower the cost of development (e.g., stacked recreational uses combined with affordable housing).
- *Film, Media and Creative Uses*
 - Study fluctuations in the film industry over time to gain a better understanding of the sector's long-term land use needs.
- *Housing*
 - Consider integrating affordable housing and market units in the same building to ensure success.
 - Include a clear objective for a diversity of housing options within the Port Lands (e.g., affordable, co-operative, and market) as well as a requirement for inclusionary zoning.
- *Industrial Uses*
 - Require a mix of uses in employment zones to support diverse uses.
 - Consider changing the land use direction for Polson Quay so that it becomes a mixed-use neighbourhood (live work employment uses are desirable).

- Consider removing the hydro towers on Commissioners Street after they have been decommissioned.
- *Mixed-Use Development*
 - Prioritize mixed-use development – do not let compatibility issues with long-term industrial uses limit the vision of the framework.

Transportation and Road Network

- *Public Transit*
 - Ensure the framework prioritizes public transit throughout the Port Lands, particularly on Unwin Avenue and Lake Shore Boulevard.
 - Ensure there are transit routes to major destinations within the Port Lands (e.g., the Hearn).
 - Consider using the railway spurs between the Hearn and Union Station for future LRT use.
 - Align the mode of transit with density in the surrounding area to ensure a mix of transit options throughout the Port Lands (e.g., bus routes in lower density areas).
 - Consider further integrating the Ship Channel with north-south corridors.

Upcoming Public Consultations

- Make the vision for the Port Lands more explicit; ensure it is bold and challenges the status quo.
- Consider depicting the Toronto Islands in the visual materials to help complete the picture.
- Reduce the amount of information presented, focusing on high level ideas.

Other

- Recommend the use of retractable awnings to help regulate indoor temperatures.

4. Adjourn

Ms. Nield thanked the project team and SAC members for attending and adjourned the meeting.



**Port Lands Planning Framework
and Port Lands and South of Eastern Municipal Class EA**

Stakeholder Advisory Committee (SAC) Meeting #4

Metro Hall, 55 John Street, Room 303

Thursday, November 5, 2015

6:30 – 8:30 pm

AGENDA

Meeting Purpose:

- Present the emerging vision for the Port Lands, including land use direction, preferred street network and urban structure, as well as the direction for other key elements like built form, biodiversity and sustainability.
- Obtain feedback from the SAC ahead of the upcoming public consultation meetings in mid-November.

6:30 pm Agenda Review, Opening Remarks and Introductions

Liz Nield, Facilitator, Lura Consulting

6:40 pm Process Update and Presentation – Cassidy Ritz, City of Toronto; Amanda Santo, Waterfront Toronto; Adam Nicklin, Public Work

- Process Update and Upcoming Public Consultations
- Placemaking in the Port Lands: The Emerging Vision

7:30 pm Facilitated Discussion – SAC Questions, Feedback and Advice

7:30 pm What do you like about the emerging vision?

7:45 pm Has anything major been missed or of concern to you?

8:00 pm What refinements would you suggest ahead of the upcoming public consultations?

8:15 pm Wrap-up and Next Steps

8:30 pm Adjourn

SAC Meeting List of Attendees:

- CodeBlueTO
- Corktown Resident & Business Association
- Cycling Toronto/Ward 30 Bikes
- Gooderham & Worts Neighbourhood Association
- Resident
- Toronto Field Naturalists
- Transit Advocate
- West Don Lands Committee

Appendix C – Questions of Clarification and Detailed Summary of SAC Feedback

A summary of the questions and answers and discussion following the presentation is provided below. Questions are noted with **Q**, responses are noted by **A**, and comments are noted by **C**.

C. The vision for the Port Lands must be bold and challenge the thinking “we can’t do this”. From a transit perspective, consider revisiting the work done in the original environmental assessment (EA) in 2004 which included transit on Unwin Street. Ensure the framework for the Port Lands includes a vision for light rail transit to ensure it is a priority in the future. The original EA also included transit on Lake Shore Boulevard which should be added to the framework. On the development side, the recommended density should be reviewed to increase the number of residents in the Port Lands.

A. The framework does include an extensive transit network on streets in the Port Lands. We are presenting the street network with higher order transit, but it will come down to funding to get higher order transit in place. We are pushing to get that funding. We are also future-proofing the street network. The Broadview Extension, for example, is being designed with future needs in mind (e.g., higher order transit) to avoid building lift bridges twice. There may also be interim uses (e.g., bus rapid transit), but none of the streets preclude transit.

Q. Will the Don Roadway be wide enough for truck use?

A. The Don Roadway will have the highest capacity of all the streets in the Port Lands (i.e., two lanes). The other streets are being designed with one lane in each direction and a turning lane for efficiency. We have identified some working streets which will be 3.5 m wide and fall within the City’s lane width guidelines. We recently met with industry representatives to identify dedicated truck routes. Some industries are amenable to that solution, while others will find it more challenging. The key is to ensure there is redundancy in terms of truck route options so that heavy trucks are not moving through residential areas.

C. I am awe struck – this is fantastic. The framework has captured what we have been dreaming about for the Port Lands. I like that that there are many separate areas taking shape. Each district needs a hub of activity so that it has a distinct sense of place. I do also have some concerns – the transit diagram did not include any routes to the Hearn, which will need transit if it will be a major destination. Consider using the railway spurs that run between the Hearn and Union Station for future LRT use. There is also a risk of creating transit deserts in lower density areas if only right-of-way or higher order transit is planned for (e.g., LRTs). Consider bus routes in low density areas of the Port Lands.

A. There is a line on the transit map depicted in gray which protects for a future streetcar route to the Hearn. The rail spurs can be used for other systems when they are not being used for industrial uses (e.g., biodiversity).

C. I also want to add that arenas do not have to be free standing single purpose buildings with parking. An arena can be part of a stacked building with other recreational uses (e.g., running track, swimming pool, etc.). An arena does not necessarily need windows; the outside edges could be combined with other uses (e.g., affordable housing). In terms of sustainability, retractable awnings should be considered to help regulate indoor temperatures.

C. I really like the focus on the relationship between Blue-Green – it’s a term already used by the committee I represent. I love the biodiversity work that has been done; the biodiversity layers are quite brilliant. I also like that diversity in general is being built into the framework. I do have some

concerns about ensuring mixed-used development in the area. The compatibility issues with long-term industrial uses should not limit the vision for the future of the Port Lands. There is a need to ensure a healthy mix of diverse uses in the precincts and that the framework can accommodate change over time.

C. I love the idea of starting with water and the expression you used – “the green fringe that hugs Toronto”. I urge you to show the Toronto Islands in the context of the Port Lands to complete the picture. Something to replace the island airport would be welcome. I have one note of caution about biodiversity – coyotes have killed cats and dogs on the Toronto Islands. They travel across the winter ice from the Leslie Street Spit to the Island. It is something to consider as we want to support biodiversity, but not a monoculture of coyotes. On the subject of Film, Media and Creative uses, the film industry is susceptible to external factors (e.g., exchange rate) and fluctuates accordingly. Please keep that in mind when planning the framework for the Port Lands. You don’t want to overbuild for a single land use and end up with vacant spaces. I suggest studying industry fluctuations over time using data from the Ontario Media Development Corporation website.

C. I was happy to see the green fringe on northern side of the Ship Channel. How much of that green fringe can be animated at different times throughout the day (e.g., at night)? I like the idea of maintaining artefacts (e.g., smoke stacks); they are iconic of the area’s heritage. The Broadview Extension alignment with a view corridor to the Hearn was a nice reveal. I also love the focus on water (e.g., naturalization, bioswales, etc.).

A. I want to note that this is a framework plan so it is very high level. Within the framework, all the neighbourhoods will eventually go through precinct planning (like is being done for Villiers Island); many of these ideas will get fleshed out further.

Q. How would future phases of planning and development in the Port Lands be affected if the required flood protection work (e.g., berm, re-naturalization of the Don River mouth, etc.) is drawn out?

A. The original EA was based on a three or four phase approach for flood protection. We have asked the three levels of government for funding to complete the full build out of the river because there are so many efficiencies of doing it at one time, including unlocking the Port Lands. We are undergoing an extensive due diligence process to accurately cost those issues. We are optimistic we will get the funding to complete the flood protection.

C. I like the island airport and use it all the time. It does have its function in the downtown core. I would like to congratulate the team – the work completed in the past two years is phenomenal, including the public consultations. I am impressed with the overall process. I do have some concerns about the employment zones. The types of uses in the employment zones should include blue and green industries to ensure a diversity of uses (e.g., live, work, play). Affordable housing is another big issue; I love the 20% target, but there is a need to ensure a mix of affordable and market units in the same building to ensure success. I like the work that has been done in Regent Park, but the affordable and market units should have been integrated within the same buildings instead of being separate developments.

A. It is difficult to integrate affordable and market units in the same building, but we do have pilot projects that are trying to achieve that. We have had some success in the West Don Lands integrating buildings with affordable units near buildings with market units. Waterfront Toronto’s design review process has ensured a level of design excellence so one cannot always tell which building has affordable units and which has market units.

C. Cooperative housing is another model that is very successful. There should be a clear objective for a diversity of housing options in the Port Lands as well as a requirement for inclusionary zoning. I would also like to congratulate the team on the phenomenal work completed to date. I also have a few concerns – I see this as a framework, not a vision. A vision requires an overriding narrative that describes what is there now and also inspires future development. There is also a need to explain what the Port Lands is (e.g., an extension of the City?). The narrative about the water is important. I also have some concern about the direction for Polson Quay – I think the direction presented is the wrong one for that piece. It is an important part of the Port Lands; I don't want to give it up to industrial or employment uses unless they are live-work uses. They don't animate the landscape the way a neighbourhood would. The First Gulf development includes high density employment uses nearby. There is also a need for a critical mass of residents in the Port Lands. Where will they be located? Is it possible to remove the hydro towers on Commissioners Street to make it a civilized street? I don't see the need to maintain them. Can you also clarify if the work on the Broadview Extension is being integrated with Gardiner East EA?

A. Yes, staff from Transportation Planning are involved in both projects. The studies inform each other.

Q. How specific will the framework be on the location for the alignment of the Broadview Extension?

A. The transportation component of the study is part of an EA, which is currently in Phase 2. The specifics of the alignment would take place in Phase 3 of the process. We have exceeded the work required for Phase 2 of an EA process to meet flood protection and transportation planning requirements.

C. I love the green-blue vision you presented as well as the suggestions to re-naturalize the Port Lands. Consider integrating the Ship Channel with north-south corridors.

C. The presentation had too much information. Cull the amount of information to focus on high level ideas.

C. Keep it big picture – don't let the audience get lost in the details.

**APPENDIX C –
LANDOWNERS AND USERS ADVISORY COMMITTEE
MEETING SUMMARIES**



**Port Lands and South of Eastern Planning Studies
Land Owners and Users Advisory Committee
Meeting 13-1**

**Thursday November 21, 2013
Waterfront Toronto, 20 Bay Street, Town Hall Meeting Room
8:00 – 10:00 AM**

1. Agenda Review, Opening Remarks and Introduction

Ms. Liz Nield, CEO of Lura Consulting, began the Land Owners and Users Advisory Committee (LUAC) meeting by welcoming committee members and thanking them for attending the session. She introduced the facilitation team from Lura Consulting and led a round of introductions of LUAC members and staff from the City of Toronto, Waterfront Toronto and TRCA. Ms. Nield reviewed the meeting agenda and reminded LUAC members that a key role of the committee is to provide feedback and guidance to the project team ahead of public meetings. Ms. Nield also informed committee members that a revised LUAC Terms of Reference will be provided in the next few weeks.

A copy of the agenda is provided in Appendix A. A list of LUAC members participating in the meeting is included in Appendix B. Questions of Clarification are provided in Appendix C.

2. LUAC Briefing

The purpose of the first round of consultation was to introduce the current planning initiatives that the City, Waterfront Toronto and TRCA are working on in the Port Lands and South of Eastern areas.

A presentation by Cassidy Ritz, City of Toronto, City Planning Division, Shalin Yeboah, Waterfront Toronto and Angela Stea, City of Toronto, City Planning Division introduced the Port Lands and South of Eastern studies to LUAC members and included:

- Overview of Initiatives;
- Port Lands Planning Framework and Precinct Planning;
- South of Eastern Strategic Direction;
- Port Lands and South of Eastern Transportation and Servicing Master Plan EA.

It was noted that the presentation will be available online at www.portlandsconsultation.ca following the November 28, 2013 community consultation meeting.

3. Facilitated Discussion - Questions of Clarification, Feedback and Advice

LUAC members provided the following feedback and advice following the briefing:

Presentation

- Clarify why the planning study and consultation process focuses on two precinct planning initiatives when Council provided direction for three planning initiatives.

- Clearly label and identify the boundaries of the study area in the context slide.
- Clarify the project and consultation process timelines.
- Clarify the overall implementation timelines of the planning framework (e.g., short-term vs. long-term).

Transportation and Infrastructure

- Preserve and improve truck routes through the Transportation and Servicing Master Plan.

Land Use

- Consider the interests of existing land users, particularly industrial businesses, when planning for other uses (e.g., residential).
- Introducing sensitive uses (e.g., residences, schools, restaurants, etc.) can negatively impact industrial users and impact their ability to meet provincial approvals. Planners need to be cognizant of this when recommending setbacks in the planning framework.
- Some of the existing and surrounding land uses are not compatible with residential development in the Port Lands (e.g., Ashbridges Bay Sewage Treatment Plant).

A more detailed summary of the feedback session (including questions and answers) is provided in Appendix C.

4. Proposed Format for Upcoming Community Meeting

Ms. Nield informed LUAC members of the upcoming community consultation meeting scheduled for November 28, 2013 at Riverdale Collegiate. Ms. Nield briefly outlined the format of the meeting which will include an open house and presentation as well as several opportunities to ask questions of clarification and provide feedback.

5. Upcoming LUAC Meeting Dates

Ms. Nield thanked the project team and LUAC members for attending and adjourned the meeting.

Next LUAC meeting: January 2014



**Port Lands Planning Framework and
Port Lands and South of Eastern Municipal Class EA**

Land Owners and Users Advisory Committee (LUAC) Meeting – 13-#1

Waterfront Toronto, Town Hall Meeting Room

Thursday November 21, 2013

8:00 – 10:00 am

AGENDA

- 8:00 am** **Agenda Review, Opening Remarks and Introductions**
Liz Nield, Facilitator, Lura Consulting
- 8:15 am** **LUAC Mandate and Responsibilities – Quick Refresher**
- 8:20 am** **LUAC Member Briefing – Cassidy Ritz, City of Toronto & Shalin Yeboah, Waterfront Toronto**
1. Overview of Initiatives
 2. Port Lands Planning Framework and Precinct Planning
 3. South of Eastern Strategic Direction
 4. Port Lands and South of Eastern Transportation and Servicing Master Plan EA
- 9:20 am** **Facilitated Discussion – LUAC Questions, Feedback and Advice**
- Thinking about the material presented and the main topics covered in the presentation, what feedback or advice do you have to improve the clarity of the material in preparation for the upcoming community meeting?
 - Feedback on the different initiatives?
- 9:50 am** **Proposed Format for Upcoming Community Meeting**
- 9:55 am** **Next Steps and Closing Remarks**
- 10:00 am** **Adjourn**

Appendix B – List of Attendees

LUAC Meeting List of Attendees:

- Canadian Salt
- Cimco Refrigeration
- DNM Retaining Wall Systems
- ESSROC
- Holcim Canada Inc.
- National Rubber
- Redpath
- Rose Corp.
- Sifto Canada
- Telesat
- Tribal, Castlepoint, Kerbel
- Waterford Group

Appendix C – LUAC Questions of Clarification, Feedback and Advice

A summary of the discussion following the LUAC Briefing is provided below. Questions are noted with **Q**, responses are noted by **A**, and comments are noted by **C**.

Q. Regarding the circles identified as key precinct opportunities, going forward is there an idea of what each location will look like?

A. Not at this time. That is something we would like to consult on. We don't have any particular ideas, and are looking for feedback from the public.

Q. As the project progresses do you plan to include businesses and land users in that consultation process?

A. Yes, definitely. But also keep in mind that this is meant to be a regeneration/revitalization plan. It will be a visionary framework that outlines how those areas should develop.

Q. You mentioned that City Council provided direction for three precinct planning initiatives in the Port Lands. It would be helpful to clarify why the project and consultation process only focuses on two of these.

A. It was mentioned during the presentation that the project is focusing on two of the three planning initiatives due to the contracted timeline. There's a lot of work to do and we needed to prioritize what to do first.

C. Also, in the initial context slide it would be helpful to identify what the boundaries of the study area are.

Q. During the presentation it was mentioned that there are appeals to the Ontario Municipal Board (OMB) regarding proposed connections and crossings in the study area. Who is appealing what?

A. The Broadview extension was appealed by the property owner located here [points to map]. The Carlaw extension across the ship channel was appealed by Ontario Power Generation. Completing the Carlaw extension is now more difficult than when it was initially proposed because of a new Hydro One switching station and the Portlands Energy Centre. What we need to do is look at where connections should go based on recent developments.

Q. What kind of connections are you anticipating in the study area? What will the connections over the shipping channel look like? Will they be lift bridges?

A. It could be a lift bridge, or it could be another kind of bridge, but that's something the Environmental Assessment (EA) will help decide. We recognize that it is an active ship channel and that any future connections would have to take that into consideration.

Q. Many of the properties have previously been used by industry and are brownfields. Will the soil be remediated?

A. We recognize that remediation will be needed, and should reference this more clearly.

Q. The Transportation and Servicing Master Plan should include the preservation and improvement of truck routes.

A. That's a good point, there are a number of challenges to address. We recognize that industrial activity will continue and know that trucking and residential development are not always compatible. We need to rationalize where those routes go based on where the industrial uses are located.

Q. As industrial users, we would like to not be considered a problem. It is a port area that is fundamental to the city.

A. The word 'rationalize' was used not to identify a problem but to recognize that industrial uses are not necessarily compatible with residential uses. We do have to find a balance and figure out how to reconcile competing interests in the Port Lands. We understand the need within the City for the shipping activities that happen in the Port Lands but it's about where those shipping activities take place and how that happens.

Q. Will the sewage treatment facilities remain where they are in this plan?

A. The sewage treatment plant is not something we are considering relocating. It serves a large portion of the city.

C. A sewage treatment facility is not necessarily compatible with residential development either.

A. Yes, that's a good point. That is something we'll have to take a look at.

C. Further to the conversation about competing land uses in the Port Lands, as industrial users we have to meet provincial approvals to operate. Introducing sensitive uses into the Port Lands will make it problematic for us to stay in compliance with those approvals depending on what's being proposed or developed. That's something you need to be cognizant of when describing setbacks in the plan.

Q. How firm will this plan be? How can we be certain that it won't be affected by future political ambitions? I believe there's a bid for either Expo 2025 or the 2024 Olympics which includes the Port Lands.

A. You are right about a potential bid for Expo 2025. Ernst and Young are studying the City's potential to bid for Expo 2025 and the 2024 Olympics. If Council decides to pursue the bid, the Port Lands is an obvious potential site for the games. There will be ideas that come up in the future about how to spark development. Part of this planning exercise is to put us in a better position to deal with those situations and bring credible and rational responses.

Q. Isn't there a way to say this is the firm plan? We need something to stop new ideas from displacing plans that have been approved.

A. The role of the planner is to make recommendations to Council, who make the decisions. We are working within the *Planning Act*.

Q. How fast will shovels go in the ground?

A. The Quays are slated to go first, but will require flood protection measures before development can happen. This area will develop in a phased approach over a long time due to the scale of the landscape. It's likely a 50 year plan in reality.

Q. I appreciate what you said about timing, but what is the timeline for the projects in the Quays and Film Studio Precinct? Is it five years, ten years?

A. It's difficult to say at this point, but it depends when funding and financing become available. We are working on a financing strategy. The City just passed its five-year development charges bylaw, which will enable to City to collect money across the municipality.

C. In other words development also depends on the planning tools that are available.

A. Yes.

Q. Are copies of the presentation available to take with us?

A. The presentation will be available online after the public meeting on November 28, 2013 at www.portlandsconsultation.ca.

Q. Could you clarify the timing of the precinct planning?

A. We will put forward recommendations to City Council at the end of March 2014. It is important for people to recognize that this area is subject to a special policy area and requires provincial approval to make changes to the zoning bylaw and other policies.

C. It would be helpful to include more information about the timing and the study process in the presentation.

**Port Lands and South of Eastern Planning Studies
Land Owners and Users Advisory Committee
Meeting 13-2 – Summary**

**Monday February 3, 2014
City Hall, 100 Queen Street West, Committee Room #3
8:30 – 10:00 AM**

1. Agenda Review, Opening Remarks and Introduction

Ms. Liz Nield, CEO of Lura Consulting, began the Land Owners and Users Advisory Committee (LUAC) meeting by welcoming committee members and thanking them for attending the session. She introduced the facilitation team from Lura Consulting and led a round of introductions of LUAC members and staff from the City of Toronto, Waterfront Toronto and TRCA. Ms. Nield reviewed the meeting agenda and reminded LUAC members that a key role of the committee is to provide feedback and guidance to the project team ahead of public meetings, and reminded them of the community consultation meeting on Thursday, February 13, 2014.

Toronto City Councillor Paula Fletcher, Ward 30, also welcomed LUAC members. She reminded the LUAC of other projects (e.g., Gardiner East EA, Downtown Relief Line EA, etc.) that will influence and inform the long-term development of the Port Lands. Ms. Fletcher thanked the LUAC members for participating in the meeting and noted she is interested to hear what they think of the presented land use options.

A copy of the agenda is provided in Appendix A. A list of LUAC members that participated in the meeting is included in Appendix B. Questions of Clarification posed by the LUAC are provided in Appendix C.

2. LUAC Briefing

A presentation by Cassidy Ritz, City of Toronto, City Planning Division, Amanda Santo, Waterfront Toronto, and Ann Joyner, Dillon Consulting reviewed the Port Lands Planning Framework and South of Eastern Transportation Servicing Master Plan with LUAC members and included:

- Emerging Vision and Objectives;
- Land Use Options for the Port Lands, and;
- Transportation and Servicing Alternatives.

It was noted that the presentation will be available online at www.portlandsconsultation.ca following the February 13, 2014 community consultation meeting.

3. Facilitated Discussion - Questions of Clarification, Feedback and Advice

LUAC members provided the following feedback and advice after the briefing:

- Provide more information about the economic rationale for each option.

- Explain the difference between industry types and employment land use designations (e.g., creative industries vs. industrial uses).
- Provide more information about the evaluation criteria that will be used in the study (e.g., infrastructure costs).
- Explain the role, function and potential of the Port Lands Ship Channel in more detail.
- Maintain the private right of way and access routes of existing industries and businesses in the Port Lands.
- Explain that the transportation options are still highly conceptual at this time.

4. Proposed Format for Upcoming Community Meeting

Ms. Nield informed LUAC members of the upcoming community consultation meeting scheduled for February 13, 2014 at the Fire Academy, 895 Eastern Avenue. Ms. Nield briefly outlined the format of the meeting which will consist of an open house session followed by a presentation and facilitated round-table discussion.

5. Upcoming LUAC Meeting Dates

Ms. Nield thanked the project team and LUAC members for attending and adjourned the meeting.

Next LUAC meeting: April 2014



**Port Lands Planning Framework
and Port Lands and South of Eastern Municipal Class EA**

Land Owners and Users Advisory Committee (LUAC) Meeting – 13-#2

Location: City Hall, Committee Room 3

Monday February 3, 2014

8:30 – 10:30 am

AGENDA

Purpose:

- Present land use options and parks and open space opportunities for the Port Lands, and the transportation and servicing alternatives.
- Seek feedback on material presented in preparation for the upcoming community meeting.

- 8:30 am Agenda Review, Opening Remarks and Introductions**
Liz Nield, Facilitator, Lura Consulting
- 8:40 am Upcoming Community Meeting**
- 8:45 am LUAC Member Briefing – Cassidy Ritz, City of Toronto & Amanda Santo, Waterfront Toronto**
1. Emerging Vision and Objectives
 2. Land Use Options for the Port Lands
 3. Transportation and Servicing Alternatives
- 9:25 am Facilitated Discussion – LUAC Questions, Feedback and Advice**
- Questions of clarification
 - Thinking about the material presented and the main topics covered in the presentation:
 - a. What was one thing you liked?
 - b. What is one thing you suggest we change?
- 10:25 am Next Steps and Closing Remarks**
- 10:30 am Adjourn**

Appendix B – List of Attendees

LUAC Meeting List of Attendees:

- Canadian Salt
- Natalie + Guerrieri
- Cimco Refrigeration
- Mayfair Clubs
- Tribal Partners
- First Gulf Don Valley
- Toronto Port Lands Company
- Smart Centres
- The Kirkland Partnership Architecture / 309 Cherry
- H & R Development
- Fasken Martineau
- Scott Burns Planning Consultants

Appendix C – LUAC Questions of Clarification, Feedback and Advice

A summary of the discussion following the LUAC Briefing is provided below. Questions are noted with **Q**, responses are noted by **A**, and comments are noted by **C**.

Q. In addition to the various inspirations presented, what is the economic basis for some of the options? Particularly, what is the demand for film studios and other comparable spaces considering current proposals such as the Unilever site? Also, would creative industries include opportunities for residential development (e.g., non-traditional, studio type of living)?

A. The economic rationale would be completed during the implementation phase. The implementation criteria encompasses a number of considerations. We kept it simple for the purposes of this presentation. Implementation will look at the transportation and servicing analysis completed by Dillon Consulting. For instance, the land use options will be dependent on our ability to deliver the transportation and servicing network. The other aspect is the marketability of the land use options. The question is if there is more significant intensification in the South of Eastern area, how does that impact employment in the Port Lands area and vice versa? We are considering that in the evaluation of the options. We are looking for feedback from this group and the public on the creative industry and whether it makes sense to have such a large creative industry cluster in the Port Lands. Is there a demand for it? Is it better suited elsewhere? We would like to know what you think.

A. To answer your question about creative industries, we are not necessarily anticipating residential mixed in with the creative industries. You can see in the various land use options, some have more of a mixed-use community surrounding it while some have less. Those land use options illustrate what could be happening to the north with the Unilever site for example.

C. The economic basis will drive the land use options and should be considered before implementation. Be creative with the creative industry category. It would be a shame if we fell into traditional land use categories.

Q. Is this presentation going to be made available to us?

A. The presentation will be made available on the project website after the public meeting on February 13.

Q. How is the South of Eastern meeting February 18 different than the round tables on February 12?

A. The roundtables are for land owners and business owners, and the February 18 date is for the general public.

Q. Regarding the transportation and servicing plan, what consideration was given in terms of the active applications in the area (e.g. Smart Centres site)? I don't see any consideration of what we are proposing there in your transportation options. Can you clarify what creative industries are compared to employment designations?

A. The South of Eastern study is specific to the area south of Eastern Avenue which is designated as employment land in the City's Official Plan. A provincially mandated review of the City's employment areas is ongoing. The South of Eastern study is looking at types of industries and uses that are achievable and desirable for that particular area. We refer to a creative industry district in the Port Lands because of the Pine Wood Film Studios, which serve as the heart of the area being studied. It is something we can build on. We have not specified uses that would be considered within the district, but we are interested in uses that have synergies or mutual benefits with the film industry such as offices or artist studios. In terms of the Smart Centres site, we have taken that into consideration in the transportation and servicing alternatives that have been presented. We are taking a look at the concept plan that you

submitted. The potential north-south connections through the site are in recognition of private connections on the site.

C. Creative industries can be dealt with more specifically in the South of Eastern Strategic Direction. As you are evaluating Pinewood, I see the revival of the studio centre shouldn't be considered any differently in terms of synergies or other uses based on the employment uses we are proposing.

Q. What are the evaluation criteria being used in the internal review of the options? I have specific comments relating to the expansion of uses at the Pinewood Film Studio. If you look at examples across North America, the film industry is snagging and not pursuing stand-alone uses, it is trying to establish mixed-use hubs around creative industries. To limit the type and amount of uses is problematic to the future of the industry.

A. Some of the land use options depicted the Pinewood Film Studio as the centre of a creative hub, with different amounts of what we refer to as the mixed-use communities. There are three different options for how much creative industry versus how mixed use could be developed. The mixed-use anticipates more than residential uses and includes options for synergistic uses based on how the area could evolve.

A. Land use options have to take into account two key things: 1) can we find a suitable place for the relocation of the waste transfer station, if not, it has to be maintained, limiting the ability to introduce residential uses into the area. We considered both of these points in each of the options, and is why in this particular option (Option 1) there is not a lot of residential development proposed; and 2) The other aspect is dealing with the overhead transmission wires. Whether that's feasible or cost prohibitive will impact the options to relocate those uses and introduce more sensitive uses. We have assumed the relocation of the waste transfer station and the overhead hydro wires in some of the alternatives. We are taking a look at land use compatibility as part of this exercise.

C. My first question was specific to infrastructure costs required for the Port Lands. Have you taken that into account in terms of criteria?

A. Yes, it is one of the criteria. The Port Lands Acceleration Initiative (PLAI) included a market report. Everything we are doing now is building on the work that was completed during the PLAI. What we are suggesting is consistent with the direction from that report and the direction of that market study. It seems like the feedback we are receiving indicates we need to be more specific about the considerations we are using as part of the "Implementation" evaluation criteria and how the options will be evaluated.

C. You did quite a good job explaining the complexity of the project. The land use options are promising because they made something of the Ship Channel. I would like to see the Ship Channel recognized as a living artifact. Explain in more detail what the Ship Channel is and what it can do. Once that is fully understood it can be used to inform several issues (e.g., bridges, infrastructure, transit, land use intensity). I also suggest not treating the four options as structurally broken, because they aren't.

Q. How are the locations of the Broadview extension a driver of the north-south connections, and is high order transit being considered for the four to six lane cross-section?

A. The purpose of the Broadview extension between Eastern Avenue and Commissioners Street is about 1) access to the Port Lands, 2) local access for the Unilever site, and 3) to create opportunities to provide transit connections. There are a lot of constraints in that area in terms of crossing from Eastern Avenue to Lake Shore Boulevard (e.g., distance, under or over the rail line berm). From our feasibility review, we have determined there are ways to cross over or under the rail berm, but they require specific design considerations. What is driving the location of the connections, at Bouchette Street for example, is whether the connection with Lake Shore Boulevard is over or under, which also hinges on the results of the Gardiner East EA. Saulter Street provides another opportunity to improve connectivity with the Port

Lands. The connection there could be located under the Gardiner Expressway, there is room for it there, but the issue is what you can actually do. There are a lot of technical issues to be addressed. The framework of alternatives has considered all these technical issues.

Q. Can we take a closer look at the local streets?

A. The local streets that were shown are conceptual, we are not dealing with them at this level. Local streets are being addressed in precinct planning exercises and other planning work underway in the South of Eastern area.

Q. After April you will be presenting an amended secondary plan to Council, is that correct?

A. No, we would be putting forward a report with the Port Lands Planning Framework document making recommendations for direction to proceed with planning tools, Official Plan amendments and any other *Planning Act* mechanisms that we would introduce.

Q. Is the intention to produce an amended secondary plan?

A. Yes, absolutely. We are waiting for the Don Mouth EA to be submitted to the MOE for final approval. Once that process is underway we will bring forward the amendments that we would be contemplating.

Q. Can the precinct plan be processed in parallel to that?

A. In the report that would go to Council at the end of May, the plan would be to bring forward the preferred plans for those precinct areas. In the new year of 2015 we would bring forward the final precinct plan as well as any implementation mechanisms associated with them.

Q. Would that include the zoning bylaw?

A. Amending the by-law hinges on us being able to work with the province in dealing with the Special Policy Area.

Q. Basin Street is a private right of way west of Bouchette Street. It needs to remain private to protect security and access to Pinewood Film Studios. It's something that we'd like to work with you on.

A. Absolutely. We did allow for a 23m right of way through that site if the secured perimeter is no longer there. We are looking at alternatives to extend Basin Street across, but this is an environmental assessment and we do have to look at all the alternatives, but we are also looking for feedback on the alternatives.

**Port Lands Planning Framework
and Port Lands and South of Eastern Municipal Class EA**

**Stakeholder Advisory Committee (SAC) and
Land Owners and Users (LUAC) Advisory Meeting #3**

**Tuesday, May 20, 2014
Metro Hall, 55 John Street, Room 310
7:00 – 9:00 PM**

Meeting Summary

1. Agenda Review, Opening Remarks and Introduction

Liz Nield, Lura Consulting, began the Stakeholder Advisory Committee (SAC) and Land Owners and Users Advisory Committee (LUAC) meeting by welcoming committee members and thanking them for attending the session. She noted that this was a joint meeting of the two committees and that the main purpose of the combined meeting was to present an emerging land use strategy for the Port Lands for discussion and feedback. Ms. Nield noted that the draft minutes from the last SAC and LUAC meeting were available for review and feedback by committee members. She introduced the facilitation team from Lura Consulting and led a round of introductions of SAC and LUAC members and staff from the City of Toronto, Waterfront Toronto and TRCA.

A copy of the agenda is provided in Appendix A. A list of SAC/LUAC members who participated in the meeting is included in Appendix B.

2. SAC & LUAC Briefing

A presentation by Cassidy Ritz, City of Toronto, City Planning Division provided a detailed update on the planning process for the Port Lands Planning Framework and outlined the emerging land use strategy for the Port Lands. She provided a handout to SAC/LUAC members, which included key aspects, illustrations and maps from the proposed land use strategy. She added that City staff intend to report on strategy development to the City's Planning and Growth Management Committee meeting in June.

3. Facilitated Discussion - Questions of Clarification, Feedback and Advice

Following the presentation, SAC/LUAC members provided feedback on the emerging land use strategy. The discussion centred on the following discussion questions:

1. Thinking about the proposed land use strategy...
 - What do you like?
 - What concerns do you have?
 - What would you change and why?
2. Do you have any other advice or suggestions for the project team?

Below is a high level summary of the feedback received during the facilitated discussion. Appendix C contains a summary of questions of clarification from committee members and answers from City staff, as well as a more detailed summary of SAC/LUAC feedback.

Positive Feedback from SAC/LUAC Members – What They Like

About the Land Use Strategy

- Strategy is comprehensive, based on detailed information and attempts to balance existing conditions/uses with long-term future plans
- Level of detail is good
- Vision is “very progressive”, “magnificent”, “great”
- Overall flexibility of strategy to adapt over time as market conditions evolve
- Overall focus on mixed-use development
- Connectivity throughout the plan
- Concept of the film studio cluster and creative district
- Strategic land reserve
- Mixed-use vision for Villiers Island
- Consideration of commercial traffic
- Green space south of Unwin remains untouched
- Strategy includes consideration to straighten Unwin Avenue
- Pedestrian and cycling network links to various green/open spaces
- Green space located along the turning basin

About the Planning Process

- The process has slowed down; time is being taken to collect and analyze the necessary background data and information
- More inclusion of market-oriented and economic-related information
- Focus on compatibility of industrial uses with other uses; good that compatibility analysis is being undertaken
- Inclusion of PPS guidelines and principles
- Land ownership has been reflected in the strategy
- Good explanation of why decisions have been made and rationale for proposed future directions
- Proposed design charrettes to flesh out additional aspects of the strategy over the summer

Concerns about the Land Use Strategy

- Too much focus on the “golden ticket”/“magic bullet” idea of protecting land for a future Olympics, World’s Fair or similar large event
- Concern that compatibility/buffer studies will slow the process down; concern that this may also preclude creative examination of compatibility and achievement of overall vision
- Many unknowns and challenges associated with relocating the waste transfer facility
- No mention of how repurposing the Hearn will fit into the strategy

- Concern that film studios should be incorporated as part of a mixed use strategy and not as an isolated cluster on their own; building more film studios is not the answer
- Concern that this a very long-term planning process and what is missing is an elaboration of compatible land uses to deal with market forces
- Approach to green network/connectivity/ecological concept is “minimalist” and needs to be expanded
- Concern that there may be too much flexibility in the strategy (e.g., South of Eastern Strategic Direction could have an impact on the future of the Port Lands)
- Concern about the financial shortfall and the potential impact on strategy implementation

Recommendations for Improvement and Next Steps

- Illustrate the green corridor/network connections to Lake Ontario Park and Tommy Thompson Park; existing parks to the south need to be clearly identified on all plans
- Locate employment intensive uses adjacent to proposed transit hubs
- As part of compatibility analysis, consider buffers around waste transfer facility
- Incorporate what was presented for Villiers Island Precinct Plan last week in strategy
- Show connectivity between roads/transportation facilities in the Port Lands and communities to the north
- Consult with film studio operators about appropriate inclusion of studios as part of future mixed use development
- Need to strengthen the green network/connectivity/ecological concept component of the strategy
- Elaborate on the compatibilities of the land uses (i.e. create a longer list of uses to clarify what the mix could be in order to address market forces over time)
- Undertake proper modelling studies to fully understand compatibility of uses
- Aim high with the vision and building standards to ensure future development meets the most progressive standards
- Establish a realistic timeline that recognizes there likely won't be a market for a large amount of residential development in the area for decades
- Consider using a vacuum waste collection program that takes waste to a central Energy From Waste (EFW) facility
- Incorporate statistics on the Port usage from the Toronto Port Authority into analysis of future port and land uses

4. Adjourn

Ms. Ritz encouraged SAC and LUAC members to provide any additional comments and feedback on the draft land use strategy by early next week. Ms. Nield thanked SAC and LUAC members for attending and providing their input.



**Port Lands Planning Framework
and Port Lands and South of Eastern Municipal Class EA**

**Stakeholder Advisory Committee (SAC) and
Land Owners and Users (LUAC) Advisory Meeting #3**

Location: Metro Hall, 55 John Street, Room 310

Tuesday, May 20, 2014

7:00 – 9:00 pm

AGENDA

Meeting Purpose:

- Bring SAC and LUAC members together in a joint meeting to provide a detailed update on the planning process and next steps; and
- Present an emerging land use strategy for the Port Lands for discussion and feedback.

7:00 pm Agenda Review, Opening Remarks and Introductions
Liz Nield, Facilitator, Lura Consulting

7:10 pm Process Update and Presentation – Cassidy Ritz, City of Toronto & Amanda Santo,
Waterfront Toronto

- Process Update and Next Steps
- Proposed Land Use Strategy for the Port Lands
- Upcoming Workshops/Charrettes

7:50 pm Facilitated Discussion – SAC/LUAC Questions, Feedback and Advice

1. Thinking about the proposed land use strategy...
 - What do you like?
 - What concerns do you have?
 - What would you change and why?
2. Do you have any other advice or suggestions for the project team?

8:55 pm Wrap-up and Closing Remarks

9:00 pm Adjourn

Appendix B – List of Attendees

Participating Organizations:

- 33 Villiers Street (Cherry Beach Sound Ltd)
- 440 Commissioners
- Castlepoint
- Chai Poultry
- City of Toronto
- Code Blue/West Don Lands Committee
- Corktown Residents and Business Association
- Cycle Toronto
- Don Watershed Regeneration Council
- First Gulf
- Gooderham & Worts Neighbourhood Association (GWNA)
- LaFarge
- Sherwood Park Residents Association
- Toronto Green Community
- TRCA
- Toronto Port Lands Company
- Toronto Real Estate Board
- Toronto Region Board of Trade
- Waterfront Action
- Waterfront Toronto

Appendix C – Questions of Clarification and Detailed Summary of SAC/LUAC Feedback

A summary of the questions and answers and discussion following the SAC/LUAC briefing is provided below. Questions are noted with **Q**, responses are noted by **A**, and comments are noted by **C**.

Questions of Clarification

Q. Will the compatibility analysis include night clubs? They are louder than many factories.

A. MOE doesn't address night clubs because it's not an industrial use, but we will take note and look into it.

Q. You mentioned you had discussions with Metrolinx about a GO connection. Where exactly would that connection be?

A. It would be here (point to map). In order to have the connection, a few changes would be required. Metrolinx would need to electrify the line and in order to do that they would need to have both local and express routes. We will continue to work with Metrolinx on the feasibility and location of GO connections.

C. This comment is regarding the solid waste transfer station. At risk of alarming people from South Riverdale, why don't we just have vacuum waste collection from all the construction sites and take it to a central energy from waste plant? This could contribute to Port Lands energy needs. This is done in many other places and could be an improvement to the quality of the Port Lands. This is something that we should make a target.

Q. Are the different uses equally employment intensive? Why not put the employment uses adjacent to where we think the transit hub will be? This will mean there is less traffic travelling into the Port Lands. If employment lands are located at the farthest point of the precinct, people will be more likely drive, increasing traffic. Not everyone who lives there is going to work there so it makes sense to locate the employment uses near the transit hub.

A. We did identify a second transit hub at the intersection of Commissioners and Bouchette. This is a good point and I'm sure the transportation experts would agree with you to a certain extent. This is something that we are planning. We are going to take a look at where certain land uses will be and what transit is associated with that. We will be doing a more detailed modal split analysis for the entire site area as part of next phase.

Q. How much are we worried about the PPS buffers? They look a bit concerning to me as setbacks from several of the industrial uses. If we move the transfer station and de-classify it as heavy industry surely that would make a big difference, but still the international examples presented seem to have much smaller buffers than what the Province requires at this point. Is this something that we can negotiate?

A. Those are the minimum separation distances, but you can do a more detailed study and if that study shows smaller buffer requirements, than those can be used. We are going to do a more detailed study to help us determine the buffers required. We know that there are many different ways to address the impacts, but we did want to look at what the guidelines originally say so that we can take that into consideration.

Q. What is a community hub? How is that playing into the long-term vision for the entire precinct, especially in terms of the buffers around land uses?

A. We don't know at this stage what the community hub would be. That would be something that we would try and sort out through precinct planning as well as through the next stage. That is something that feedback and suggestions will be welcome on as well.

Q. The reason that I ask is because a lot of the land use decisions have been made based on establishing appropriate buffers from the waste transfer station, but if the waste transfer station moves, does that impact the overall land use across the precinct?

A. Yes and I would suggest that was reflected in the presentation. If the waste transfer station remains, the ability to get mixed-use residential in this area would be much more limited.

Q. Did Solid Waste Management Services give you the timing of their EA and possible relocation options? And while they are doing that, will you be looking at the D-6 guidelines and determining whether it's appropriate to locate residential next to the station?

A. They have retained a consultant to do their long-term waste management strategy for the city, and that process is already underway. That strategy will inform anything that happens with waste transfer facility here. The EA will be initiated following a decision from Council. They have identified that it would be a challenge to move the facility, so in the interim we won't be suggesting that you can put residential uses next to the waste transfer station until a decision has been made that it can be relocated.

Q. In the interim are you going to determine if it's appropriate to have residential next to the station at the 300m buffer?

A. We could. We didn't think about that, but we could consider that. One of the challenges is the location within the precinct. We need to consider the odour and truck traffic associated with the transfer station.

Q. Are you simply dismissing it as an impossible idea? The plants in Sweden don't require a lot of truck traffic because the waste is used. I wonder how big of a buffer they need.

A. That is something that would have to be explored through the EA, but it is something that we can relay to them. They would have to look at a number of different alternatives and different types of technologies. Doing something that is sustainable and great for the environment has been a cornerstone of the Port Lands plan from the beginning.

Q. Port uses are essential for the planning of the area, but having them the way that they are right now is not necessarily right. Are there statistics about port usage? For example, where does traffic go? Where does traffic come from? Can this be fit into the overall discussion, instead of just assuming that the port uses should be retained as they are right now?

A. What we are saying is that we don't want to retain the port uses as they are right now. We do have information on the tonnage and types of cargo coming into the Port from the Toronto Port Authority over the last 10 years. Last year, there was 1.1 million tonnes of cargo, not including sugar (mainly salt and concrete materials). The other aspect to consider is that we have to get in and out via the St. Lawrence River Seaway and that limits the size of vessels. For instance, we can't have the large container ships, because they are too big and the Seaway isn't deep enough. So we are limited to Great Lakes shipping to a certain degree. That isn't necessarily a bad thing because we do already get a lot of product via the Great Lakes. It is also important to note that the Port is seasonal, operating from March to September.

Q. Do we already have the statistics?

A. We would have to check with the Toronto Port Authority to see if we can release their statistics regarding tonnage.

Q. During the talks with Metrolinx for the GO Station did you talk about a commercial hub there?

A. We have talked about having a transit hub at that site. It is outside of our study and is part of a separate study happening for the relief line. GO would also have to initiate their own study. It is an idea that we are putting forward, and the concept is to have multiple modes.

Q. How is the film studio precinct plan process integrated with this process?

A. Land use is really important in the precinct plan. We are still moving ahead in developing street and block concepts, but we are waiting until we have some endorsement on the land use direction before we move forward with the precinct plan.

Q. Do you think it will move forward through the summer for the film studio precinct?

A. We are still working out those details, but ideally we would like to.

Q. Lake Shore Boulevard acts as a barrier and a lot of the planning here is about connectivity. Did we consider reducing the grand boulevard to an ordinary avenue?

A. In the past couple of meetings we have had we have presented hand in hand with the Transportation and Servicing Master Plan EA that is underway so you really got to see the relationship between the land use plan and the connectivity from the Port Lands to the north. Tonight we really wanted to focus on the land use plan, in part, because we need this land use plan in place before they can move forward with their EA. That is why tonight you didn't see a lot about those connections and about infrastructure and transportation. Lake Shore, to a certain degree, will also be informed by Gardiner EA.

Detailed Feedback Summary

1. Thinking about the proposed land use strategy...

- **What do you like and why?**

C. I like the concept of the film studio and the creative district. This is an area that is growing in the Toronto economy and has broader implications than just film. If you look at studies that have recently been done by the City of Toronto, a lot of this kind of development is happening along the southern region of the City.

C. I really like the fact that you have slowed down and are going much deeper into the questions that are puzzling us. Looking deeper into some of the industrial issues, and commercial and business opportunities that are there is a good idea. At other meetings we are getting into good discussions about environmental issues and natural habitat issues that mean a lot to me, which I appreciate. What I see here has a lot more substance than what we have seen in the past.

C. I agree and would like to compliment the project team. This presentation is more market-oriented and economic specific. I am also happy to see there is a focus on industrial compatibility. All these aspects had to be considered in this area and they were demonstrated in this presentation.

C. I really like the strategic land reserve from a real estate perspective. Land is finite resource and you need to use it wisely.

C. It is essential to get all the background data done before any detail planning is done. That is something that was missing previously. It is great that the process has slowed down and we are taking the time to look at the background information, because without that we are going to get it wrong.

C. I like the idea about planning for the future. For example, the CNE is getting built up and might need more space.

C. Great job. I like the connectivity as a whole. We are going to have some challenges moving forward and transitioning from where we are today to where we want to be, but we are making some headway.

C. We are private land owners and are down there every day. We are supportive of everything you guys are doing. This is very exciting because not much is around us right now. We would like to thank you for honouring your word and showing us as private lands on the map. Please continue to do so.

C. I have been coming to these meetings for 32 years. This is the most detailed work of all the years. You are actively trying to achieve a balance in order to accommodate the present and the future, as well as different public and stakeholder opinions, and I don't know how you can do much better than you have done. I think you have done a marvellous job and I am really happy with the detail.

C. I am hearing that we have come a long way and it sounds good.

C. I agree that you have done a lot of work. Tonight is much more informative for us, and you have provided more of an explanation about why you have made your decisions.

C. I am really impressed and it is great to be included in this thinking. It helps us understand the decisions being made. I am happy about the charrettes.

C. I love the concept of having residential in the film area and really love that you have recognized that south of Unwin is completely green, and will remain green.

C. The general land use strategy looks quite good. I like the attempt to maximize mixed-use and balance these areas with the industrial uses. I notice that the performance standards still to be developed so more detail will come in the future.

C. I am encouraged to see the compatibility analysis laid out in the slides. I know that the PPS was recently updated; however it's nice to see the principles reflected in the presentation.

C. I like what I see with regard to the pedestrian and cycling network that would link to various open spaces. This seems to be a very pleasant environment for someone travelling in something other than a motor vehicle.

- **What concerns do you have? What would you change and why?**

C. I don't see you making much use of Lake Ontario Park and Tommy Thompson Park. They need to be better connected to the area.

C. I am concerned about this idea of the 'golden ticket', such as the Olympics or World Fair unlocking the Port Lands. We need to start doing things today, and start planning for a vibrant urban destination now.

C. I am supportive of the mixed-use vision on Villiers Island, but I have some concerns about timing. How will the noise and air quality study play out with the precinct planning process?

C. In terms of the film studio precinct, we have some significant concerns that they can grow about 50 thousand square metres on that site. Being able to support the entire area is problematic. We know that the film studio needs to be embedded as part of a mixed-use community. People do not want to be based out of an employment type environment. They want to be part of something vibrant, active and urban. In order to do that, you need a real true mixed-use plan that is blended and integrated.

C. My concern is related to one of the basic principles, which is 'to create network of green corridors'. That seems to be a minimalist approach. The connectivity is almost missing and seems to be dependent on utilizing the street right-of-way. There is no ecological concept here. We still have a number of opportunities, as you said in your presentation, along the ship channel. I would like to see the principle expanded and better imprinted into this whole exercise.

C. This is a very long-term process. The ones that I have been involved in before have had to have flexibility. What is missing here is an elaboration of the compatibilities of land uses. A longer list to clarify what the mix could contain in order to deal with market forces at play is required.

C. You have done a great job. I do have some concerns about flexibility. I think infrastructure will be a challenge for a number of different reasons. I am happy to see commercial traffic is being looked at. I am pleased with the amount of detail. I am concerned about the transfer station and challenges associated with that. We have done a lot of planning for that area and I think it hinges on the relocation of the waste transfer station.

Q. I am concerned about the area south of the ship channel. There is a lot of talk about repurposing the Hearn and that has not been mentioned tonight. How does this fit in? There are a lot of Port uses south of ship channel, so how will the Hearn fit in? It certainly won't be compatible unless you do something more exciting. Also, the relationship between that area and park below needs to be further developed.

A. That is one of the reasons why we want to hold the design charrettes. The purpose of the charrettes will be to explore those types of issues in more detail.

Q. Can the issues around Lake Ontario Park be straightened out?

A. It will be an uphill battle, but we will try.

C. I want to congratulate you on amount of detail included. I also picked up on the island straightening and am happy that it is actually being verbalized. In terms of the timeline, we have to keep in mind that most of us at this table are not likely to walk along the future plans illustrated on these papers. We need to keep that in mind and remain flexible, because who knows what we are going to be moving around in, what kinds of transit we will have, and how we are going to deal with our waste and energy sources in the years to come. Trying to plan for residential in this area is a challenge because it will be decades before there is going to be a market for a large amount of residential development here. We have to be flexible in the uses and build into the program how the uses are not going to negatively impact the future uses. The uses need to be flexible from short-term, to mid-term, to long-term. In the long-term we will want to have residential so that we have people living here. We will need to draw people to want to live here. Let's keep a realistic timeframe as we move forward.

Q. I have one comment around noise and air quality assessments that overlap with the Cousins Quay (Villiers Island) precinct planning area. I had the opportunity to attend the meeting last week on that

precinct planning area and I did not see anything similar discussed in that presentation. What is the tie in? How do the two processes work together?

A. This type of detail will come as part of the City's study of noise. The results of the study will get embedded into precinct plan. We are still doing all of these studies together. Keep in mind that the hatched area on the map represents the air quality and noise assessment zone and is not the buffer zone. It is an area that requires further study.

Q. The level of detail is very good, it is very thorough. From the financial side, you mentioned that there was a bit of a shortfall, and I am curious to learn how the shortfall will impact potential land use strategies?

A. I don't think that it necessarily does impact the land use strategies. There was a shortfall before, there is still one today. It is about looking at a variety of different sources to make up for that shortfall. That includes looking at public/private partnerships, which is why the land owners group was established. Waterfront Toronto is looking to the province and federal government, but we need to get the EA approved before we can look for funds. That being said, there are a number of different ways that we are looking to make up the shortfall.

C. I appreciate the hard work. I think existing parks should be quite clearly identified to the south. It would also be helpful to see an overall plan that depicts the connectivity to everything north (i.e. showing the relationship to transit, to Lake Shore, to Cherry, and to future Broadview). It would be good to have an overall map that identifies those specific items and their impacts on land use.

C. I am concerned about the approach in linking environmental considerations and assessments of air quality and noise with the precinct planning process. I think the guidelines in the PPS is going to be hugely instructive to ensure compatibility can be achieved between different uses. The guidelines affect both industry and industrial development. The guidelines recognize that it is not a one size fits all solution. What I don't want to see is the potential of the Port Lands disregarded because we take a broad brush approach to land use compatibility. For example, you really can't understand the impacts unless you are modelling what the development will look. How are you doing to conduct those studies? Are you actually going to model developments and massing in the precincts? If you don't do that the studies are useless. You won't be able to really understand how the two uses will work together. It would be a shame to turn down a vision, because we have not modelled this properly. We don't want to preclude a magnificent vision because we haven't approached it properly in terms of the study. We have to consider what massing studies are going to be done to see what mitigation measures might be required on both sides of the fence.

C. I have a concern about the film studios. I heard you say 'more studios, more studios, more studios'. I caution using the approach 'build it and they will come'. I encourage this group to talk to Revival, Cityspace, and Castlepoint very seriously about how our business works. Just building more studios is not the answer. It is about a mix of spaces and the quality of these spaces. Examples of parks that did not work include: Techno Park in Montreal, park in Spain, and Chicago. We have to be really careful. While the film board is telling you to build more studios, their offices are located in a mixed-use area. You need to listen carefully to the operators and how their business works.

C. I like the detail and the vision: it is very progressive. I was apart of initial unlocking report and I can see we are building on that. I am also concerned about the 'magic bullet' events like Olympics. The result of those events are supposed to bring you the legacy items like the Don River, and water's edge promenade, but we are getting closer to those without these 'magic bullets'. These 'magic bullets' have

tended to sterilize these opportunities. We need to stop relying on these 'magic bullets' and move forward with the resources at hand. It seems like we are getting much closer to that. These are important legacy builders and I don't think we should be relying on these big events to move the city forward in city building process. I am really excited about the direction we are heading.

C. I keep hearing the reference to the waste transfer station as being a question about whether it's going to be residential or commercial uses. That type of facility that has air quality issues has sensitive uses around it already (i.e. parks, roadways). If you are serious about the vision for the entire precinct, it's not about just residential, it's about moving forward with a better community – both for people that live there and work there. The waste transfer station is not about residential versus commercial, it's about the past and the future and it's about an underutilized space. If you want to create a higher better order of place, then the option to move the facility has to be seriously considered.

C. We shouldn't just be building the way we build things now. Let's have in 20 years time, people from Europe showing pictures of Toronto as a way of how to build things. This is a special opportunity and we need to aim high.

C. I like the idea of bringing the green space to the west side of Leslie and along the turning basin.



Port Lands Planning Framework and Port Lands and South of Eastern Municipal Class EA

Land Owners and Users Advisory Committee Meeting #4

**Wednesday, November 4, 2015
Waterfront Toronto, 20 Bay Street
8:00 – 10:00 am**

Meeting Summary

1. Agenda Review, Opening Remarks and Introduction

Ms. Liz Nield, CEO of Lura Consulting, welcomed members of the Land Owners and Users Advisory Committee (LUAC) and thanked them for attending the meeting. She introduced the facilitation team from Lura Consulting and led a round of introductions of LUAC members and staff from the City of Toronto, Waterfront Toronto, Toronto and Region Conservation Authority, Dillon Consulting and Public Work. Ms. Nield reviewed the meeting agenda and explained that the purpose of the meeting was to present and obtain feedback on the emerging vision for the Port Lands.

A copy of the agenda is provided in Appendix A. A list of organizations that participated in the LUAC meeting is included in Appendix B. Questions of Clarification posed by the LUAC and a more detailed summary of the discussion are provided in Appendix C.

2. Process Update and Presentation

Cassidy Ritz, City of Toronto, Amanda Santo, Waterfront Toronto and Adam Nicklin, Public Work provided LUAC members with an overview of the work completed to date, the format of the upcoming public consultations and the emerging vision for the Port Lands.

The presentation will be available online at www.portlandsconsultation.ca following the November 14, 2015 open house and information session.

3. Facilitated Discussion - Questions of Clarification, Feedback and Advice

Following the presentation, LUAC members addressed the following discussion questions:

1. What do you like about the emerging vision?
2. Has anything major been missed or of concern to you?
3. What refinements would you suggest ahead of the upcoming public consultations?

A summary of the feedback and advice is provided beginning on the next page. A more detailed account of the discussion can be found in Appendix C.

Emerging Vision

- The Emerging Vision recognizes various businesses that currently operate in the Port Lands.
- Committee members also liked:
 - The intent to support a diversity of uses in the Port Lands (e.g., residential, commercial and light industrial uses, and open space).
 - The initial breakdown of the precincts into sub-districts.
 - The Emerging Vision has not changed significantly since the last meeting – good to see that a consistent vision is now starting to take hold.
- Committee members also raised concerns about elements of the Emerging Vision which are summarized by theme area below.

Emerging Land Use Direction

- *Industrial Uses*
 - Need to better recognize and celebrate the current industrial uses in the Port Lands and the role they play in city building.
 - Consider the impact of introducing new uses (e.g., residential, recreational) in the Port Lands on existing industrial uses.
 - Consider non-residential uses as a buffer between industrial and residential uses on Polson Quay.
- *Film, Media and Creative Uses*
 - Consider how economic changes to the film industry over time may impact the development of a Film, Media and Creative cluster.
 - Reconsider the creation of a single-use Film, Media and Creative cluster by allowing a variety of ancillary uses to support the development of a dynamic mix of uses.
- *Biodiversity*
 - Re-consider the greenway proposed south of the Ship Channel as it may lead to compatibility issues with surrounding industrial uses (e.g., increased dredging, less space for existing uses).
 - Consider the cost of maintaining the network of greenspaces.
- *Ship Channel*
 - Ensure the current function and use of the Ship Channel as a turning basin is considered in the Emerging Vision.

Transportation and Road Network

- Address concerns about truck routes and access throughout the Port Lands, particularly on Unwin Avenue. Concerns were also raised about the proposed Marine Hub and how it will impact truck routes to existing industries.
- Consider the impact of the proposed Broadview Extension alignment on adjacent properties and potential transit stops and address concerns raised about the proposed alignment (e.g., creation of a “dead zone”, odd shaped blocks, technical impacts to the rail embankment, and awkward intersections and angles).
- Reconsider the alignment of the east-west road proposed south of Commissioners Street.

Upcoming Public Consultations

- Refer to industrial uses as industrial uses instead of “artefacts”.
- Emphasize that there are active industrial uses in the Port Lands.
- Clarify that there is still a lot of work to be done on the Broadview Extension and its alignment.
- Make it clear that there will be more consultations as work on other components of the Port Lands continues (i.e. this is not the “final” round of public consultation).

Case Studies

- Consider including case studies of ports with a history of heavy industry.

4. Adjourn

Ms. Nield thanked the project team and LUAC members for attending and adjourned the meeting.



**Port Lands Planning Framework
and Port Lands and South of Eastern Municipal Class EA**

Land Owners and Users Advisory Committee (LUAC) Meeting #4
Waterfront Toronto Offices, 20 Bay Street, Suite 1310 – Main Boardroom
Wednesday, November 4, 2015
8:00 – 10:00 am

AGENDA

Meeting Purpose:

- Present the emerging vision for the Port Lands, including land use direction, preferred street network and urban structure, as well as the direction for other key elements like built form, biodiversity and sustainability.
- Obtain feedback from the LUAC ahead of the upcoming public consultation meetings in mid-November.

8:00 am Agenda Review, Opening Remarks and Introductions
Liz Nield, Facilitator, Lura Consulting

8:10 am Process Update and Presentation – Cassidy Ritz, City of Toronto; Amanda Santo, Waterfront Toronto; Adam Nicklin, Public Work

- Process Update and Upcoming Public Consultations
- Placemaking in the Port Lands: The Emerging Vision

9:00 am Facilitated Discussion – LUAC Questions, Feedback and Advice

9:00 am What do you like about the emerging vision?
9:15 am Has anything major been missed or of concern to you?
9:30 am What refinements would you suggest ahead of the upcoming public consultations?

9:45 am Wrap-up and Next Steps

10:00 am Adjourn

Appendix B – List of Attendees

LUAC Meeting List of Attendees:

- 16 Munition Street
- 300 Commissioners Street
- 33 Villiers Street
- Belleterre Real Estate Partners
- CanRoof
- CastlePoint Numa (309 Cherry Street, 475 and 495 Commissioners Street and 75 Basin Street and 225 Commissioners Street)
- Compass/Sifto
- CRC
- Dufferin Concrete, CRH Canada
- Essroc
- First Gulf
- Johnston Litaviski
- K + S Windsor Salt Ltd.
- LaFarge/Holcim
- Rose Corp.
- Scott Burns Planning
- St. Marys/CBM
- Telesat

Appendix C – Questions of Clarification and Detailed Summary of LUAC Feedback

A summary of the discussion following the presentation is provided below. Questions are noted with **Q**, responses are noted by **A**, and comments are noted by **C**.

Questions of Clarification

Q. The examples from New York City and Amsterdam shown in the presentation do not have a history of heavy industry to make a true comparison to the Port Lands. I am concerned about the compatibility of the proposed greenway south of the Ship Channel with the surrounding industries. Is the greenway needed for flood protection if the mouth of the Don River is being re-naturalized? The turning basin has a function and is used by vessels that come into the port – I hope that is being considered.

A. The Navy Yard in DUMBO, New York City does have heavy industry near it. There are lots of other examples that could be highlighted instead if it is helpful. Dockside Green, Victoria, for example, has similar aggregate uses that are located the same distance away as the Ship Channel. In this case, non-residential uses provide a buffer at the water's edge, with residential uses located further back. The greenway south of the Ship Channel is not for flood protection; it is intended as a connection between the area north of the Ship Channel and Lake Ontario Park for biodiversity to filter through. We are cognizant of how the turning basin is currently being used and how it may be used in the future. Through our conversations with the Harbour Master, we understand there is some flexibility for uses on the sides of the Ship Channel.

Facilitated Discussion

1. What do you like about the emerging vision?

C. I like the fact that the emerging vision has taken our property [33 Villiers] into account. I also like the open space and that the vision aims to support diversity in the Port Lands. There are 30 different companies in our building. We are also surrounded by many different businesses (e.g., heavy industry, TV production, animation). I am pleased to see that the existing companies in the Port Lands are reflected in the emerging vision.

C. I like the fact that you have started to explore breaking down the precincts into sub-districts.

2. Has anything major been missed or of concern to you?

C. There is still uncertainty about the future of the area captured within the oval [on slide 50] as well as the uses on Villiers Island and Polson Quay. My understanding is that future work is needed to resolve land use compatibility issues, but it is unclear at this time how or when that will take place. In principle, intervening non-residential uses would be a reasonable solution to buffer industrial uses and should be explored on Polson Quay, rather than relying on noise or air quality studies. Industrial uses should be thought of less as “artefacts” and more as industrial uses. The terminology “artefact” conjures a negative response.

C. I agree that “artefact” is the wrong vernacular. Lafarge has been there for 80 years and intends to be there for another 80 years. The vision should recognize and celebrate Lafarge's role in city building

in the Port Lands and elsewhere in the GTA. The presentation did not provide details about the road network or address the fact that our trucks will be land locked. Was there an industry representative on the Biodiversity Group?

A. Yes, a representative from the Portlands Energy Centre was on the Biodiversity Group.

Q. How will the Broadview Extension continue over the Ship Channel – would it be a lift bridge?

A. Yes, it would be a lift bridge to maintain the shipping function.

C. My understanding is that the area north of Commissioners Street (between Logan Avenue and Leslie Street) will be transformed into a modern warehouse and light media district. I am concerned about this as the area is currently occupied by heavy industry.

A. That Planning Act recognizes existing land uses. The objective for that particular area over the long-term is light industry. We are not saying that you have to leave; we are simply providing more direction for the future as existing uses change.

Q. The emerging land use plan includes a “Maritime Hub” area south of the Ship Channel. Can you clarify what a “Maritime Hub” is (e.g., amenity area, destination)? In terms of transportation, the vision is that trucks will travel south on Cherry Street to Unwin Avenue – how will trucks pass through the Maritime Hub?

A. Unwin Avenue would still be a working street that accommodates truck traffic as it does today. There are also a lot of recreational users that use the same route. The Maritime Hub is a name we came up with to reinforce port activity. There is an example from North Shore, NY that has lots of parks and open spaces that are heavily used by people that are adjacent to active port uses. We saw it as an opportunity to put some development (e.g., restaurants) along Cherry Street south of the Ship Channel. The intent was to put the permissions in place for commercial or employment uses to allow that type of activity to happen and to support existing port functions.

C. When this is presented to the public, it should be emphasized that there are existing industrial uses in the Port Lands. Over time there may be a movement toward light industry, but that there are currently heavy industries in the Port Lands.

C. I like that the plan recognizes that we are there. I work for an industry (aggregates) that people need, but that nobody wants to be near. It should be recognized that as more people move in and begin to use the area, the number of complaints increase and that is when conflicts start to happen.

A. We genuinely did try to recognize industry in the vision. We are now aware that the term artefact is something we should not use. The majority of the images shown during the presentation that were taken during the charrette were of active industrial uses – they are valued.

C. I like that the plan has not changed significantly since the last meeting. The mix of residential and over time light industrial uses make sense, recognizing that there are challenges by the presence and location of existing industrial uses. There appears to be a huge focus on the film industry. There is already a large concentration of film industry uses in the Port Lands; as this plan is implemented over time, changes to the film industry’s economic model should be considered. Many of the existing industrial users have been there longer than the film industry which should also be considered. The cost of maintaining the greenspace network should also be considered (e.g., drought tolerant plants).

A. In terms of the greenway there are two options – maintaining the space or not maintaining it. Tommy Thompson Park, for instance is not maintained, celebrating a more natural network. We are exploring

whether there is a different way to celebrate wilderness in the street - not necessarily no maintenance, but low maintenance.

C. The current plan for the Broadview Extension is driven by flawed assumptions. The main challenge relates to flood protection - as Broadview Avenue continues south of the rail embankment it creates a dead zone, sterilizing most of the First Gulf site. One of the assumptions is that there is no higher order transit at that site. If there is no transit station there we don't have the infrastructure needed to support the development of a major employment node with higher order uses than industry. That is the first fundamental problem we have. The second relates to the technical challenges of going under the rail embankment. We have raised concerns about some of the assumptions and were informed that they would be further analyzed in Phase 3 of the EA. We do not think they are viable solutions and may worsen the dead zone. The proposed alignment creates a number of odd shaped blocks and awkward intersections on our site but south of Lake Shore Boulevard as well. When we brought these concerns forward, we were told that there are other reasons for this particular alignment. It may be fine to strive for an alignment that creates a view corridor to the Hearn, but in order to achieve it existing rights-of-way and proposed plans are being disrupted. We do not think this part of the plan is ready to proceed to next phase of EA.

A. Broadview Avenue is a very challenging connection. The proposed alignment is not just about the Hearn stack and aims to achieve a number of different objectives. We have a meeting set-up to discuss the concerns you have raised.

C. I would also like to emphasize the continued existence of heavy industry in the Port Lands. The team should re-consider the greenway south of the Ship channel as it may lead to compatibility issues with surrounding industrial uses. The industries that are there now are losing valuable space; it is becoming more difficult to continue operations in the Port Lands. Will the greenway affect the frequency of dredging needed to maintain the required depth of the Ship Channel (i.e., more sediment)?

A. The plan for Lower Don Lands will decrease sediment by allowing water to continue to move. The greenway north of the Ship Channel is envisioned as a more natural wetland which will also be used as a conduit for flood water in the event of a large storm.

C. Is the greenway south of the Ship Channel truly needed then?

A. South of the Ship Channel, the greenway is not for flood protection. There are a number of reasons for the greenway, one of which is to provide a corridor for biodiversity to pass through between the Lower Don Lands and Lake Ontario Park.

C. There is already a lot of greenspace south of Unwin Avenue; industry also needs space.

C. In regards to the application made at 475 Commissioners Street, there was a comment made earlier that the FedEx facility is not compatible with sensitive land uses such as residential. I would like to clarify that the FedEx facility that was located at 215 Lake Shore Boulevard was relocated to the Port Lands because of the changes currently taking place in the area (i.e., precinct plan implementation). I do want to clarify that the uses are compatible. In terms of the Film Studio Precinct, the land use direction is moving backward rather than forward. That sector depends on relationship building and proximity to the right mix of uses. Research shows that they want to be part of a place not an employment park. For instance, we are looking at allowing other ancillary uses on the Pinewood Toronto Studios site to create a dynamic mixed-use place. We do have concerns about allocating approximately 60 acres for one use, and think that it will halt the positive change that has been happening in the area. I would also like to echo the comments made earlier about the alignment of the Broadview Extension, which would cut through some of our secured film studio properties. We are supportive of the effort to create a north-south link as it would benefit the entire neighbourhood,

however there is still a lot of work to be done and missing information at this point in the process. In terms of refinements to this presentation, I encourage the Project Team to make it clear that there is still a lot of work to be done in terms of the Broadview Extension.

A. I understand there are concerns about the Broadview Extension. There are a few things that we would like to point out. We are excited about creating a north-south linkage back into the City. There is a 200 m grid being applied to support transit along Commissioners Street, which is where intersections will be added. Bouchette Street will likely be the strategic link to the Broadview Extension. The bridges, where they are needed, cannot be located closer than 400 m. The blocks created are big enough to be court yards, the angles are about 70 degrees and developable.

C. The alignment is less of a concern than the angle created which does not allow two signalized intersections east of the Don Roadway which we need to manage forecasted demand. Under this alignment, the spacing you talked about would result in one intersection at the Don Roadway, one at Broadview and one at Carlaw Avenue, which does not provide our site with the needed traffic capacity. We prefer a situation with intersections at Saulter Street and one at Bouchette Street. Why is the alignment being shifted west south of Commissioners Street?

A. The issue is the hydro transfer station which would have to be re-configured even if the alignment was at Bouchette Street. Another issue is the infrastructure that is on the south side of the Ship Channel. There are limitations as to what can be done to extend Broadview Avenue into the Port Lands. We will create protections to add bridge connections, using some of the lessons learned while planning for Carlaw Avenue. We are also looking to create connections in areas that are gated off or currently secured perimeters (e.g., hydro).

C. In this scenario there is no public transit station in the area. Our plan is basically the opposite of this; it concentrates development around a transit station. This alignment sterilizes the land around the transit station would be.

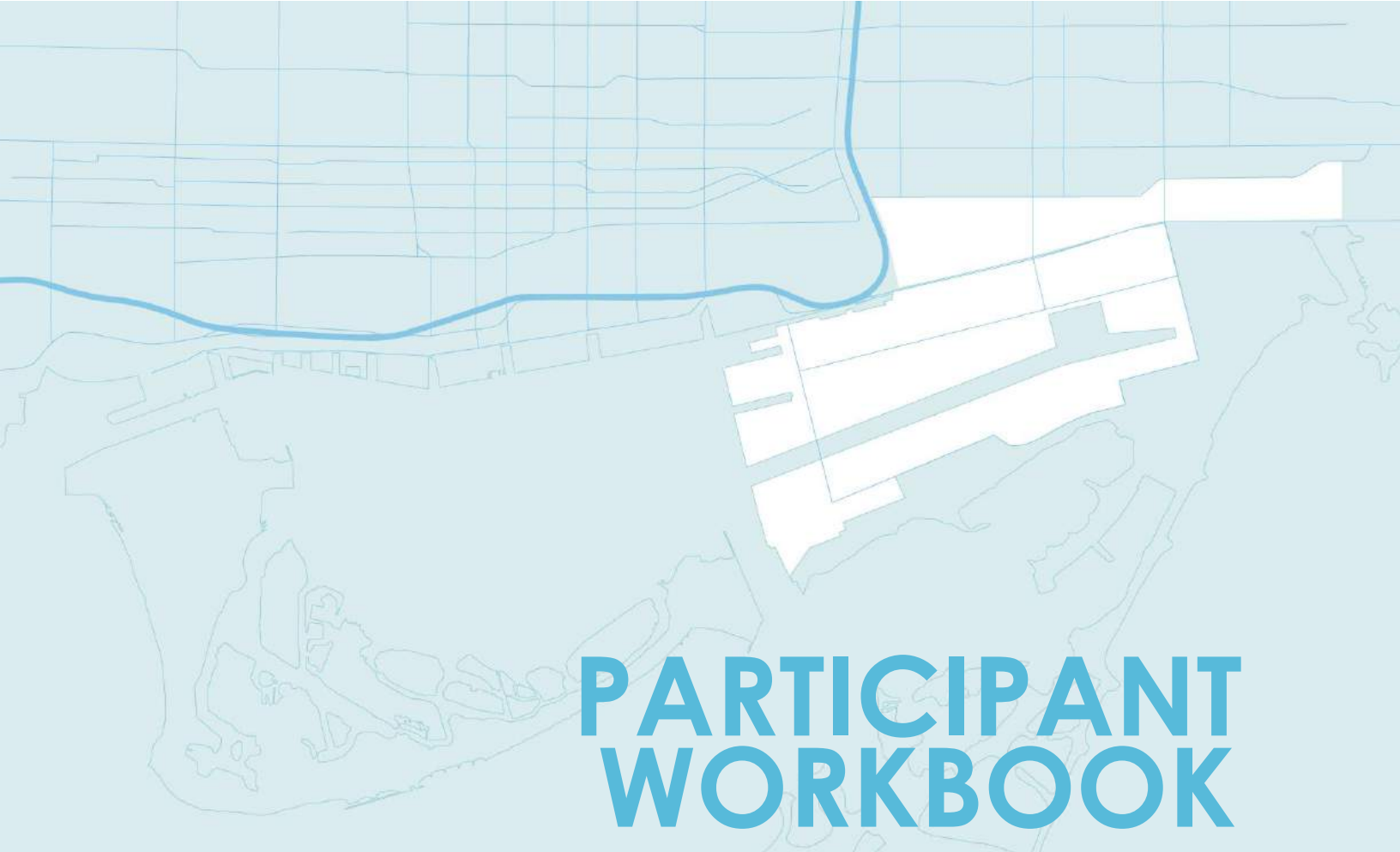
A. This is just for demonstration purposes. We agree that development should be at a higher density near transit and decline as it moves away from transit.

Q. Why did the notice go out stating this as the final consultation?

A. It was drafted with the idea that this would be the “final” round of consultations as part of this stage of work on the planning framework and infrastructure EA. There will certainly be more consultation when it comes to the Official Plan policies as well as future phases of planning for the Port Lands.

C. The way the information was presented did not suggest that there is more work to come. It is important to reiterate that there will be more consultation on other components of the Port Lands.

**APPENDIX D –
DISCUSSION GUIDES**



PARTICIPANT WORKBOOK

Port Lands and South of Eastern

November 28, 2013 Public Meeting
Riverdale Collegiate, 1094 Gerrard Street East



Completed Participant Workbooks can be returned at the public meeting, or alternatively completed by **December 12, 2013** and mailed to:

City Planning Division
Attn: Thomas Rees, Planner
City Hall
100 Queen Street West
18th Floor, East Tower
Toronto, Ontario
M5H 2N2

An **online version** of the Participant Workbook can also be completed up to **December 12, 2013** at:

<http://www.portlandsconsultation.ca/>

PORT LANDS AND SOUTH OF EASTERN PUBLIC MEETING

MEETING PURPOSE:

- To introduce and provide background information on the five initiatives underway in the area:
 - Port Lands Planning Framework
 - Cousins Quay Precinct Plan
 - Film Studio Precinct Plan
 - South of Eastern Strategic Direction
 - Port Lands and South of Eastern Transportation and Servicing Master Plan
- To seek your feedback on:
 - Your vision for areas/sites within the Port Lands
 - The draft objectives developed to inform and guide the development of the Port Lands Planning Framework and Precinct Planning
 - Important considerations for the South of Eastern Strategic Direction
 - Problems and opportunities in the Port Lands and South of Eastern areas specifically related to transportation (streets and transit) and servicing (water, sanitary sewers and stormwater management)

AGENDA:

6:00 -7:00	Open House
7:00 -7:10	Welcome and Introductory Remarks <i>David Dilks, LURA Consulting</i> <i>John Livey, Deputy City Manager, City of Toronto</i> <i>John Campbell, President & CEO, Waterfront Toronto</i> <i>Councillor Paula Fletcher and Councillor Mary-Margaret McMahon</i>
7:10 -8:00	Presentation Introducing the Five Initiatives Gregg Lintern, Director, Community Planning, City of Toronto Chris Glaisek, VP, Planning and Design, Waterfront Toronto
8:00 -8:15	Questions of Clarification <i>David Dilks, LURA Consulting</i>
8:15 -9:00	Opportunity to Complete Workbooks at Open House Stations
9:00	Adjourn

OPEN HOUSE DISPLAY BOOTHS

1. OVERVIEW OF PLANNING INITIATIVES

- Learn about the new initiatives, how they fit together, and the overall planning process

2. PORT LANDS PLANNING FRAMEWORK

- Provide feedback on:
 - o How you see the Port Lands developing out over the long-term
 - o Draft objectives

3. PRECINCT PLANNING

- Learn about the two precinct plans – Cousins Key and Film Studio – that are now underway

4. SOUTH OF EASTERN STRATEGIC DIRECTION

- Provide input on important considerations for the study

5. PORT LANDS AND SOUTH OF EASTERN TRANSPORTATION AND SERVICING MASTER PLAN

- Provide feedback on problems and opportunities that should be considered in the plan

OVERVIEW OF INITIATIVES

Port lands Planning Framework

At 356 hectares, the Port Lands are a tremendous redevelopment opportunity for the City. Waterfront Toronto and the City of Toronto are developing a planning framework for the Port Lands that builds on the momentum from the Port Lands Acceleration Initiative adopted by City Council in 2012. The planning framework will guide revitalization efforts in the Port Lands and will provide the foundations for affirming and refining the vision for the Port Lands in the Central Waterfront Secondary Plan.



Precinct Planning

Precinct planning is being undertaken by Waterfront Toronto and the City of Toronto for Cousins Quay and the Film Studio District. Precinct Plans outline development principles and guidelines at a more detailed level and illustrate how lands can be developed to meet the policies of the Central Waterfront Secondary Plan. Precinct planning forms the bridge that allows the City to move from Secondary Plan policies to Zoning By-law provisions.



South of Eastern Strategic Direction

The City of Toronto is undertaking the South of Eastern Strategic Direction will build upon the South of Eastern Planning Study completed in 2008 that resulted in proposed amendments to the Official Plan and Zoning Bylaw. The Strategic Direction will focus on economic development, urban design and transportation.



Port Lands and South of Eastern Transportation and Servicing Master Plan EA

The City of Toronto is undertaking a Transportation and Servicing Master Plan (TSMP) for sections of the Port Lands and South of Eastern area in accordance with the requirements of the Municipal Class EA. The TSMP will identify the necessary infrastructure (streets, transit, watermains and sewers) to support revitalization in the Port Lands and continued economic growth in the South of Eastern area.



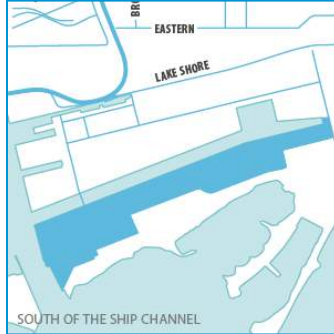
CONTEXT



PORT LANDS QUESTIONS

1. **What do you see as the two or three key issues and/or opportunities that need to be addressed in the Port Lands Planning Framework?**

2. What types of land uses and/or character would you like the different areas in the Port Lands to have?



PORT LANDS DRAFT OBJECTIVES

Six draft objectives to assist in the evaluation of options/alternatives and to inform the vision for the Port Lands have been developed and are provided below.

CREATING AN INTERESTING AND DYNAMIC URBAN MIX

The revitalized Port Lands is a dynamic and vibrant area of the city. A number of new, inclusive, sustainable, urban-scaled, compact, mixed-use communities and employment areas will be created. Each new urban area will have a unique local identity and character. Water permeates and influences all facets of the revitalized Port Lands given its proximity to the waterfront, new river valley and continued port activity. A number of new destinations and special places are developed which promote walking and taking transit, provide opportunities for social interaction and contribute to an interesting urban life.

CONNECTING THE PORT LANDS TO THE CITY

Enhanced physical, social and visual connections are created in the Port Lands, connecting the Port Lands to the city. These connections include new public streets, higher-order transit, new bridges, enhanced pedestrian and cycling connections and the renaturalized Don River. New public street connections provide permeability into, out of and within the Port Lands. The public streets promote synergies between the South of Eastern area and the Port Lands by stitching these two areas together, and better connect the Port with the rest of the city. The Port Lands' unparalleled views, including those of the city's skyline, are protected, framed by development and celebrated. New views to the water's edge, river valley and iconic structures are created.

LEVERAGING THE PORT LANDS ASSETS

The Port Lands are an important remnant of the city's industrial past and portions have since evolved into wonderfully diverse natural areas. There are a number of important and iconic heritage resources that are conserved, repurposed and appropriately leveraged to contribute to placemaking and to celebrate the Port Lands industrial heritage. The new Lake Ontario Park, which includes Tommy Thompson Park, the Base Lands and Leslie Spit, is a key asset that distinguishes the Port Lands as a unique destination for people and provides habitat for wildlife.

DEVELOPING A HIGH-QUALITY PUBLIC REALM

A comprehensive network of public parks and open spaces are developed that capitalizes on the Port Lands' waterfront setting, the new river valley and Lake Ontario Park. High-quality streetscapes, outstanding parks, new natural linkages and design excellence for public facilities are secured to ensure that complete communities created in the Port Lands are great places to live, work and visit.

CONTRIBUTING TO THE SUSTAINABLE FUTURE OF THE CITY

The dynamic mix of uses developed in a walkable, urban form, the creation of new jobs and opportunities and continued port activity are the cornerstones of the Port Lands' and city's sustainable future. Equally important is ensuring that all aspects of redevelopment contribute to a healthy and sustainable environment. Leading-edge and innovative approaches are utilized that showcases the revitalized Port as a leader of sustainable development on the world's stage. Reducing resource consumption, providing low-carbon developments, minimizing dependency on the private automobile and fostering new technologies are just some of the principles that are employed to optimize the sustainability of the revitalized Port Lands.

PROVIDING FLEXIBILITY AND CERTAINTY IN THE PLAN'S IMPLEMENTATION

The Port Lands, at 356 hectares, will incrementally redevelop over an extended period of time. The planning framework for the Port Lands must allow for a high degree of flexibility to accommodate changes over time. Notwithstanding this flexibility, it must also be specific enough to ensure that public and private investments contribute to the long-term vision for the Port Lands and have lasting value.

3. Do the draft objectives reflect how you see the Port Lands developing? Provide us with your ideas and suggestions on how to improve these objectives.

SOUTH OF EASTERN QUESTIONS

4. Are there specific improvements that you would like to see in the South of Eastern area? Are there areas that you think need special attention?

5. What types of businesses and economic activity would you like the City to promote in the South of Eastern area?

PORT LANDS AND SOUTH OF EASTERN TRANSPORTATION AND SERVICING MASTER PLAN

Based on a review of existing conditions and objectives to revitalize the Port Lands and ensure continued economic growth in South of Eastern, problems and opportunities to be addressed in the Environmental Assessment process have been developed.

PROBLEMS

- Existing infrastructure is insufficient or is non-existent
- Major infrastructure like the Gardiner Expressway, Lake Shore Boulevard and rail corridors are impediments for better connections
- Street networks are limited
- The areas lack defined streetscapes and pedestrian amenity
- There is no higher-order transit service and introducing higher order transit on Commissioners Street requires resolving the hydro transmission towers located within the right-of-way east of the Don Roadway
- Existing connections across the Ship Channel are insufficient or are in disrepair
- New streets and servicing requires resolving soil contamination issues. Moreover, the area has a high water table
- The long-term revitalization of the lands necessitates developing strategies to ensure compatibility between existing industrial traffic and revitalized city environments

OPPORTUNITIES

- Located within close proximity to the city's downtown
- Opportunities to improve existing infrastructure comprehensively as the Port Lands and South of Eastern undergo redevelopment, including:
 - Introducing and extending higher order transit routes
 - Improving existing streets and establishing new streets
 - Providing complete streets
 - Capitalizing on the Ship Channel and Turning Basin for water-based transportation opportunities
 - Managing transportation impacts of growth on established, stable residential neighbourhoods
 - Providing innovative, state-of-the-art stormwater facilities
 - Providing the needed capacity for other municipal servicing

6. Do you think these problems and opportunities reflect the issues to be addressed in Port Lands and South of Eastern area from a transportation and servicing perspective? Are there other problems and opportunities that should be considered?

CONTACT INFORMATION

OPTIONAL — Please **PRINT** name, address and email

- I consent to the disclosure of this comment sheet containing my name, address and comments to the respective Ward Councillor(s) for the purpose of communicating with me about these planning matters.
- Please ensure that my name is on the City Clerk's Office mailing list for the initiatives I've identified below as being of interest to me.

Please indicate which of the initiatives are of interest to you?

<input type="checkbox"/> Port Lands Planning Framework	<input type="checkbox"/> Cousins Quay Precinct Plan	<input type="checkbox"/> Film Studio Precinct Plan
<input type="checkbox"/> South of Eastern Strategic Direction	<input type="checkbox"/> Port Lands and South of Eastern Transportation and Servicing Master Plan	

Advisory committees/working groups are being established for the different initiatives. These are smaller groups of interested community members which would provide input on the different initiatives at key stages in the process.

Please advise if you would like to participate on advisory committee/working group for any of the initiatives identified below and provide your contact information above.

<input type="checkbox"/> Port Lands Planning Framework	<input type="checkbox"/> Cousins Quay Precinct Plan	<input type="checkbox"/> Film Studio Precinct Plan
<input type="checkbox"/> South of Eastern Strategic Direction	<input type="checkbox"/> Port Lands and South of Eastern Transportation and Servicing Master Plan	

The formal notice of any public meeting held by the City under the *Planning Act* will be sent to: property owners within 120m (400 feet) of the property; anyone submitting a written request to the City Clerk's Office to be notified; and anyone entering their name on a Sign-in or Comments sheet provided at the Community Consultation Meeting.

The personal information on this form is collected under the authority of the *City of Toronto Act, 2006*, the *Planning Act*, and the City of Toronto Municipal Code. The City collects this information to enable it to make an informed decision on the relevant issue(s). Individuals who submit correspondence should be aware that any personal information in their communication will become part of the public record. The City will make it available to the public, unless the individual expressly requests the City to remove the personal information. Questions about the collection of this information may be directed to the Planner listed above.

DISCUSSION GUIDE

PORT LANDS PLANNING FRAMEWORK + TRANSPORTATION & SERVICING MASTER PLAN

February 13, 2014 Community Consultation Meeting

For more information on Phase 2
of the Port Lands Acceleration
Initiative visit:
www.portlandsconsultation.ca

PORT LANDS PLANNING FRAMEWORK + TRANSPORTATION & SERVICING MASTER PLAN

February 13, 2014 Community Consultation Meeting

MEETING PURPOSE

Present and seek feedback on:

1. Ideas for **land use** in the Port Lands
2. Alternatives for **streets** (including transit) and **municipal servicing** (water, wastewater and stormwater)

AGENDA

- | | |
|---------|--|
| 6:30 PM | Drop-in (Display Boards) |
| 7:00 PM | Welcome and Opening Remarks |
| 7:05 PM | Overview of Planning Initiatives and Recap of Process |
| 7:10 PM | Port Lands Planning Framework: Lands Use Options |
| 7:30 PM | Transportation and Servicing Master Plan: Alternatives |
| 7:45 PM | Questions of Clarification |
| 8:00 PM | Facilitated Table Discussions |
| 8:40 PM | Report Back |
| 9:00 PM | Adjourn |

WHAT WE ARE DOING

The City of Toronto and Waterfront Toronto are developing a comprehensive long-term plan to guide the revitalization of the Port Lands. The plan will include direction for the transformation of the Port Lands into a number of new urban districts alongside our working port. This plan will build on the direction from the Port Lands Acceleration Initiative that was adopted by City Council in 2012 and will incorporate the planning for the Lower Don Lands and the naturalized valley of the Don River.

A Master Plan under the Municipal Class Environmental Assessment (EA) process is also being developed to establish the street network (including transit), and the water, wastewater and stormwater infrastructure needed to support revitalization. The Master Plan applies to most of the Port Lands and to the area referred to as "South of Eastern" (located north of Lake Shore Boulevard East, south of Eastern Avenue, between the Don River and Coxwell Avenue). The Master Plan will provide a coordinated transportation and servicing strategy between the two areas.

REVITALIZATION OBJECTIVES

Six objectives are guiding our work in the Port Lands:

1. Create an interesting and dynamic urban mix
2. Connect the Port Lands to the city
3. Leverage the Port Lands' assets
4. Develop a high quality public realm
5. Contribute to the sustainable future of the city
6. Provide flexibility and certainty in the Plan's implementation

HOW TO USE THIS GUIDE

Since the last round of consultation in November, 2013, we have developed some land use options for the Port Lands. We have also developed alternatives for streets (including transit) and municipal servicing (water, wastewater and stormwater).

This Discussion Guide provides an introduction to these options and alternatives. The accompanying Discussion Questions are designed to get your feedback on the land use options and transportation and servicing alternatives. All presentation materials from the public meeting will be posted on www.portlandsconsultation.ca. You can refer to this Guide and the complete presentation materials to assist you in completing the Discussion Questions.



Port Lands Planning Framework Study Area



Transportation + Servicing Master Plan Study Area

LAND USE OPTIONS

The vision for the Port Lands in the Central Waterfront Secondary Plan is to transform the Port Lands into a number of new urban districts set amid the hustle and bustle of Toronto's port activities. Having a working port next to these new urban districts is a unique opportunity, but also requires careful consideration. Port uses are not necessarily compatible adjacent to where people live. There are also a number of existing industrial uses that will remain in the long-term. We would like to better define where land uses should go in the Port Lands. This will allow us to:

- Provide more robust direction for the long-term vision of these lands;
- Ensure proper separation of industrial and port uses from the new communities that will be developed; and
- Continue to provide the services that grow the city and make the city work.

Four land use options have been developed using three broad land use categories. There are assumptions that are constant in all of the options:

- The Lower Don Lands continues to be envisioned as a mixed-use, live-work community framed by the naturalized valley of the Don River;
- The lands east of Carlaw Avenue would be used for port and employment purposes as there are existing uses that are anticipated to remain in the long-term;
- South of the Ship Channel, east of the Hearn, the lands would continue to be used for industrial and port purposes;
- The Hearn is transformed into a destination; and
- The lands owned by the Toronto Port Authority remain in use as a working port.

The main differences in the land use options are focused in the Film Studio District and south of the Ship Channel, west of the Hearn. We are looking at different amounts of live-work, creative industries, and port and employment uses in these areas.

What is the Central Waterfront Secondary Plan?

The Central Waterfront Secondary Plan provides a long-term vision to guide growth and change in the city's Central Waterfront area. In addition to being a visionary document, it is also a legal document and our primary tool to ensure that an area develops as envisioned.

The Plan was adopted in 2003 by City Council. It is built on four core principles:

- Removing Barriers/Making Connections
- Building a Network of Spectacular Waterfront Parks and Public Spaces
- Promoting a Clean and Green Environment
- Creating Dynamic and Diverse New Communities

LAND USE CATEGORIES

Live-Work Communities

- Opportunities for living and working
- Complete communities with schools, affordable housing and provision of other day-to-day needs
- Retail and active uses on main streets
- Neighbourhood parks and open spaces

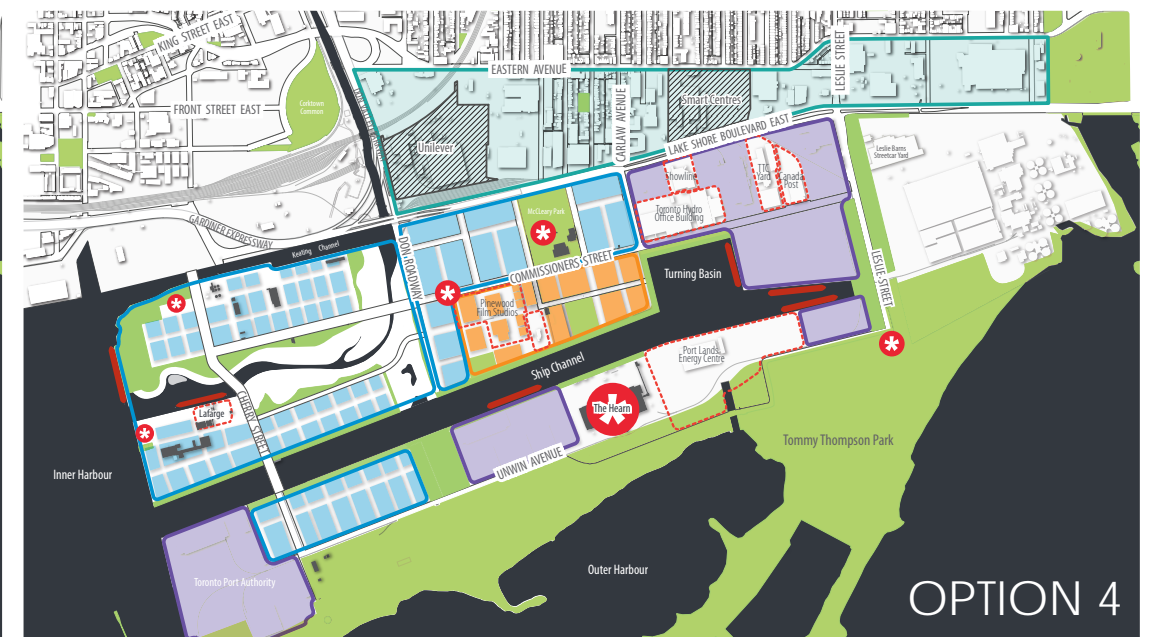
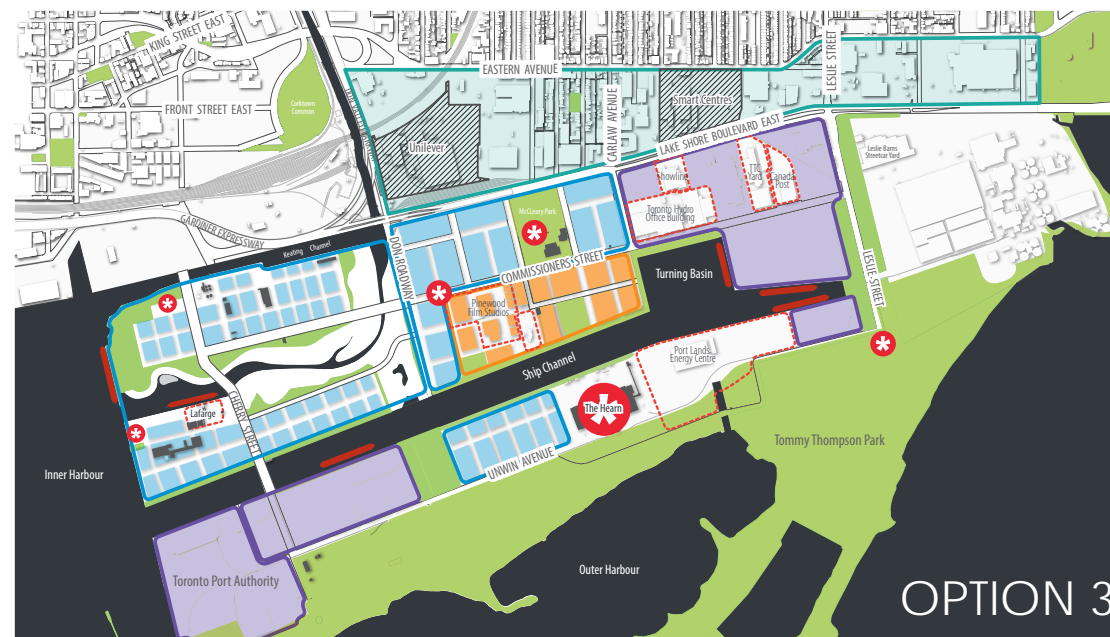
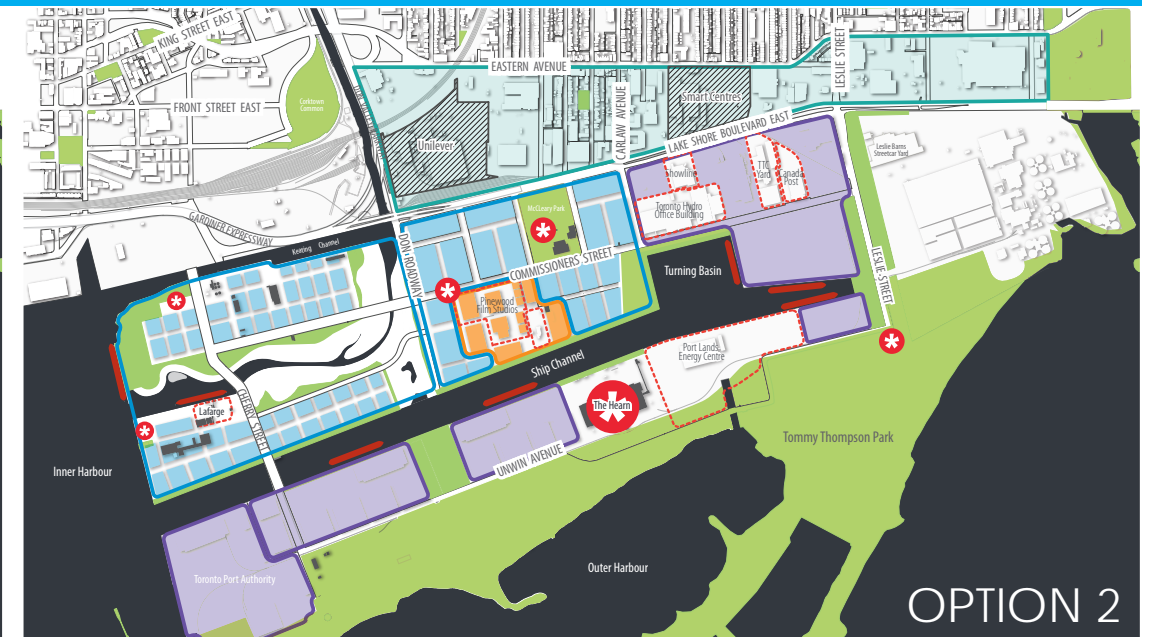
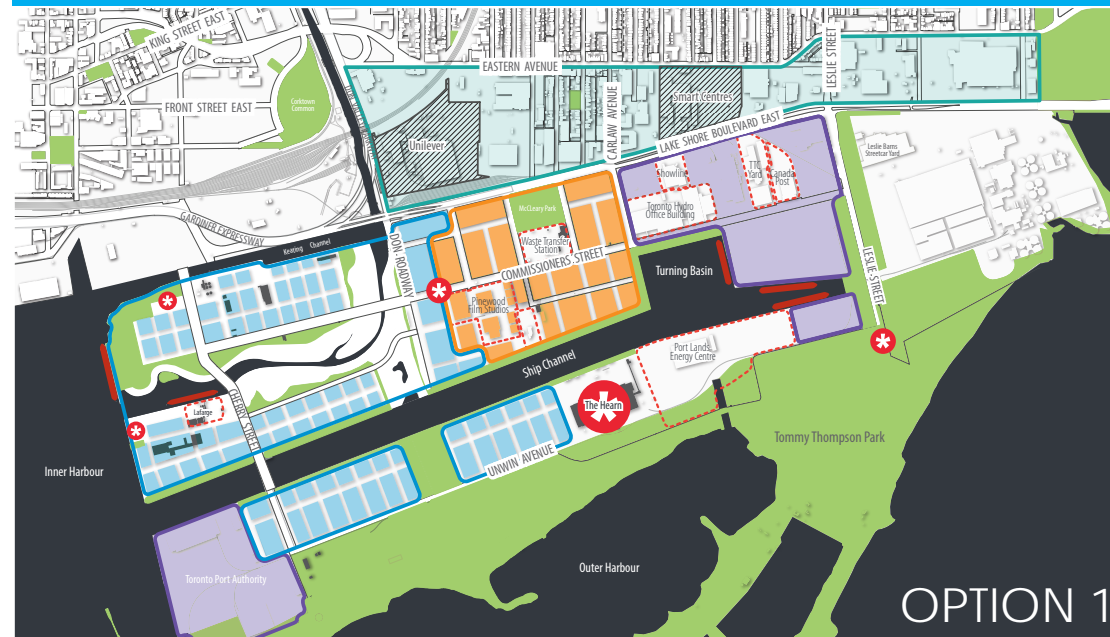
Creative Industry District

- Anchored by Pinewood Film Studios
- Film studio expansion opportunities
- Other uses such as offices, workshops, post-production, new media and knowledge-based industries
- Retail and active uses on main streets

Port / Employment District

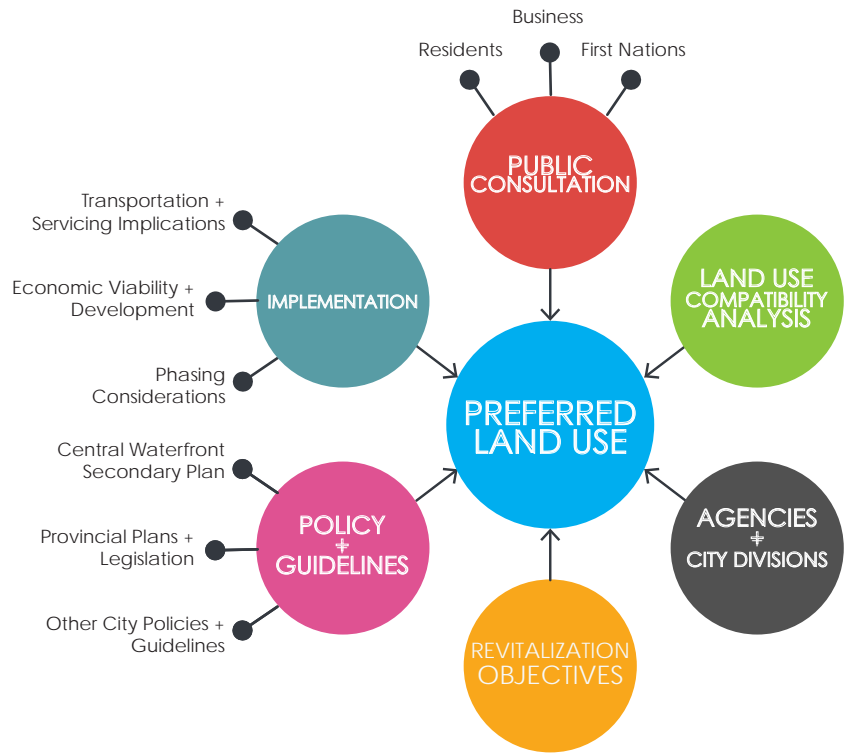
- Active, working port uses
- Related and supportive industries
- Other industrial and employment activities
- Existing uses to remain in the long-term
- Greening of port activities

LAND USE OPTIONS



EVALUATION OF LAND USE OPTIONS

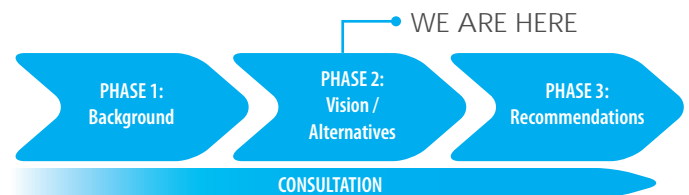
The City and Waterfront Toronto will complete a comprehensive evaluation of the different land use options to identify a preferred land use scenario. The options will be evaluated based on feedback we receive from continued consultation with the various stakeholders and with relevant Agencies and City Divisions. We will evaluate the options based on their achievement of the six revitalization objectives and against other policies and guidelines such as the Central Waterfront Secondary Plan. We are also going to undertake a land use compatibility analysis to ensure that the places where people will live in the future are appropriately separated from industrial and port uses that will remain in the long-term. Finally, we will evaluate the land use options based on their ability to be implemented. A key objective of the Port Lands Acceleration Initiative is to accelerate revitalization in the Port Lands. As such, the options will be evaluated thinking about transportation and servicing infrastructure needs, economic viability and development and phasing considerations.



NEXT STEPS FOR THE PLANNING FRAMEWORK

Once a preferred land use option is identified, the City and Waterfront Toronto will complete additional analysis to provide further direction for how the Port Lands will develop over the long-term in consultation with the public and stakeholders. This will include, but not be limited to:

- Developing built form principles;
- Developing principles for how development should relate to major public spaces;
- Identifying where tall buildings could be located;
- Establishing direction for the character of the new urban districts;
- Identifying important view corridors;
- Identifying direction for the conservation of heritage resources and opportunities for the commemoration and interpretation of First Nations history;
- Developing a strategy for the provision of the community services and facilities needed for complete communities;
- Developing a parks and open space plan and direction for creating spectacular waterfront parks;
- Developing principles for special sites, such as the catalyst uses and destinations, identified in the land use options; and
- Developing a land use compatibility strategy for sites within proximity to industrial and port uses to remain in the long-term.

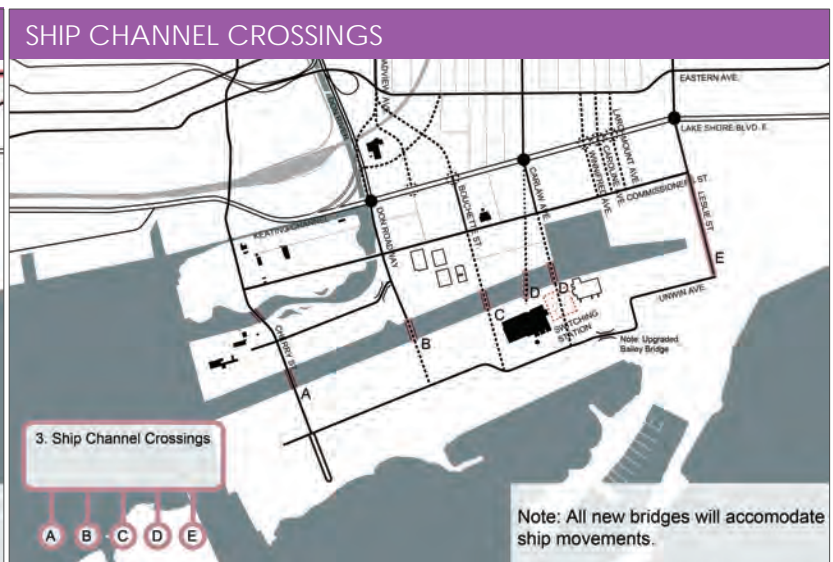
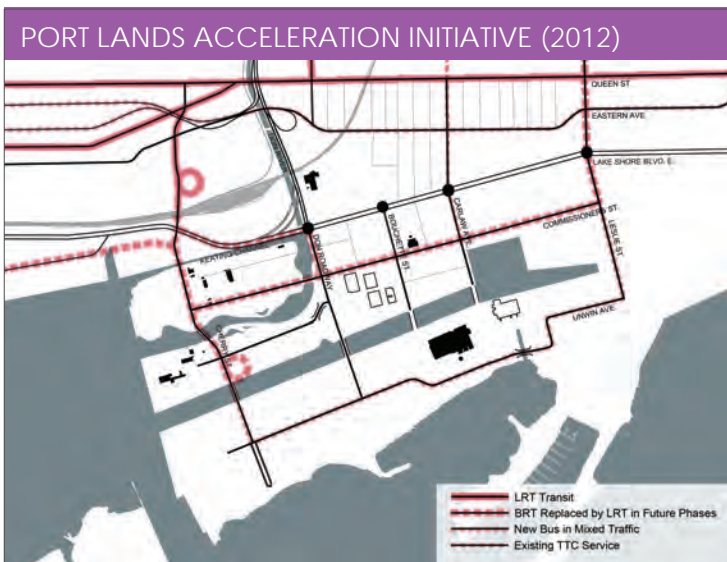
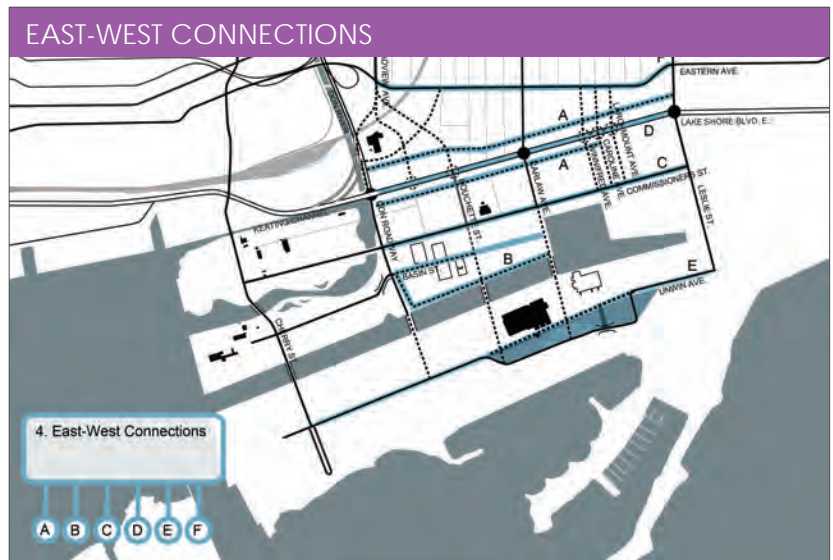
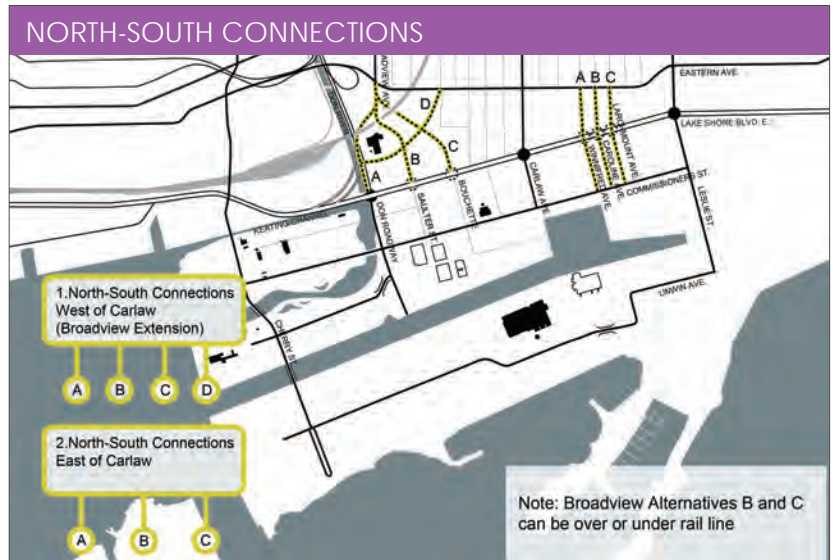


TRANSPORTATION + SERVICING MASTER PLAN

The Master Plan that we are developing under the Municipal Class Environmental Assessment (EA) process will establish the street network (including transit), and the water, wastewater and stormwater infrastructure needed to support revitalization in the Port Lands and continued economic growth in the South of Eastern area. Our main objective is to provide a coordinated transportation and servicing strategy between the Port Lands and South of Eastern area. We are currently in Phase 2 of the Class EA process which is the identification of alternative solutions. The alternatives being explored include "Do Nothing" scenarios. These alternative solutions will be systematically evaluated using the revitalization objectives as the basis for the evaluation.

TRANSPORTATION ALTERNATIVES

Transportation alternatives focused on east-west connectivity, north-south connectivity, connections across the Ship Channel and establishing a transit network within the system of roads. These alternatives would support population and employment levels that have been identified for the different land use options. We are also exploring different levels of employment intensification in the South of Eastern area. All alternatives would be complete streets providing safe and comfortable access for all transportation modes (pedestrians, bicycles, transit and vehicles).



SERVICING ALTERNATIVES

Water

- Existing water supply - Do Nothing
- Alternative 1: Reduce water usage and maintain the existing network
- Alternative 2: Reduce water usage and enlarge/expand the network
- Alternative 3: Alternative 2 + a separate non-potable pipe system

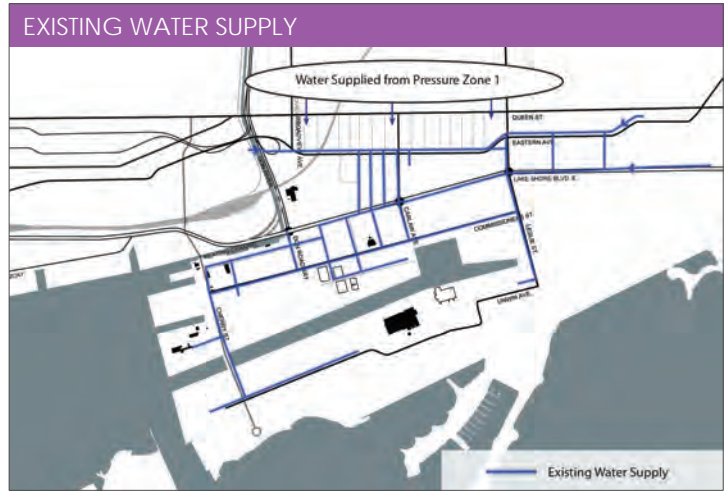
Wastewater

- Existing wastewater collection system - Do Nothing
- Alternative 1: Maintain existing collection system and reduce wastewater flows through reduction and water efficient appliances / low flow toilets
- Alternative 2: Alternative 1 + enlarge and extend the wastewater collection system. Flows conveyed to the Mid-Toronto Interceptor
- Alternative 3: Alternative 2 + flows conveyed to the Low-Level Interceptor
- Alternative 4: Alternative 2 + flows conveyed to a new pumping station and directed to the Ashbridges Bay Treatment Plant

Stormwater

- Existing and planned drainage system for the Lower Don Lands - Do Nothing
- Alternative 1A: Conventional conveyance and treatment process. Treatment occurs at the Ashbridges Bay Treatment Plant
- Alternative 1B: Conventional conveyance and treatment process. Treatment occurs at the treatment plant planned in the Lower Don Lands
- Alternative 2: Integrated Community Stormwater Management, with stormwater management forming part of the landscape of the Port Lands

All transportation and servicing alternatives will be posted on www.portlandsconsultation.ca following the public meeting



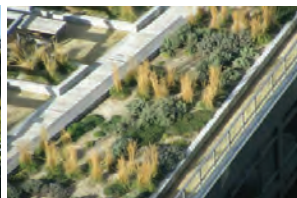
Wetland



Wetland



Green Roofs



Enhanced Bioswales



Enhanced Bioswales



Examples of Integrated Community Stormwater Management Approaches

DISCUSSION QUESTIONS

PORT LANDS PLANNING FRAMEWORK + TRANSPORTATION & SERVICING MASTER PLAN

February 13, 2014 Community Consultation Meeting

Completed Discussion Questions can be returned at the public meeting, or alternatively completed by **February 28, 2014** and mailed to:

City Planning Division
Attn: Thomas Rees, Planner
City Hall
100 Queen Street West
18th Floor, East Tower
Toronto, Ontario
M5H 2N2

An **online version** of the Discussion Questions can also be completed up to **February 28, 2014** at:

<http://www.portlandsconsultation.ca/>

DISCUSSION QUESTIONS

1. Long-term revitalization will unfold over 50+ years and will take its cue from the new, naturalized Don River mouth. What other features should inform revitalization in the rest of the Port Lands?

2. Thinking about the four land use options for the future of the Port Lands...

- a) Which land use option best captures your vision for the long-term revitalization of the Port Lands? Why?

- b) What improvements would you suggest we make to your preferred land use option? Why should these improvements be considered?

3. The transportation alternatives developed are about effectively moving people in, out and within the Port Lands and South of Eastern area. The alternatives include north-south / east-west connectivity alternatives, alternatives for crossing the Ship Channel and for establishing a transit network. Thinking about these different transportation alternatives...

a) Which alternatives do you prefer? Why?

b) Are there alternatives that we should not be considering? Why?

4. Water, wastewater and stormwater management alternatives have been identified. Thinking about the servicing alternatives, which water, wastewater and stormwater alternatives do you prefer? Why?

Other comments

CONTACT INFORMATION

- I consent to the disclosure of this comment sheet containing my name, address and comments to the respective Ward Councillor(s) for the purpose of communicating with me about these planning matters.

- Please ensure that my name is on the City Clerk's Office mailing list for the initiatives I've identified below as being of interest to me.

The formal notice of any public meeting held by the City under the Planning Act will be sent to: property owners within 120m (400 feet) of the property; anyone submitting a written request to the City Clerk's Office to be notified; and anyone entering their name on a Sign-in or Comments sheet provided at the Community Consultation Meeting.

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DISCUSSION GUIDE
SHAPING THE FUTURE:
Placemaking in the Port Lands + Connecting South of Eastern

**OPEN HOUSE +
INFORMATION SESSIONS**

November 14, 2015
9:00 AM - 4:00 PM
George Brown College -
Waterfront Campus
51 Dockside Drive

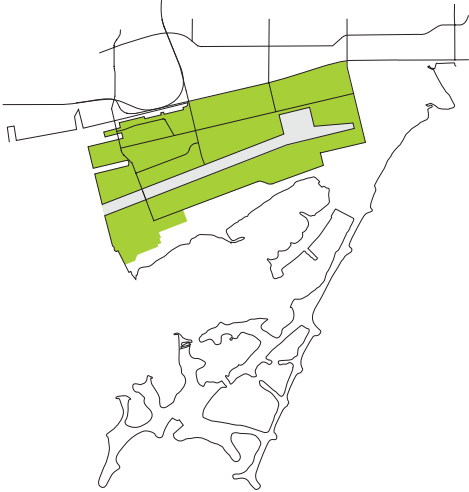
**WORKSHOP:
PLACEMAKING
IN THE PORT LANDS**

November 17, 2015
6:30 PM - 9:00 PM
Morse Street Junior Public School
180 Carlaw Avenue

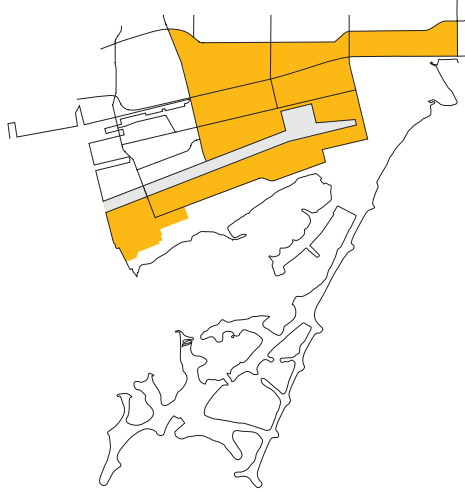
**WORKSHOP:
CONNECTING THE PORT LANDS +
SOUTH OF EASTERN AREAS**

November 18, 2015
6:30 PM - 9:00 PM
Toronto Fire Academy + EMS Training Centre
895 Eastern Avenue

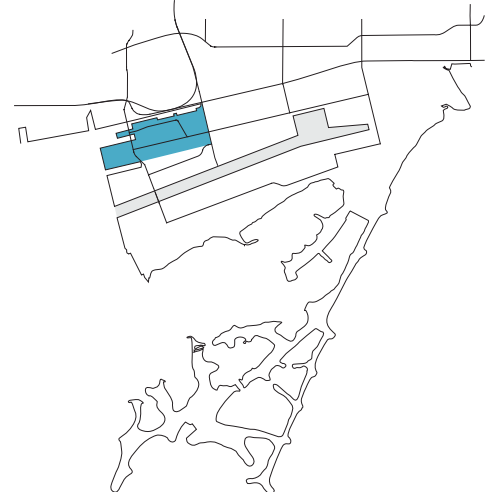
Port Lands Planning Framework



Port Lands + South of Eastern EA



Villiers Island Precinct Plan



What's in this Discussion Guide?

1. Overview of what we're consulting on – page 1
2. Open House + Information Session agenda – page 2
3. November 17 and 18 workshop agendas – page 3
4. Discussion questions (workshop and online at www.portlandsconsultation.ca) – pages 4 to 7
5. Other feedback and contact information (page 8)

www.portlandsconsultation.ca

Placemaking in the Port Lands + Connecting South of Eastern DISCUSSION GUIDE

Help Us Shape the Future

The City of Toronto and Waterfront Toronto, with the Toronto and Region Conservation Authority, have been working on a number of plans in the Port Lands and the South of Eastern area. Previous public consultations have been very valuable and have helped shape our emerging plans. This final round of public consultation on these initiatives is about getting your feedback to help refine the final plans.

The overall vision for the Port Lands will be presented, including land use, urban structure (streets and public realm), high-level built form considerations, biodiversity, sustainability, public art and affordable housing principles. These elements will form the basis for amending the Central Waterfront Secondary Plan which establishes the legal framework to guide growth and change in the area. The final Villiers Island Precinct Plan, which is a more detailed plan for this area of the Port Lands, will also be presented. A detailed streets and block plan and built form direction has been developed, as well as direction for creating a complete, vibrant mixed-use area in the Villiers Island Precinct.

We will also present the preferred solutions for the Port Lands and South of Eastern Transportation and Servicing Master Plan, a Municipal Class Environmental Assessment. The solutions include an overall street and transit network for the area and future municipal servicing (water, wastewater and stormwater management) to support regeneration, renewal and employment growth in the Port Lands and South of Eastern areas.

Given the amount of information and its complexity, the final round of consultation will be a two-step process. The overall vision and key aspects of the emerging plans will be presented at an open house and information sessions on November 14, 2015, followed by two evening workshops to receive public feedback on November 17 and 18, 2015.

Participate Online + through Social Media

If you are unable to attend the meetings in person, you can also participate online. For those who cannot attend, or for those wishing to take a second look, all of the open house presentations will be recorded and posted online. Visit www.portlandsconsultation.ca for more details.

Follow us on Twitter:



@waterfrontTO
#PortLandsTO

Placemaking in the Port Lands + Connecting South of Eastern

DISCUSSION GUIDE

Open House + Information Sessions

The Open House provides two important opportunities to participate, offering identical morning and afternoon sessions. The Overview presentation will provide an update on the work completed to date and outline the format of the four information sessions (detailed below). Each of the information sessions will run four times in the morning and four times in the afternoon. Stay for all four sessions or attend the ones of most interest to you. Each session will also be recorded and posted online following the meeting. The Open House will run all day with staff available to answer your questions.

Information Sessions

01 Vision + Urban Structure

Ground Floor - Room 004



Urban Structure



Placemaking



Land Use



Mobility + Access



People + Jobs



Water as a Resource

02 Character + Place

Ground Floor - Room 005



Land Use



Placemaking



Biodiversity



Sustainability



Energy



Parks + Open Spaces

03 Transportation + Servicing

Second Floor - Room 215



Urban Structure



Mobility + Access



Goods Movement



Water as a Resource



Municipal Servicing



Biodiversity

04 Villiers Island Precinct Plan

Ground Floor - Room 006



Mobility + Access



Housing



Placemaking



People + Jobs



Parks + Open Spaces



Sustainability

Agenda

Morning Session

Welcome and Overview Presentation: 9:00 am
Room 237

Information Sessions:
9:30 / 10:10 / 10:50 / 11:30

Lunch Break – 12:10-1:00 pm

Afternoon Session

Welcome and Overview Presentation: 1:00 pm
Room 237

Information Sessions:
1:30 / 2:10 / 2:50 / 3:30

Placemaking in the Port Lands + Connecting South of Eastern

DISCUSSION GUIDE

Evening Workshops

Workshop #1 - November 17, 2015

Placemaking in the Port Lands
Morse Street Junior Public School
180 Carlaw Avenue
6:30-9:00 pm



The focus of this workshop is on the overall vision and plans for the Port Lands. There will be a short overview presentation followed by presentations on the key topic areas with facilitated roundtable discussions.

Agenda

- 6:30 pm Welcome and Introductions
- 6:35 pm Overview Presentation
- 6:50 pm Port Lands Vision and Urban Structure
 - Presentation (15 min)
 - Roundtable Discussion (25 min)
- 7:30 pm Character and Place
 - Presentation (15 min)
 - Roundtable Discussion (25 min)
- 8:10 pm Villiers Island Precinct Plan
 - Presentation (15 min)
 - Roundtable Discussion (25 min)
- 8:50 pm Feedback + Closing Remarks

Workshop #2 - November 18, 2015

Connecting the Port Lands + South of Eastern Areas
Toronto Fire Academy + EMS Training Centre
895 Eastern Avenue
6:30-9:00 pm



The focus for this workshop is on the Port Lands and South of Eastern Transportation and Servicing Master Plan Environmental Assessment and the preferred solutions. There will be a short overview presentation followed by breakout sessions on three topics. Participants can choose which sessions they will attend.

Agenda

- 6:30 pm Welcome and Introductions
- 6:35 pm Overview Presentation
- 7:00 pm Breakout Sessions
 - South of Eastern Transportation
 - Port Lands Street and Transit Network
 - Water, Wastewater and Stormwater Management
- 8:00 pm Breakout Sessions
 - South of Eastern Transportation
 - Port Lands Street and Transit Network
 - Water, Wastewater and Stormwater Management
- 8:50 pm Feedback + Closing Remarks

DISCUSSION QUESTIONS

01 Vision + Urban Structure

1. What do you like about the directions for the overall vision and urban structure?
2. What, if anything, concerns you? Why?
3. What refinements, if any, would you like to see explored?

DISCUSSION QUESTIONS

02 Character + Place

1. What do you like about the different character and place elements of the plans?
2. What, if anything, concerns you? Why?
3. What refinements, if any, would you like to see explored?

DISCUSSION QUESTIONS

03 Transportation + Servicing

1. What do you like about the preferred solutions for streets, transit and municipal servicing?
2. What, if anything, concerns you? Why?
3. What refinements, if any, would you like to see explored?

DISCUSSION QUESTIONS

04

Villiers Island Precinct Plan

1. What are the strengths of the Precinct Plan?
2. What, if anything, concerns you? Why?
3. What refinements, if any, would you like to see explored?

OTHER FEEDBACK



Submit your Completed Discussion Guide

Please submit your completed Discussion Guide at the November 14, 2015 Open House, or at the November 17 or 18, 2015 workshops. Alternatively, you can submit your completed Discussion Guide to either contact listed below, or complete the online Discussion Guide (www.portlandsconsultation.ca) by Friday, November 27, 2015.

Contact Information

Cassidy Ritz, Project Manager
City Planning Division
100 Queen Street West
18th Floor, East Tower
Toronto, Ontario
M5H 2N2
T: 416-397-4487
E: portlands@toronto.ca

Amanda Santo, Director
Waterfront Toronto
20 Bay Street, Suite 1310
Toronto, Ontario
M5J 2N8
T: 416-214-1344 ext. 292
E: info@waterfronttoronto.ca

**APPENDIX G –
COMMUNITY CONSULTATION MEETINGS AND WORKSHOPS
SUMMARY REPORTS**

Port Lands and South of Eastern



Prepared by Lura Consulting for:
The City of Toronto and
Waterfront Toronto

December 2013



Port Lands and South of Eastern
Community Consultation Meeting #1 Report

This report was prepared by Lura Consulting, the independent facilitator and consultation specialist for the Port Lands Planning Framework and Port Lands and South of Eastern Municipal Class Environmental Assessment (EA). If you have any questions or comments regarding this report, please contact:

Liz Nield

505 Consumers Road, Suite 1005
Toronto, Ontario M2J 4Z2
416-536-6174
lnield@lura.ca

OR

info@waterfrontoronto.ca
www.portlandsconsultation.ca



Port Lands and South of Eastern
Community Consultation Meeting #1 Report

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 Purpose of Consultation and Engagement Activities..... 2
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Round One Consultation Process Overview 3
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 Consultation Activities 5
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 Open House Feedback 7
 Presentation Questions of Clarification..... 9
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 Additional Feedback Received via Email..... 15
Next Steps 15

Appendices
Appendix A: Public Meeting Notice
Appendix B: Workbook

INTRODUCTION

Background

Building on the achievements of the Port Lands Acceleration Initiative, Waterfront Toronto, the City of Toronto and the Toronto and Region Conservation Authority (TRCA) continue to work together to revitalize the Port Lands. The focus of current efforts is to create an overall planning framework to guide revitalization for the next several decades. Studies now underway include: the Port Lands Planning Framework, precinct planning for Cousins Quay and the Film Studio District, the Port Lands and South of Eastern Transportation and Servicing Master Plan. While not part of the *Central Waterfront*, the City of Toronto City Planning Division is also undertaking a planning study – the South of Eastern Strategic Direction in the South of Eastern area, directly to the north of the Port Lands.

The Port Lands are an unparalleled redevelopment opportunity for the City. Located east of Toronto's downtown area between the Inner Harbour and Leslie Street and south of Lake Shore Boulevard, the Port Lands are approximately 356 hectares (880 acres) in area and were created through filling in of the Ashbridges Bay in the early 20th century as a new district to serve the City's growing industrial sector. Waterfront Toronto and the City of Toronto are jointly developing a high-level plan to establish a coordinated and comprehensive framework to guide investment and future revitalization of the Port Lands. An overview of each initiative is included below:

Port lands Planning Framework

Waterfront Toronto, the City of Toronto and TRCA are developing a planning framework for the Port Lands that builds on the momentum from the Port Lands Acceleration Initiative adopted by City Council in 2012. The planning framework will guide revitalization efforts in the Port Lands and will provide the foundations for affirming and refining the vision for the Port Lands in the Central Waterfront Secondary Plan.



Precinct Planning

Precinct planning is being undertaken by Waterfront Toronto and the City of Toronto for Cousins Quay and the Film Studio District. Precinct Plans outline development principles and guidelines at a more detailed level and illustrate how lands can be developed to meet the policies of the Central Waterfront Secondary Plan. Precinct planning forms the bridge that allows planning to move from Secondary Plan policies to Zoning By-law provisions.



Port Lands and South of Eastern Community Consultation Meeting #1 Report

South of Eastern Strategic Direction

The City of Toronto is undertaking a planning study - the South of Eastern Strategic Direction – for the South of Eastern area. The South of Eastern area is an employment district bounded by the Don River in the west, Eastern Avenue to the north, Coxwell Avenue to the east and Lake Shore Boulevard to the south. The Strategic Direction will focus on economic development, urban design and transportation.



Port Lands and South of Eastern Transportation and Servicing Master Plan EA

The City of Toronto is undertaking a Transportation and Servicing Master Plan (TSMP) for a portion of the Port Lands and the South of Eastern area in accordance with the requirements of the Municipal Class EA. The TSMP will identify the necessary infrastructure (streets, transit, watermains and sewers) to support revitalization in the Port Lands and continued economic growth in the South of Eastern area.



Purpose of Consultation and Engagement Activities

The City of Toronto, Waterfront Toronto and TRCA recognize the importance of engaging stakeholders and the public to provide opportunities for feedback throughout the planning process.

The objectives of the consultation process are to:

- Build on the robust consultation approach undertaken as part of the Port Lands Acceleration Initiative;
- Raise awareness of the continued planning efforts underway in the Port Lands, mobilize interest, and encourage broad participation;
- Meet the public consultation requirements of all regulatory regimes within which the City of Toronto, Waterfront Toronto and TRCA operates, including those of the *Planning Act* and Municipal Class EA;
- Present information in a manner that fosters an understanding of the emerging plans and provide opportunities for meaningful dialogue that embraces different perspectives; and
- Identify and work towards a common ground, ultimately building trust and support for the recommendations that will be contained in the final plans.

The Port Lands and South of Eastern Planning Studies, including Precinct Planning for Cousins Quay and the Film Studio District, will include a robust public consultation program to ensure multiple

Port Lands and South of Eastern Community Consultation Meeting #1 Report

opportunities for participation as part of an inclusive and transparent consultation process. The first public consultation process was held between November 21 and December 12, 2013, and engaged over 100 individuals and 24 stakeholder groups.

Engagement during this round of consultations was facilitated through several complementary approaches including: a stakeholder advisory committee meeting, a land owners and users advisory committee meeting, a community consultation meeting, web-enabled consultations, and social media. A review of the input received reveals common themes, concerns and viewpoints brought forward by the project's stakeholders and members of the public, and will be used to inform and shape the next phase of the planning process and related consultation activities.

Report Contents

This report provides a description of the consultation and engagement activities undertaken as part of the first phase of the Port Lands and South of Eastern Planning Studies, as well as a summary of the feedback received from the consultation activities. Section 2 provides an overview of the consultation process, the various consultation approaches used to reach and engage different audiences, and the communication and promotional tactics used to encourage participation.

An overview of the feedback received is organized into key themes in Section 3, and includes a compilation of the comments and suggestions that emerged from the consultation process. Next steps in the Planning Study process are outlined in Section 4.

ROUND ONE CONSULTATION PROCESS OVERVIEW

To fulfill the objectives of the consultation strategy, a multi-faceted approach targeting key stakeholders and the general public through complementary communication, promotional and engagement tactics was adopted. A range of consultation activities was utilized to provide multiple opportunities for public participation as part of an inclusive and transparent consultation process.

Communication and Promotional Tactics

Community Mail-Out

Approximately 5000 meeting notices were mailed-out through Canada Post during the week of November 11-15, 2013. The distribution area included all properties in the study area plus the surrounding area bound by Queen Street East to the north, the Don River to the west, and Coxwell Avenue to the east.

Project Website

The project website (www.portlandsconsultation.ca) serves as a landing spot for all information related to planning efforts for revitalizing the Port. The website includes a comprehensive overview of the study, relevant documents and resources, information about consultation events and opportunities to provide feedback. The project website also includes links to City of Toronto and Waterfront Toronto

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webpages containing additional background information about the planning studies and history of planning efforts in the Port Lands.

Social Media

Waterfront Toronto and City of Toronto Twitter accounts - @WaterfrontTO, @TorontoCivicEng, and @CityPlanTO were used as promotional tactics to increase awareness about the Community Consultation Meeting and to encourage broad participation. The project hashtag #portlandsconsult was also used on all tweets to promote and track discussion.

Public Notice/Invitation

A formal public notice was published in the Toronto Sun and Beach-Riverdale Mirror on November 18, 2013 and November 21, 2013 respectively to promote stakeholder and public awareness of the community consultation meeting. A copy of the public meeting notice is included in *Appendix A*. The public notice was also included in the November 2013 edition of Waterfront Toronto's newsletter, which was emailed to subscribers and available [online](#). Members of the Landowners and Users Advisory Committee (LUAC) and the Stakeholder Advisory Committee (SAC) were sent a copy of the public notice via email.

Consultation Resources

A number of resources were developed to facilitate participation for the first consultation process. These resources were made available at the first Community Consultation Meeting and subsequently posted on the project website. An overview of each resource is provided below.

Participant Workbook

A Participant Workbook was developed to summarize the five initiatives underway. The Workbook contained a summary of the planning initiatives, draft objectives to guide the development of the Port Lands Planning Framework and Precinct Plans, and problems and opportunities related to transportation and servicing in the Port Lands and South of Eastern areas. The Workbook also included key discussion questions, enabling participants to provide feedback on each study. An interactive version of the Workbook was posted on the project website between November 29 and December 12, 2013, allowing the public to provide comments and feedback to the project team following the public meeting.

Overview Presentation

A presentation was delivered at the public meeting to provide an overview of the planning initiatives underway in the Port Lands including: the Port Lands Planning Framework and Precinct Plans, South of Eastern Strategic Direction, and the Port Lands and South of Eastern Transportation and Servicing Master Plan EA. A PDF version of the presentation is available on the project [website](#).

Open House Display Boards

Approximately 40 boards were displayed at the Community Consultation Meeting to provide attendees with an overview of the project and to provide more detail about the individual planning initiatives.

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Space was also provided for attendees to provide their feedback directly on the panels, charts and maps. A PDF version of the boards was made available on the project [website](#).



Photos of Open House Display Boards and Maps

Consultation Activities

The following consultation activities were implemented to ensure broad participation from key stakeholders and members of the public.

Stakeholder Advisory Committee (SAC) Meeting

A SAC meeting with key interest groups and community associations was held on November 21, 2013 at City Hall. The purpose of the meeting was to orient stakeholders with the different studies, and receive feedback on the presentation in preparation for the first Community Consultation Meeting. The format of the meeting consisted of a presentation, a question and answer period, and an open discussion about the material presented.

Land Owners and Users Advisory Committee (LUAC) Meeting

A meeting with land owners and users was held on November 21, 2013 at Waterfront Toronto. The purpose of the meeting was to orient stakeholders with the different studies, and receive feedback on the overview presentation in preparation for the first Community Consultation Meeting. The format of the meeting consisted of a presentation, a question and answer period, and an open discussion about the material presented.

Community Consultation Meeting (CCM)

A Community Consultation Meeting was held on November 28, 2013 at Riverdale Collegiate. Approximately 100 people attended the meeting. The purpose of the meeting was to introduce and provide background information on the five initiatives underway in the area and seek feedback on:

- Likes and dislikes about existing conditions in the Port Lands and South of Eastern areas;
- People's vision for areas/sites within the Port Lands;
- The draft objectives developed to inform and guide the development of the Port Lands Planning Framework and Precinct Planning;

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- Important considerations for the South of Eastern Strategic Direction; and
- Problems and opportunities in the Port Lands and South of Eastern areas specifically related to transportation (streets and transit) and servicing (water, sanitary sewers and stormwater management).

The format of the meeting consisted of an open house followed by a presentation and question and answer period (see *Appendix B*). During the open house, participants had the opportunity to view display boards, featuring key aspects of each planning initiative, and provide input. Members of the project team were available to answer questions during the open house.



Photos of Community Consultation Meeting on November 28, 2013

Online Engagement

Parallel to the face-to-face consultation activities, online options were also available to facilitate broad participation. An overview of the tools used to encourage online participation is provided below:

- Online Participant Workbook - The project website included an online version of the Participant Workbook allowing stakeholders to review the information and discussion questions and provide feedback on their own time.
- Social Media - Twitter was used to provide real time updates of the proceedings at the Community Consultation Meeting. The project hashtag #portlandsconsult was used on all tweets to promote discussion.
- Email – Stakeholders were also invited to submit feedback through email, either through info@waterfrontoronto.ca or portlands@toronto.ca.

SUMMARY OF PARTICIPANT FEEDBACK

The purpose of this round of consultation was to introduce and seek feedback on the Port Lands and South of Eastern Planning studies currently underway.

Open House Feedback

Interactive stations set up near the display boards during the open house session were designed to collect feedback from participants using coloured dots, post-it notes and flip chart paper. The feedback is summarized below:

Dotmocracy and Post-it Notes

Land Use, Observations and Experiences	
Like	Dislike
<ul style="list-style-type: none"> Cherry Beach/North Shore Park (x4) Cherry Beach Soccer Fields (x2) Hearn Generating Station (x3) Leslie Street Spit (x4) View to downtown (x1) Heritage buildings and silos on Cherry Street (x2) Potential for bars/restaurants along Keating Channel (x1) Explore whether Marine Terminal building can be re-purposed for park use (x1). Consider designating the area south of the ship channel as park land (x1) Infrastructure to support job creation in information technology (x1) Clean tech cluster (x1) 	<ul style="list-style-type: none"> Go-Karts at Polson Pier (x1) Do not develop North Shore Park (x1) Do not introduce beaches within the Leslie Street Spit (x1) Limited roadway connections into the Port Lands (x1) Clean contaminated industrial lands (x2) Limited transit to support business and commercial activities (x1) Scrap yard near Leslie Street and Eastern Avenue (x1) Congestion at Carlaw Avenue and Lake Shore Boulevard – permit u-turn (x1)



Photos of the aerials where participants provided feedback about Land Use using coloured dots and post-it notes.

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Transportation and Servicing, Opportunities and Challenges	
Opportunities	Challenges
<ul style="list-style-type: none"> • Build a new school next to the Cherry Beach soccer fields (x1) • Redevelop the Hearn as a multi-purpose venue space (x1) • Recognize and include First Nation history in the redesign (x1) • Extend Carlaw Avenue as a flyover bridge for cyclists and pedestrians (e.g. Spit Bridge) (x1) • Extend Broadview Avenue to Lake Shore Boulevard (x1) • Create gateway connections to the lake (x1) • Re-route Lake Shore Boulevard at Coxwell Avenue (x1) • Build on existing recreation uses and trails (x2) • Separate storm/sanitary sewers (for Eastern Avenue) (x1) • Potential for new LRT route on Commissioners Street (x1) • Toronto Waterfront Golf Academy (x3) 	<ul style="list-style-type: none"> • Limited north-south bike crossing over the shipping channel (x1) • Improving existing connections into the Port Lands to make them more inviting (x1) • Existing shipping activities (x1) • Toronto Waterfront Golf Academy (x2)



Photos of the aerials where participants provided feedback about Transportation and Servicing using coloured dots and post-it notes.

Flip Chart, Ideas for the Hearn?

- Improve connectivity through public transportation and bridges.
- Re-purpose it as event space, a recreational facility, or a cultural facility (e.g., Canadian Music Hall of Fame, Tate Modern, and Hamburg Concert Hall).
- Recognize and protect the Hearn as a film location.
- Leverage existing assets (e.g. First Nation history, archaeology, current anthropology).

Presentation Questions of Clarification

Following the presentation, the following questions of clarification were asked:

Q1: With respect to the Gardiner East project, one of the options is to remove the elevated expressway which would impact the northern area of this plan. What integration discussion is there going to be? At what point would you connect those two plans?

A1: Many of the same staff are working on both projects. The recommendation for the Gardiner East has not been finalized. All of the options being looked at for the Gardiner East are being looked at with an eye towards making sure they are compatible with the Don Mouth Naturalization EA, and Port Lands Acceleration Initiative. We will ensure they are coordinated, especially looking at traffic volumes. The next round for Gardiner East consultations is scheduled for late January/early February. There is a major attempt to coalesce the plans.

Q2: With all the new proposed community neighbourhoods, what are the implications for an expanded Billy Bishop Airport?

A2: The implications of the expanded airport are set out in a report that is available on the City's [website](#). There are a lot of unanswered questions with respect to that proposal. Generally, the work we are doing on the Port Lands has to take into account a wide range of considerations. It is one of many factors that will be taken into account as we develop the framework and the precinct planning. There is an airport zoning regulation that has a limitation on height, it extends out from the airport but by the time it reaches the Port Lands it is quite high. It has not been thought of as a significant issue to date, but we are mindful of it.

Q3: I am curious about the sustainability implications of building. What is the timeframe you are looking at? What are the sustainability goals and issues you will be addressing so the City builds something that is truly sustainable, meeting goals within the timeframe?

A3: Sustainability will be addressed in the precinct plans, including building envelopes, direct sunlight in the public realm, renewable energy sources and stormwater treatment systems. Sustainability specialists are on the various consulting teams retained to assist with the planning work. Our goal is to bring in as much creativity as we can to sustainability initiatives as each precinct is planned. As of January 2010, all site plan applications that the city processes must meet the City's Green Development Standard. The City had 600 applications in total adhering to the Standard, resulting in significant greenhouse gas emission reductions. The City is very engaged with sustainability both on the policy side, new planning, and the regulatory side.

Q4: Your presentation shows an emphasis on streetscapes within the study area. I am worried about the streets surrounding the precincts. No thought been given to main thoroughfares. We don't want the same thing that happened in Mimico to happen here.

A4: We are going to be developing streetscape options for Commissioners St. and Cherry St. Connectivity to surrounding neighbourhood and land uses is a key priority of the planning studies.

Q5: I represent the Mississaugas of the New Credit First Nation. There were traditional sites in the area, how will they be addressed and looked at? As a First Nations person, we don't see ourselves in any of these plans. It has all been covered up. All of our existence has been erased. On the waterfront, we hope that it will be considered important and recognized.

A5: Phase I archeological assessments will be done as part of these processes. We would like to engage you on the issues you just raised and talk about how you can contribute on those processes.

Q6: Is there an overall timeline for this? Is it a 20 year plan? A 10 year plan? You talk about flexibility, how will they fit together eventually if they are developed so many years apart?

A6: We foresee building out over a 20-30 year period. We can make this clearer. It is a long projection. Flood protection is key to start unlocking the potential.

Q7: I am concerned that the South of Eastern employment area is going to act as a barrier to transportation through that area to the lake. Our experience on Leslie Street has been bad that way, with big box stores taking over space for cycling infrastructure. I am concerned about the north-south connections.

A7: Permeability is a key issue. Both the transportation work and the urban design work will look at that issue. The City is addressing this with current applications to improve connectivity early on. That will be a key ingredient in connecting neighbourhoods in the north.

Q8: I am homeowner in the residential area south of Eastern Avenue. What are the implications for our neighbourhood from all the development around us?

A8: Generally, the policy calls for the retention of residential pockets. It's a community; we must have regard for that when we deal with the questions that come up regarding South of Eastern. How we locate new buildings, how we deal with traffic and parking issues. Those are the types of issues that the City is mindful of and we will be happy to connect with you.

C1: I sat on the SAC, and attended the meeting last week to preview the presentation. You did a fabulous job of boiling down the information; it came across very well tonight.

Q10: There is a lot of potential in this area. There is potential to intertwine and interweave the economic plans with your urban design. It is important you do not alienate various parts of the communities. Do you see your urban design plan having a community engagement component?

A10: When we think of the new public spaces, we need to think not only of the people who would work in the area but also the broader community. We will look at integration, from a design and programming point of view.

Participant Workbooks

Participants who attended the community consultation meeting provided feedback by completing and submitting the Participant Workbook, while online participants submitted comments electronically using a fillable version of the Workbook on the project website. A combined total of 18 hardcopy and online feedback forms were completed between November 28, 2013 and December 12, 2013. Feedback,

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organized by the discussion questions in the Workbook, is summarized below and provides a high-level synopsis of recurring comments, concerns and/or recommendations from consultation participants.

Key Issues & Opportunities to be addressed in the Port Lands Planning Framework

- Create sustainable transportation linkages to connect the Port Lands to the City (e.g., complete streets).
 - Focus on non-car centric design.
 - Introduce measures to address speeding on Eastern Ave.
 - Ensure cyclists have an uninterrupted lane into the downtown corridor.
- Create a destination area, but ensure connectivity between downtown, harbourfront and surrounding neighbourhoods.
- Bring industry and jobs (revenue) to the Greater Toronto Area (GTA).
- Plan for mixed use neighbourhoods.
- Include local opportunities for food production/growth in land uses.
- Create design guidelines for density, height and urban form (e.g., Beach Design Guidelines).
 - All structures in the Port Lands should be low/mid-rise and must not impede the view or access to the water ways.
 - Underground wiring (i.e., no lines to be seen on poles).
 - Infrastructure must incorporate the latest sustainability measures (i.e., community-wide vacuum garbage separation and collection) and provide capacity to incorporate innovations over time.
- Maximize green space and plant lots of trees.
- Maintain direct access to the waterfront and waterways.
- Enhance recreational opportunities.
- Ensure statutory clout to withstand challenges from land owners and developers.
- Balance future development to address the needs of existing industrial uses with new uses (e.g., residential, commercial, etc.).
- Simplify governing/administration of entire Port Lands under one authority.
- Ensure affordable housing in the area, particularly for low and middle income families with children.
- Address environmental and ecological issues (e.g. re-naturalizing the area where necessary, promoting green building).

Land Uses/Character to be achieved in the Port Lands

Port Lands Study Area

- Prioritize a large employment base including commercial, entertainment, restaurant, theatre, film, and sports venue uses.
- Encourage pedestrian presence day and night.
- Consider compact 4-6 storey residential buildings with narrow streets, winding alleys, and ground floor retail (e.g., Barceloneta neighbourhood in Barcelona).
- Include artists and farmers' markets.

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- Promote small businesses to create a sense of culture (e.g., a modern distillery district without the premium cost).
- Promote opportunities to create a clean technology cluster/eco-district (e.g., alternative energy).
- Enhance north-south connections particularly for cyclists, pedestrians, and public transit.
- Build on existing recreational uses and make it easier to access them (e.g., cycling, birding, fishing, hiking, boating and kite boarding).
- Recognize and include First Nations histories in the designs.
- All areas need sufficient, not token, green space.
- Consider the creation of outdoor event spaces.
- Increase opportunities for urban farming, garden plots and other recreational uses.
- Ensure mixed use commercial/residential developments with new parks and amenities (e.g., educational institutions, libraries, community centres, cultural institutions, hotels, etc.).
- Ensure each new neighbourhood has a distinctive feel by encouraging a variety of architectural styles and materials.
- Retain designated and listed heritage structures as well as artifacts from previous buildings and incorporate them into the new communities.
- Reconsider the earlier decision to demolish Marine Terminal 35. If retained it will serve as a reminder of the area's shipping heritage and could be repurposed as a park.
- Perhaps regional sports and cultural amenities could be provided in the Hearn, but there is no particular value in developing major sports, recreation and cultural facilities geared to the wider region on new sites in the Port Lands.
- Do not consider a casino.

Lower Don Lands

- Re-naturalize this area with parks and open space that "direct" people toward the harbour and Toronto islands.
- Include mixed use residential/commercial developments if they can be designed to withstand flooding.
- Include park lands along the existing dock to expand park area around a re-naturalized Don River.
- Celebrate connections to the Don River and encourage people to use the river for recreation (e.g., canoe/kayak rentals).
- The initial plan to keep ESSROC is wrong. It's not heritage; it's ugly and should be torn down.

Film Studio District

- Consider space for small craft studios, creative culture-based jobs and a new media cluster.
- Maintain the commercial and residential characteristics of this area in the Port Lands.
- Consider space for an open-air event space (e.g., roman-style area for summer theatre, concerts, demonstrations, etc.).
- Design the area to accommodate the largest film studio in North America. Surround with art, design, and information technology schools and colleges and ancillary businesses.

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- This entire area should be designated for employment uses similar to the Corus building (e.g., mixed media in low rise buildings).

Cousins Quay

- This area should emphasize water uses with facilities for small boat launches and rentals, and encourage water-related small businesses (e.g., boat rentals, building and repair).
- Sample plans are a good start, but LaFarge should be relocated.

East Port

- Consider featuring a large landmark building.
- Focus on employment and light industrial uses.
- Consider a clean technology cluster/incubator modelled after MARS.
- Consider a mixed use residential/commercial area with complete streets that connect neighbourhoods to the Lake. Use community gardens as an existing parameter for design.

South of Ship Channel

- Consider a beach/nautical themed architecture design palate.
- Include space for recreation and urban agriculture.
- This area should be returned to as much of a natural state as possible.
- Old abandoned structures (e.g., the Hearn) should be demolished.
- Consider a mix of residential (e.g., Bonn, Germany) and commercial uses with an accent on connectivity and public access to the Waterfront.
- Add a separated cycling trail through Tommy Thompson Park to avoid trail user conflicts and to protect sensitive habitat.

Feedback on Draft Development Objectives for the Port Lands Planning Framework

- Regarding public transit, consider moving away from streetcars; maintenance is ongoing, expensive and disruptive.
- Allow a portion of land to be used for agriculture while awaiting future development (e.g., allotment gardens).
- Concern about the whole area being under the flight path of planes, particularly jets if they are permitted, taking off and landing at the Billy Bishop Toronto City Airport.
- Stress a mandatory cap on building heights.
- Emphasize the recreational and health benefits of re-naturalizing the Don River and creating new green spaces.
- Sustainability is key; consider district energy, renewable energy demonstration models and green building standards.
- Create opportunities for affordable housing.

Feedback on South of Eastern Area Improvements

- Enhance local and regional connectivity to the area (e.g., north/south connections, Gardiner and Don Valley Parkway ramps, etc.).

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- Attract businesses that permit the area to be locally self-sustainable from a residential perspective (e.g., grocery stores, restaurants, entertainment, art, services).
- Create vibrant and animated streets with retail, and move beyond factories and warehouses.
- Widen Carlaw Ave. on west side from Lake Shore Blvd. to Queen St.
- Add a bike trail in the unused rail spur.
- Consider reclaiming soil and acreage for urban farming. If the Hearn plant is not contaminated, it could be redeveloped as a multi-purpose event space.
- Maintain existing light industry/employment uses.

Business and Economic Activity to be promoted in South of Eastern Area

- Promote office employment in the ICT sector (i.e. information and communications technologies) and creative industries, in addition to FIRE (finance, insurance, real estate) sector.
- Promote educational institutions to incubate talent that will work in the district (e.g., college for trades/professions to support the film industry).
- Include amenities to serve the needs of users/residents (e.g., shops, retail, restaurants, recreation).
- Promote art, entertainment, culture, and food (i.e. like in the Beaches).
- Promote employment uses that do not rely on car transportation.
- Promote the development of a clean tech cluster/incubator.
- Break up the barrier provided by Lake Shore Blvd. by creating more intersections with north-south streets to provide places for cyclists and pedestrians to cross.

Transportation and Servicing

- Improve connections to the area and provide a major gateway to invite people to the Port Lands (e.g., Carlaw Ave. as a gateway to connect the north to the lake).
- Extend Eastern Ave. /Broadview Ave. intersection down to the lake.
- Consider the effects of development on surrounding residential pockets (i.e. Logan Ave., Morse St., and Carlaw Ave.).
- Improve the already impressive bike trail around the Port Lands.
- Build a pedestrian/cyclist crossing across Ship Channel.
- Queen St. transit is at capacity. How does loading/off-loading on Queens Quay impact effectiveness of a Commissioners St. LRT?
- Separate storm/sanitary sewers in South of Eastern area.
- Ensure the light rail tracks between Leslie Barns and Queen Street do not become a psychological barrier for pedestrians or cyclists traveling between the Port Lands and Woodbine Beach.
- Roads and driveways that intersect with the multi-use path north of Lake Shore Blvd should have traffic lights to ensure pedestrian and cyclist safety.
- Consider canal transportation and extend the water channel north and south of the shipping channel.
- New employment uses should not contribute to an influx of cars; give employees alternative ways to get to and from the area.

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- Consider a municipal lottery to raise capital with the funds earmarked for infrastructure and transit building.
- Include walking, biking and exercise trails as part of transportation.

Additional Feedback Received via Email

- All lands south of the Ship Channel should carry a park land designation.
- Vacant lots in the Ship Channel should be opened as temporary parks so the population at large may enjoy the land in the interim, as development in the area may take decades.
- The alignment of Unwin Ave. should be altered to show alignment from the 2010 Planning Study, which illustrates a more northerly route for Unwin Ave. This northerly route shows more parkland for Lake Ontario Park and the Base Lands and further increases the size of the green link from the spit and the Base Lands through to the North Shore through to the Don River.
- Unwin Ave. has never been intended as an arterial road. Strategies must be devised to ensure the bulk of auto traffic and parking remains north of the Ship Channel. A series of pedestrian and cycling bridges which span the Ship Channel at regular intervals would be an asset.
- The parking areas required for the development of the lands should be available in off-hours and weekends for use at little or no expense for those who are coming to experience the park land and sporting facilities south of the Ship Channel.
- Consider an intensive urban farming hub.
- Prioritize affordable housing and home ownership options in the Port Lands. Reconsider the use of conventional regulations applied in the Central Waterfront to promote affordable housing, as they are ineffective without public subsidies and do not provide long-term affordable housing options. The City and Waterfront Toronto should: 1) increase the percentage requirement of affordable housing/rental units; 2) demand the provision of “below-market” housing; 3) develop controls to maintain its permanent affordability; and 4) establish eligibility criteria for owners/renters.

NEXT STEPS

The feedback received during Round One of the Port Lands and South of Eastern Planning Studies will be used to inform and shape the next phase of planning and related consultation activities. The next round of consultation on the Port Lands Planning Framework and Port Lands and South of Eastern Master Plan is expected to occur in February of 2014. It is also anticipated separate consultations will be held for the precinct plans and South of Eastern Strategic Direction in early 2014.

For more information please visit: www.portlandsconsultation.ca.

APPENDIX A: PUBLIC MEETING NOTICE

PORT LANDS AND SOUTH OF EASTERN PLANNING STUDIES

NOTICE OF STUDY COMMENCEMENT AND PUBLIC MEETING

Waterfront Toronto and the City of Toronto are undertaking the following studies in the Port Lands and area south of Eastern Avenue.

Port Lands Planning Framework:

At 356 hectares, the Port Lands are a tremendous redevelopment opportunity for the City. Waterfront Toronto and the City of Toronto are developing a planning framework for the Port Lands that builds on the momentum from the Port Lands Acceleration Initiative adopted by City Council in 2012. The planning framework will guide revitalization efforts in the Port Lands and will provide the foundations for affirming and refining the vision for the Port Lands in the Central Waterfront Secondary Plan.

Precinct Planning in the Port Lands: Cousins Quay Precinct Plan and Film Studio Precinct Plan:

Precinct planning is being undertaken by Waterfront Toronto and the City of Toronto for Cousins Quay and the Film Studio District. Precinct Plans outline development principles and guidelines at a more detailed level and illustrate how lands can be developed to meet the policies of the Central Waterfront Secondary Plan. Precinct planning forms the bridge that allows the City to move from Secondary Plan policies to Zoning By-law provisions.

South of Eastern Strategic Direction:


The City of Toronto is undertaking the South of Eastern Strategic Direction, which applies to an employment area and will build upon the South of Eastern Planning Study completed in 2008 that resulted in proposed amendments to the Official Plan and Zoning Bylaw. The Strategic Direction will focus on economic development, urban design and transportation.

Transportation and Servicing Master Plan – Municipal Class Environmental Assessment (EA)

The City of Toronto is undertaking a Transportation and Servicing Master Plan (TSMP) for sections of the Port Lands and South of Eastern area in accordance with the requirements of the Municipal Class EA. The TSMP will identify the necessary infrastructure (streets, transit, watermains and sewers) to support revitalization in the Port Lands and continued economic growth in the South of Eastern area.

UPCOMING PUBLIC MEETING

Public consultation is a key component of the Port Lands and South of Eastern studies. Consultation on the studies in different public forums will occur. This is the first consultation meeting to introduce these studies. You are invited to learn more about these studies, as well as provide input and feedback:

- Date:** Thursday, November 28, 2013
- Time:** Open House – 6 to 7 p.m.
Presentations and Q & A – 7 to 9 p.m.
- Location:** Riverdale Collegiate – Atrium and Auditorium 
1094 Gerrard Street East
- TTC:** 506 Carlton streetcar (to Jones Ave) or
83 Jones bus (to Gerrard Ave)
- Parking:** On-street – Gerrard Avenue or Jones Avenue

More information about the studies is available at <http://www.portlandsconsultation.ca>.

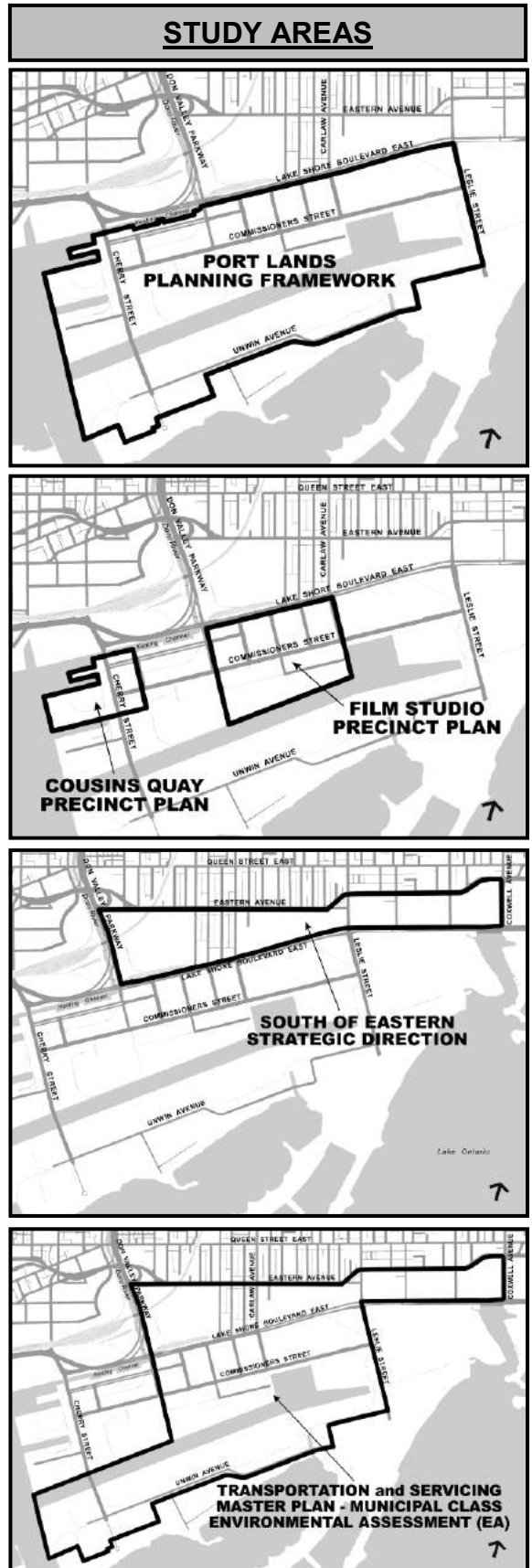
If you wish to receive further information on the studies or be added to a mailing list, please contact:

PORT LANDS:

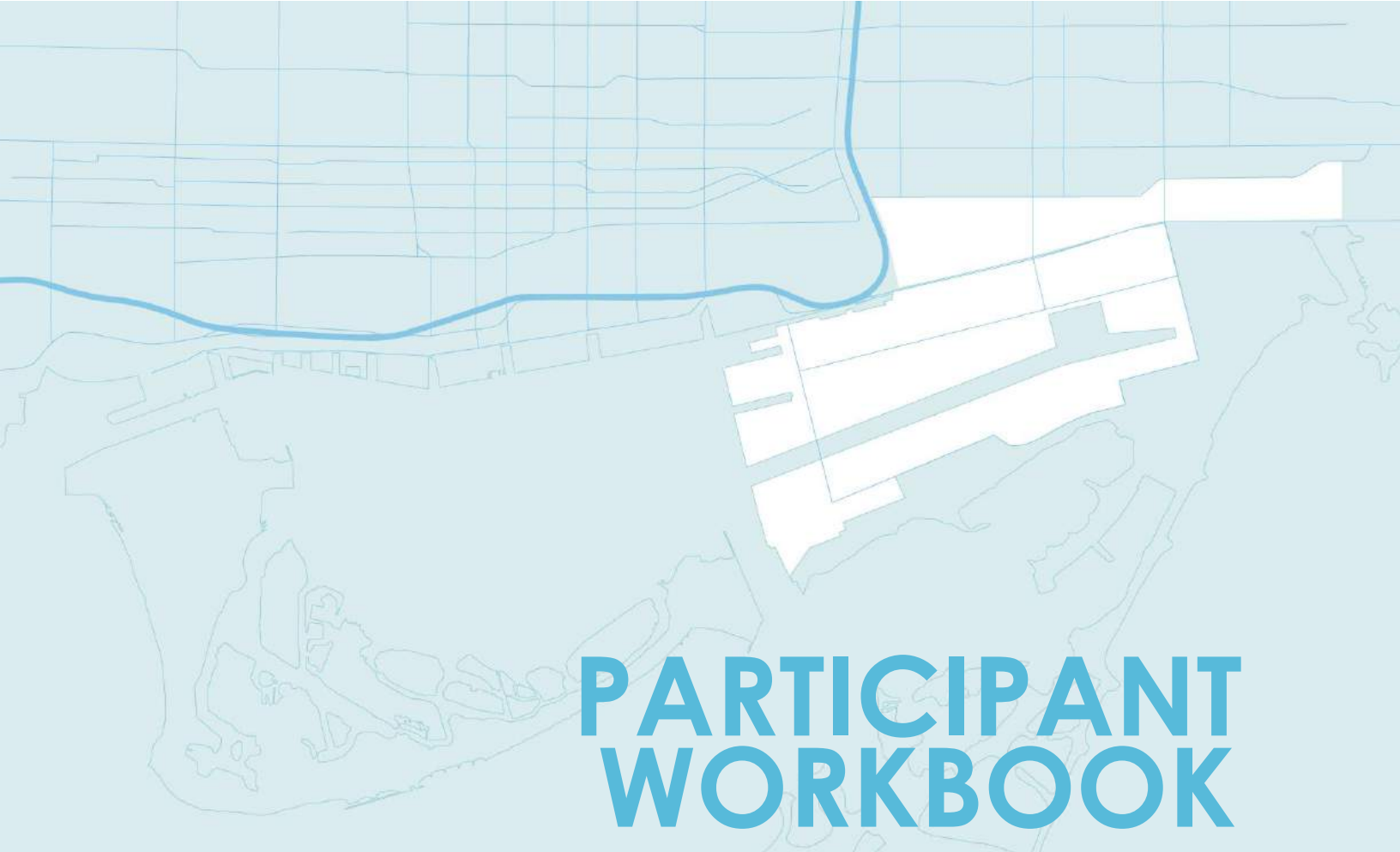
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SOUTH OF EASTERN STRATEGIC DIRECTION:

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APPENDIX B: WORKBOOK



PARTICIPANT WORKBOOK

Port Lands and South of Eastern

November 28, 2013 Public Meeting
Riverdale Collegiate, 1094 Gerrard Street East



Completed Participant Workbooks can be returned at the public meeting, or alternatively completed by **December 12, 2013** and mailed to:

City Planning Division
Attn: Thomas Rees, Planner
City Hall
100 Queen Street West
18th Floor, East Tower
Toronto, Ontario
M5H 2N2

An **online version** of the Participant Workbook can also be completed up to **December 12, 2013** at:

<http://www.portlandsconsultation.ca/>

PORT LANDS AND SOUTH OF EASTERN PUBLIC MEETING

MEETING PURPOSE:

- To introduce and provide background information on the five initiatives underway in the area:
 - Port Lands Planning Framework
 - Cousins Quay Precinct Plan
 - Film Studio Precinct Plan
 - South of Eastern Strategic Direction
 - Port Lands and South of Eastern Transportation and Servicing Master Plan
- To seek your feedback on:
 - Your vision for areas/sites within the Port Lands
 - The draft objectives developed to inform and guide the development of the Port Lands Planning Framework and Precinct Planning
 - Important considerations for the South of Eastern Strategic Direction
 - Problems and opportunities in the Port Lands and South of Eastern areas specifically related to transportation (streets and transit) and servicing (water, sanitary sewers and stormwater management)

AGENDA:

6:00 -7:00	Open House
7:00 -7:10	Welcome and Introductory Remarks <i>David Dilks, LURA Consulting</i> <i>John Livey, Deputy City Manager, City of Toronto</i> <i>John Campbell, President & CEO, Waterfront Toronto</i> <i>Councillor Paula Fletcher and Councillor Mary-Margaret McMahon</i>
7:10 -8:00	Presentation Introducing the Five Initiatives Gregg Lintern, Director, Community Planning, City of Toronto Chris Glaisek, VP, Planning and Design, Waterfront Toronto
8:00 -8:15	Questions of Clarification <i>David Dilks, LURA Consulting</i>
8:15 -9:00	Opportunity to Complete Workbooks at Open House Stations
9:00	Adjourn

OPEN HOUSE DISPLAY BOOTHS

1. OVERVIEW OF PLANNING INITIATIVES

- Learn about the new initiatives, how they fit together, and the overall planning process

2. PORT LANDS PLANNING FRAMEWORK

- Provide feedback on:
 - o How you see the Port Lands developing out over the long-term
 - o Draft objectives

3. PRECINCT PLANNING

- Learn about the two precinct plans – Cousins Key and Film Studio – that are now underway

4. SOUTH OF EASTERN STRATEGIC DIRECTION

- Provide input on important considerations for the study

5. PORT LANDS AND SOUTH OF EASTERN TRANSPORTATION AND SERVICING MASTER PLAN

- Provide feedback on problems and opportunities that should be considered in the plan

OVERVIEW OF INITIATIVES

Port lands Planning Framework

At 356 hectares, the Port Lands are a tremendous redevelopment opportunity for the City. Waterfront Toronto and the City of Toronto are developing a planning framework for the Port Lands that builds on the momentum from the Port Lands Acceleration Initiative adopted by City Council in 2012. The planning framework will guide revitalization efforts in the Port Lands and will provide the foundations for affirming and refining the vision for the Port Lands in the Central Waterfront Secondary Plan.



Precinct Planning

Precinct planning is being undertaken by Waterfront Toronto and the City of Toronto for Cousins Quay and the Film Studio District. Precinct Plans outline development principles and guidelines at a more detailed level and illustrate how lands can be developed to meet the policies of the Central Waterfront Secondary Plan. Precinct planning forms the bridge that allows the City to move from Secondary Plan policies to Zoning By-law provisions.



South of Eastern Strategic Direction

The City of Toronto is undertaking the South of Eastern Strategic Direction will build upon the South of Eastern Planning Study completed in 2008 that resulted in proposed amendments to the Official Plan and Zoning Bylaw. The Strategic Direction will focus on economic development, urban design and transportation.



Port Lands and South of Eastern Transportation and Servicing Master Plan EA

The City of Toronto is undertaking a Transportation and Servicing Master Plan (TSMP) for sections of the Port Lands and South of Eastern area in accordance with the requirements of the Municipal Class EA. The TSMP will identify the necessary infrastructure (streets, transit, watermains and sewers) to support revitalization in the Port Lands and continued economic growth in the South of Eastern area.



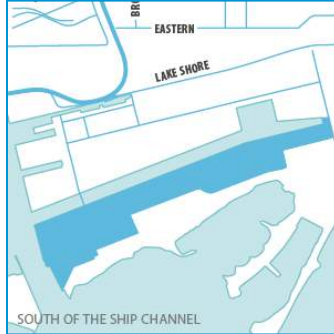
CONTEXT



PORT LANDS QUESTIONS

1. **What do you see as the two or three key issues and/or opportunities that need to be addressed in the Port Lands Planning Framework?**

2. What types of land uses and/or character would you like the different areas in the Port Lands to have?



PORT LANDS DRAFT OBJECTIVES

Six draft objectives to assist in the evaluation of options/alternatives and to inform the vision for the Port Lands have been developed and are provided below.

CREATING AN INTERESTING AND DYNAMIC URBAN MIX

The revitalized Port Lands is a dynamic and vibrant area of the city. A number of new, inclusive, sustainable, urban-scaled, compact, mixed-use communities and employment areas will be created. Each new urban area will have a unique local identity and character. Water permeates and influences all facets of the revitalized Port Lands given its proximity to the waterfront, new river valley and continued port activity. A number of new destinations and special places are developed which promote walking and taking transit, provide opportunities for social interaction and contribute to an interesting urban life.

CONNECTING THE PORT LANDS TO THE CITY

Enhanced physical, social and visual connections are created in the Port Lands, connecting the Port Lands to the city. These connections include new public streets, higher-order transit, new bridges, enhanced pedestrian and cycling connections and the renaturalized Don River. New public street connections provide permeability into, out of and within the Port Lands. The public streets promote synergies between the South of Eastern area and the Port Lands by stitching these two areas together, and better connect the Port with the rest of the city. The Port Lands' unparalleled views, including those of the city's skyline, are protected, framed by development and celebrated. New views to the water's edge, river valley and iconic structures are created.

LEVERAGING THE PORT LANDS ASSETS

The Port Lands are an important remnant of the city's industrial past and portions have since evolved into wonderfully diverse natural areas. There are a number of important and iconic heritage resources that are conserved, repurposed and appropriately leveraged to contribute to placemaking and to celebrate the Port Lands industrial heritage. The new Lake Ontario Park, which includes Tommy Thompson Park, the Base Lands and Leslie Spit, is a key asset that distinguishes the Port Lands as a unique destination for people and provides habitat for wildlife.

DEVELOPING A HIGH-QUALITY PUBLIC REALM

A comprehensive network of public parks and open spaces are developed that capitalizes on the Port Lands' waterfront setting, the new river valley and Lake Ontario Park. High-quality streetscapes, outstanding parks, new natural linkages and design excellence for public facilities are secured to ensure that complete communities created in the Port Lands are great places to live, work and visit.

CONTRIBUTING TO THE SUSTAINABLE FUTURE OF THE CITY

The dynamic mix of uses developed in a walkable, urban form, the creation of new jobs and opportunities and continued port activity are the cornerstones of the Port Lands' and city's sustainable future. Equally important is ensuring that all aspects of redevelopment contribute to a healthy and sustainable environment. Leading-edge and innovative approaches are utilized that showcases the revitalized Port as a leader of sustainable development on the world's stage. Reducing resource consumption, providing low-carbon developments, minimizing dependency on the private automobile and fostering new technologies are just some of the principles that are employed to optimize the sustainability of the revitalized Port Lands.

PROVIDING FLEXIBILITY AND CERTAINTY IN THE PLAN'S IMPLEMENTATION

The Port Lands, at 356 hectares, will incrementally redevelop over an extended period of time. The planning framework for the Port Lands must allow for a high degree of flexibility to accommodate changes over time. Notwithstanding this flexibility, it must also be specific enough to ensure that public and private investments contribute to the long-term vision for the Port Lands and have lasting value.

3. Do the draft objectives reflect how you see the Port Lands developing? Provide us with your ideas and suggestions on how to improve these objectives.

SOUTH OF EASTERN QUESTIONS

4. Are there specific improvements that you would like to see in the South of Eastern area? Are there areas that you think need special attention?

5. What types of businesses and economic activity would you like the City to promote in the South of Eastern area?

PORT LANDS AND SOUTH OF EASTERN TRANSPORTATION AND SERVICING MASTER PLAN

Based on a review of existing conditions and objectives to revitalize the Port Lands and ensure continued economic growth in South of Eastern, problems and opportunities to be addressed in the Environmental Assessment process have been developed.

PROBLEMS

- Existing infrastructure is insufficient or is non-existent
- Major infrastructure like the Gardiner Expressway, Lake Shore Boulevard and rail corridors are impediments for better connections
- Street networks are limited
- The areas lack defined streetscapes and pedestrian amenity
- There is no higher-order transit service and introducing higher order transit on Commissioners Street requires resolving the hydro transmission towers located within the right-of-way east of the Don Roadway
- Existing connections across the Ship Channel are insufficient or are in disrepair
- New streets and servicing requires resolving soil contamination issues. Moreover, the area has a high water table
- The long-term revitalization of the lands necessitates developing strategies to ensure compatibility between existing industrial traffic and revitalized city environments

OPPORTUNITIES

- Located within close proximity to the city's downtown
- Opportunities to improve existing infrastructure comprehensively as the Port Lands and South of Eastern undergo redevelopment, including:
 - Introducing and extending higher order transit routes
 - Improving existing streets and establishing new streets
 - Providing complete streets
 - Capitalizing on the Ship Channel and Turning Basin for water-based transportation opportunities
 - Managing transportation impacts of growth on established, stable residential neighbourhoods
 - Providing innovative, state-of-the-art stormwater facilities
 - Providing the needed capacity for other municipal servicing

6. Do you think these problems and opportunities reflect the issues to be addressed in Port Lands and South of Eastern area from a transportation and servicing perspective? Are there other problems and opportunities that should be considered?

CONTACT INFORMATION

OPTIONAL — Please **PRINT** name, address and email

- I consent to the disclosure of this comment sheet containing my name, address and comments to the respective Ward Councillor(s) for the purpose of communicating with me about these planning matters.
- Please ensure that my name is on the City Clerk's Office mailing list for the initiatives I've identified below as being of interest to me.

Please indicate which of the initiatives are of interest to you?

<input type="checkbox"/> Port Lands Planning Framework	<input type="checkbox"/> Cousins Quay Precinct Plan	<input type="checkbox"/> Film Studio Precinct Plan
<input type="checkbox"/> South of Eastern Strategic Direction	<input type="checkbox"/> Port Lands and South of Eastern Transportation and Servicing Master Plan	

Advisory committees/working groups are being established for the different initiatives. These are smaller groups of interested community members which would provide input on the different initiatives at key stages in the process.

Please advise if you would like to participate on advisory committee/working group for any of the initiatives identified below and provide your contact information above.

<input type="checkbox"/> Port Lands Planning Framework	<input type="checkbox"/> Cousins Quay Precinct Plan	<input type="checkbox"/> Film Studio Precinct Plan
<input type="checkbox"/> South of Eastern Strategic Direction	<input type="checkbox"/> Port Lands and South of Eastern Transportation and Servicing Master Plan	

The formal notice of any public meeting held by the City under the *Planning Act* will be sent to: property owners within 120m (400 feet) of the property; anyone submitting a written request to the City Clerk's Office to be notified; and anyone entering their name on a Sign-in or Comments sheet provided at the Community Consultation Meeting.

The personal information on this form is collected under the authority of the *City of Toronto Act, 2006*, the *Planning Act*, and the City of Toronto Municipal Code. The City collects this information to enable it to make an informed decision on the relevant issue(s). Individuals who submit correspondence should be aware that any personal information in their communication will become part of the public record. The City will make it available to the public, unless the individual expressly requests the City to remove the personal information. Questions about the collection of this information may be directed to the Planner listed above.

Port Lands Planning Framework and Transportation and Servicing Master Plan



Prepared by Lura Consulting for:
The City of Toronto and
Waterfront Toronto

March 2014



Port Lands Planning Framework and Transportation and Servicing Master Plan
Community Consultation Round #2 Report

This report was prepared by Lura Consulting, the independent facilitator and consultation specialist for the Port Lands Planning Framework and Transportation and Servicing Master Plan. If you have any questions or comments regarding this report, please contact:

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Port Lands Planning Framework and Transportation and Servicing Master Plan
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Appendix A: Public Meeting Notice

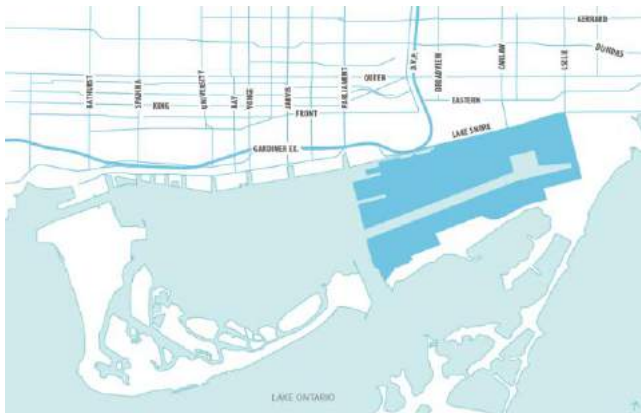
Appendix B: Detailed Participant Feedback

INTRODUCTION

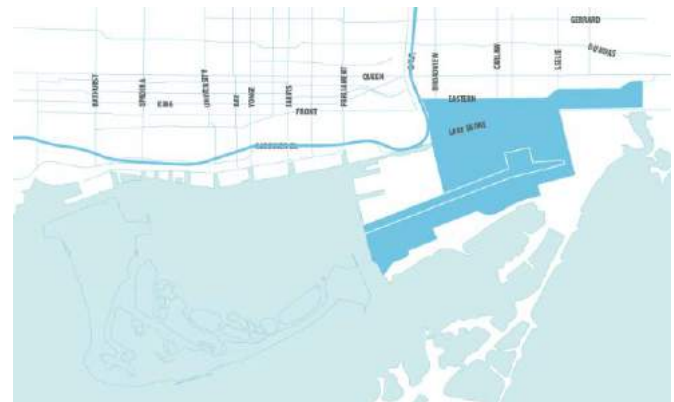
Background

The City of Toronto and Waterfront Toronto are developing a comprehensive long-term plan to guide the revitalization of the Port Lands. The plan will include direction for the transformation of the Port Lands into a number of new urban districts alongside our working port. This plan will build on the direction from the Port Lands Acceleration Initiative that was adopted by City Council in 2012 and will incorporate the planning for the Lower Don Lands and the naturalized valley of the Don River.

A Master Plan under the Municipal Class Environmental Assessment (EA) process is also being developed to establish the street network (including transit), and the water, wastewater and stormwater infrastructure needed to support revitalization. The Master Plan applies to most of the Port Lands and to the area referred to as "South of Eastern" (located north of Lake Shore Boulevard East, south of Eastern Avenue, between the Don River and Coxwell Avenue). The Master Plan will provide a coordinated transportation and servicing strategy between the two areas.



Port Lands Planning Framework Study Area



Transportation and Servicing Master Pan Study Area

The Port Lands Planning Framework will knit together more detailed planning work that has occurred to date for the Port Lands. It will also incorporate outcomes of precinct planning that is underway for Cousins Quay and the Film Studio Precincts. For more information on each of the planning studies underway in the Port Lands, please visit: www.portlandsconsultation.ca.

Port Lands Planning Framework and Transportation and Servicing Master Plan
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The study is being undertaken in three phases:

- Phase 1 is the background phase;
- Phase 2 involves developing a long-term vision for the revitalization of the Port Lands and land use alternatives to test and evaluate; and
- Phase 3 will include the development of recommendations.



Purpose of Consultation and Engagement Activities

The City of Toronto, Waterfront Toronto and TRCA recognize the importance of engaging stakeholders and the public to provide opportunities for feedback throughout the planning process. The objectives of the consultation process are to:

- Build on the robust consultation approach undertaken as part of the Port Lands Acceleration Initiative;
- Raise awareness of the continued planning efforts underway in the Port Lands, mobilize interest, and encourage broad participation;
- Meet the public consultation requirements of all regulatory regimes within which the City of Toronto, Waterfront Toronto and TRCA operates, including those of the *Planning Act* and Municipal Class EA;
- Present information in a manner that fosters an understanding of the emerging plans and provides opportunities for meaningful dialogue that embraces different perspectives; and
- Identify and work towards common ground, ultimately building trust and support for the recommendations that will be contained in the final plans.

The Port Lands Planning Framework and Transportation and Servicing Master Plan projects include a robust public consultation program to ensure multiple opportunities for participation as part of an inclusive and transparent consultation process. The second round of public consultation was held between February 13 and February 28, 2014, and engaged over 130 individuals and 24 stakeholder groups.

Engagement during this round of consultation was facilitated through several complementary approaches including: a Stakeholder Advisory Committee meeting, a Land Owners and Users Advisory Committee meeting, a community consultation meeting, web-enabled consultations, and social media. A review of the input received reveals common themes, concerns and viewpoints brought forward by

Port Lands Planning Framework and Transportation and Servicing Master Plan
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the project's stakeholders and members of the public, and will be used to inform and shape the next phase of the planning process and related consultation activities.

Report Contents

This report provides a description of the consultation activities undertaken as part of the second phase of the Port Lands Planning Framework and Transportation and Servicing Master Plan projects, as well as a summary of the feedback received from the consultation activities. Section 2 provides an overview of the consultation process, the various consultation approaches used to reach and engage different audiences, and the communication and promotional tactics used to encourage participation.

An overview of the feedback received is organized into key themes in Section 3, and includes a compilation of the comments and suggestions that emerged from the consultation process. Next steps in the planning process are outlined in Section 4.

ROUND TWO CONSULTATION PROCESS OVERVIEW

A range of consultation activities was utilized to provide multiple opportunities for public participation as part of an inclusive and transparent consultation process.

Communication and Promotional Tactics

Community Mail-Out

Approximately 5,666 meeting notices were mailed-out through Canada Post during the week of January 27-31, 2014. The distribution area included all properties in the study area plus the surrounding area bound by Queen Street East to the north, the Don River to the west, and Coxwell Avenue to the east.

Project Website

The project website (www.portlandsconsultation.ca) serves as a landing spot for all information related to efforts to revitalize the Port Lands including the Planning Framework and Transportation and Servicing Master Plan. The site includes a comprehensive overview of the projects, relevant documents and resources, information about consultation events and opportunities to participate online. The project website also includes links to City of Toronto and Waterfront Toronto webpages containing additional background information about the projects.

Social Media

Waterfront Toronto and City of Toronto Twitter accounts - @WaterfrontTO, @TorontoCivicEng, and @CityPlanTO were used as promotional tactics to increase awareness about the Community Consultation Meeting and to encourage broad participation. The project hashtag #portlandsconsult was also used on all tweets to promote and track discussion.

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Public Notice/Invitation

A formal public notice was published in the Beach-Riverdale Mirror and Toronto Sun on January 30, 2014 and January 31, 2014 respectively to promote stakeholder and public awareness of the community consultation meeting. A copy of the public meeting notice is included in *Appendix A*.

Notification was also included in the February 2014 edition of Waterfront Toronto's newsletter, which was emailed to subscribers and available [online](#). Members of the Landowners and Users Advisory Committee (LUAC) and the Stakeholder Advisory Committee (SAC) were sent a copy of the public notice via email.

Consultation Resources

A number of resources were developed to facilitate participation during the second round of consultation. These resources were made available at the second Community Consultation Meeting and subsequently posted on the project website. An overview of each resource is provided below.

Discussion Guide and Discussion Questions

A Discussion Guide was developed to provide participants with information on four land use options as well as alternatives for transportation and municipal servicing. Revitalization objectives and an overview of the planning framework were also included as background material. A copy of the Discussion Guide can be found online [here](#). Accompanying the Discussion Guide was a series of Discussion Questions enabling participants to provide feedback on the land use options and transportation and serving alternatives that were presented. A copy of the Discussion Questions can be found online [here](#).

An interactive version of the workbook was posted on the project website between February 13 and February 28, 2014, enabling the public to provide comments and feedback to the project team following the public meeting.

Presentation

A presentation was delivered at the Community Consultation Meeting that began with an overview of the planning initiatives and recap of the study process. Following the overview, four land use options were presented as well as alternatives for the transportation and servicing master plan. A PDF version of the presentation is available on the project [website](#).

Open House Display Boards

Approximately 18 boards were displayed at the Community Consultation Meeting providing attendees with an overview of the planning process and evaluation criteria as well as the draft land use and transportation and servicing options. A PDF version of the boards is posted on the project [website](#).

Open House Maps

Large maps, post-it-notes and markers were provided on each table at the Community Consultation Meeting to encourage participants to provide comments or suggest modifications directly on the maps.

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The maps featured the proposed Road Network Alternatives, Land Use Options, and Approved Port Lands Infrastructure.



Photos of Maps Provided on Tables at Open House

Consultation Activities

The following consultation activities were implemented.

Land Owners and Users Advisory Committee (LUAC) Meeting

A meeting with land owners and users was held on February 3, 2014 at City Hall. The purpose of the meeting was to present and receive feedback on the draft land use and transportation and servicing options in preparation for the first Community Consultation Meeting. The format of the meeting consisted of a series of presentations, a question and answer period, and an open discussion about the material presented.

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Stakeholder Advisory Committee (SAC) Meeting

A SAC meeting with key interest groups and community associations was held on February 3, 2014 at City Hall. The purpose of the meeting was to present and receive feedback on the draft land use and transportation and servicing options in preparation for the first Community Consultation Meeting. The format of the meeting consisted of a series of presentations, a question and answer period, and an open discussion about the material presented.

Community Consultation Meeting (CCM)

A Community Consultation Meeting was held on February 13, 2014 at The Toronto Fire Academy. Approximately 130 people attended the meeting. The purpose of the meeting was to present and seek feedback on ideas for land use and alternatives for streets and municipal servicing in the Port Lands. The format of the meeting consisted of an open house followed by a presentation and question and answer period, and concluded with roundtable discussions. At the open house, participants had the opportunity to view display boards featuring land use options and transportation and servicing alternatives. Members of the project team were available to answer questions during the open house. The roundtable sessions featured small table discussion groups, which were facilitated by City Planning and Waterfront Toronto staff, and provided participants with the opportunity to provide feedback on the Discussion Questions.

Online Engagement

Parallel to the face-to-face consultation activities, online options were also available to facilitate broad participation. An overview of the tools used to encourage online participation is provided below:

- Online Discussion Guide and Discussion Questions - The project website included an online version of the Discussion Guide and Discussion Questions allowing stakeholders to review the information and provide feedback on their own time.
- Social Media - Twitter was used to provide real time updates of the proceedings at the Community Consultation Meeting. The project hashtag #portlandsconsult was used on all tweets to promote discussion.
- Email – Stakeholders were also invited to submit feedback through email, either through info@waterfrontoronto.ca or portlands@toronto.ca.

SUMMARY OF PARTICIPANT FEEDBACK

Questions of Clarification

Following the presentation at the Community Consultation Meeting, participants asked the following questions of clarification.

Q1: Regarding the bridges on the Ship Channel, in some diagrams all three are shown. I am unsure whether we can assume that all three will be built or if we choose one.

A1: Not all the bridges are necessarily needed. We need one lane in each direction in addition to what's there. We could have many different combinations. Beyond the need for getting people across the channel is the question about character. Having more bridges probably knits the study area together more effectively. But it's a matter of determining how many bridges achieve what we want.

Q2: Are you going to extend sustainability to energy generation and use of waste?

A2: District energy is always a challenge. From a sustainability point of view, technology will help us with this over time. Costs will start to come down. It is something we should look at, at a framework level and most certainly at a precinct level because that's where some of the opportunities will reveal themselves. The City also has Green Development Standards. On a site level, we will take that into account.

Q3: With regards to transportation, a modal split of 20-80 was mentioned. How was that determined?

A3: We looked at what is achievable in the Lower Don Lands and in other plans in the City of Toronto. The 80-20 split is a reasonable starting assumption.

Q4: Regarding the switching station, how far along is that in planning? I presume it is a provincial initiative. If it's not too far along, is there any way to try and shift it so Carlaw Avenue provides a complete view down to the water?

A4: I believe it is quite far along. If you go down to the Port Lands you can see the structures that Hydro One is constructing. We've had discussions with them about whether we could reorient it or make some modifications. It would require constructing an entirely new switching station.

Q5: My question relates to the cultural/creative district. The Film Studio Precinct Plan is being developed at the moment. Are there any market projections that have already been done to indicate the whole block would need to be expanded for creative uses, and therefore would be eliminated from this exercise?

A5: The creative industry district that is shown in Land Use Option 1 was based on some market predictions made as part of the first phase of the Port Lands Acceleration Initiative. As part of the South of Eastern Strategic Direction, we are also doing some additional market work that will help to inform decisions that we make in the Port Lands area with respect to employment uses and creative industries.

Q6: If the Gardiner Expressway comes down east of Jarvis Street, would it alter the concept of the mouth of the Don River?

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A6: The Gardiner East Environmental Assessment has taken into account the plans for the mouth of the Don River. Any options for the Gardiner have to work with the naturalization plans for the Don River.

Q7: You talked about leveraging existing assets. Have they been inventoried and do they include all the recreation that is happening there now? Is there an interim plan coming forward to make those uses easier?

A7: Part of this planning framework includes a community services and facilities layer. We will look at existing assets from a community services and recreation point of view. We will look at what's there as a baseline, and what is needed at a macro-level to support the population and employment considerations we are looking at. It will be further focused when we get to precinct planning. We are also looking at Lake Ontario Park and will be looking at improving the user experience in Tommy Thompson Park. Hopefully we will have a package of quick and affordable improvements that we can bring forward over the next few months.

Q8: Another issue facing the City is the Porter airport expansion. What consideration is being given to the potential impacts of jets flying over the Port Lands area?

A8: It is a factor for development in the Port Lands, and as long as the airport is there it will continue to be a factor. It will influence land use and development like the area around any airport. We are taking it into account as much as we can. We don't have a decision by City Council on an expansion so we are dealing with what we currently know.

Q9: You mentioned a range of 900m up to 2000m for port facilities.

A9: We looked at a range for the dock wall in metres for various land use scenarios related to port uses adjacent to those dock walls. The more port uses adjacent to the dock wall, the longer the length of dock wall space would be needed. Those are the options we are evaluating that we want your feedback on.

Q10: One of the key components of this study is to connect the area back to Toronto. How does the Gardiner Expressway East fit into that? It seems the area will always be cut off with Gardiner Expressway there. How does that impact your plans?

A10: There are ways to connect the neighbourhoods with or without the Gardiner Expressway. The biggest challenge is the area near the Don River east over to Carlaw Avenue where the ramp touches down. Alignments are being considered with the existing ramp as it is. There are definitely opportunities with any option. There is probably a bit more flexibility with the Gardiner East remove option.

Open House Maps

Attendees used the large maps provided on each table as another means to provide feedback on the land use options and transportation alternatives. By marking directly on the maps, participants indicated preferred transportation connections and modifications to land uses. The details of this feedback are incorporated into the summary of participant feedback below.

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Photo of Feedback Provided on Maps

Discussion Summary

Participants who attended the Community Consultation Meeting provided feedback by participating in facilitated roundtable discussions or by completing and submitting the Discussion Questions, while online participants submitted comments electronically using a fillable version of the workbook on the project website. A combined total of 39 hardcopy and online feedback forms were completed between February 13, 2014 and February 28, 2014.

The summary of feedback collected during and after the workshop is provided below and organized according to the following discussion questions:

1. Long-term revitalization will unfold over 50+ years and will take its cue from the new, naturalized Don River mouth. What other features should inform revitalization in the rest of the Port Lands?
2. Thinking about the four land use options for the future of the Port Lands...
 - a. Which land use option best captures your vision for the long-term revitalization of the Port Lands? Why?
 - b. What improvements would you suggest we make to your preferred land use option? Why should these improvements be considered?
3. Transportation alternatives focused on east-west connectivity, north-south connectivity, connections across the Ship Channel and for establishing a transit network to support population and employment level have been identified. Thinking about these different transportation alternatives...
 - a. Which alternatives do you prefer? Why?
 - b. Are there alternatives that we should not be considering? Why?
4. Water, wastewater and stormwater management alternatives have been identified. Thinking about the servicing alternatives, which water, wastewater and stormwater alternatives do you prefer? Why?

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The summary provides a high-level synopsis of recurring comments, concerns and/or recommendations from consultation participants, both during the roundtable discussions and via completed individual discussion question forms. Verbatim feedback is included in *Appendix B*.

Features to Inform Port Lands Revitalization

1. Long-term revitalization will unfold over 50+ years and will take its cue from the new, naturalized Don River mouth. What other features should inform revitalization in the rest of the Port Lands?

The following features were frequently cited in both roundtable reporting forms and individual discussion guides:

- Waterways (Don River, Lake Ontario) and the harbour
- Wildlife, nature, trails and natural open space
- Ship Channel (suggestion for channel to be pedestrian focused)
- The Hearn (suggestion for the Hearn to be a cultural facility or museum/gallery)
- Sports, recreation, beach access
- Active transportation (walking, biking, canoeing, sailing)
- First Nations heritage, sacred lands
- Industrial heritage
- Mixed use development
- Film District and creative industries
- Smart technology and renewable energy (suggestion for Portlands Energy Centre to be a demonstration centre for sustainable energy technology)
- Draw inspiration from other cities' successful port lands revitalizations (e.g. South Bank in London, UK)

Land Use Options

- 2. Thinking about the four land use options for the future of the Port Lands...**
- a. Which land use option best captures your vision for the long-term revitalization of the Port Lands? Why?**
 - b. What improvements would you suggest we make to your preferred land use option? Why should these improvements be considered?**

Feedback obtained through facilitated discussions was consistent with feedback submitted via completed individual discussion question forms. Overall, there were mixed views on whether live-work communities should be placed south of Ship Channel and next to the Hearn. There was general agreement that every option should include more public green space and that industrial uses and associated traffic should be separated from residential areas. Detailed feedback is provided in the table and sections below:

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Option	Like	Dislike	Comments
1	<ul style="list-style-type: none"> • Large creative industry district, connected to South of Eastern employment area. • Live-Work Communities close to water’s edge and facing each other across Ship Channel. • Waste transfer station remains and can contribute to making the area “self-contained”. 	<ul style="list-style-type: none"> • Loss of port/dock wall. • Waste transfer station should be moved. Current location makes the adjacent park unappealing. 	<ul style="list-style-type: none"> • Add more green space to this option. • Live-Work Communities along Ship Channel will better integrate Cherry Beach with the Don Lands. • Option 1 could potentially result in less industrial traffic through residential areas. • Ensure diversity of industries to avoid creating an employment park.
2	<ul style="list-style-type: none"> • Live-Work Communities north of Ship Channel only. They are premature and unnecessary south of the channel. • There is more green space with this option. 	<ul style="list-style-type: none"> • The Hearn is too isolated from Live-Work Communities. 	<ul style="list-style-type: none"> • Provides the best opportunity for complete communities. • Facilitates the Port Lands being its own community. • Enables energy uses to be grouped together south of Ship Channel.
3	<ul style="list-style-type: none"> • Live-Work Community adjacent to the Hearn. 	<ul style="list-style-type: none"> • Live-Work Community south of Ship Channel will be isolated, sandwiched between Port/Employment Districts. 	<ul style="list-style-type: none"> • Bridge for pedestrians or LRT is important for connecting to residential community south of Ship Channel.
4	<ul style="list-style-type: none"> • Live-Work Community is closer to the beach and Cherry Street bridge (also making the beach a more attractive destination). 	<ul style="list-style-type: none"> • Live-Work Community south of Ship Channel will be isolated. 	<ul style="list-style-type: none"> • Option 4 provides a blend of usage. Avoids a “wall of industry”. • Options 3 and 4 provide a good balance of mixed use and creative industry areas. • Add more park space next to turning basin, as in Option 2.

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Participants also provided suggestions in relation to the long-term redevelopment of the Port Lands, regardless of the preferred land use option. Recurring points are organized according to the following key themes:

Residential Development

Many participants commented on the location and form of residential development within the Port Lands:

- There was no consensus on whether residential development should occur south of Ship Channel and it was indicated by some participants that residential communities should only be located south of Ship Channel if adequate transit is in place.
- There was also no consensus on whether waterfront land should be used for residential development or reserved for public access. It was suggested that there is good potential for residential development around the turning basin.
- Participants indicated the importance of separating residential and industrial land uses.
- Preference was also expressed for dense low to mid-rise development rather than high-rise development.

Greenspace and Parks

Many participants, as indicated in both roundtable and individual feedback, felt that priority should be placed on parks and open public space:

- Creating a continuous waterfront promenade was suggested by roundtable participants.
- Some participants, in both roundtable and individual submissions, indicated that south of Ship Channel should be dedicated to parks and recreation only.
- Many participants who submitted individual discussion guides showed preference for land use Option 2 as it includes more green space (specifically near the turning basin).

Existing Port Lands Features

Individual and roundtable participants provided feedback on the location and function of various existing features within the Port Lands:

- There were suggestions provided from roundtable reporting forms and individual discussion guides to move the road salt storage, Waste Transfer Station, and other industrial sites close together to free up space for other uses. However, feedback was provided in individual discussion guides indicating preference for the Waste Transfer Station in its current location as it could provide valuable service to the Port Lands.
- Feedback from individual discussion guides suggested moving the Lafarge site closer to other industrial sites.
- It was indicated during roundtable discussions that consideration for the quality of dock walls and required port functions should inform the land use options.
- Issues of soil contamination in the Port Lands and emissions from the Portlands Energy Centre were also highlighted as factors that must be addressed before adding development to the area.

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- A suggestion was provided to incorporate the current transmission lines over the Ship Channel into one of the proposed bridges (e.g. underneath the roadway).

Need for a Vision and More Market Research

- A few participants who submitted individual discussion guides felt that an overall vision/concept for the Port Lands revitalization is required before deciding on land uses.
- Some roundtable participants indicated that more background market research and analysis is required before deciding on land uses, including discussions with the film industry regarding future needs.

Additional Comments on Land Use

- Limit big box retail in mixed use areas.
- Clarify what is meant by “Creative Industries”. Affordability will also be important in attracting that industry.
- Flood protection is an important consideration.
- Suggestion to maintain only essential port uses and relocate non-essential uses.
- Suggestion to connect the Ship Channel to the outer harbour with canals at the east end.

Transportation Alternatives

- 3. Transportation alternatives focused on east-west connectivity, north-south connectivity, connections across the Ship Channel and for establishing a transit network to support population and employment level have been identified. Thinking about these different transportation alternatives...**
 - a. Which alternatives do you prefer? Why?**
 - b. Are there alternatives that we should not be considering? Why?**

Overall, there were many similarities in the feedback provided during roundtable discussions and in individual discussion guides. Many participants highlighted the importance of planning for transit that serves the long-term needs of the Port Lands and is integrated with existing/planned City transit. Additional feedback on transportation alternatives is provided below:

North-South Connections

- Many participants, as indicated in both roundtable and individual discussion guides, favoured extending Broadview Avenue along the eastern edge of the Unilever site, connecting with Bouchette Street and traversing the Ship Channel (Option C) as this is more centrally located within the Port Lands. A few participants felt that extending Broadview Avenue to the Don Roadway (Option A) would be more suitable to serve the residential communities to the west.
- It was emphasized that improved pedestrian/cyclist access is needed into the Port Lands, specifically across the rail lines and Lake Shore Blvd.
- There was preference by some participants who submitted individual discussion guides to extend Winnifred Avenue (Option A) east of Carlaw Avenue as this is the central access to the

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industrial area between Carlaw Avenue and Leslie Street. Roundtable participants did not express a preference for any option but felt that only one connection is needed.

- There was concern, as indicated in roundtable discussions, that the connections east of Carlaw would not be sufficient to support the anticipated volume of traffic.

East-West Connections

- Feedback from individual discussion guides indicated that an alternate east-west route located south of Lake Shore Blvd. is needed. One participant also expressed preference to extend Basin Street east towards Bouchette Street.
- Some roundtable participants did not feel there was a need for more streets through the South of Eastern area.
- Feedback provided in individual discussion guides showed preference for redirecting Unwin Avenue directly below the Hearn to facilitate access to this future destination and potential residential communities south of Ship Channel.

Channel Crossings

- Overall, there was no consensus on a preferred number or location of channel crossings.
- It was suggested by roundtable participants that a channel crossing as a result of extending Carlaw Avenue or the Don Roadway should be avoided as this will interfere with planned green space.
- Feedback from roundtable and individual discussion guides showed preference for pedestrian/cyclist and LRT bridges.
- It was suggested in individual discussion guides that the number of channel crossings be minimized so as not to interfere with shipping operations.

Transit Network

- Many participants expressed that all development in the Port Lands should be contingent on building Light Rail Transit.
- It was suggested that a transit loop be implemented along Leslie Street, Unwin Avenue, Cherry Street, and the Keating Channel.
- A transit hub located at the Unilever site to connect the Port Lands to other parts of downtown was favoured by many participants.
- It was suggested that higher order transit on Commissioners Street should be developed as a first step.
- Some participants expressed concern with deciding on a transit network while other transit plans are yet to be determined (such as the Downtown Relief Line).

Mixed Transportation Modes

- Feedback was provided indicating a preference for active transportation and pedestrian zones, particularly along the water's edge.

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- It was also suggested that the Port Lands be made a pedestrian right of way zone using raised and textured pedestrian crossings.
- Some roundtable participants suggested the use of ferry transportation, connecting the Port Lands to Toronto Island and other areas along the City's waterfront.
- There was preference to keep trucks and industrial traffic separate from other transportation modes as well as residential areas.
- There was disagreement with the 80-20 modal split as some participants felt that commercial/industrial traffic will be higher.

Street Improvements

- Some participants expressed preference for more streets as opposed to wider streets to promote slower traffic speeds, safer crossings and better visual connections across the street.
- It was suggested by some participants that Carlaw Avenue be widened and street parking removed as it is a major artery connecting surrounding neighbourhoods.

Servicing Alternatives

- 4. Water, wastewater and stormwater management alternatives have been identified. Thinking about the servicing alternatives, which water, wastewater and stormwater alternatives do you prefer? Why?**

As this material is more technical in nature, fewer comments were provided by participants on the servicing alternatives. The feedback below was provided via individual discussion guides as there was minimal feedback provided on servicing alternatives during roundtable discussions.

Water

- Overall, there was no consensus on a water servicing alternative.
- Some participants favoured Alternative 3: Reduce water usage and enlarge/expand the network in addition to a separate non-potable pipe system, while others felt that maintaining the existing network would be sufficient combined with reduced water usage.

Wastewater

- There was a preference to enlarge and extend the wastewater collecting system.
- Some participants were in favour of directing flows to the Ashbridges Bay Treatment Plan (Alternative 4) while others were not as it was expressed that it is over capacity.

Stormwater

- Overall, there was a preference for Alternative 2: Integrated Community Stormwater Management, with stormwater management forming part of the landscape of the Port Lands.
- One concern, however, is that a linear stormwater feature could create stagnant ponds and an environment conducive to mosquito breeding.

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- It was also suggested that permeable surfaces be used wherever possible to reduce the stormwater load.

Other Comments on Port Lands Revitalization

- Many participants expressed concern regarding the proposed expansion of service and runways at Billy Bishop Airport as this would impede a good residential environment in the Port Lands.
- There was also considerable discussion on energy needs and sustainability. Many participants stressed the importance of considering district energy and other self-sustaining energy solutions for the Port Lands.
- Participants suggested that building height should be low near the waterfront and higher further from the water.
- It was suggested that green building standards should be required.
- There was a preference to enhance views from Polson and Cousins Quay.
- It was emphasized that employment opportunities should be preserved.
- It was indicated that there are health implications of living in close proximity to electrical towers. Consultation with the Toronto Board of Health was advised.
- It was suggested that land uses should reflect the diversity/multiculturalism of Toronto.

Additional Feedback Received via Email

Some feedback was received via email following the community meeting:

- Before any re-development occurs in the Port Lands, the City and Province must address any environmental concerns caused by the Portlands Energy Centre, ensuring the health of current and future residents.

NEXT STEPS

The feedback received during the second round of consultations on the Port Lands Planning Framework and Transportation and Servicing Master Plan will be used to inform and shape the next phase of planning and related consultation activities. As a further opportunity for community members to understand and discuss the land use options and transportation and servicing alternatives, a Community Workshop was held on March 5, 2014 at the Ralph Thornton Centre. Feedback from the Workshop will be documented in a separate summary report. The next round of consultation on the Port Lands Planning Framework and Transportation and Servicing Master Plan is expected to occur in Spring 2014. It is also anticipated that separate consultations will also be held as part of developing precinct plans.

For more information please visit: www.portlandsconsultation.ca.

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APPENDIX A: PUBLIC MEETING NOTICE

Help us plan the future of the Port Lands

PORT LANDS PLANNING FRAMEWORK & TRANSPORTATION AND SERVICING MASTER PLAN

PUBLIC MEETING

We invite you to attend this public meeting where different options for land use, transportation and municipal services for the Port Lands will be presented. The purpose of this meeting is to discuss these options and get your feedback. Your participation and ideas are important and will help shape the future of the Port Lands.

Date: Thursday, February 13, 2014

Time: Drop-in – 6:30 to 7:00 p.m.
Presentation, followed by Facilitated Discussion – 7 to 9 p.m.

Location: Fire Academy, 895 Eastern Avenue
(southwest corner of Eastern Avenue and Knox Avenue)



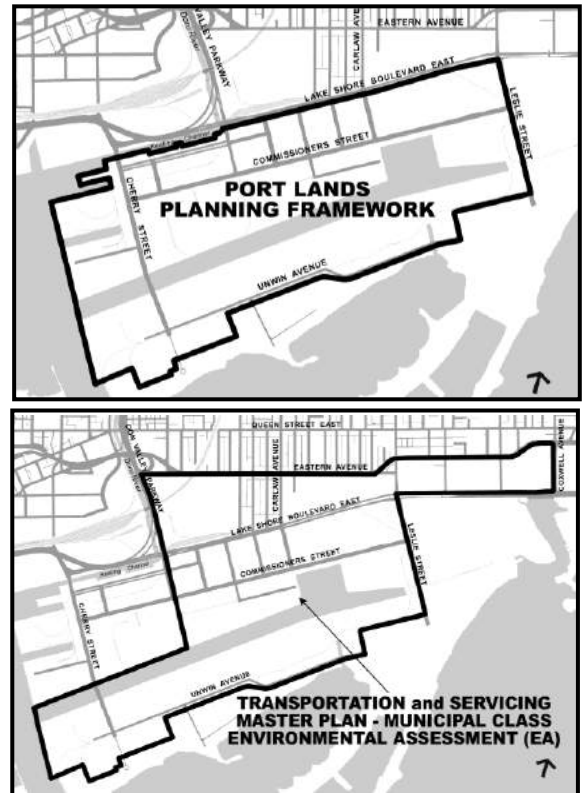
The City of Toronto and Waterfront Toronto are developing a comprehensive long-term plan to guide the revitalization of the Port Lands. The plan will include direction for the transformation of the Port Lands into a number of new districts with a variety of uses including residential, commercial and parkland. This plan will build on the direction from the Port Lands Acceleration Initiative that was adopted by City Council in 2012.

A Master Plan under the Municipal Class Environmental Assessment (EA) process is also being developed to establish the street network (including transit), and the water, wastewater and stormwater infrastructure needed to support revitalization. The Master Plan applies to most of the Port Lands and to the area referred to as "South of Eastern" (located north of Lake Shore Boulevard East, south of Eastern Avenue, between the Don River and Coxwell Avenue). The Master Plan will provide a coordinated transportation and servicing strategy between the two areas.

South of Eastern Strategic Direction:

A separate community consultation meeting for the planning study for the South of Eastern area will be held on February 18, 2014. A meeting notice will be issued shortly.

More information about the studies is available at:
<http://www.portlandsconsultation.ca>.



If you wish to receive further information on the studies or be added to a mailing list, please contact:

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During the planning process for the above studies, the City of Toronto and Waterfront Toronto will be collecting comments and information from the public under the authority of the City of Toronto Act, 2006, s. 136© and the Planning Act, 1990. Personal information collected will be maintained in accordance with the Municipal Freedom of Information and Privacy Protection Act and may be used to provide updates on this file. Questions about the collection of this information can be directed to the City Planning Division, City of Toronto.

APPENDIX B: DETAILED PARTICIPANT FEEDBACK

A. Verbatim Feedback from Facilitated Roundtable Discussions

1. Long-term revitalization will unfold over 50+ years and will take its cue from the new, naturalized Don River mouth. What other features should inform revitalization in the rest of the Port Lands?

Table 1

- First Nations heritage, sacred lands, etc.
- Green space and public realm should have a marker system
- Hearn – opportunity for college that ties into film industry, re-use
- Think of waterways as part of heritage, e.g. Ship Channel
- Airport – flight path goes across the Port Lands, will impede a good residential environment

Table 2

- The Hearn is an important catalyst
- Mixed use is key
- Important to enhance views from Polson and Cousins Quay
- District energy is an important consideration

Table 3

- Film district – creative industries important
- Promote mixed use community focused on film studio (needs to be all the time, not 9-5)
- Ship Channel should not go to waste
- Park land to be prominent
- Film studio needs to have security
- Preserve number of employment opportunities (industrial “job-for-job”)
- Preserve the Hearn

Table 4

- Process being pushed too quickly
- No overall concept to begin with (need big concept)
- Residential potential for turning basin is great
- Want complete streets that connect the man-made and natural attributes
- Recreational uses and other historical uses can be explored and reimagined
- Area can be planned to be more of park, or increasing recreation amenities
- Consideration of appropriate measures to protect the lands from global warming
- Think about live-work communities, cannot allow people to move too far away
- Need reconnect to the lake, park system to surround the lake (Vancouver greenways)
- Land uses should reflect the diversity of Toronto (multiculturalism, socio-economic levels)

Table 5

- Water – recreation/natural features integrated, emphasize connection to water
- Ship Channel, harbor – as Thames-like walkway/promenade
- Wildlife, trails, open space, nature
- Existing parks/attractions
- Keep the area remote/isolated
- Pedestrian/bike bridges
- Community facilities (i.e. schools, hospitals)
- Remove waste treatment facility

Table 6

- Sustainability – throughout entire planning process

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- Land, water, servicing
- Reduce infrastructure load
- Mixed uses to reduce transportation costs
- Emphasize green space (not just development)
- Emphasize transportation – start here and then allocate the land use
- No need to maneuver in area with a car
- Look to other city models

Table 7

- Need to protect the unique view of the lake and views back to city
- Landmark of the Hearn stack
- May need to create key landmarks
- Need to define these views in the Official Plan

Table 8

- River – natural
- Ship Channel – man-made, celebrate the urban artifact
- Maintain dock wall (exception greenway)
- Real estate equity – infrastructure/transit, consider that as #1 priority
- Build the plan around Commissioners St – straight/strong views
- Opportunity – example of sustainability

Table 9

- Ship Channel, Lake Ontario – take advantage, make them beneficial
- Promenade; cruise ships
- Geographic features; business
- Better to move housing towards water and business back
- What business will be attracted to Port Lands? – will inform revitalization
- Cherry Beach and park – will it be a draw for entire city
- Hearn should be a destination – art gallery and many other uses, open air amphitheater

Table 10

- Naturalized areas already there, keep at least some areas wild, add vibrancy
- Ship Channel – pedestrian focused, needs to be the location for the community centre
- Why aren't we talking about water use instead of just land use?
- Connect to the water – safe places for boating
- Keep the industrial heritage, Ship Channel is the industrial heritage

Table 11

- Don Mouth
- Ship Channel – look at infill in Turning Basin or other creative re-use
- Shared amenities, mixed
- The Hearn – cultural facility, City of Toronto museum, destination, restaurant, catalyst use
- Hydro tower – bury wires, remove or beautify towers
- Access to hospital
- Keep the Hearn stack

2. Thinking about the four land use options for the future of the Port Lands...(see Discussion Guide)

a. Which land use option best captures your vision for the long-term revitalization of the Port Lands? Why?

Table 1

- Option 1 – There is a logic to the creative district connected to the South of Eastern employment area

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- There is some question though about whether the area might be larger than is realistic
- Place priority on parks and open space, public activities

Table 2

- Retaining industrial uses are important
- Mixed use south of the channel to help connect use to the mouth of the channel are important
- Option 3 – requires a bridge connection across Ship Channel, consideration of connection is key if there is residential
- Pedestrian bridge and/or LRT important for Option 3
- All options should be shaped by transit, if you can't get transit south of the Ship Channel then don't develop residential there

Table 3

- Option 4 – important, stitches uses together
- Option 3 – bad, sandwiching live-work between port/employment south of Ship Channel
- Option 1 – good, large creative industry district
- Not enough creative industry to support area?
- Need more diversity, can't just be an employment park
- Will there be a market analysis re: creative industry?
- TPA lands should become park – on the other hand there is something interesting about watching port activity

Table 4

- None – south of Ship Channel should be parks/recreational
- Like the idea of the Commissioner as waterway

Table 5

- Limit industry uses on south of Ship Channel, limit traffic across bridges
- Incorporate residential to south – no more industrial/employment
- Residential next to Lake Ontario park – very attractive and unique
- Group residential uses together, keep away from industrial uses
- Expand film/creative industry
- Option 2 is best – residential to north, best opportunity for complete communities
- Option 3 & 4 – emphasis on film district expansion with mix of live-work
- Option 1 – keep residential grouped together, separate from industrial

Table 6

- Note impact of Lakeshore on mixed-use/creative areas
- How do you come about the mixed-use?
 - By retaining certain elements
 - Organic and diverse
- Limit to studios is a concern
- Timeline is unrealistic (50 years)
- Think in terms of uses that are compatible, not just specifically cultural/entertainment
- Port not really viable – make it people oriented
- Options with less area dedicated to port uses, if not necessary, should not be there
- Precious area, don't limit to studios, land is too valuable
- Industrial buildings that don't need to be there should not be there
- Ensure live-work communities are mixed
- Not limit area of creative industry to that sector

Table 7

- Issues – soil sustainability, contamination, lack of connection to the water, debris from the Don River

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- There should be no residential, it is an industrial zone, should remain so (3 people)
- Like putting uses together (1 person)
- Maybe in the future the whole area will become park land
- Complete streets – they need to be wider to accommodate all the uses, how do they deal with winter?

Table 8

- Consider quality of dock walls as base case consideration, this might seriously inform land use options
- South of Ship Channel communities are premature. Stay north of Ship Channel – like Option 2
- Idea: follow the fabric of city north to south

Table 9

- Option 1 & 2 – live-work should be near water, either channel or lake
- Option 2 – facilitates Port Lands being its own community/city, could move transit to outer edges, make the Hearn a destination, move the salt land (would connect green space), do not want near housing
- All land use options should address: what energy needs are needed? Can it be sustainable? Can it go off the grid?
- Transit along Don Roadway would cut community in half
- Housing near waste water plant bad idea, even with a buffer
- Hearn – use will matter, noise would impact housing
- Continuity along south channel of housing
- Creative industry could act as a centre north-south oriented

Table 10

- Insufficient information on which to base a choice
- Like Option 4 – blend of usage, diversity, avoid “wall of industry”
- Residential at Cherry Beach – gateway to the beach
- Industry next to Hearn - not too active/noisy
- Accessibility to green/public spaces – avoid “walling off”
- Option 3 – Residential next to Hearn as a catalyst use

Table 11

- Creative industry – not just film-focused
- Protect small business, mitigate gentrification, don't price out the little guy
- Option 4 – Like less bridges, adjacent live-work north and south of Ship Channel, live close to beach. Dislike isolated live-work south of Ship Channel.
- Option 3 – Like live-work adjacent to Hearn. Dislike isolated live-work south of Ship Channel.
- Option 1 – Like large creative industry in Film Studios. Dislike losing too much port/dockwall.
- Option 2 – Dislike Hearn too isolated from live-work areas.

b. What improvements would you suggest we make to your preferred land use option? Why should these improvements be considered?

Table 2

- Continuous promenade on the waterfront edges is key
- Dense mid-rise rather than towers

Table 4

- Increase recreational use and access to lake
- Still have neighbourhoods
- Create canals north-south to the lake

Table 5

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- Bike lanes/transit focus – less roads
- Save what port use is essential and relocate non-essential

Table 9

- Move salt lands
- How will Port Authority use the site?
- What will be the uses in next 50 years?

Table 10

- Any/all options – marine access
- Canals – is there a way to connect Ship Channel to outer harbor at east end?

3. The transportation alternatives developed are about effectively moving people in, out and within the Port Lands and South of Eastern area. The alternatives include north-south / east-west connectivity alternatives, alternatives for crossing the Ship Channel and for establishing a transit network. Thinking about these different transportation alternatives...(see Discussion Guide)

a. Which alternatives do you prefer? Why?

Table 1

- Doesn't understand need for more east-west streets through South of Eastern
- Doesn't believe that widening Eastern Avenue is feasible; wouldn't
- Concern about north-south connection across the Ship Channel that would detract from green space (i.e. extending Don Roadway)
- Generally concerned about widening streets; prefer more streets to wider streets
- Larchmount/Caroline/Winnifred – only one is needed, doesn't matter which one

Table 2

- Transit should always have priority in ROW
- Reduce parking demand
- Transit hub at Unilever site is a good idea
- Focus on active transportation in addition to transit and connectivity to the north of the Port Lands from the outset as structuring elements to the precinct plans

Table 3

- Disagree with 80-20 modal split, commercial/industrial traffic generate much more
- Don't sell ourselves short on transportation/road capacity

Table 4

- Cannot comment until land use is finalized
- Want Island ferry to the neighbourhood

Table 5

- Expand Broadview along eastern property line of Unilever site, connect to Bouchette or Saulter (more centrally located north-south connection)
- East-west connection dependent on where residential goes
- Improve Unwin Avenue if residential is south of Ship Channel
- None of the east of Carlaw connections could hold heavy traffic
- Minimize road traffic along water's edge, more pedestrian
- Sustainable transportation and reduction of automobile traffic (mix the two intelligently)

Table 6

- Make a loop – down Leslie, down Unwin, down Cherry, down Keating Channel
- Raised LRT loop, connected to city transit (perhaps to Queen St.)
- 80-20 split okay, in the end people need and have cars

Table 9

- Commissioners St. higher order transit should go in first before build out

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- Have cars come in one way and out the other
- BRT as a temporary measure is wrong – should be higher order transit

b. Are there alternatives that we should not be considering? Why?

Table 4

- Do not understand why Eastern Avenue needs to be widened when two lanes of bikes will be lost
- Do not understand why Don and Leslie being considered for more north-south thoroughfares when we want a higher cycle modal share

Table 7

- Lake Shore Blvd. – the traffic will only get worse – streetcars on Leslie and the addition of more intersections
- Need to separate the traffic at Lake Shore and the new connections

4. Water, wastewater and stormwater management alternatives have been identified. Thinking about the servicing alternatives, which water, wastewater and stormwater alternatives do you prefer? Why?

Table 1

- Like integrating green space

Table 2

- What are the options for waste in the Port Lands, how to reduce trucks. Alternatives are important (i.e. vacuum waste removal)

Table 5

- Wastewater feature on Commissioners St – educational, unique, attraction, connect back to water

Other Comments

Table 2

- Green building should be a requirement

Table 3

- Naturalization important for fishing/recreation
- Who is going to pay for infrastructure?
- Ways to have winter recreational uses?
- Balance of uses – don't let one use overpower

Table 7

- Port Lands Energy Centre – how will it serve this area?
- Deep lake water cooling?
- Opportunity for a PATH system here? – How could this help with cycling and walking? Could do a “high line” for walking/cycling/gardens
- Chicago Loop – 3 levels of streets: walking/tourism, service, delivery
- Question: If this is all land fill how can there be First Nations heritage?
- Crazy idea – move the airport to the Port Lands

Table 10

- Align industrial with proposed flight path for jets, if necessary
- Where do the trucks go versus residential?
- Can we keep trucks separate from other modes?
- Sustainable transit

Table 11

- Consider filling discharge channel – improve connectivity
- Principle for tall building locations – low near water, higher further from water

B. Verbatim Feedback from Individual Discussion Guides (Online and Hard Copy)

1. Long-term revitalization will unfold over 50+ years and will take its cue from the new, naturalized Don River mouth. What other features should inform revitalization in the rest of the Port Lands?

Step back and think blue sky, host a charette/competition before we deal with where we have what uses.

Look at the history of this land use and focus on recreation uses, particularly around the Ship Channel and south of it.

Hearn should be centre of recreation uses surrounded by park land and some recreational uses.

Ship Channel

Use of smart technology, renewable energy uses to replace the Hearn G.S. site and compliment the Portlands Energy Centre.

Park land to the south.

Possible energy from waste generation plant using waste from transfer site.

Focus on water ways.

Emphasis on nature over the tendency to plan by adding bridges and more roads.

Flip the industrial and residential so the truck traffic and industry doesn't go through residential areas.

A people-oriented place, sports fields, transportation use

You cannot add development before looking at the serious pollution from the Portlands Energy Centre. It needs to either be removed or have the stacks replaced with better technology. High levels of toxins are already spewed and the health of East enders is compromised.

The naturalized Don River is an important feature to inform the rest of the Port Lands. We should also draw inspiration from other successful international port lands revitalizations such as the South Bank in London, UK and the various port lands that have been redeveloped along the Thames (e.g., Canary Wharf). The South Bank in London redeveloped the power station into the Tate Modern, now one of the most popular tourist destinations in London. This important feature has become an important focal point for the redevelopment of the South Bank. Similarly the use of the Hearn generating station could be re-purposed into a significant focal point for the area with a surround park around the channel. This would require a reduced (but not eliminated) industrial use for the area. The film production studios already in the area also provide an anchor and would mix well with other service oriented industries.

Long-term employment potential, housing affordability.

Active transportation as the primary means of transportation within the study area (acknowledging that transportation out of the area, and into the area by car may be feasible).

Transit and live-work communities

The value of public beaches on the outer harbour shouldn't be understated and there should be focus on creating great beaches.

Good public transportation should also drive the design and as the diagrams show the Broadview Bouchette extension and a DRL alignment which dives south a bit are key.

Significant park space, reduced vehicle traffic and the overall deindustrialization of employment.

This is the last area of the city where we can have a true connection with the lake, our greatest asset.

Whatever we do - we cannot have a wall of condos.

This should complement the decision to tear down the Gardiner extension.

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Needs to link to the DRL and redevelopment of the Unilever space.

The Ship Channel should be key to the revitalization as well as the park space south of it. Enhancing both sides of the Ship Channel including the turning basin could make it a destination area with the beautiful views of the harbour and downtown Toronto.

Increase wildlife habitat, clean waters, add vegetation, allow for fish feeding.

Reduce use of motor boats on lake. Encourage sailboats, canoes etc. as alternative ways to enjoy and explore the lake. Add docks for canoe/kayakers so they can hop on and off at stops along the lake - using it as an alternative green transportation method.

The uniqueness of the Port Lands including: its extensive water's edge, Lake Ontario Park and the unique habitat created by the Spit, extension of the Don Greenway south of the Ship Channel the potential for the Ship Channel to become another defining urban destination, the importance of the recreational water sport clubs adjacent to Cherry Beach, preservation and improvement to Cherry Beach as a recreational resource, the potential to create strong north-south, pedestrian friendly connections into south Riverdale/Leslieville, the potential for striking development addressing views of the city from Polson and Cousins Quay, proximity to East Bayfront, Keating and West Don Lands precincts and, finally, the obstacles and opportunities presented by the Hearn including its relationship to the base lands of the Spit.

Making accessibility important but also human health.

I do not agree with the naturalization of the Don River.

Transit oriented design with an emphasis on quality design (for attractiveness and energy conservation) and quality construction (for longevity and low maintenance).

The water's edge: the river, the lake, the harbour, and the shipping channel.

Increase the tree capacity.

Increase water front and river naturalization ("wild") areas.

Programs to improve water of the river and the lake (like there Sherborne Commons which improves the water).

Programs to improve air quality.

The channels should be used as part of the public realm. As places for recreation and even possibly agriculture.

The Port Lands should be thought of as a small beach community, somewhat like the Beaches farther west. Interaction and access to the water and the natural environment is critical. Port Lands should be the model for a modern, mixed-use sustainable community.

The water; Lake Ontario provides scenic views and recreation.

Existing naturalization the shorelines and existing green space of forests and fields.

Cherry Beach is an existing city park and attraction.

Recreational playing fields along Unwin Ave.

Marinas along Unwin and outer harbour.

Dragonboat property and boat launch at Portlands Energy Centre channel-popular recreation.

Tommy Thompson Park – ensure access to this recreational destination from the residential neighbourhoods being built. Connect the residential to the park via bicycle lanes.

Live-work communities and retail, especially small businesses. They bring vibrancy to any area and are fundamental for a community's success.

Keep it green, No construction, please. We need a large park close to downtown, and there is none!

Water is the main feature that should inform the revitalization. There are four east-west water features, the Keating Channel, the new extended Don River, the Ship Channel and the Outer Harbour with a potential connection over to Ashbridges Bay. The Don River and the Outer Harbour are meant to be naturalized. The Keating and Ship Channels should celebrate the fact that they are man-made. The Inner

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Harbour provides a north-south water route for small craft but there are no north-south water connections on the east side of the Port Lands. One of the ways that water can be celebrated is that people travel on it by boat. The use of small unobtrusive craft would be particularly appropriate given that there will be residential development along many of the shores. In this regard a direct north-south connection between the Don River and the Ship Channel and/or a direct connection between the Ship Channel and the Outer Harbour would help promote the celebration of the various bodies of water with small craft travelling from one to the other. There might need to be short portages where small craft could be lifted out of one body of water and put back in in the next body if the water quality could be impacted by a continuous connection. Potentially residents could even use small craft to travel to the foot of downtown or elsewhere just as other residents might travel by bicycle.

Good use of space. Lots of parkland. Transit accessibility. Walkable communities

Canals and different water features.

I would like to see development (housing in particular) pushed back from the water. It is "nice" to have waterfront property but it's inclusive. Dare to be different.

Relationship to the lake / water.

An emphasis on sustainable culture and inspiring transit.

Walk-ability, transit, employment and accessibility.

To compare the four land use options properly we need to specify the minimum and optimum surface area we will need for Port/employment functions. It isn't obvious to me that we can prudently go as low as suggested in option 1, nor that we need to reserve as much as suggested in option 2. We need to button up the requirement because once we repurpose the land we won't have other space to give back to port functions.

Usage of the parklands to the south and east which, at the moment, are used to give the people of Toronto both free and extremely affordable access to the lake. Roadways and pathways should reflect the robust water's edge community of water sports enthusiasts.

Environment and nature.

Live-work neighbourhoods and communities.

Transit.

Public space and preservation of heritage buildings/features.

I was not at the public presentation, and some of my comments may have been covered there. In any event, a problem common to all of the questions is the issue of the reasonable timeframe for the buildout of this plan, and the degree to which other developing areas will compete with the Port Lands for each type of land use. A related issue not shown in any of the drawings is the existing land holding patterns and the degree to which proposed land uses are compatible with this. Conversely, there may be potential changes over the 50-year period that would affect at least the long-term vision for parts of the site. One example that has been mentioned often is the Lafarge plant and the question of what might happen 20 years out when current equipment there reaches end of life.

Another thing that must be considered is the interim state of the Port Lands depending on the rate, location and type of development. For example, it is possible that the film district might built up quickly, or that it could stagnate. The residential lands might not find a market right away, and yet to be attractive even the "early settlers" need a workable, attractive neighbourhood including transit that is more than the now-and-then Cherry/Pape bus service. We already see some of these access and timing issues in East Bayfront. I feel that there has been too much emphasis on the finished state which many of us will not live to see and not enough on reasonable interim targets that could also inform the rationale for and progress to the final state.

A good transportation network from the outset will be essential, not something cobbled together to make do for the short term. Of course some of this will be underutilized, but if it's not there, nothing

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will follow. I am particularly upset at the continued use of "BRT" as an interim state for the transit network. It is essential that the roads be laid out not simply with a reserved curb lane for buses, but with a proper right-of-way that can easily be upgraded to LRT. Otherwise, you will never have anything more than buses serving an area of future high growth. To that end, the roads need to include facilities such as ductwork for electrical supply and provision for overhead support systems so that we don't have to tear everything up when an LRT-friendly TTC comes into existence.

Although it is not in the study area per se, something that has yet to be explained is how a BRT network would access Union Station. If BRT is presumed for the Port Lands, you could find that you have exhausted the capacity of a bus link with the East Bayfront, and have to move forward with LRT much sooner than the TTC seems to be planning. A related question is how the proposed Broadview extension LRT would hook into a Lake Shore LRT which, presumably, is a continuation of the Queens Quay east line. This ties into the timing of development on the Lever site.

Your study also needs to be informed by parallel work on the alignment of the DRL. It's good that you show it serving the Lever site, but continuing west via King into downtown is an unlikely route. The route you show (for land uses 2-4) would take the line directly through some recently constructed buildings of which Waterfront Toronto is rather proud. It is important to show a vaguely credible route because politicians and interested parties in neighbourhoods take these maps seriously.

Because it is further from downtown, this area will have a harder time achieving a high transit modal split, and very good transit from the outset will be essential. Experience in the East Bayfront does not suggest that this will actually happen, and your land use could trigger massive congestion in the absence of strong investment in transit. On a related note, depending on the commercial/industrial uses, there will be transportation demand both for workers at the sites and for trucks serving the businesses, with the type of activity determining the timing and type of demand. How, for example, would you prevent intensification of the area between Lake Shore and Queen from becoming intensely congested if it is redeveloped as a light industrial or commercial area?

An obvious "feature" is the ship channel, and beautification of this area depends a lot on land use in the abutting areas that are not actually shipping related. Operationally, the proposal for several new bridges across the channel begs the question of the degree to which these could complicate shipping operations. A related issue is that if there is any ferry service (something I find difficult to believe), then the bridges must at least be capable of clearing the ferries so that they are not having to open and close all of the time.

2. Thinking about the four land use options for the future of the Port Lands...(see Discussion Guide)

a. Which land use option best captures your vision for the long-term revitalization of the Port Lands? Why?

Looking at the proposed land use maps and associated population/job numbers, a few things leap out immediately. First off, the proposed employment in the Port Lands would jump immensely above what it is today, but it is unclear where these jobs would be located. You do not distinguish between jobs that are actually port-related and those in the film industry or other new businesses that might come into the area. Many of the port's job areas (purple on the maps) have existing uses already on them, and it is unclear how these would grow to create a 10x jump in jobs.

The idea of a "creative district" is nice on paper, but it seems to ignore the existing location of sites along Lake Shore. Is it really practical to plan for a consolidation to a block within the Port Lands, and is this even a desirable configuration? There is also, of course, the substantial variation in the space devoted to the creative industries in the land use maps.

I must return to the question of staging. How realistic is the full build out of the residential areas (labelled as live-work communities) as shown, and is the "work" component of that designation viable? To what extent will these communities generate travel demand elsewhere (ie the core area) and to what

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extent will they be work-at-home? This has a huge effect on travel demand. Also, live-work spaces tend to take a different form than purely residential ones, and many who occupy them cannot afford the more typical condo developments we already see proposed for East Bayfront.

What you don't want to have is islands of development separated by hostile open space.

The effect of the Lever development must also be included in projections for build out. This is a comparatively new part of the mix, but it can be a stimulus for more commercial space east of the river, or a drain on the attractiveness of areas you might have assumed would develop sooner.

Probably the most important part of selecting a land use will be to identify those industrial areas (port uses) that are not going to change. For any that you propose altering (for example, the substitution of residential for the road salt area south of the ship channel in option 4), you need to talk about where the existing use would be relocated and the effects of that change.

As to my preference, all four include residential use where I think it best fits on the north, east and south side of the relocated river. Beyond these areas, particularly south of the ship channel where transit access will be more difficult, I am not convinced. As for the area to the east, nominally the film district, the real question is the degree of consolidation and the demand for space that reasonably can be expected.

I don't like any of them because we don't have the overall vision/desire for what we want

For example, all land south of the Ship Channel could be park and some recreational uses.

Option 2 because it enables some energy uses to be grouped south of the Ship Channel.

Move the salt dome closer to Lake Shore or another road on the edge of the Port Lands area.

Industrial uses could be interesting energy uses and would be compatible with TPA and Portlands Energy Centre if these uses are renewable/sustainable energy.

More vibrant walking, bicycle and discovery of the landscape.

De-emphasize roads – rail/LRT transit fit the character better.

Public lands created first, then the development around these areas.

Options 4 and 1 seem the best mixed use of land, keeping the creative industry alive but still providing park space and live in areas.

Preference for Option 1 mixed with the park and open spaces shown in option 2. Option 1 looks like it combines the right mix of employment and residential, focused on the feature of the Ship Channel.

Residential along the Ship Channel would better integrate Cherry Beach with the rest of the Don Lands and the City than industrial uses.

The area surrounding the Pine Wood Studios would support knowledge-based services such as media, technology etc. This configuration would also connect well with higher densities of a technology hub (similar to Silicon Roundabout developing in London, UK) and service-oriented businesses in South of Eastern. Encouraging the development of significant scale to create a Hub in SoE, would bring back some of the service industries that have moved to the suburbs such as Bell etc.

Option 4 because it seems to have the most flexible land use options. I'm concerned that over-prescribing "creative industry" use will limit the flexibility of the spaces.

Option 4 is preferred over Option 3 only because of the proximity of the live/work area to the Cherry St bridge on the south-west corner of the area.

Option 4. I like the distribution between shipping activities and living/working. I think it's important to have these mingle.

Option 4 seems to match my expectations most. It is important to animate and make accessible the beaches as much as possible and a neighboring mixed use area would seem like a better fit to drive that end result.

Option 3 and 4 seem to strike the right balance of creative versus mixed use as well.

Option 4 - highest living space, almost highest jobs, keeps some port space and links with higher jobs in

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South of Eastern.

While none of the land use options really match my vision, the one that comes closest is Option 2. I am not sure why land use is being studied at this time. There are already Precinct planning initiatives for Cousins Quay and The Film District and it has been determined that Polson Quay will be a Live-work precinct. The area south of the Ship Channel will not be developed for a very long time, so it is more important to focus on the planning directions of the Secondary Plan and the Port Lands Acceleration Initiative in terms of roads and services that would be needed no matter what kind of development works 30-50 years from now.

Option 1 because it has the most space allocated to creative industries which are mostly non-polluting, can be lucrative, and we need to invest in them. This could be a creative centre.

I don't think the waterfront should be a series of glass high rises so I'm fine with less housing and more creative industries. In fact we've lost too much city land to condos lately and really do need to hold onto big places where we can continue to build and ship big things in and out of our ports. Such as spiral windmills, solar panels.

So far none of the options appear to consider, analyze and address the unique features of the Port Lands. It is highly premature to be asking participants to choose a preferred option without more analysis.

Option 1 seems like the best option; however I would not want to live near waste treatment plant or anywhere near hydro wires.

The options are really uninspiring and hard to differentiate.

The Film industry is heavily reliant on the low dollar and the \$1billion in corporate subsidy that Ontario provides (can that be basis of building a city?)

I live in the east end and know this area well, the real substantial improvement I see is getting rid of the waste transfer station in 3 of the options and growing the park -the only thing the City can actually do itself. The Hearn is still a wasted space/opportunity in all 4 options.

What about the massive electrical transmission lines - or the massive natural gas lines?

I am glad to see the bridge connections over the turning basin to improve connectivity in the next section - they should be included in the land use as that will have a dramatic impact on the outcomes of the secondary plan.

The naturalizing of the Don really takes away from the entire land use plan and is a waste of money and space. Build another canal with a hard edge to the turning basin.

Preference for Option 1.

No industrial buffer between the live/work area in the north and the parkland in the south.

Live/work areas face one another across the shipping channel.

Most of the Port Land industry is at either end and therefore less industrial traffic through the core of the development.

Keep Port areas to the minimum required. Some of these areas may be essential but are not large scale generators of employment.

Preference for Option 2. It maximizes housing/retail which means that people come first over business. Option 2 has the most green space.

I don't like the creative industry because these aren't helping local economy. Just helping to make movies for Hollywood.

The other options have industry too close to houses/offices

Preference for Option 1. It puts housing next to the water which will increase the value of that land. It has a large employment area for the film industry to expand greatly in the middle that maintains the waste-diversion station, which is critical to the viability of the existing neighbourhood and the new development. Access to other city resources will be highly limited by geography. Finally, the industrial

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aspect is largely separated from the housing, and is near/behind existing industrial and big box stores. It also has the most residents and most employment.

Preference for Option 1. Option 1 locates most of its proposed residential land use connected to the water and green spaces. If you want to create value in residential lands they should be situated along the water and green spaces with easy access to existing recreational playing fields and existing recreational parks like Cherry Beach.

Option 1 is realistic in its approach to the "waste transfer station" as it will be difficult to find a new home for. Option 1 does not put residential land use beside the waste transfer station that will likely not be moving.

Option 1 limits the amount of commercial traffic to Unwin St thus the vehicles that travel across the bridges will tend to be non-commercial, non-industrial vehicles thus lessening the maintenance on the bridges. Bridge maintenance is a big issue as it can result in bridge closures as we have seen over the last year. Residential vehicles do not have the same impact as commercial or industrial vehicles.

The residential lands will have scenic views rather than views of commercial and industrial uses.

Preference for Option 1, but there's still too little live-work, and too much port and park. It won't be fun and interesting to walk around there if it's all devoid of people.

A park. No residential, commercial or business construction.

Option 1 is the best because it maximizes the residential along the water on both sides of the Ship Channel. Residential and ancillary uses will generally be more amenable along the waterfront promenades than industrial uses.

Given that there are quite a number of silos that should be retained as industrial artifacts throughout the Port Lands, perhaps these could be used for salt storage instead of leaving it in a heap on the ground. While there would be the issue of trucks accessing the silos to carry the salt away, this is also an issue if it remains in a heap on the south side of the ship channel. Trucks would have to travel through sensitive areas of the Port Lands to get to the salt either way.

Option 3 - Increased Live/work space balanced with lots of park space and creative industry.

Option 1 – Provides a community hub in the creative arts while preserving port industry operations that push back from water front. There seems ample park land and live/work space.

Option 1 is an optimal mix of live/work areas, with a community next to the Hearn that will help animate whatever its future use is that is not isolated from other areas. The creative industry district remains connected to future plans on the Unilever site, keeping employment areas connected.

Option 1 because it seems to offer the largest area for live-work communities and creative industry district simultaneously while keeping these two functions reasonably separated, and it distances the waste transfer station from the residential district.

Option 2 – Downtown Toronto needs to retain more of its industrial districts and the Port should remain port-focussed. We do not need more condos.

Option 1 because I like the division of land and the amount of space for live work communities and the location of the live work communities.

I also like the amount of land designated for the creative industry district.

I also like having live/work communities next to the Hearn as hopefully that site will be redeveloped for public use.

b. What improvements would you suggest we make to your preferred land use option? Why should these improvements be considered?

More focus on park land and recreational uses south of Ship Channel.

Recognize that the edge of the water is public and always publicly accessible.

Move the salt dome to the Toronto Hydro area.

Find out what the TPA's 20-50 year vision is for their site on the inner harbour, then better sense of

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compatible uses can be developed nearby.

Keep creative area large as in Option 1.

Better understand the future energy needs of an expanded film/creative industry district, the TPA, and employment uses because additional energy generation may be needed.

Buildings should use "smart energy".

Option 1 is preferred with more emphasis on a more natural environment.

The City of Toronto will increase by 1 million so public permit space is important.

A bit more park space separating the live work communities.

There should be a commitment to low-to-medium rise buildings across the lower Don lands development. Higher densities could be supported in the area South of Eastern, creating a technology Hub. This is important for sunlight to permeate throughout the development and the general character, creating more of a European feel, with specific ground-level design requirements. Toronto continuously tries to emulate NY and Chicago, while focusing more on European-style design would create a more unique feel to the city, drawing American tourists seeking something different than their own steel and glass towered cities. It will be important to create street level design that is welcoming and liveable, with interesting pedestrian areas, and this will be a unique feature for the area.

Perhaps some of the creative use zoning could be moved next to Hearn in favor of port employment moving up the ship channel.

I think there needs to be more discussion with the Film people to see what they would like and what is more realistic. Surely there could be something more exciting done for the area west of Leslie and south of commissioners.

You need to make low cost spaces for artists, creators, builders too. It can't be yet another high cost boutique area like the destination disaster which is the Distillery (a pretty but basically dead area of the city except during the Buskers Festival but that takes place in the space between the buildings.) Why not create a place for biologists to study the lake or work on new energy efficient technologies - like MaRs but also MIT - with more low cost space.

The framework process lacks a high level vision that informs a more detailed discussion. That vision along with a full discussion of the nature and extent of future constraints and city building priorities should proceed and move to identify a preferred land use option.

Late night transit, if you want to encourage less car traffic, unless you have all night transit, this is not a realistic option considering the location.

Also well-lit areas are important and beautiful to deter crime.

In all options you need another bridge over the turning basin to improve connectivity.

The naturalizing of the Don really takes away from the entire land use plan and is a waste of money and space. Build another canal with a hard edge to the turning basin.

Move the waste transfer station: having it there degrades whatever you might build around it. It is old and inefficient, after weighing in and unloading you have to actually leave the site, drive around the block, and then re-enter the site to weigh out. At the very least it should be re-built. Can that be done closer to the Ashbridges treatment centre? Locating it there would move it down wind and shift the heavy truck traffic that it generates to the eastern edge of the development and away from the core. The transfer station is usually closed on the weekend so it would not interfere with people visiting Tommy Thompson park and entering via Leslie St.

It would be another battle but could it be replaced with a modern incinerator for the generation of power and heat?

Try moving the industry furthest away from Cherry Beach because it would be unpleasant to be going to the beach just to pass by factories. Would damage the image.

The Hearn site which is marked with as a catalyst should become a mix residential / recreational land

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use. Extend the residential land use to this space but include building indoor gyms, rink, pool, racket sports, daycare facilities, mini library and area meeting facility.

The Lafarge cement company should be located away from the naturalized Don River as the slip for the boats will be in the delta of the river. Sediment from the river will end up in the slip requiring dredging or the ships propellers will stir it up each time they visit the facility. The remedial action plan tries to limit the amount of dredging and disturbance of silt and sediment in our waters as it has a negative impact on the aquatic vegetation and habitat of our Lake.

People say they love parks, but except for kids and dogs, they rarely use them (and smaller parks are ok for that). Bring more residential, office and retail uses.

Build nice roads, bike lanes. Improve landscaping. Remove garbage utilization sites. Plant trees.

Option 1 should be amended to provide for residential along Carlaw from Eastern all the way south to the Ship Channel as an extension of the residential pocket in the South of Eastern area.

Again residential and ancillary uses would be more amenable to a pedestrian and cycling route down Carlaw to the water's edge than industrial uses.

Excellent flood protection.

Robust transit links.

As much parkland as possible to make the space accessible for all of Toronto while still being financially viable.

Live/work space seems almost too prevalent. While I understand the importance I think a taper is in order. Further, while I think the creative hub is a good idea, I worry it will (A) become omnipresent and sole focus of a community that should represent many ideas and weave many fabrics of the Toronto landscape and (B) detract from other areas around the city that represent the arts. There are good thriving businesses geared to the movie industry that could be hurt by a centralization (if only psychological) of industry operations.

This is the chance to not create another great community for those who will inhabit the space, but an extension of our great city that invites those from outside. This will take multiple attractions and landscapes to accomplish. I worry that 4 options will limit the scope of what can be accomplished here.

Move the waste transfer station in the creative district into the industrial areas. The transfer station makes the existing park much less appealing.

I would like to see assurance that the catalyst use permitted at The Hearn site will be easily compatible with the adjacent live-work community, or conversely, that residential function is appropriate adjacent to whatever The Hearn might become.

I would add the park/open space next to the turning basin that is in Option 2. I would like to add more parks and open green space to Option 1. You could also add more parks and open spaces from Option 3 and 4 in the south of the Creative district.

3. The transportation alternatives developed are about effectively moving people in, out and within the Port Lands and South of Eastern area. The alternatives include north-south / east-west connectivity alternatives, alternatives for crossing the Ship Channel and for establishing a transit network. Thinking about these different transportation alternatives...(see Discussion Guide)

a. Which alternatives do you prefer? Why?

Useless to talk about until we've confirmed land use.

Bike lanes and rail transit as opposed to cars and burden on roads.

Less emphasis on north-south bridges over the Ship Channel so that the industrial uses don't compete with live-work areas (more living in the south, as in Option 1).

Bus, rail service

There needs to be a crosstown downtown subway line and connect the Port Lands area to it. You can't just shut the Gardiner and keep building condos without better transit.

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Connecting Broadview with the Don Roadway and a bridge over the channel looks to make the most sense. This would provide a wrap-around park around the Ship Channel which would be a key feature of the area.

Connecting through Bouchette Street would be a second option, however would potentially close off options for this public space.

It would be good to have a connection to the DRL as in Land Use Option 2 connecting a transit hub, this would have to be weighed against the alternatives though whether this would be the best option for Broadview.

Ship Channel crossings. I'm going to assume the ships would prefer not to have to wait for a bridge to be raised, and I imagine road users wouldn't want to have to wait for a bridge to be raised and lowered, and I personally would want to have to walk or bike up a bridge tall enough for ships to go under without requiring that it be raised. So I support as few bridge crossings as possible.

A road with LRT ROW running Broadview, Bouchette, Bouchette Ship Channel crossing, Unwin, Cherry ship channel crossing, Cherry makes a lot of sense.

Additional east west roads also add value but placement if these connections are less critical.

A transit hub at Broadview-Bouchette-Eastern for GO and the DRL is a great idea... better than GO station proposals for Cherry that have been seen in the past. Seems like a great place for higher order surface transit to start from headed east to Kingston Road.

DRL - is critical for this to work.

I like the extension of Broadview.

Not sure all of the east of Carlaw connections are needed - 1-2

I like the north-south connection from Broadview to Bouchette that continues down to and across the Ship Channel.

If the Hearn can be repurposed, the extension of the Don Roadway also makes sense.

For the East-west connections, I think there is definitely a need an alternate route south of the Lakeshore. And extending Basin Street south of the Film district would be great.

Unwin definitely needs to be reconfigured.

I like increasing the east west connectivity - right now it's almost impossible to take public transit in this direction along the lakefront.

Build transit networks that work - anticipating people will bike, walk or take transit. Radically reduce the number and size of car lanes.

Make the roads with textured raised pedestrian crossings so cars are aware pedestrian have a right of way. Make it a pedestrian right of way zone as on Granville Island Vancouver.

Not enough information to form a useful opinion. More in depth analysis is required to understand the implications of the alternatives and how they would be affected by land use planning choices and development scenarios outside of the Port Lands.

Tough to have an informed opinion on the transportation options at this point given the uncertainty of the Gardiner - how that would affect local traffic through this newly dense area (e.g., Great Gulf proposal) and Downtown Relief Line.

For North/South I prefer the extension of the Broadview streetcar line via Bouchette St. This route allows for a connection with the GO service and an eventual DRL. Going via Bouchette shifts the line towards the centre (albeit not much) of the area south of Eastern thereby putting a larger area within a shorter walking distance of the line. South of the Lakeshore it divides the Portland development more evenly between Cherry St and Leslie St. both north and south of the shipping channel. This route is not so favourable if the transfer station stays where it is.

The city should consider building an LRT (not a streetcar) line that loops through the Port Lands and connects directly to Union Station.

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For north-south alignment, minimize the number of traffic signals and crossings of Lakeshore Blvd. There are already a large number of 1-way and small 2-lane roads that interact, and with the possibilities of the Gardiner coming down, the lakeshore should be considered a major artery. I like the idea of a 6-lane road coming down from Broadview and crossing into the Port Lands. It will provide much needed relief to the Riverdale/Leslieville/East York corridor as access to Lakeshore and the freeways are already very limited.

The alignment of this Broadview extension will depend heavily on the fate of the Gardiner East, however I like the idea of it swinging towards Bouchette (C) as it allows for a great public realm and space between the new roadway and the new river for parks and mixed use community

The southern end of the community is going to be far from transit and major corridors so it will be important to ensure there are enough bridges for pedestrians and cyclists. I think that with the upgrading of Carlaw, that should become the 2nd major auto bridge, however there should be at least 1 pedestrian/cycling path bridge between Carlaw and Cherry for access.

For East-West, I am not in favour of adding any further E-W thoroughfares north of Lakeshore.

Widening/Urbanizing Eastern (remove street parking) and Lakeshore will serve the additional capacity for north of the Port Lands. The additional capacity needed seems like it should be south of the Lakeshore and upgrading Commissioners, basin and Unwin will be key considerations.

I am also not a fan of any roads that are directly next to the water as it removes access to a key resource and the ability to have beautiful walking/cycling paths next to this key resource.

Broadview Extension option A – Keeps the access to residential for land use option 1 out of commercial areas and limited commercial traffic through residential areas.

North/South Connections east of Carlaw option A

Winnifred Ave is central access to industrial area between Carlaw and Leslie.

East-West Connections Option C Commissioners. Facilitates access to both commercial and industrial land uses.

LRT in separated right-of-way. Reliable and comfortable.

The existing bus to Cherry Beach is more than adequate. It runs often and is never full.

As a general rule, we should spread the required number of east-west and north-south lanes over several streets rather than concentrating them onto one or two very wide streets. Narrower streets are easier to cross, promote slower, safer speeds and offer better visual connections between the two sides of the street.

There should be several new bridges across the Ship Channel for all modes of transportation. The more crossings, the better the connections. Also crossings help to celebrate the water below. Cities like Chicago, Pittsburgh and any number of European cities have numerous crossings of their rivers and canals which add urban character.

A dense network of routes for small water craft should be considered for recreation and also for transportation similar to a system of bike routes.

BRT with eventual conversion to LRT is definitely the way to go. Multiple crossings in and out are key - given how poor the transit and vehicular access to Liberty Village is, I would not want to see that replicated.

First off, you have an error in the "existing" services shown. Although the TTC operates buses on Eastern/Richmond/Adelaide, this is a premium fare express service to the Beach, not a regular fare local route. You need to establish that this would be a new all-day service and what area it would actually serve. For example, would it be a logical extension of the Woodbine or Coxwell buses to provide a subway link at the east end, and where would it go on an all-day basis downtown?

I would prefer to see n-s 1A west of Carlaw because it provides a direct connection to Broadview and is close to the residential zone east of the Don Roadway, simultaneously with 2B east of Carlaw which

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seems to divide the long block about half way.

I would prefer to see e-w A(north of Lakeshore)+C+E and Eastern because, combined, they provide the widest coverage across the Port Lands and Eastern provides a good bypass for people who don't need to come further south.

I would be content with channel crossings at A, B and C. They seem simple and reasonably spaced to me. D is overly complicated. E is not really a crossing, but should be retained for people approaching from or departing to the east.

I think the new bus and BRT would be the reasonable start, until higher residential density can afford to upgrade the BRT to an LRT.

If the area south of the main shipping channel is not populated by condos filled with people trying to get to/from work between 7-9 and 3-6, then there isn't the same necessity for all those expensive, north-south vessel-accommodating bridges.

There MUST be better and frequent transit accommodated to winter. That is probably a good place to put the LRT. There must also be parking, everywhere and vehicle access to the park system.

I like extending Broadview and think all three options could work.

Like the bridge at end of Don Roadway.

Really like the idea of Water Transit! Think it would be great alternative to get downtown.

Urbanize Lakeshore, Eastern, Commissioners, Basin. Need to have transit and potential for LRT.

Bike lanes very important.

b. Are there alternatives that we should not be considering? Why?

What would this community look like if the park, river and waterways were the main feature we see when we are there today?

Enhance the natural aspects as opposed to the building the area up.

The extension of Carlaw across the Ship Channel. It would not be necessary if you do one or both of the others.

The east/west connection that I am most concerned with is Basin St. It would be preferable to keep it away from the promenade on the north side of the shipping channel. If it has to be close to the channel then the design of the promenade/roadway interface must be given special attention to keep the pedestrian's focus

on the water feature and not the traffic running alongside of the them.

Carlaw should be widened as it's a major artery and all street parking removed. Left turn lanes should be added at Eastern and Queen. Carlaw is intensifying and so all parking should be removed from that street as a major N-S thoroughfare to access the Danforth.

The entire development of the Port Lands should only be contingent to the East LRT being built. It should be built at the same time, and not an after-thought. Let's do this one right.

A bus network is antiquated and should not be included. A new modern area deserve a new modern transit approach. Perhaps the streetcar was made for this area. If done properly it may discourage cars in the Port Lands.

I see this as a very pedestrian friendly area and that can only be accomplished with less vehicle interruption.

The DRL must serve the Unilever site, not go west via Queen.

Higher order transit, especially LRT, is less likely to be built south of the Ship Channel (it's not even in many of the earlier transit diagrams for this area), and land use that would require service at LRT levels (or even reserved bus lanes) in this area should be approached with caution. This is likely to remain an industrial area for the foreseeable future.

Full transit in the form of streetcars in a dedicated right-of-way (this is not LRT and calling it that confuses people) should be provided from the beginning of development. Separated bus lanes that will

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be replaced are a waste of money, and non-separated lanes get ignored all over the city and may never be changed.

Channel crossing D does not seem worth the trouble. All crossings of the channel, the Don River, and the Keating channel should *not be* lift bridges - those contraptions cause too much intermittent interruption in flow, and become points of mechanical failure. Simple fixed spans above or below the water would be more reliable over the next century - although they need to be built better than the existing Gardiner expressway was built. Over water arches can be desirable destination/attractions in their own right because of the views they offer. Under water tubes have the advantage of leaving open sky for taller than expected ships and creating uncluttered views.

4. Water, wastewater and stormwater management alternatives have been identified. Thinking about the servicing alternatives, which water, wastewater and stormwater alternatives do you prefer? Why?

Incorporate water as a visible aspect of the development

Enlarge and extend the wastewater collecting system.

Stop directing everything to Ashbridges Treatment plant. It's already over capacity.

Use alternative 2 for stormwater.

The cleanest, greenest, easiest to maintain alternative is preferred.

Wastewater: Alternative 1, because it encourages less water use which is important for everyone.

Stormwater: Alternative 2, because it connects people the what happens in the city around them and beautifies the city.

The integrated community storm water option is important. What has been built at Sherbourne Commons is a model of what should be continued. A non-potable water source makes sense for keeping public spaces green all summer.

Like the idea of using the wastewater. Need to think about smell - Ashbridges bay already gives off bad smells.

Are more wetlands not possible?

Water Alternative 3 - I believe it is always better to separate non-potable water.

Reduce water usage and maintain the existing network. You can require all new buildings and businesses to have water measurement meters that show them how much they are using.

Alternative 1: Maintain existing collection system and reduce wastewater flows through reduction and water efficient appliances / low flow toilets. This is completely possible. If the stormwater runoff is reduced by building sidewalks with permeable concrete this should also reduce the load.

Alternative 2: Integrated Community Stormwater Management, with stormwater management forming part of the landscape of the Port Lands sounds very exciting.

Creating a swamp for people to live and work by is a bad idea. We survived a super storm last summer, and if you are that concerned, make a new channel to the turning basis to release the surge pressure from the Don once every 50 years. We do not need a new artificial wetland. We have plenty of new wetland being created on the nearby Leslie Spit.

Green roofs are good.

Reduced parking to reduce hard surfaces is also good.

Bio swales are good - even if the one at the waterfront is never actually working.

Integrated Community Stormwater Management is the best option. It requires the least infrastructure and the least amount of money. Also it is sustainable as the water does not be transported thereby saving energy.

Water - Alternative 2

Wastewater - Alternative 4

Storm water - Alternative 1A

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If we have sitting water in this area (i.e. stormwater bioswales on Commissioners) you run the risk of providing habitat to west nile carrying mosquitoes and encouraging wildlife to enter into a commercial /industrial area.

As long as it is well designed with longevity and, where visible, integration into parkland and communities is considered in the design, I would be happy with all of the options.

With water, alternative 3. A non-potable pipe system is a great idea especially in an area with office and industrial uses.

Water – alternative 2

Wastewater – alternative 3

Stormwater – alternative 2

Combined, these options seem to provide the most reasonable supports for increased residential density at what I think would be an intermediate cost.

Other Comments

Slow up. Let's do it right. We need a vision.

We can't have airport expansion, in fact the island airport it should be removed all together. We also need the Gardiner removed so we can actually get to the lakefront easily.

Is it possible to have a promenade along the shipping channel and still be able to dock large ships there? Not for loading and unloading of cargo, but just moorage. This would preserve working dockwall and add an element of interest for anyone taking a stroll along the water's edge. In time perhaps there could be floating attractions permanently moored in the channel (eg a floating maritime museum, floating restaurants, a floating hotel).

I think we need some further discussion about what is meant by "creative industry". Artist's studios? Architect's Office? Planner's office? Fashion design? Often creative businesses need cheap rents in old buildings to get started so consideration should be given to retaining as many old structures as possible in order to foster such activity.

Love some of the ideas for water feature at turning basin.

Inspiration for the Port Lands, including Tommy Thompson should be taken from Central Park and the harbourfront in DC.

As Toronto continues its endless and massive density expansion, right now is the city's only chance to create a park. That land is right there. What an opportunity.

Do not plan any construction in this flood-risky area. Too expensive. Keep it as a park. Even if flooded, there won't be much damage to the park.

Port Lands Planning Framework and Transportation and Servicing Master Plan



Prepared by Lura Consulting for:
The City of Toronto and
Waterfront Toronto

March 2014



Port Lands Planning Framework and Transportation and Servicing Master Plan
Community Workshop Summary Report

This report was prepared by Lura Consulting, the independent facilitator and consultation specialist for the Port Lands Planning Framework and Transportation and Servicing Master Plan. If you have any questions or comments regarding this report, please contact:

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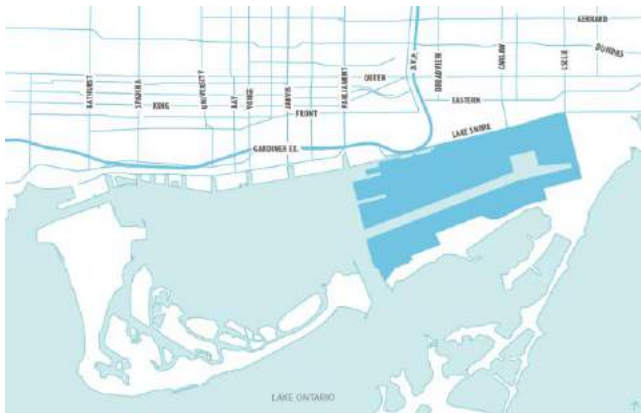
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INTRODUCTION

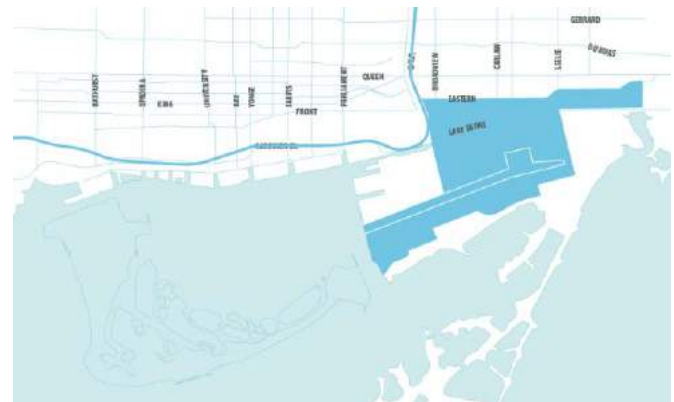
Background

The City of Toronto and Waterfront Toronto are developing a comprehensive long-term plan to guide the revitalization of the Port Lands. The plan will include direction for the transformation of the Port Lands into a number of new urban districts alongside our working port. This plan will build on the direction from the Port Lands Acceleration Initiative that was adopted by City Council in 2012 and will incorporate the planning for the Lower Don Lands and the naturalized valley of the Don River.

A Master Plan under the Municipal Class Environmental Assessment (EA) process is also being developed to establish the street network (including transit), and the water, wastewater and stormwater infrastructure needed to support revitalization. The Master Plan applies to most of the Port Lands and to the area referred to as "South of Eastern" (located north of Lake Shore Boulevard East, south of Eastern Avenue, between the Don River and Coxwell Avenue). The Master Plan will provide a coordinated transportation and servicing strategy between the two areas.



Port Lands Planning Framework Study Area



Transportation and Servicing Master Plan Study Area

The Port Lands Planning Framework will knit together more detailed planning work that has occurred to date for the Port Lands. It will also incorporate outcomes of precinct planning that is underway for Cousins Quay and the Film Studio Precincts. For more information on each of the planning studies underway in the Port Lands, please visit: www.portlandsconsultation.ca.

ABOUT THE COMMUNITY WORKSHOP

Overview

As part of the consultation process, the City of Toronto and Waterfront Toronto hosted a Community Workshop on March 5, 2014 from 7:00 pm – 9:00 pm at the Ralph Thornton Centre.

The workshop was designed to:

- Provide an opportunity for further review and comment on the different options for land use, transportation and municipal services for the Port Lands that were presented at the community consultation meeting held on February 13, 2014, at the Toronto Fire Academy.
- Obtain additional feedback on: thoughts and ideas for **land use** in the Port Lands and, alternatives for **streets** (including transit) and **municipal servicing** (water, wastewater and stormwater).

The workshop format consisted of a presentation followed by a question and answer period from 7:00pm – 7:45pm. Facilitated small group discussions and reporting followed with a focus on Land Use Options (from 7:45pm – 8:10pm) and Transportation and Servicing Alternatives (from 8:20pm – 8:45pm). Approximately 60 community members participated in the workshop.

A copy of the Workshop Notice is included in Appendix A.

Presentation

David Dilks, Lura Consulting, welcomed the attendees and introduced himself as the neutral facilitator who would be responsible for moderating the discussions. He introduced Cassidy Ritz, City of Toronto, who presented an overview of the Port Lands Planning Framework, including a draft vision statement, and four land use options for consideration.

The second half of the presentation was given by Ann Joyner, Dillon Consulting, and focused on the Transportation and Servicing Master Plan. She presented road and transit network alternatives, as well as alternatives for water, wastewater and stormwater management.

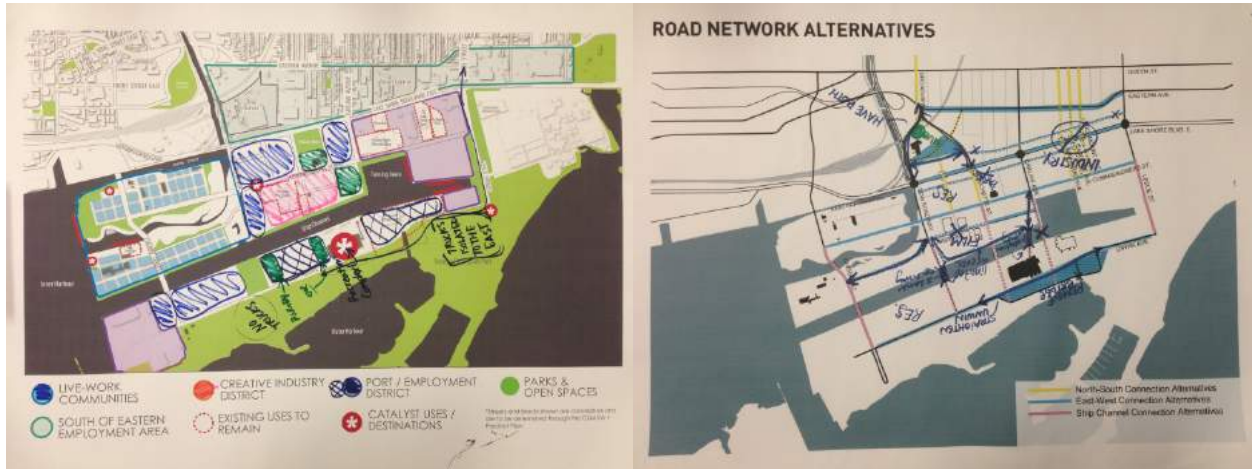
A copy of the presentation is available on the project website – www.portlandsconsultation.ca. The Question and Answer period that followed the presentation is summarized in Appendix B.

SUMMARY OF PARTICIPANT FEEDBACK

Workshop attendees provided feedback by participating in facilitated roundtable discussions and by completing and submitting written comments using the Discussion Guide and Questions handout. An online version of the Discussion Guide and Questions handout was also available on the project [website](#) from March 5, 2014 to March 19, 2014. A combined total of 31 hardcopy and online feedback forms were submitted.

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Attendees also used large maps provided on each table as another means to provide feedback on the land use options and transportation alternatives. By marking directly on the maps, participants indicated preferred transportation connections and modifications to land uses. The details of this feedback are incorporated into the summary below.



Photos of Feedback Provided on Maps

The summary of feedback collected during and after the workshop is provided below and organized according to the following discussion questions:

Land Use Options

1. Thinking about the four land use options for the future of the Port Lands...
 - a. Which land use option best captures your vision for the long-term revitalization of the Port Lands? Why?
 - b. What improvements would you suggest we make to your preferred land use option? Why should these improvements be considered?

Transportation and Servicing Options

2. Transportation alternatives focused on east-west connectivity, north-south connectivity, connections across the Ship Channel and for establishing a transit network to support population and employment level have been identified. Thinking about these different transportation alternatives...
 - a. Which alternatives do you prefer? Why?
 - b. Are there alternatives that we should not be considering? Why?
3. Water, wastewater and stormwater management alternatives have been identified. Thinking about the servicing alternatives, which water, wastewater and stormwater alternatives do you prefer? Why?

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The summary provides a high-level synopsis of recurring comments, concerns and/or recommendations provided by workshop participants during the facilitated roundtable discussions and via completed individual discussion question forms. A detailed summary of the feedback is included in Appendix B.

Land Use Options

1. Thinking about the four land use options for the future of the Port Lands...

- a. Which land use option best captures your vision for the long-term revitalization of the Port Lands? Why?**
- b. What improvements would you suggest we make to your preferred land use option? Why should these improvements be considered?**

Feedback obtained through facilitated discussions was consistent with feedback submitted via completed individual discussion question forms, with the points cited most frequently summarized in the table below.

Option	a. Best Capture of Vision	b. Suggested Improvements
1	<ul style="list-style-type: none"> • Area designated for creative industries – supports uses that were displaced from other parts of the City • Live/work communities on west side, near the waterfront • Heavy industrial uses on east side, away from the waterfront • Transition from live/work to recreational uses • Opportunities for employment activities • Communities on both sides of the ship channel • Proposed waterfront uses • Potential for signature multi-purpose projects • Heavy truck traffic limited to the perimeter, away from the centre 	<ul style="list-style-type: none"> • Relocate the waste transfer station – it generates too much traffic and is not compatible with the residential uses proposed for the area • Locate residential uses near the Hearn • Support more port uses • Designate the area south of the ship channel for industrial uses • Consider adding commercial uses • Provide connections to residential communities on the south side of Ship Channel • Verify the number of jobs allocated in this Option compared to Option 2
2	<ul style="list-style-type: none"> • Turning Basin Park – offers views across the Ship Channel • Optimizes live/work areas • Variety of land uses in the Film Studio District • Maintains area south of the Ship Channel for economic development 	<ul style="list-style-type: none"> • Create a buffer between port uses and proposed residential areas • Balance residential uses with employment uses • Optimize utilization of waterfront park area • Replicate the size of the area designated for creative industries in Option 1 in this option • Verify the number of jobs allocated in this Option compared to Option 1
3	<ul style="list-style-type: none"> • Park south of the Ship Channel 	<ul style="list-style-type: none"> • Prioritize parkland

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	<ul style="list-style-type: none"> • Industrial/port uses south of the Ship Channel • Residential area south of Ship Channel • Soft park edges • Park along the perimeter of the turning basin • Ties to bridge location – allows better access, depending how often ships can enter the channel • Residential uses located near green spaces • New public green spaces 	<ul style="list-style-type: none"> • Relocate the waste transfer station • Ensure bridges can accommodate boats • Ensure land is secured for port uses in the Ship Channel • Locate residential uses near the Hearn • Create a buffer between port uses and proposed residential areas
4	<ul style="list-style-type: none"> • Live/work community located on the west side • Smaller area for creative industries, but with opportunity for growth • Continuation of port uses • Compatibility of residential uses with open space and recreational uses on the south side • Potential for the expansion of the Hearn site through employment/port uses • Balance of residential and employment opportunities • Access to water in residential areas • Logical connection to energy generation 	<ul style="list-style-type: none"> • Remove industrial uses along Cherry Street • Include a park around the turning basin as outlined in Option 1 • Ensure community safety as new uses are introduced alongside port uses (e.g., buffers)

Participants also provided suggestions in relation to the long-term redevelopment of the Port Lands, regardless of the preferred land use option. Recurring points are organized according to the following key themes:

Existing Port Lands Features and Functions

- Maintain the area south of the Ship Channel for localized renewable energy generation/distribution projects
- Turn the underutilized Ship Channel into public space (i.e., for people, not industry)
- Ensure the Ship Channel and the river are a focal point
- Allow public access (e.g., pedestrian pathways) to the edge on the south side of the Ship Channel, while taking into consideration any employment uses that may need water access
- Consider the area south of the Ship Channel for employment uses (residential is problematic)
- Leave the area south of the Ship Channel as vaguely defined as possible; its character could be varied as needs change
- Consider several smaller, mid-sized open spaces along the northern ship channel edge rather than one linear public edge to provide spaces for different experiences along the water’s edge

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- Maintain enough land for port industries to support shipping ability/port function
- Consider community safety when introducing new uses near port activities
- Preserve the industrial character of the area
- Reserve waterfront access for industrial uses which require them
- Re-develop the Hearn as a cultural destination with the potential for multiple uses (e.g. sports arena)
- Create public spaces around the Turning Basin (to offer people views of shipping activities)
- Ensure existing uses to the outer harbour are maintained and celebrated
- Ensure recreational activities do not lead to conflicts with port uses
- Consider innovative solutions to address transmission wires (burying them is too expensive)
- Consider removing port uses entirely - the only regular marine traffic is to the Redpath plant (outside the planning area) and the cement plant on Cherry Street, which is being removed/relocated anyway
- Minimize truck traffic through neighbourhoods

Public Space, Greenspace and Parks

- Preserve the entirety of the land south of the Ship Channel for public parks, greenspace and recreational activities - seize the opportunity to build a destination for waterfront recreation
- Retain a significant portion of the Port Lands for public space and greenspace – none of the plans contemplate a significant dedication to functional park space
- Recognize First Nations heritage through symbolism and art in parks and trails (e.g., My Moccasin trail markers)
- Consider the land south of the Ship Channel for a variety of public uses (e.g., botanical gardens, outdoor theatre space, pedestrian and bike trails etc.)
- Ensure connections between parks and open space to create a network of these spaces, including areas along the ship channel's waterfront edge
- Add more greenspace/playing fields south of the ship channel
- Strengthen the natural connections between open spaces to create a cohesive network for the movement of people and wildlife
- Ensure public waterfront access
- Use native species for plantings
- Consider open space large enough to accommodate a variety of defined/undefined recreational uses (e.g., rugby fields)
- Maintain linear green space along the water

Employment Uses

- Reconsider the amount of space designated for creative industry uses and be mindful of the need to nurture the development of these uses over time
- Ensure employment uses are balanced with other uses
- Consider creative industry uses (other than film and studio uses) near residential areas

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- Ensure compatibility between existing industrial uses and new/proposed uses; relocate industrial uses if possible
- Consult with landowners/existing businesses

Waste Transfer Station

- Re-locate the waste transfer station, if possible – it is not compatible with neighbouring residential land uses. If it must remain, consider putting commercial uses directly adjacent to it
- Maintain the waste transfer station where it is – it provides an important service to local and regional businesses

Energy – More Emphasis Needed

- Create conditions to support self-sufficient complete communities south of the Ship Channel (e.g., powered by renewable energy, supportive of retail, local schools, etc.)
- Ensure energy generation/distribution is included in infrastructure planning
- Require all developments to be LEED platinum certified
- Explore opportunities for district energy and co-generation
- Consider a thermal energy capture heat loop and biogas facility at Ashbridges Bay
- Consider a cooling facility at the Hearn

Transportation and Servicing Alternatives

- 2. Transportation alternatives focused on east-west connectivity, north-south connectivity, connections across the Ship Channel and for establishing a transit network to support population and employment level have been identified. Thinking about these different transportation alternatives...**
 - a. Which alternatives do you prefer? Why?**
 - b. Are there alternatives that we should not be considering? Why?**

Overall, participants provided general feedback in relation to the transportation alternatives (i.e., did not specify one alternative over another). The key ideas and comments provided during the facilitated round table discussions and via individual feedback forms were similar and are organized according to the following themes:

North-South Connections

- Extend Broadview Avenue and the new bridge over the Ship Channel via Bouchette Street – it should be a continuous route, halfway between Leslie Street and Cherry Street, creating a hub at the centre of the Film Studio District
- Disperse traffic between Saulter Street and Bouchette Street
- Don Roadway seems least desirable Broadview extension alternative
- Consider the impact of the Gardiner East EA on potential north-south connections

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- Consider Larchmont Street as the preferred connection east of Carlaw Avenue – it is closest to retail along Leslie Street
- Consider North-south connections based on the pattern of development within the Port Lands
- Provide more linkages to South of Eastern area
- Consider extending Broadview Avenue to both Bouchette Street as well as the Don Roadway

East-West Connections

- Add a street south of and parallel to Lake Shore Boulevard
- Basin Street cannot traverse through private film studio lands
- Direct connection to the Hearn by realigning Unwin Avenue was supported

Channel Crossings

- Ensure truck traffic does not travel through neighbourhoods (i.e., Don Roadway connection across the Ship Channel should serve industrial traffic)
- Consider extending Larchmont, Caroline or Winnifred Avenues as cross points over the Ship Channel
- Carlaw Avenue bridge over Ship Channel is not feasible – new Switching Station and building will block a connection to Unwin Avenue
- Consider potential land uses south of the Ship Channel when planning crossings
- Consider the aesthetic impact of bridges on the Ship Channel
- Reserve bridge crossings for pedestrian/bike paths over the Ship Channel (e.g., connect Carlaw Avenue to the Hearn with a direct pedestrian-only bridge)
- Include a minimum of two lanes of traffic per direction on the Don Roadway bridge extension
- Ensure any future bridges can accommodate boats passed under (e.g., height or draw bridge requirements)

Street Improvements

- Consider two lanes of traffic rather than four on Unwin Avenue
- Do not make Commissioners Street wider than it already is – it is already too wide for pedestrians
- Consider traffic circles/roundabouts for continued traffic flow
- Use St. George Street as a precedent for street design
- Minimize the amount of on-street parking

Transit Network

- Prioritize public transit in the redevelopment
- Consider higher order transit (LRT) on Unwin Avenue, rather than buses
- Provide more information about the transit requirements south of the Ship Channel (e.g., is an LRT south of the Ship Channel required? Will an LRT system be problematic with bridges?)

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- Increase the number of north-south and east-west route options through the site through loops – no dead ends (terminals)
- Consider the Downtown Relief Line plans on potential transit routes in the Port Lands
- Reconfigure transmission towers to allow transit along Commissioners Street
- Consider re-routing the King Street streetcar to include service to the proposed transit hubs
- Avoid the 90 degree turn of the Downtown Relief Line at Carlaw Avenue and Queen Street presented in Option 1

Mix of Transportation Modes

- Clarify whether trucks are factored into the 80/20 modal split
- Coordinate bridge lifts to allow alternative traffic across the channel
- Ensure a network of bike and pedestrian paths throughout the Port Lands
- Ensure recreational water sport clubs have secure waterfront access (i.e., move the proposed bike path south of Unwin Avenue)
- Ensure bike access to the proposed transit hub at the Unilever site
- Consider multiple bridges to separate truck traffic (allow trucks in the east only)
- Centralize the industry distribution centre for transportation efficiency
- Plan for rail line to continue to service south of Ship Channel to the Hearn to the Toronto Port Authority
- Use rail line between the Hearn and Union Station for passenger trains.
- Consider water taxis/ferries as an option to connect people to the City and island

Other Comments

- Transportation should depend on the planned land uses
- The power lines on Commissioners Street should be buried to enable better development and transit
- Implement noise mitigation measures on new Cherry Street buildings to minimize truck noise
- Consider connecting the Port Lands to Toronto Island with a bridge to allow the Island as a year round destination for pedestrians/cyclists/tourists

3. Water, wastewater and stormwater management alternatives have been identified. Thinking about the servicing alternatives, which water, wastewater and stormwater alternatives do you prefer? Why?

While participants provided limited feedback regarding the alternatives for water, wastewater and stormwater management, feedback obtained through facilitated discussions was consistent with feedback submitted via completed individual discussion question forms and included the following points:

Wastewater

- Integrate grey water recycling in new developments
- Consider untreated lake water for toilettes, irrigation, etc.
- Do not locate plant on west side of Don Greenway

Stormwater

- Implement stormwater management features (e.g., bioswales, permeable paving, native plantings) along Commissioners Street if there is no Light Rail Transit – there is not enough room for both
- General support for wetlands and bioswales expressed – these approaches worked well at Sherbourne and Cork Town Commons
- Provide more information about alternative approaches to stormwater management
- Consider sustainable servicing (e.g., green roofs)
- Support Hydro Tower stormwater feature

Other Comments

Participants offered an extensive list of additional comments and suggestions through the individual feedback forms:

- Ensure a balanced mix of public and private uses in the Port Lands without over-developing the site
- Create opportunities for a diverse populations and experiences (e.g., variety of species, life stages and new/variable economic conditions)
- Prioritize the creation of pedestrian-only zones from day one
- Investigate options for off-grid energy sources
- Adopt a landscape ecology perspective in the precinct planning phases to enhance the ecological integrity of the entire area
- Ensure rowing/sailing/boating/windsurfing clubs are engaged throughout the consultation process
- Address the need to remediate contaminated land
- Promote a clean and green environment as outlined in the Central Waterfront Secondary Plan – the built environment should be designed not to simply minimize harm (the traditional EA focus) but it should also be proactive; that is to also actually improve the habitat value of the Port Lands

Additional Feedback Received via Email

It was expressed that the vision for the Port Lands Planning Framework needs to be bold and in line with the Don River vision, providing a distinguishing character and identity for centuries to come. A bold vision should be based on the assets of park space, Lake Ontario, the Ship Channel, and the Don River

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mouth. An inquiry was made regarding the estimated timing and approach for remediating the contaminated lands in the Port Lands.

NEXT STEPS

The feedback received during the Workshop for the Port Lands Planning Framework and Transportation and Servicing Master Plan will be used to inform and shape the next phase of planning and related consultation activities. The next round of consultation on the Port Lands Planning Framework is expected to occur in April 2014. It is also anticipated that separate consultations will be held for the precinct plans in Spring of 2014.

For more information please visit: www.portlandsconsultation.ca.

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APPENDIX A: WORKSHOP NOTICE

Help us plan the future of the Port Lands

PORT LANDS PLANNING FRAMEWORK & TRANSPORTATION AND SERVICING MASTER PLAN

WORKSHOP

We invite you to attend this workshop where you can further review and comment on the different options for land use, transportation and municipal services for the Port Lands that were presented at the community consultation meeting held on February 13, 2014, at the Fire Academy. This workshop is a further opportunity to understand the material, ask questions and provide feedback.

Date: Wednesday, March 5, 2014

Time: 7 – 9 p.m.

Location: Ralph Thornton Centre, 765 Queen Street East



Please RSVP to portlands@toronto.ca by March 3, 2014, if you are planning to attend.

The Port Lands Planning Framework will include direction for the transformation of the Port Lands into a number of new districts with a variety of uses including residential, commercial and parkland. This plan will build on the direction from the Port Lands Acceleration Initiative that was adopted by City Council in 2012.

The Transportation and Servicing Master Plan – Municipal Class Environmental Assessment (EA) is being developed to establish the street network (including transit), and the water, wastewater and stormwater infrastructure needed to support revitalization.

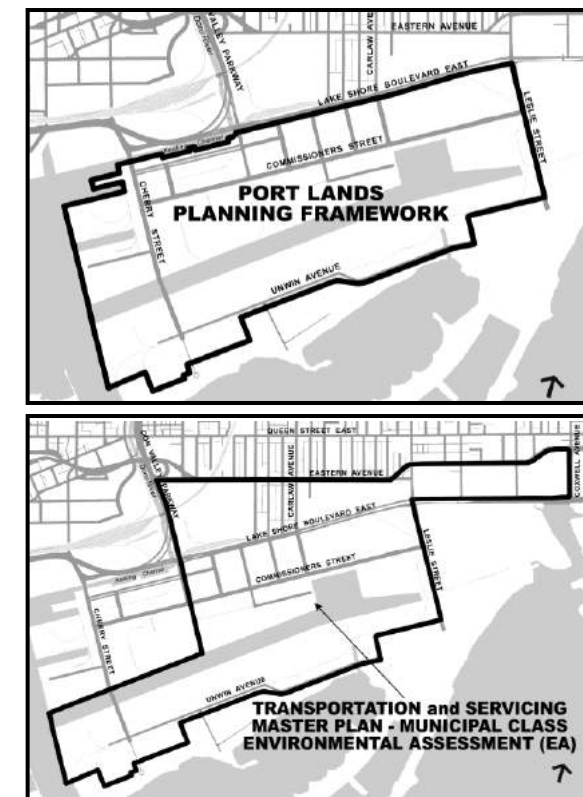
More information about the studies is available at:
www.portlandsconsultation.ca.

The materials that were presented and provided at the community consultation meeting held on February 13, 2014, are available online:

- [Presentation](#)
- [Port Lands Planning Framework – Display Boards](#)
- [Transportation & Servicing Master Plan – Display Boards](#)
- [Discussion Guide](#)
- [Discussion Questions](#)

If you wish to receive further information on the studies or be added to a mailing list, please contact:

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APPENDIX B: QUESTIONS OF CLARIFICATION

The following summarizes participants' questions (identified with 'Q') or comments (identified with 'C'), and responses from the project team (identified with 'A') during the Q&A session following the presentation at the Workshop. Please note this is not a verbatim summary.

C. I am concerned about the location of new bike lanes. It looks like they are being moved south and might interfere with access to the outer harbour.

Q1. When you say live/work communities, do you mean buildings that have commercial stores on the main level and residential units above? Because we know that if you integrate commercial and residential and other uses you have watchful eyes 24/7 and greater integration in terms of walkability.

A1. It could be a combination of vertical integration of residential and non-residential uses in one building or it could be primarily residential buildings with some non-residential buildings. One of the things we are trying to achieve is a variety of uses. We are considering different ways to incorporate the mix of uses, but have not yet specified the exact mix. We are trying to provide for flexibility.

Q2. Are the land use options based on research? Have you consulted with the film industry on how they forecast their future land use, and other possible industries that will use the area? It is difficult for the public to say how many acres you need for different uses, because we don't know how those industries see their own futures. If you have any of this research, please share it with us.

A2. We have had discussions with some stakeholders that are in this area, including Pinewood Studios and Windsor Salt. We've had meetings and information provided to us by the Toronto Port Authority. There is some background information. We came up with some initial ideas, and the land use categories are quite broad. We intend to do a more detailed evaluation of them as part of this process. We intend to come back out to the community with the findings of that evaluation.

C. I'm curious about the energy requirements that might be needed over the next 50 years by industrial, commercial and residential uses in the area. If we have intensification, we also need to keep enough land for energy production, preferably renewable energy sources. We need to ask existing parties to do some energy projections.

Q3. Would the bridges that go across the Ship Channel have to be able to open up for ships to get by?

A3. The bridges would have to allow ships through – either be able to open or be tall enough that ships can pass underneath.

Q4. Under the transportation options are you asking for our feedback on specific options, or an amalgamation of some of the options?

A4. Yes to the above. What would be helpful to us is for you to prioritize which of those options you would see as most suitable, whether that is a specific option or some combination.

Q5. In terms of transportation, you spoke about roadways and TTC over the Ship Channel, but I didn't hear anything about pedestrian bridges.

A5. All roads and crossings will consider active transportation needs (walking, cycling).

Q6. The options presented have differing assumptions for jobs created in the South of Eastern area, and it's widely varying. Why not make the same assumption for all options?

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A6. We are trying to test a range of employment intensification alternatives to help inform the transportation and servicing network. The types of employment uses and amounts are being explored as part of the other planning study for South of Eastern, and this study will ultimately help inform planning for the Port Lands. We are currently testing a range to see what the requirement may be.

Q7. For the modal split (80/20), does that include auto passengers?

A7. Yes. The modal split has to do with the number of auto, transit and active transportation trips. It is trip-based, based on the population and number of jobs.

Q8. There are planning applications that might preclude some of the transportation road networks – how does that work in terms of how we evaluate this?

A8. When we evaluate applications we take a look at whether there are opportunities to allow for additional street connections to go through the area. All of this will inform the consideration of options under the EA.

Q9. I heard you say earlier that there are contaminated lands in the study area. In any of the options being presented, is clean up expected? Or will employment and industrial lands not have to be cleaned up?

A9. If you are proposing to go to a more sensitive land use, the Ministry of Environment requires that the contaminated soil go through a Risk Assessment-Risk Management Process that could result in remediation of the lands or implementing risk management measures.

Q10. Regarding the mouth of the Don River and it being redirected, why is it not going straight down? Is this plan confirmed?

A10. The Don Mouth Environmental Assessment has been submitted to the province for formal approval. It has gone through an extensive process, and has been confirmed to be the preferred plan by the City.

Q11. What will the results of the consultation process be? Will the area be rezoned based on what the public wants to see and where they want to see it?

A11. We are not proposing to rezone the lands because it is such a large area, but instead make an amendment to the Waterfront Secondary Plan, the overarching policy document that guides redevelopment. In any planning process, public feedback is a key component, but a number of things need to be considered for informing the recommendations to City Council. It is very important to hear from the public and different stakeholders on what they would like to see in this area.

C. Our film studio has been working with the City in advising on the interests and evolution of the film industry. We did raise some concerns that the film studio industry is requiring less space now and also doesn't want to be based out of an Employment Park – we want to be part of a true mixed use community.

APPENDIX C: DETAILED FEEDBACK SUMMARY

A. Feedback from Facilitated Roundtable Discussions

1. Thinking about the four land use options for the future of the Port Lands...

a. Which land use option best captures your vision for the long-term revitalization of the Port Lands? Why?

Table 1

Option 1:

- Not responding to ship channel

Option 2:

- Turning Basin Park West

General comments:

- What does creative industry mean?
- Not sure we need this much area designated for the creative industry
- Creative hub needs to be nurtured slowly - do not want liberty village
- Balance employment with other uses
- Preserve character of the area

Table 2

Options 1 & 2:

- Issue with job allocation numbers?

Option 4:

- Concentrate live/work community to the west
- Better to have LD lands looking at another LW area
- Smaller film district suits their needs and allows for growth
- Allows for Port uses
- Residential more compatible with open space and recreational uses to the south
- Don't need to have industrial come down Cherry Street
- Should have a park around turning basin as outlined in another option

Table 3

General comments:

- Park south of ship channel
- Industry/port south of ship channel
- Residential south of ship channel
- Place high importance on parkland
- Soft edges along park edges – particularly around spillway and south of SC across
- Ship channel – keep enough land secured for port industries
- Waste transfer station must go
- How will bridges accommodate boats?
- Like the park adjacent to turning basin

Table 4

Option 1:

- Option preferred if waste transfer station stays

Option 4:

- Preference based on what happens to the heard 'use'
- Employment/Port – allows for expansion/flexibility of hearn site

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General comment:

- Safety issues of port uses was raised when considering future uses

Table 5

General comments:

- Like residential south of Trade Centre
- Bring residential use near Hearn (Option 1 or 3)
- Heritage is important – First Nations recognition in parks and trails
- Port use adjacent to TPA (Option 2 or 3) – need buffer between TPA and residential
- Use rail line between Hearn and Union Station – passenger trains
- Live/work south of ship channel is desirable but needs a buffer to TPA site + active railway along Unwin

Table 6

Option 4:

- Good balance of residences and employment opportunities
- Provides good access to water for residential areas

Questions:

- What industrial uses are there?
- Can they be moved/should they be moved?
- Is the contamination a constraint on land use and how would it be managed?

General comments:

- Keep shipping ability – Port function
- Turning basin as opportunity for public space, viewing shipping activities
- Need a good long-term vision

Table 7

General comments:

- Recreational must be allocated for in the consolidated area
- Park located at the turning basin
- Larfarge owns the land and has a lease which they are not willing to give up/change
- Keep ship channel – boat building company could be a nice idea to include along the channel
- Residential on south side links into the LDL
- Option 1 – residential on west side and industrial on the east

Table 8

Option 1:

- Transition from live/work to recreational
- Minimum port use
- Most employment
- Assuming only one option with South/Eastern development
- Transfer station needs to be moved because it generates too much traffic and not appealing to the residential areas proposal for that area
- Communities on both sides of the ship channel
- Wondering how a specific area could be dictated by industry: film, port, etc.
 - If it is required then we don't have a choice (i.e. if it requires a port, then it should be there – if not, then it shouldn't be there)

Option 3:

- Ties into bridge location, opens better accessibility for the uses depending on how often ships enter the channel

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General comment:

- Can't really differentiate all the options

Table 9

General comments:

- Concern about live/work south of ship channel - is it self-sufficient? Can they support schools and retail?
- Want more green space/playing fields south of the ship channel
- Want pedestrian paths on ship channel
- No waste transfer station is good
- Residential south of the ship channel is problematic
- Support for port use south of ship channel, but there are concerns about heavy truck traffic through residential areas

Table 10

Option 1

- The creative industry north of ship channel is important to the city – a new home for uses that were pushed out of other parts of the city
- In favour of more port uses

Option 4:

- Allows the flow of city to water from Cherry beach
- The Hearn is a cultural destination
- Park spaces
- Allan south of ship channel around the hearn - renewable energy source (wind/solar)

b. What improvements would you suggest we make to your preferred land use option? Why should these improvements be considered?

Table 1

Option 2:

- Make McCleary Park
- South of ship channel should be industrial

Table 2

- Rugby fields/ open space large enough to accommodate a variety of recreational uses
- Burying transmission lines is too expensive – look to innovative/unique ways to include wires
- Transportation and transit are key for whatever land use options - ensure the area is well served to move people without terminals
- Does turning basin need to be so big?

Table 3

- More linkages to south of Eastern
- Vision statement = theatre
- Ensure existing uses to outer harbour are maintained and celebrated

Table 4

Option 1

- Would need something other than residential and theatre use adjacent to hearn

Table 5

- Concerned about trucks travelling through neighbourhoods
- Implement noise mitigation measures on new Cherry Street buildings to deal with truck noise
- Plan for rail line to continue to service south of ship channel to hearn to TPA
- First nations recognition in a natural setting, not an urbanized setting

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- World Trade Centre at LDL

Table 6

- Like in all of the options the linear green space along the water
- Want more information
- Option 4 has a logical connection between energy generation
- Creative industries are more than film and can be compatible near residential areas
- Concerned that the waste transfer station won't be compatible with residential and may be difficult to move. Provides an important service.

Table 7

- More bridges are better – can be a beautiful feature
- Like Option 2 – employment is required with the residential
- Like Option 4 – having residential on the south side
- No single use for the hearn - it needs to have a number of uses (e.g. sports centre)
- Like Option 1 – recycle plan is in the middle. Commercial area could be added in this area
- Like residential closer to the water
- Challenge is having a self contained area off the grid and have it as a self-sustaining community
- Recreational uses (e.g. house boats)
- Needs to be kept as a working port
- Too much recreation could cause a problem for the port authority
- Water access should be for the public and not just people that live on the waterfront
- Water taxi's can be used to connect the public to the Island, etc.

Table 8

- An area of the Port Lands that is completely off the grid/ no cars are able to enter/ houses that do not use electricity or even cars
- Connections should connect the variety of areas, not just one
- Connect to Dundas Station as opposed to King

Table 9

- Not enough market research
- Not enough green space
- Consistent use south of ship channel
- Ensure there are appropriate connections
- Widen the Don Greenway

Table 10

- Hearn – use cooling facility to cool outer area or energy from waste facility
- District energy
- Thermal energy capture facility/storage heat loop and biogas facility at Ashbridges Bay and Toronto PL energy outer – using water to distribute heat

2. Transportation alternatives focused on east-west connectivity, north-south connectivity, connections across the Ship Channel and for establishing a transit network to support population and employment levels have been identified. Thinking about these different transportation alternatives...

a. Which alternatives do you prefer? Why?

Table 1

- Transit is imperative
- 80/20 modal split → what year? Are trucks factored in?
- If you cannot bring transit to QQ, what is the future?
- Consider higher order transit - Broadview and Relief Line

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- Consider industrial roads

Table 2

- Bridge access from Don Roadway – connect Port uses to Don Valley
- Need to have more transit routes loop through the site – no dead ends (terminals)
- Time bridge lifts to allow alternative traffic across the channel
- No major access across channel from film studio
- Pedestrian sources off Carlaw – E/W parallel to Lake Shore between Don Roadway and Bouchette

Table 3

- Unwin should be 2 lanes not 4
- Bike path south of Unwin is shown travelling through the out harbour clubs
- Bike paths throughout is important

Table 4

- Multiple bridges to separate truck traffic
- Has going under the ship channel been considered?
- Don Roadway connection across the ship channel to serve truck traffic, not for traffic through neighbourhoods
- Could Larchmont, Caroline or Winnifred be extended as a crossing over the ship channel?
- Like the direct connection to the Hearn

Table 5

- Saulter – spread out traffic between Bouchette
- Don Roadway connection may cause too much traffic
- Bouchette is preferable for Broadview extension and new bridge over ship channel. It should be a continuous route, halfway between Leslie and Cherry, creating a hub at the centre of film studio district
- Carlaw bridge over ship channel not feasible – new switch station and building will block connection to Unwin

Table 6

Broadview

- Firm opinions are tough in advance of Gardiner decision
- Don Roadway seems least desirable route
- Locate to service the widest number of people

East of Carlaw

- Larchmont might make more sense because closest to retail along Leslie

East/West

- Don't make Commissioner wider than it is already – already may be too wide for pedestrians

Table 7

- Transit first
- Some of the road connections are based on the outcome of the Gardiner
- Broadview needs to accommodate the north and south
- DRL along King Street (rail and bus)
- Not major differences between the various options
- Option 3&4 assumption is on higher populations
- The frequency of the transit can be adjusted to different times in the day

Table 8

- Do not like connection to Don and that should Connect Eastern without getting too close to DRP

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- Ship channel alternatives depend on whether or not community/residential space is developed south of channel
- Bridges may take away from the look of the ship channel
- Consider separate bridges for pedestrians/cyclists
- East-west seems wasteful for the water edge

Table 9

- Downtown relief line may ease pressure of system
- Consider traffic circles for continued traffic flow

b. Are there alternatives that we should not be considering? Why?

Table 1

- Bury the power lines for the ability to develop and for transit
- Like H.O.T for land use option 2
- Basin Street cannot go through private (fences in) lands

Table 2

- Reconfigure transmission towers to allow transit along Commissioner
- No high order transit to south of ship channel
- Centralize industry distribution centre for transportation efficiency

Table 3

- Consider traffic and parking south of ship channel
- More transit south of ship channel – LRT to Unwin
- Must accommodate industrial truck traffic on roads and bridges
- Pedestrian/bike roads

Table 5

- Make better use of rail line south of Unwin and between Union Station
- Consider passenger service on existing rail line – currently underutilized
- Show rail lines

Table 6

- More than one east-west route may be needed
- Use St. George St. as a precedent for street design
- Create a dedicated pedestrian and cycling bridge over the ship channel

Table 7

- LRT could be an option for transit, so car use can be reduced
- Transit structure is very important and should be the main priority
- North/South connections is dependent on the development
- East/West – something connected to Lakeshore as an option
- The finer the road work the better and provides easier access for the public
- Water taxi's as an option to connect people to the city and island.

Table 8

- Take King car and divert to proposed transit hubs
- Take Dundas over to downtown relief line
- Building/widening Commissioners street would have to be tasteful

Table 9

- Is an LRT South of the ship channel required?
- Will an LRT system be problematic with bridges?

3. Water, wastewater and stormwater management alternatives have been identified. Thinking about the servicing alternatives, which water, wastewater and stormwater alternatives do you prefer? Why?

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Table 2

- Stormwater treatment along commissioners if no LRT – not enough room for everything

Table 3

- Grey water reuse is a must
- Love the bioswales in centre of commissions
- Not supportive of treatment plant on west side of Don Greenway

Table 5

- Like bioswale concept on Commissioners Street

Table 6

- Interest in alternative approaches to stormwater management
- Would like more information on alternative stormwater management; it was only mentioned in passing
- Positive views of bioswales, permeable pavement and grey water reuse
- District energy! And seek opportunities for co-generation
- Native species plantings

Table 8

- Really like the hydro towers stormwater feature

Table 9

- Sustainable servicing (green roofs, etc)

B. Feedback From Individual Discussion Guides

Land Use Options

1. Thinking about the four land use options for the future of the Port Lands...

a. Which land use option best captures your vision for the long-term revitalization of the Port Lands? Why?

Option 3:

- Residential close to green; away from sugar/salt stock pile so they get to work as needed
- New green spaces for more people use

Option 1:

- Better use of waterfront
- More suitable for development of signature multipurpose projects

Option 2:

- Must be able to maintain port activities with respect to storage of salt/sugar at MTSI and be able to transport it by truck through the new residential mixed-use communities along Cherry

While I identify my preferred option below, I first wish to provide some context for my position.

I have significant concerns about all options - primarily due to the excessive development of one of Toronto's last opportunities to develop a great urban park. Given pending adjacent developments at East Bayfront, the 'Home Depot' lands at Lakeshore and Parliament, the Unilever site, etc., the Port Lands are situated adjacent to Toronto's future 'second core'. With some 15 million square feet of commercial development planned for the Unilever site alone, retaining a significant portion of the Port Lands for public spaces and parks will be critical to ensuring a long term sustainable and livable city. None of the plans contemplate any significant dedication of park space.

The additional green space contemplated for the mouth of the Don will be nice green space, but not functional space where residents from across the downtown core and east side of Toronto can utilize.

Promontory Park is an excellent use of the waterfront land west of Cherry St., but it in and of itself is not an adequate dedication of park space for this great part of the city - at most, it is a neighbourhood park. McCleary Park is also a well situated neighbourhood park, but fails to be the grand public space that Toronto needs and that the Port Lands offer the opportunity to create.

As a resident of Old Towne, I run through and visit the Port Lands almost every weekend during the summer. I have noticed that even without the development of East Bayfront, Uniliver and the northern Port Lands, existing park spaces such as Cherry Beach are already very well used. Adding the development expected for the downtown east side over the next 10-20 years will surely strain the ability of these existing parks and public spaces to accommodate the demands of residents.

While there is a significant area of 'green space' along the Waterfront, much of it should not be considered 'park' space as it is wild, and inaccessible. Even Tommy Thompson Park - which is probably the most innovative and forward thinking development on Toronto's waterfront - is not a 'park' in the sense that its wilderness state permits only certain types of activities.

What the Port Lands is missing is a great functional park space - akin to Trinity Bellwoods or, reflecting more grand ambitions, Central Park in NY. Given that most of Toronto's land area has already been developed, the Port Lands represents the last chance for a public project of such grand ambitions. The area could contain a variety of public outdoor uses, including a Botanical Gardens (think of Sydney), a band shell, outdoor amphitheatre, etc. None of the contemplated plans contribute much in terms of additional functional park space.

I would suggest that the land south of the Shipping Channel be preserved and repurposed for public space and parklands.

My reasons are set out below:

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1. The land is physically separated from the land north of the Port Lands, which makes future residential development of this area a risky proposition. Significant precedent exists in the field of urban planning to suggest that neighbourhoods that are physically cut off from adjacent areas are prone to developing into slums, ghettos or other types of neighbourhoods that represent undesirable long term outcomes. Despite efforts to create physical connections with additional bridges, the area south of the Shipping Channel will still suffer from too much physical separation to make it a viable residential or mixed-use area. Unlike CityPlace even, which is an intermediate step between Front Street and the Lakeshore neighbourhoods, there are no additional neighbourhoods linked to the south side of the lands south of the Shipping Channel.

2. While Cherry Beach, the playing fields, Tommy Thompson Park and other green spaces along the existing waterfront are great, the area lacks the open space type of parks that will be critical to ensuring high quality greenspace options for the people of the City. The best kinds of public green space are those that allow for different uses - wild spaces like Tommy Thompson Park to escape to, trails to run and bike through, and areas to congregate, relax and enjoy the outdoors.

Unfortunately, there is an inadequate amount of this latter type of space in all the land use options. Allowing for additional park spaces on the lands south of the Shipping Channel will turn the southern Port Lands into an amazing greenspace that provides visitors with a variety of types of greenspace uses.

3. The Port Lands is already, and will continue to become a destination for the City, not just the neighbourhood, and the current plans do not provide for adequate public space to allow it to accommodate the growth of the City over time. Promontory Park looks like it has the opportunity to become a great neighbourhood park, but the Port Lands provides an opportunity for the City to make a bold gesture - to demonstrate to the province, country and world, that Toronto values its public spaces.

4. Downtown Toronto has one of the lowest rates of park space per resident of many major Canadian and international cities, and the Port Lands represents the last opportunity to provide a large urban park that is conveniently located to emerging neighbourhoods in the City. As transit access to the Port Lands improves, it will allow for even greater access to the park space to be developed there.

Accordingly, in my opinion, Land Use Option 2 represents the best outcome if I had to select one of the four options. The rationale is that, while it puts the land south of the Shipping Channel to employment/port uses, these types of uses represent the best opportunity to preserve the land for future redevelopment and eventually re-purpose that land to be the great park and public space that the city needs. Once a medium or high density mixed-use community is developed on the land, it will be there for ever, and gone will be the opportunity for future redevelopment as public space.

My preferred solution - as I'm sure you have gathered by now - is to preserve the entirety of the lands south of the Shipping Channel for public parks and greenspace.

Option 1:

The creation of a large 'creative industry district' is a preference of mine. This area should be open to many light industry type uses that are displaced from other areas of the city (cabinet and furniture making; music practice studio places; workshops) because they are deemed too loud or dusty. While some of these may support the film business the uses should not be restricted to that industry exclusively.

The waste transfer station in this location is a strong asset for construction contractors and other businesses which make things which may have some scraps or waste to dispose of. Relocating it out of the core is a mistake that will increase traffic and dumping.

Option 2:

Seems to optimize live/work areas. The goal should be to optimize utilization of the waterfront park area. The live/work areas will provide people to use the park facilities and businesses such as

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restaurants and shops to support an active waterfront community.

Lands south of ship channel should continue to be developed as mixed port/park land. This makes use of the channel and consistent with existing sports fields and water sport clubs. No other location for water sport clubs identified in waterfront plans.

While understanding the value of true mixed use plans, where work, living and play are not segregated (the bane of 20th c. planning) the concentration of the live-work communities at the west end (Option 1) seems most appealing, with a critical mass of housing defined by its relationship to water (the Don, ship channel and inner harbour), closest to the city and probably most easily serviced by transit. The only challenge is the isolation of housing south of the channel (see b below).

And the reality of the port/employment district lands is that these are unlikely to be much different than the concrete or bulk material storage uses of the present, so who wants to see those across the channel?

Option 2 suggests little, if any, more in terms of creative industry area than is currently used by the film studios. If there is a use case, the extent shown on Option 1 seems better, especially as it would eliminate the less desirable housing areas against the Lakeshore east of the Don Roadway (Option 2 at least extends this community area to the channel, but in 3 and 4 it feels like an afterthought.

1. Please keep the area south of the ship channel a park or a mixed use park/port related activity.

Toronto needs green space for affordable entertainment just like our not-for-profit sailing community clubs are offering!

2. the position of the bike lane showed on page 9 of on the Transportation Servicing proposal should be running NORTH of our not-for-profit community sailing/rowing/windsurfing clubs.

Option 1:

I think the creative use makes a lot more sense than clogging the area with more commuters traveling by car (which, no matter what the transit options, will happen).

Option 2: (with modifications - see B)

I like the idea of an additional park area around the Turning Basin. I think it would attract people to see the ships turn around similar to watching planes take off and land at the airport.

Option 2:

Provides a good variety in the Film Precinct, while leaving the South of Ship Channel area for future economy leverage. See below.

The park in land use option 2 at the turning basin would offer chances for views across the ship channel and provide a focal point in the new community.

I suggest using Land Use Option #2 as a base.

A hybrid is a likely outcome, one in which the film sector could be a separate large or small area on one where the individual companies are integrated with the rest of the Port Lands Area. Much depends on their preferences, size and electricity needs.

Given this latter needs for electricity for all uses, I suggest that the area south of the shipping channel not be identified for residential development, I understand that the Hearn GS is on long term lease from Ontario Power Generation to a film company but that the large site is designated for power production. This could be the location for smaller energy/ distributed and renewable generation projects. These need not occupy the whole area of the Hearn GS but should not be ignored. It is better to anticipate this need that have to force fit it into the Port Lands Area at a later date. Also transmission links exist already with the Hearn site and the Port Lands Generating Station site.

Someone at WT should consult with the existing uses about their long term plans re expansion or shrinkage and their future energy needs. My reason for mentioning this is that energy provision should be part of infrastructure planning at an early stage. It can be keep loose but should not be ignored.

The rest of the land uses in option #2 are fine.

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A split decision: Number one because it has the least heavy industry along the water's edge and what there is, is located at either the west or east end of the development leaving the centre portion to live/work areas, creative industries, and recreation. Heavy truck traffic is limited to the outside edges and away from the centre. There is a better transition from live/work areas to recreational areas with this plan.

What I like about all of the other options is the development of the "south of Eastern" area as a high employment area. The potential for great transit to and through that area and then on to the Port Lands should be exploited to the fullest extent. Development there requires higher order transit, higher order transit needs that level of development; it is a perfect union of the two.

All look appropriate. As there appears to be limited differences, it is difficult to choose.

b. What improvements would you suggest we make to your preferred land use options? Why should these improvements be considered?

As a First Nation, would like to see any development that includes parks/trails/cycling to include recognition of First Nations as historic land uses through symbolism (e.g., art, greening, etc.).

You could incorporate "my moccasin" identifier and way finding ideas.

Years ago I submitted conceptual designs for a world trade centre type development encompassing multi-uses integrated into an overall development project on the north side of the channel east of Cherry Street or partly straddling south side of channel multi-use close to water; catalyst sites while preserving green area.

Improvements to be determined with respect to roadways/bridges and access to the port

As detailed in my response to (a) above, I suggest that development of the Port Lands be concentrated to the areas north of the Shipping Channel, and that all areas south of the channel be preserved for public spaces and parks.

While I suggest a 'park space', I think the vastness of this space allows for a variety of uses that can also serve as destination uses, such as a botanical gardens like in Sydney (to contrast with the natural beauty of areas like Tommy Thompson park), a band shell or outdoor theatre space or amphitheatre, etc.

Generally, there are a number of great outdoor public uses that could be envisioned as part of a focus on publicly accessible outdoor space.

Less exclusive Port areas. Some of these areas could also be light industrial or true live work where creative people may wish to be located and don't care about some noise or grime.

There should be public facilities for accessing the water. There are thriving rowing/sailing/boating/windsurfing communities already in the area that should not be ignored. The city should assist with providing infrastructure to support these activities.

The political hot potato of removing the port uses entirely or at least from the interior of the Port Lands should be considered. In my experience, the only regular marine traffic is to the Redpath plant (outside the planning area) and the cement plant on Cherry Street, which is being removed/relocated anyway. The use of the container depot west of Cherry and Unwin is minimal, but accessed from the harbour side in any event. The point is that the Shipping Channel is hardly ever used, and it would seem to make sense to turn it into a focus for people, not industry. It would also remove the impediment to adding an additional bridge crossing further east on the channel, aligned possibly with the Don Roadway, ensuring better connection to residential lands to its south. And the turning basin itself could be refashioned into an amazing lake. One final point - the water in the basin and channel is not the freshest, and extending a channel from the east end of the outer harbour to the turning basin could help encourage water flow.

Another approach, surprising in its absence, is the dedication of ALL of the area south of the shipping channel to park use. Assuming industry is moved out, as noted above, half of this expanse is already used for park or recreational purposes, would concentrate the built areas to the north of the channel

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and obviate the need for a new car bridge over the channel, arguably. In spite of comments above, the isolation of any development on the south side is a concern.

Again, the position of the bike lane showed on page 9 of on the Transportation Servicing proposal should be running NORTH of our not-for-profit community sailing/rowing/windsurfing clubs.

As little additional activity as possible other than park/recreational use south of the ship channel. You have the opportunity to build an amazing waterfront recreational destination, but you will only have one chance to do it. This is a very, very special place in the city and should not be overdeveloped south of the channel.

Add residential south of the Ship Channel as it is in Option 4 in order to enhance the southern wall of the Ship Channel and animate it. The Ship Channel should be a focal point as well as the river. The rest of the area south of the Ship Channel to the Hearn should be considered for employment - something that might compliment whatever is to be done for the Hearn.

Also, if the waste station remains in the northern section, it would be better to have some commercial on the west and east side instead of residential because who wants to live across from a waste depot?

I believe that the land uses near Lake Shore Blvd. should enhance connections to the city north of Lake Shore (south of Eastern). Particularly, along Carlaw, south of Eastern is the only residential pocket linking to the Port Lands, and this should be enhanced, not undermined, by building residential along Carlaw to the south. School, park and local-commercial amenities can link the areas together.

Similarly, with the First Gulf development proceeding at the Korex-Unilever site, a commercial node connecting along the new Broadview link and transitioning to mixed uses towards Don Roadway and south to Commissioners will link the Port Lands to the city more firmly along these axes.

I believe that the area south of the Ship Channel is best left as vaguely defined as possible. The "live-work" definition is best. It will be a long time before it is needed for residential, and in the meantime, economic opportunities may develop in a changing world economy that we should be flexible enough to accommodate in the area south of Ship Channel.

Any land use plan should emphasize connections between parks and open space to create a network of these spaces, including areas along the ship channel's waterfront edge. At present, the land use options do not indicate how certain planned parks, particularly in the community north of the ship channel, would accomplish this. For example, an expanded McClearly Park could connect with the turning basin park shown in land use option 2. On the same point, natural connections through parks and open spaces between the base lands and the spit should be strengthened to ensure this network of open spaces extends throughout this large site and across the ship channel in a cohesive manner for both movement of people and wildlife.

The land use plan should allow for several smaller and mid-sized open spaces along the northern ship channel edge rather than one linear public edge to provide spaces for different experiences along the water's edge.

The water's edge on the south side of the ship channel should remain as publicly accessible as possible while taking into consideration any employment uses that may need water access.

I am concerned about the bridges that may be suggested to connect the area to the north and the south of the shipping channel. Ship traffic may well affect the need for the bridges to open and be high. A reasonable height will be important for pedestrians and cyclists; frequency of opening will be an issue for all users (including transit, cars, trucks), so a regime or schedule of opening and closing may be necessary.

Because we will continue to have industrial uses south of the shipping channel, with a strip of waterfront the public will want to access, I suggest that creativity will be needed to make the transition user-friendly. Therefore I am hesitant to be specific about this area south of the shipping channel as its character could be varied as needs change.

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The presence of the transfer station degrades everything around it, I think that it even compromises the First Gulf plans for a new office campus. Relocated, rebuilt; something has to be done with it. Sorry, other than moving it closer to the Ashbridge's treatment plant I don't know where you will find a place for it.

I would recommend that the land adjacent to the eastern gap be an iconic building design to anchor the overall property and the view back to the city.

I also recommend that you include in your scope a bridge from this iconic building to Toronto Island. Toronto Island is largely unused during October through April given ferry system. This expands the waterfront and avoids a "dead-end" for bikers, runners and tourists. This could be a "toll" bridge to help fund, equivalent to the cost of the ferry or a ferry pass.

I would also ask if Toronto Island is within your scope. If outside your scope, I would appreciate a contact name so I can discuss this status.

As an example, by putting Toronto Island in scope, I see a further option to build a dock on the western side of Toronto Island allowing for a high speed ferry system to connect to the revitalized Ontario Place. This would connect the Port Lands to Toronto Island and Ontario Place (and vice versa) creating a dynamic route that would generate tourism.

Transportation and Servicing Alternatives

2. The transportation alternatives developed are about effectively moving people in, out and within the Port Lands and South of Eastern area. The alternatives include north-south / east-west connectivity alternatives, alternatives for crossing the Ship Channel and for establishing a transit network. Thinking about these different transportation alternatives...

a. Which alternatives do you prefer why?

Land Use Option 1, but I don't like the 90 degree turn of the DRL line at Carlaw and Queen very much Bouchette might service the live-work connections better

Bouchette is preferred as it connects right through

Of the alternatives presented in the presentation, I believe that the Higher Order Transportation plans for Land Use Options 3/4 represent the best solution. Given my view that Land Use Option 2 should be implemented (but ideally with park space and public uses south of the shipping channel), I think it is important to have streetcar transit (rather than buses) servicing Unwin Ave, which, in my mind, should be streetcar, pedestrian, bicycle, and only single lane (in each direction) vehicle traffic.

North-South Connections:

1. Off Broadview. I think that Broadview should connect to Bouchette and allow for a future streetcar line along that alignment, which would cross the shipping channel and into the parkspace that I hope will be implemented (along with the public uses in that space). It is important to allow the streetcar network to provide for a full loop through the Portlands, providing both east-west access as well as connectivity with the city north.

2. Shipping Channel Connections:

I think that the shipping channel connections should be provided at Don and Bouchette. Multiple connections across the channel will be important. If a streetcar access is provided at Bouchette and Cherry, then pedestrian/bicycle-only accesses could be provided at Don and Carlaw.

East-West Connections:

1. I think option B for the Basin street alignment is probably best given that the roadway will provide some separation between the mixed use developments north of it and the industrial uses of the shipping channel. I would, however, reconsider the awkward turn on Basin as it crosses Don. I would also ensure that there is a reasonably-sized public realm along the south side of Basin adjacent to the Shipping Channel.

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With respect to the road widening/improvement schemes, I would strongly suggest that the 'urbanized' plans be utilized. Street parking should be limited wherever possible, and 'Green P' parking required to be included as part of the mixed-use buildings in the area. Despite efforts to make the neighbourhood as transit oriented as possible, there will be the need to allow for some vehicle parking, and this is best accommodated off the streets.

Connecting Don Roadway to Unwin - for moving truck traffic away from Cherry straight up Don Valley
Pedestrian bridge at foot of Carlaw across shipping channel
Broadview to connect to Saulter and across channel. Light rail right on to Unwin
New E-W north of Lakeshore

1a. Seems to cause minimal disruption as it does not add crossings to the bike path or Lakeshore.

2abc. All look fine.

3ab. Extending the Don Roadway would provide quick access from the DVP or Broadview. Out of town visitors should be able to get to the port facilities easily.

4e. Is important since Unwin is currently awkward to drive.

Carlaw extension with Cherry bridge improvements would appear to best round out movement in and out. The bike/recreational trail should be to north of water sport clubs. Their activities requires secure water access.

All land use options except 2 would benefit from at least one additional channel crossing, assuming there is development south of the channel (but see above). Given the bias of most live-work development to the west end of the site, the Don Roadway bridge over the shipping channel seems to make the most sense, if you have to pick one and even if there is only parkland south of the channel. The E-W extensions don't seem all that vital beyond the existing roads and Basin St. would carve through existing and viable studios. The straightening of Unwin to skirt by the Hearn is interesting, but not essential.

The Don Roadway alignment extension is a great idea, although one wonder how it could be engineered to accommodate the DVP ramp north of Lakeshore. For that reason, the Bouchette extension across the Lakeshore works best.

The ridiculously short LRT ROW down Cherry St. should be extended as soon as possible to Commissioners and then run east. BRT makes little sense here unless it's a token BRT (exclusive lanes etc) and not a true ROW in which case, half the infrastructure for an LRT is already in place. The ideal world would be to extend the Harbourfront LRT along Queen's Quay where the BRT is shown, making easy streetcar access to the downtown, and not via King St.

The more connectivity the better. Servicing with good transit will hopefully reduce the impact of cars in the area.

I recommend as fine a street grid as possible with more streets and closer together than in the examples in the work book. The 504 streetcar, which will also service the West Don Lands, uses Broadview. I presume the TTC thinks it could share a line with the Broadview route into the Port Lands.

For the sites south of the Ship Channel to be successful they must not seem to be isolated or hard to reach. There should be as many bridges across the channel as possible with only one or two for private vehicles, the rest for bikes and pedestrians.

Can a streetcar/LRT cross a bridge that has to be lifted for large boats to pass under?

Use every conceivable means to discourage driving. The city of Zurich has a lot of clever ways to do this, besides having only one parking lot in the whole city as far as I could see. Traffic lights give priority to transit and only give cars enough time for 3 or 4 to go through at once; if a lot of people are stupid enough to drive they have to wait through more than one cycle. The big main shopping street has lots of transit lines but no other traffic at all. The port lands could do this: on transit streets have bike lanes and

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lots of pedestrian space but no private vehicles.

Despite unfortunate precedent in East Bay Front, keep the water's edge for pedestrians; give rear access to development along it for taxis, service vehicles etc.

There should be maximum use of water transport for people and goods deliveries to retail and other uses. One presumes vessels would have to be low and barge-like to minimise bridge raising. The Paris transportation system (RATP) has a batobus: www.batobus.com. You can use a regular transit pass for commuting or get a day pass for tourists. Also make maximum opportunity for recreational boating for tourists and people who don't own their own boats or belong to clubs.

So much depends on what happens with the Gardiner and the new proposed plans for the South of Eastern. I like the option of splitting Broadview to join with both the Don Roadway and Bouchette St and over the Ship Channel. I like Basin street jogging down to north of the ship channel. I also like the idea of a street running south of and parallel to Lakeshore.

The transportation and servicing frankly need to flow from the Land Uses, and the only comments necessary to add are simply to support active transportation, and to support innovative storm water solutions such as the treatment swale features in the central boulevard of Commissioners and at other locations at water's edge on the Ship Channel, where they can enhance habitat value.

There are too many alternatives; and possible, ship canal crossings to contemplate. What is needed is a larger transportation plan(transit, major arterial roads) that will appropriately support the final precinct plan overview.

For example, the City/Metrolinx needs to make a decision now as to whether the new east of Union Go station is to be located at Cherry Street or perhaps at the former Lever Brothers site9East of the Don Roadway).

Another example. It is the accepted "chattering class" that a downtown subway relief line is absolutely essential. Really, This should only be considered a possible option in the context of two distinct subway line CAPACITY problems, namely, the Yonge route and the Danforth route (Pape to Yonge/Bloor transfer point).

My main concern is that there not be too many streets or bridges. Walkways, cycle paths and transit routes should be more prominent.

Truck traffic related to industrial uses should be carefully restricted to certain routes.

I prefer a mobility hub combining GO trains, the DRL, the Broadview streetcar line, and possibly diverting the King car south to a new hub versus turning it north to the Broadview subway station. I prefer routing the Broadview car along Bouchette as this divides the area north of the Lakeshore and the Port Lands themselves more evenly.

b. Are there alternatives that we should not be considering? Why?

Current rail spur line not even reflected on Transportation and Servicing Master Plan connecting TPA/MTSI must be maintained and a part of the plan

The bicycle network should extend across all streets in the Port Lands, including Unwin Ave, Bouchette, and Carlaw

No cars / trucks on some bridges

It is important that roads and paths do not restrict access to the water for the recreational rowing/sailing/boating/windsurfing clubs. I am particularly concerned about a proposal for a bicycle path that will force boaters to compete with cyclists to access the water. Paths need to be North of boat clubs.

Not within these documents, although there is more detail on the transportation master planning document prepared by the City. Issues such as bike lanes and road design should be part of this discussion guide.

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I'm not sure I agree with multiple bridges over the ship channel, which will impact the very unique character of the area.

I don't think we would need Carlaw as well. Extending Basin Street through the film studios will not work.

Consideration should be given to establishing a light rail network to the east of Union Station similar to the network west of Union - Bathurst and Spading lines. This suggest a possible Queens Quay East extension up Parliament (or Cherry) streets; an extension of the Broadview car line into the port lands and/or the reopening and extension of the Coxwell alignment over to Leslie. Who knows. Such a new distributor network might actually mitigate/eliminate the east of Union capacity/crowding crunch

Please see my general comments above.

I think that running a new streetcar line down the Don Roadway is a mistake. It won't connect with a new mobility hub and it concentrates transit on the western side of the Port Lands.

I suggest you consider a four season maintained covered BikeWAY. The bikeWAY would be a feasible option for residents and employees to enter and exit the area and possibly reduce overall transit costs. This could be funded through a special license/membership ... or one time use payments.

The bikeWAY would connect bikers in this area to Union Station.

3. Water, wastewater and stormwater management alternatives have been identified. Thinking about the servicing alternatives, which water, wastewater and stormwater alternatives do you prefer? Why?

Proximity may be preferred or capacity issues may call for more flexible routing

I do not have a view on the optimal water/wastewater and stormwater management options

Grey water (untreated lake water) for toilets, irrigation and other process water is a fantastic idea

Grey water recycling is also a great idea to consider (at the building or block level, but supported by sewer infrastructure)

Incorporating wetlands and bioswales into parks looks promising. These approaches have worked well at Sherbourne and Cork Town Common.

Hard to assess the various options. Clearly, any approach that uses a landscape approach to stormwater management is preferable, but there's not enough info (feasibility, cost etc) to make a meaningful comment.

One issue not addressed in the document is the approach to be taken to remediate remarkably toxic fill that lies underneath the entire Port Lands, as far as I understand, a result not only of the industrial storage over the years, but the very composition of the fill itself (used coal from furnaces).

I have no preference, as long as it is green with an eye to the long-term future.

Find ways to recycle grey water, perhaps by extracting heat or recycling for toilets etc.

Have lots of public drinking water fountains and frisk people for bottled water.

Water - Alternative 3

Waste Water - Alternative 4

Storm Water - Alternative 1A

Other comments:

Land Use Option

- Residential 36,000 – great for rugby fields because of population growth. Balmy Beach Rugby Club (stakeholder).

I don't see any bike ways to/from the new Unilever transit hub. The abandoned spur line just east of the DVP/Don Roadway would work. It connects eastern to the lakeshore route.

Based on the tone of my above comments, one might infer that I am anti-development, a socialist, or generally a nutbar. I should state that I am not anti-development. I am generally fiscally conservative. I am not a nutbar. I am in favour of smart, well-planned development, but I recognize that great

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development should not be exclusively the domain of private, mixed-use developments. There is also a need for well-planned, ambitious development of public spaces and parks.

I would be happy to be more involved in this project, including assisting WT or the City in trying to further explore the proposed parkland solution for the lands south of the Shipping Channel. I am an experienced developer and financier of infrastructure and public-private partnership projects, and have worked on several important projects in the city, including bidding on the West Don Lands development for the Pan Am Village. I would be willing to lend my views, my voice and whatever talents I may have to assist in this effort.

I recognize that privatization of public lands has its place as a way to promote development in under developed areas, but I am of the view that the location and potential of the Port Lands, combined with the continued growth of the city, do not require us to privatize all of this precious asset in order to spur development. Development needs to be planned and coordinated to avoid private developers running wild, but that plan needs to be reasonable and reflect the unique nature of the Port Lands and recognize what an important asset it is to the City and its people.

I recognize that the land, once remediated, will have significant value, however, am sincerely concerned that the Port Lands represents one of Toronto's great and last land assets. The complete development of this area would be a tragedy for the future of the city, and we should do everything in our power to ensure that a great urban park space can be developed and preserved for Toronto and can serve our citizens for the next several hundred years.

There is adequate stimulus for private development in Toronto, and opportunities for development should be sought in areas that represent in-fill and other forms of redevelopment or re-use. Developing all of the last undeveloped land close to the core will represent one of the biggest mistakes that we can make in our generation.

Certain areas of the Port Lands should be considered 'pedestrian zones' from day one, with appropriate transit resources and car sharing resources at the perimeter. Areas should be substantial and in the range of 800m - 1000m square (with transit access in that zone)

The rowing/sailing/boating/windsurfing clubs have been making excellent use of these lands for years. The city should not exclude them from planning. In fact, the city could become involved by coordinating these groups to create a large mixed use facility or separate facilities with some common resources.

I love the community sailing clubs. It has changed my life since 2007. I live at Yonge and Eglinton and I am down at my "cottage" by the lake within 20 minutes. It is a slice of heaven - being part of a community that socializes on the water!!!

Having traveled to more than 35 countries and extensively throughout North America, I cannot emphasize enough the uniqueness of the Port Lands and especially the "wild" and deceptively remote character of the area south of the ship channel. Every effort should be made to preserve this and the wonderful recreational opportunities it provides, free of charge, to every Torontonians. More condos and store plazas would be absolutely detrimental. The activities should be limited to those of the port and the recreation needs of the city. We have few green spaces left to think about, and there's an opportunity to make this an amazing place.

This is a chance to do something special. Every effort should be made to get the whole area off the grid, ie self-sufficient in energy. It could use its own waste (collected in underground vacuum tubes) to produce energy as well as solar and perhaps even wind if there's a suitable spot. I don't suppose geo-thermal would work on that terrain though it might south of Eastern.

Ask in RFPs for LEED platinum buildings. Designate one site for a design competition for a zero-net energy mixed use building. Make sure all buildings have heat chimneys, that all except north-facing windows have retractable blinds, and all the other inexpensive low-tech things they do in Europe. Use roofs for food production and try to attract a freezing or canning company to locate nearby so that

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local strawberries and tomatoes are available in the winter.

Make maximum use of the channel and turning basin for recreational boating -- but provide no facilities for boats using engines.

My vision would be to have ferries running from Downtown, the Island, perhaps the airport to and from the Ship Channel (or the TPA terminal) as another transit source.

Investigate options for energy sources off the grid.

I would like to reflect upon the Port Lands Planning Framework. I have previously contributed commentary to the issues around the transportation and servicing master plan through participation in the public meetings and workshop.

The PLPF Draft Vision Statement is perhaps the most crucial piece to come from the framework exercise, since it will be central to any changes to the Central Waterfront Secondary Plan that may arise from this process. It is a good statement, building upon the four core principles of the CWSP.

I see three elements that need strengthening or clarification in the wording.

1) Commitment to enhancing the natural environment through a wildlife habitat framework. The CWSP speaks of promoting a clean and green environment, but I believe it is time to strengthen the commitment to repairing the web of life in this special part of the city. We have shown pictures of birds migrating over the Port Lands, and have completed an environmental assessment to naturalize the Don Mouth. But there is more. The broad area where the river meets the lake in the city is a place where amazing energy transfer happens naturally. The built environment should be designed not simply to minimize harm, but actually to improve the habitat value of the Port Lands. This plan is an opportunity to develop a cutting-edge framework that redefines how our city brings people and nature together for the benefit of both.

2) Diversity can be enhanced through a multi-generational planning approach. The "8 80 Cities" approach of planning with particular reference to the very young (8-year olds) and the very old (80-year olds) is very potent. Diversity is Toronto's strength, and we seem to do well at planning for diversity of cultural backgrounds. Planning to accommodate the aging population and looking for inspiration to the needs of a generation that is inheriting our challenged world will help to consolidate the diversity of our city on-going.

3) A stronger cross-sector employment/industrial strategy is needed. We acknowledge the industrial past, take inspiration from the working port and support the creative industries, but again, there is more. Potentially, we could build an employment hub, particularly if the area south of the Ship Channel would be defined at this point in the broadest, most general terms. In a rapidly changing world economy, it seems that a large area such as south of Ship Channel, with access to energy and a variety of transportation modes, could be a catalyst for Toronto to explore a broader employment strategy. We need to plan the Port Lands for a variety of species, for a variety of stages of life and for new and variable economic conditions.

The CWSP speaks of promoting a clean and green environment. While welcome this is a very limited vision. We need to apply a landscape ecology perspective to the precinct planning exercise with a view to enhancing the ecological integrity of the entire area. The built environment should be designed not to just simply in order to minimize harm (the traditional EA focus) but it should also be proactive; that is to also actually improve the habitat value of the Port Lands. (more than just street trees) This plan could be a template to show how human activity and nature come together for the benefit of both.

WT and your consultants have done an excellent job in searching out and identifying alternatives. I trust the process and am a great supporter of the current activity. As an ex-City of Toronto planner and an ex-electricity planner, I greatly appreciate your work and the opportunity for consultation that is being offered.

I am assuming that any land reserved for heavy industry along the waterfront is for industries that

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actually require a dockside location, that require shipment by water. I recognize the city's need for port facilities but do not think that any property bordering on the waterfront should be surrendered to any use that does not actually require it.

Other than bridges and boardwalks I don't think that we should allow any built form on the greenway or the new naturalized river channel. That is the principal attraction to this area and if we lose sight of that and begin to see it as just more vacant land upon which we may build anything then the enterprise is compromised to the point of being soon lost.

Early in the development might we encourage some development that is "off the grid". If it can be shown to work early on, then maybe it will encourage more of the same as the project progresses.

The First Gulf press releases are claiming employment opportunities for 70,000 people. Are they all going to go home every night? Is it going to be deserted every night? Do we have to allow some residential development in this area to balance things out?

I am happy to speak to any team member re ideas above. As noted, at minimum, I would like to speak to the person who may have the ability to address by questions regarding Toronto Island.

I am a Mississauga resident, but a frequent visitor to the area.

I see this opportunity as GTA-wide, in fact, Canada-wide civic pride project, and look forward to hearing from you.

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C. Additional Feedback Received via Email

Friends of the Spit

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BY EMAIL AND MAIL

19 March 2014

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100 Queen Street W., 12th fl. E.
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M5H 2N2

Re: Port Lands Planning Framework and Transportation and Servicing Master Plan

Dear Mr. Campbell and Ms. Keesmaat,

As you know, Friends of the Spit continue to participate in the Stakeholder Advisory Committee meetings relating to the planning of the Port Lands. This year, we participated in the February 3rd SAC meeting and the Public Meetings and Workshops of February 13th and March 5th.

This letter is intended as a companion to our correspondence of February 10th, 2014, and our prior commentary "Parkland in the Port Lands" from May 31st, 2012.

Unfortunately, the four Land Use options presented at the recent meetings were underwhelming to us. The creative genius of large-scale planning achieved at the Don River mouth has seemingly not continued on to the rest of the Port Lands. A great opportunity might be lost.

The Draft Vision Statement introduced at the March 5th meeting, in response to the public's call to "state the vision", is really a Statement of Core Values, and as that goes, it is good – no one can argue with those sentiments!

We had expected a BOLD VISION, in line with the Don River Vision, that would, as the November SAC meeting notes mentioned, provide a "distinguishing character and identity", to which we would add "for the centuries to come...".

To us, it is obvious that a Bold Vision for the Port lands would start with its assets:

- park space,
- Lake Ontario,
- the Shipping Channel,
- and the revitalized Don River mouth.

One of WaterfrontToronto's executives mused aloud at the lectern on February 13th as to "how to leverage assets such as parkland". Within that lexicon, it is easy: create the largest amount of parkland possible south of the Ship Channel, and then develop the lands north of the Ship Channel to profit (financially and physically) from the immediate proximity to a wonderful magnificent park south of the Ship Channel.

The vision we promote would see the Don River mouth and precinct connected to the Spit and Baselands by a large green swath of parkland; this parkland would join and include Lake Ontario Park, and would extend in a broad band past the Baselands and the Spit entrance, and extend north on Leslie Street to Lakeshore Boulevard.

This visionary proposal would raise the Ship Channel from obscurity to the paramount feature of development in the Port Lands.

We are dismayed by the resistance to this Bold Vision concept by the planners, and further dismayed by what we feel is a short-sighted view of the City and its needs 50 or 100 years from now. In the early 1900's, schemes were advanced for large scale parks in this area; now is the time for our City to dedicate park space for the next century.

In terms of this current planning exercise (and there does seem to be one every 5 years or so), we can only promote and select the Land Use Option which would still allow for the creation of this large park.

Land Use Option 2 primarily fulfills this goal: it maintains the south dockwall uses of the Ship Channel, and allows the port uses to continue. If and when these uses disappear, or evolve to other areas, then the lands would be turned over to parkland. We envision that our definition of parkland is one of green space encompassing uses from active recreational ones (soccer fields, ball diamonds) through to the passive recreational uses evidenced at the Spit.

Returning to our February 10th letter, we still have been given **no compelling reasons to develop the lands south of the Ship Channel**. The technical, structural, and infrastructure problems are all still present and militate against any cost-effective development. Residential development is totally inappropriate for these lands.

We are also troubled by the unexplained urgency to designate lands south of the Ship Channel for development. There is so much “capacity” for development north of the Ship Channel that land use designations for lands south of the Ship Channel should simply acknowledge the existing uses, and establish a “holding zone”.

When we reviewed the land use options presented by staff, it was apparent that so much hinges on the relocation of the Waste Transfer Station, or conversely, its accommodation within the development. Our vision for parkland, particularly south of the Ship Channel, stands irrespective of the location/relocation of the Waste Transfer Station.

Land Use Option 2 illustrates a new park at the northwest side of the turning basin: a fine idea. This park in turn should be connected to a publicly accessible Ship Channel waterfront promenade the full way around, breaking only on the south side to accommodate the shipping and employment uses (Friends has advocated for this since the early days of the PEC CLC. !)

Within Land Use Option 2, Unwin Avenue should be maintained as two lanes (there is absolutely no need to make it a 4 lane arterial road!!); and Unwin should be realigned in the area of the Hearn and circulating channel to the northerly route depicted in the options.

All four options now show the full greening of Leslie Street on the west side, south of Commissioner’s. We applaud the staff for reacting to SAC comments and making this change.

In all four options, the pedestrian and cyclist bridges spanning the Ship Channel become the really important North-South connectors. The construction of these bridges will mean success for the park land.

We noted that the Don River spillway at the Ship Channel will have a “soft edge” (for wildlife access). A corresponding “soft edge” have to be created at the south side. This means that a small segment of the overall south dock wall will have a different character.

Coupled with this, we noted integrated stormwater management structures planned for the south side of the Ship Channel. It would make enormous sense to site these with park space uses, not with dense urban housing.

Along Commissioner’s, the hydro wires should be buried.

Finally, acknowledging that people will drive to this area (as well as take the improved transit), we refer you to past letters where we suggest that the north-of-Ship-Channel development agreements all contain clauses that open their parking areas to weekend and off-hours parking by park enthusiasts. This same concept for weekend and off-hours parking could be employed for the industrial use parking lots south of the Ship Channel.

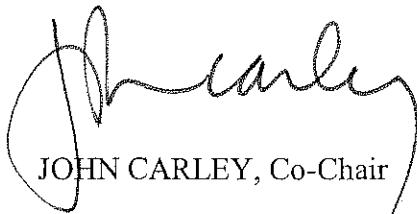
Returning specifically to Land Use, and the designation of the Port Lands south of the Ship Channel: we advocate that the current open space/parkland land use designations be maintained, and that current port employment lands be maintained as the Port/Employment District lands, as that designation offers the greatest and best economic possibility for future conversion to parkland land use.

Do alter your planners' course, do continue and strengthen the Don River vision, and step boldly ahead a century. The creators and protectors of the Port Lands Park will be lauded!

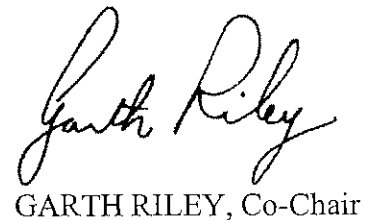
Yours sincerely,

FRIENDS OF THE SPIT

per:



JOHN CARLEY, Co-Chair



GARTH RILEY, Co-Chair

cc. Councillor P. Fletcher, City of Toronto
B. Denney, TRCA
M. Wilson, Chair, Waterfront Toronto
Other interested parties



TORONTO



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**Shaping the Future:
Placemaking in the Port Lands + Connecting South of Eastern
Community Consultation Round #3 Summary Report**

Prepared by Lura Consulting for:
The City of Toronto and
Waterfront Toronto

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This report was prepared by Lura Consulting, the independent facilitator and consultation specialist for the Port Lands Planning Framework and Transportation and Servicing Master Plan. If you have any questions or comments regarding this report, please contact:

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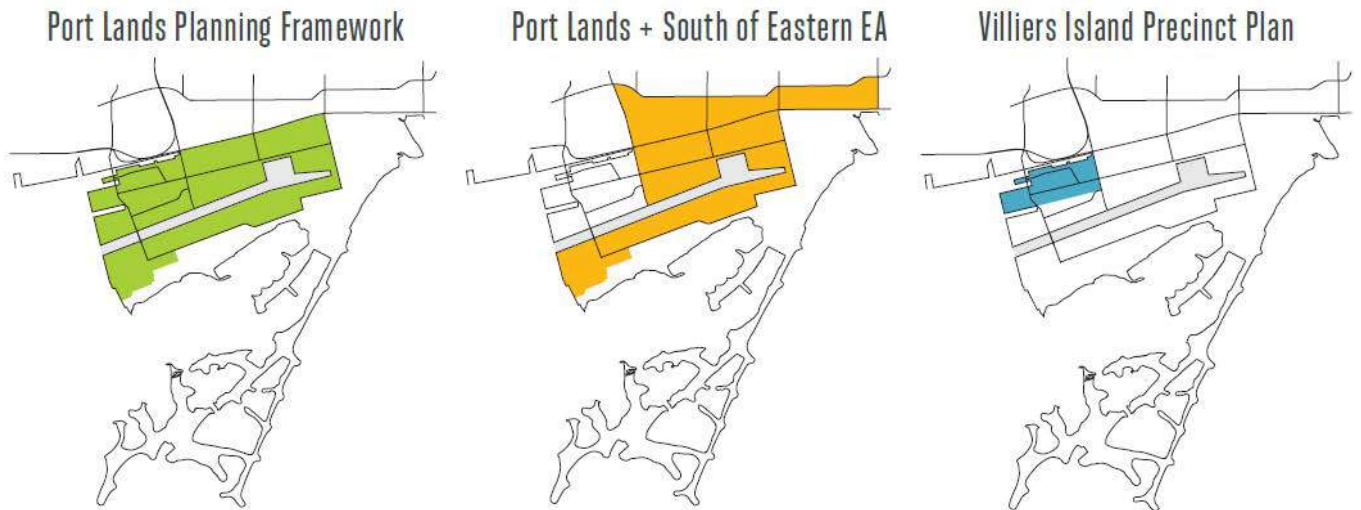
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1. Introduction

Background

Three major planning studies led by the City of Toronto and Waterfront Toronto, with the Toronto and Region Conservation Authority (TRCA), to guide the long-term revitalization of the Port Lands and better connect the Port Lands and South of Eastern areas are nearing completion. Emerging from these studies are three plans:



Port Lands Planning Framework: The Port Lands Planning Framework builds on the Central Waterfront Secondary Plan to provide more robust direction for the long-term transformation of the Port Lands. The Framework continues the work completed as part of the Port Lands Acceleration Initiative that was adopted by City Council in 2012 and integrates the planning work completed for the Lower Don Lands and the naturalized mouth of the Don River.

Port Lands + South of Eastern Transportation + Servicing Master Plan: A Master Plan under the Municipal Class Environmental Assessment (EA) process is being developed in parallel with the Port Lands Planning Framework to identify the street and transit network and municipal servicing required to support future revitalization. The Master Plan applies to most of the Port Lands and to the area referred to as “South of Eastern” (located north of Lake Shore Boulevard East, south of Eastern Avenue, between the Don River and Coxwell Avenue). The Master Plan will provide a coordinated transportation and servicing strategy to connect the two areas.

Villiers Island Precinct Plan: Detailed planning work is being done to create a vibrant mixed-use area in the Villiers Island Precinct (formerly known as Cousins Quay).

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The studies have been developed simultaneously in three phases, with extensive stakeholder and public consultation throughout the study process:

- Phase 1 focused on background research;
- Phase 2 involved developing a long-term vision for the revitalization of the Port Lands and land use alternatives to test and evaluate; and
- Phase 3 focused on developing recommendations.



For more information on each of the planning studies underway in the Port Lands, including consultation materials and reports, please visit: www.portlandsconsultation.ca.

Purpose of Consultation and Engagement Activities

The City of Toronto, Waterfront Toronto and TRCA recognize the importance of engaging stakeholders and the public to provide opportunities for feedback throughout the study process. As such, the consultation program was designed to:

- Build on the robust consultation approach undertaken as part of the Port Lands Acceleration Initiative;
- Raise awareness of the continued planning efforts underway in the Port Lands, mobilize interest, and encourage broad participation;
- Meet the public consultation requirements of all regulatory regimes within which the City of Toronto, Waterfront Toronto and TRCA operate, including those of the *Planning Act* and Municipal Class EA;
- Present information in a manner that fosters an understanding of the emerging plans and provides opportunities for meaningful dialogue that embraces different perspectives;
- Solicit input from the public and stakeholders at key points in the planning process to assist in the development and refinement of the plans; and
- Identify and work towards common ground, ultimately building trust and support for the recommendations that will be contained in the final plans.

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Consultations held during earlier phases of the study were valuable and helped shape the emerging plans. The first round of public consultations was held between November 21 and December 12, 2013, and engaged over 100 individuals and 24 stakeholder groups. A second round of consultations took place from February 13-28, 2014, and engaged over 130 individuals and 24 stakeholder groups. The third round of consultations was held from September 28 to November 27, 2015 and generated participation from over 290 individuals (3,836 with online activities included) and 24 stakeholder groups.

Overview of Round Three Consultation

Round three of the consultation process included multiple opportunities for participation facilitated through several complementary face-to-face and online mechanisms including: Stakeholder Advisory Committee meetings, Land Owners and Users Advisory Committee meetings, an Industry Users meeting, a day-long open house followed by two evening workshops as well as web-enabled consultations, and social media.

A review of the input received reveals common themes, concerns and viewpoints brought forward by the project's stakeholders and members of the public. This feedback will be used to refine the emerging plans and inform the next phase of the planning process and related consultation activities.

Report Contents

This report provides a description of the consultation activities undertaken during the third phase of the consultation process for the three planning studies, as well as a summary of the feedback received. Section 2 provides an overview of the consultation process, the various consultation approaches used to reach and engage different audiences, and the communication and promotional tactics used to encourage participation. An overview of the feedback received is organized thematically by discussion question in Section 3, and Section 4 outlines next steps in the planning process.

2. Round Three Consultation Process Overview

To fulfill the objectives of the consultation program, a multi-faceted approach targeting key stakeholders and the general public through complementary communication, promotional and engagement tactics was adopted. A range of consultation activities was implemented to provide multiple opportunities for public participation as part of an inclusive and transparent consultation process.

Communication and Promotional Tactics

Community Mail-Out

Approximately 550 post cards with details about the open house and workshops were mailed to interested parties through Canada Post on October 30th, 2015. The distribution area included the Port Lands study area, plus the surrounding area bounded by Queen Street East to the north, the Don River to the west, and Coxwell Avenue to the east. An additional 1,000 post cards were dropped off at community facilities (e.g., Ralph Thornton Centre, Jimmy Simpson Recreation Centre) near the Port Lands.

Online Presence

The [project website](http://www.portlandsconsultation.ca) (www.portlandsconsultation.ca) continued to serve as a landing spot for information about current initiatives to revitalize the Port Lands as well as consultation events. The site includes a comprehensive overview of the planning studies, relevant documents and resources, information about consultation events and opportunities to participate online.

Webpages on the [City of Toronto](http://bit.ly/1lfmCMi) (http://bit.ly/1lfmCMi) and [Waterfront Toronto](http://bit.ly/1QYTeXq) (http://bit.ly/1QYTeXq) websites also provided additional background information about the projects and upcoming public consultation events.

Social Media

City of Toronto and Waterfront Toronto Twitter accounts – @CityPlanTO and @WaterfrontTO – were used to increase awareness about the public consultation events and to encourage broad participation. The project hashtag #PortLandsTO was also used on all tweets to promote and track discussion.

Public Notice/Invitation

A save-the-date notice was included in the October 2015 edition of Waterfront Toronto's newsletter, News from our New Blue Edge, which was emailed to over 6,800 subscribers and is available on Waterfront Toronto's [website](http://bit.ly/1qx40br) (http://bit.ly/1qx40br).

A formal public notice was published in Metro News and the Beach-Riverdale Mirror on October 30th, 2015 and November 1, 2015 respectively to promote awareness of the public consultation events. A copy of the public meeting notice is available on the [project website](http://www.portlandsconsultation.ca) (www.portlandsconsultation.ca). Members of the Landowners and Users Advisory Committee (LUAC) and the Stakeholder Advisory Committee (SAC) were sent a copy of the public notice via email.

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Notice to First Nations

A formal notice was also circulated to First Nations and Aboriginal communities, inviting participation in this round of consultations, as well as providing information about additional opportunities to provide feedback.

Consultation Resources

Several resources were developed to facilitate participation during the third round of consultations. These resources were made available at the open house and workshops, and subsequently posted on the project website. A brief overview of each resource is provided below.

Discussion Guide and Discussion Questions

A Discussion Guide was developed to provide participants with information about the purpose of this round of consultations and included an overview of the work completed to date, details about upcoming consultation events as well as instructions on how to participate online. A copy of the Discussion Guide can be found on the [project website](http://www.portlandsconsultation.ca) (www.portlandsconsultation.ca). Included in the Discussion Guide was a series of Discussion Questions enabling participants to provide feedback on each of the emerging plans.

Online versions of the Discussion Questions were available on the project website from November 15-27, 2015, for the public to provide comments and feedback to the project team following the open house and workshops.

Presentations

Five presentations were developed for delivery at the open house, information sessions and workshops, including:

- [Overview Presentation](http://bit.ly/1T6dW8X) (http://bit.ly/1T6dW8X)
- [Vision + Urban Structure](http://bit.ly/1TkWP3R) (http://bit.ly/1TkWP3R)
- [Character + Place](http://bit.ly/1QpnXbF) (http://bit.ly/1QpnXbF)
- [Transportation + Servicing](http://bit.ly/1RDKYKm) (http://bit.ly/1RDKYKm)



Figure 1: Discussion Guide.

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- [Villiers Island Precinct Plan](http://bit.ly/1QJ2FFa) (<http://bit.ly/1QJ2FFa>)

The presentations provided participants with an overview of the work completed to date as well as details about each of the emerging plans. The presentations delivered at the open house were filmed and posted to Waterfront Toronto's YouTube channel to further encourage participation. Videos of each presentation are available on the [project website](http://www.portlandsconsultation.ca) (www.portlandsconsultation.ca).

Open House Display Boards

Fifty-one (51) boards were displayed at the open house providing participants with an overview of the planning process as well as specific details about each of the emerging plans. Boards corresponding to the topics of each workshop were also displayed at those events. Links to PDF versions of the boards are provided below and organized by topic area:

- [Overview](http://bit.ly/1LSJd7R) (<http://bit.ly/1LSJd7R>)
- [Vision + Urban Structure](http://bit.ly/1Lu2Vfl) (<http://bit.ly/1Lu2Vfl>)
- [Character + Place](http://bit.ly/1T6efki) (<http://bit.ly/1T6efki>)
- [Transportation + Servicing](http://bit.ly/1ngBkCl) (<http://bit.ly/1ngBkCl>)
- [Villiers Island Precinct Plan](http://bit.ly/1T6egEM) (<http://bit.ly/1T6egEM>)

Topic Specific Handouts

Four two-page handouts for each information session, consisting primarily of maps and conceptual images for each emerging plan was developed to supplement the Discussion Guide and circulated to participants at the open house and workshops.

Workshop #1 Maps

Two large maps, one featuring the Land Use Direction and the second depicting the Vision and Urban Structure of the Port Lands Planning Framework, were provided on each table at Workshop #1 with post-it notes and markers to encourage participants to comment or suggest refinements directly on the plans.

Consultation Activities

The consultation program for Round #3 included the following events and activities:

Villiers Island SAC/LUAC Meeting

Landowners and users as well as representatives of key interest groups and community associations were invited to a combined Stakeholder Advisory Committee and Landowners and Users Advisory Committee meeting on September 28, 2015 at Waterfront Toronto's offices. The purpose of the meeting was to present the preferred Precinct Plan for Villiers Island and obtain

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feedback. The meeting format consisted of an overview presentation, followed by a question and answer period, and a facilitated discussion about the material presented.

A summary of the Villiers Island SAC/LUAC meeting is available on the [project website](http://www.portlandsconsultation.ca) (www.portlandsconsultation.ca).

Port Lands Planning Framework Land Owners and Users Advisory Committee (LUAC) Meeting

A meeting with landowners and users was held on November 4, 2015 at Waterfront Toronto's offices. The purpose of the meeting was to present and receive feedback on the emerging plans in preparation for the upcoming public consultations. The meeting format included an overview presentation, followed by a question and answer period, and a facilitated discussion about the material presented.

A summary of the PLPF LUAC meeting is available on the [project website](http://www.portlandsconsultation.ca) (www.portlandsconsultation.ca).

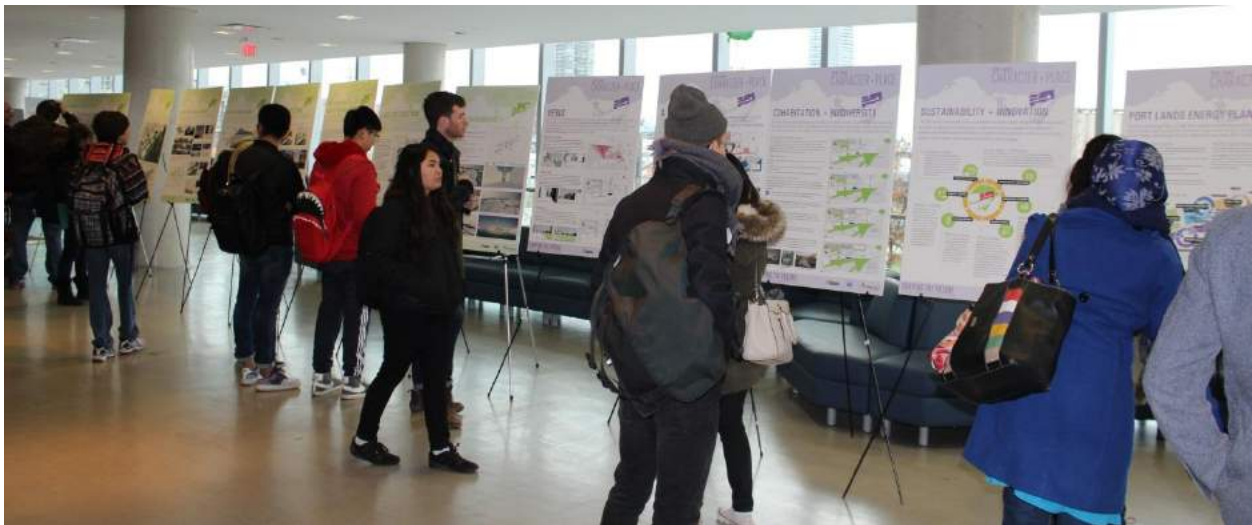


Figure 2: Open House participants viewing the display boards. Source: Waterfront Toronto.

PLPF Stakeholder Advisory Committee (SAC) Meeting

A meeting with key interest groups and community associations was held on November 5, 2015 at Metro Hall. The meeting was held to present and receive feedback on the emerging plans in preparation for the upcoming public consultations. The format of the meeting consisted of an overview presentation, followed by a facilitated discussion about the material presented.

A summary of the PLPF SAC meeting is available on the [project website](http://www.portlandsconsultation.ca) (www.portlandsconsultation.ca).

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Open House

This round of public consultations was organized as a two-step process. Step one consisted of an Open House held on Saturday, November 14, 2015 at George Brown College (Waterfront Campus, 51 Dockside Drive). The open house format featured the display panels in a large central area with content experts available to answer questions, and a program that included identical morning and afternoon sessions. Each session began with a Welcome and Overview presentation to provide an update on the work completed to date and to outline the format of the four information sessions (each information session was repeated four times in the morning and four times in the afternoon) on the emerging plans:

1. Vision + Urban Structure;
2. Character + Place;
3. Transportation + Servicing;
4. Villiers Island Precinct Plan.

Open house participants were informed of the two evening workshops that were held during the week following the open house, as step two of the consultation process, to provide additional opportunities for public comment and feedback.

A summary of the discussion captured after each open house information session presentation is included in Appendix A.



Figure 3: Overview presentation at the Open House. Source: Lura Consulting.

Workshop #1

Workshop #1 took place on Tuesday, November 17, 2015 at Morse Street Junior Public School (180 Carlaw Avenue) and consisted of a short overview presentation followed by presentations

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and facilitated roundtable discussions focusing on the emerging plans for the Port Lands Planning Framework and Villiers Island Precinct Plan (Topics 1, 2 and 4).

Feedback received at Workshop #1 is included in Appendix B.

Workshop #2

Workshop #2 was held on Wednesday, November 18, 2015 at the Toronto Fire Academy + EMS Training Centre (895 Eastern Avenue) and included a short overview presentation followed by presentations and facilitated plenary discussions focusing on the Port Lands and South of Eastern Transportation and Servicing Master Plan EA and preferred solutions (Topic 3).

Feedback received at Workshop #2 is included in Appendix B.

Online Engagement

In parallel with the face-to-face consultation activities, online options were also available to facilitate and encourage broad participation. An overview of the tools used to encourage online participation is provided below:

- Videos – YouTube videos of the Open House presentations were uploaded to the [project website](http://www.portlandsconsultation.ca) (www.portlandsconsultation.ca) to provide context to the online discussion guide and questions.
- Online Discussion Guide and Discussion Questions – An electronic version of the Discussion Guide and Discussion Questions was made available on the [project website](http://www.portlandsconsultation.ca) (www.portlandsconsultation.ca) enabling stakeholders to review the information and provide feedback online.
- Social Media – Twitter was used to provide real time updates of the proceedings at the open house and workshops. The project hashtag #portlandsTO was used on all tweets to promote discussion. The City and Waterfront Toronto also tweeted following the open house and workshops to encourage the public to provide feedback online.
- Email – Stakeholders and members of the public were also invited to submit feedback through email, either through info@waterfrontoronto.ca or portlands@toronto.ca.

Feedback received via the online discussion guides is included in Appendix D, while additional written feedback submitted by participants is available in Appendix E.

Summary of Participation by Activity

Over 290 individuals (3,830 with online activities included) participated in this round of consultations between September 28, 2015 and November 27, 2015. The following table summarizes the number of participants by consultation activity.

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Table 1: Summary of Participation

Consultation Activity	Number of Participants
Villiers Island SAC/LUAC Meeting	17
Port Lands LUAC Meeting	18
Port Lands SAC Meeting	11
Open House	150
Workshop #1	55
Workshop #2	45
Online Presence	
<ul style="list-style-type: none"> • Project Website • Waterfront Toronto Webpage • City of Toronto Webpage • YouTube Videos • Emails • Letters • Online Discussion Questions Submissions 	<ul style="list-style-type: none"> • 1,709 users (between Sept. 28-Nov. 27) • 550 (between Sept. 28-Nov. 27) • 318 (between Sept. 28-Nov. 27) • 926+ views • 5 • 4 • 28
Total	296 (in-person) 3,836 (in-person and online)

3. WHAT WE HEARD

Feedback was received through facilitated discussions at advisory committees, the open house and workshops as well as hard-copy and electronic submissions of the Discussion Questions. In addition, a number of comments were also submitted by email and letters to the project team.

A summary of the feedback is presented below. The summary provides a high-level synopsis of recurring comments, concerns and/or recommendations from consultation participants. Detailed summaries of feedback from in-person and online consultation activities are included in the report appendices.

Summary of Participant Feedback

The following points highlight the key recurring comments, concerns and/or advice which emerged from the consultations.

Vision + Structure:

- Support was expressed for the overall vision and urban structure, specifically the focus on:
 - enhancing connectivity between the City and the Port Lands through new north-south and east-west connections;

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- the creation of an integrated core grid that is human in scale;
- water and the waterfront as well as the distribution of greenspace throughout the framework.
- Recurring concerns and suggested refinements emphasized the need to consider additional north-south and east-west connections, further reducing some of the block sizes and enhancing water-based connections between the Port Lands and the Harbour, Toronto Islands and the Leslie Street Spit.

Character + Place:

- There was broad support for the character and place elements of the emerging plans. Recurring comments highlighted positive perspectives toward:
 - the types of uses and the mix of uses in the preferred land use direction;
 - the built form approach, which supports other framework objectives (e.g., protecting view corridors);
 - the inclusion of biodiversity and sustainability in city building processes; and
 - the inclusion of an affordable housing target in the plans.
- Recurring concerns and suggested refinements underlined the need to integrate a broader mix of uses within precincts and buildings, ensure compatibility between sensitive uses and existing industrial uses and increase the proposed residential population as well as community infrastructure to animate the area.
- A key concern and the subject of varying opinion is the issue of maintaining Lafarge's cement operations on Polson Quay. Lafarge would like its operation to be recognized as an existing and permitted use, while comments from community stakeholders suggest that the plans should reflect long-term aspirations for South River and Polson Quay's transition into a vibrant mixed-use community.

Transportation + Servicing:

- Participants are also generally supportive of the transportation and servicing elements of the plans, particularly the proposed transit, cycling and pedestrian network and the new approach to managing stormwater.
- A key concern and suggested area for refinement under this topic is the preferred alignment for the Broadview Extension. While there is agreement that an extension is needed to enhance connections to the Port Lands, a range of views was expressed about the preferred alignment. Many participants voiced support for the diagonal "spine" which provides views to the Hearn; there were also a few participants who felt that the diagonal alignment is not practical. Other participants expressed concerns about the impact of the southern segment of the alignment on: privately-owned properties, particularly south of Commissioners Street and properties within the

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McCleary District; future plans to redevelop these properties, and; potential improvements to transit service, and connections to destination areas near the Port Lands.

- Another key area that should be refined, based on participant feedback (particularly from industry), is the strategy for goods movement to ensure it supports the needs of existing industrial uses. The importance of balancing the movement of goods with the introduction of mixed-use communities that prioritize cycling, walking and transit (e.g., safety, quality of life) was also highlighted for refinement.



Figure 4: Facilitated roundtable discussion at Workshop #1. Source: Lura Consulting.

Villiers Island Precinct Plan:

- Many positive comments were also received about the overall vision for the Villiers Island Precinct Plan, particularly the grid pattern, park space and the character areas.

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- Key concerns and suggested refinements focused on enhancing the proposed connections from the precinct to the rest of the Port Lands, reconsidering the proposed location and height of buildings (some participants suggested increasing building heights and relocating them to the north end of the island, while others favoured lower-rise developments) and ensuring the right balance of population density, activities and uses to animate the public realm, particularly on Centre Street.

Feedback on Discussion Questions

A more detailed summary of the feedback provided by participants is included below and organized by discussion question.

Vision + Urban Structure

1. What do you like about the directions for the overall vision and urban structure?

Many participants expressed support for the overall vision and urban structure of the Port Lands Planning Framework. Recurring comments about what they like about the key directions are organized according to the following themes and topic areas:

Stitching to the City

- Similar comments from many participants revealed support for:
 - The proposed north-south connections and street grid to “stitch” the Port Lands to the City.
 - The preferred alignment for the Broadview Extension and its vision as a “City spine”.
 - The view of the Hearn from the preferred alignment for the Broadview Extension; several participants noted that this is a nice design feature.

Uniting the Harbour + the Wilds

- Recurring comments also expressed support for:
 - The proposed east-west connections.
 - The Inclusion of the Ship Channel as an east-west corridor.
 - The emphasis on complete streets and multi-modal options for transportation in the framework (e.g., transit as well as space for cyclist and pedestrians).
 - The emphasis on reducing car use in the Port Lands.
 - The identification and protection of bridge connections to enhance connectivity over the long-term.
 - The vision of streets as places and connections to other areas.

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Resilient Urban Fabric

- Many participants also provided positive comments about the vision for a resilient urban fabric, including:
 - The core grid that integrates different systems (e.g., transit, greenspace, etc.), encouraging sustainable development and resiliency over the long-term.
 - Scaling the precincts down into smaller districts and pedestrian friendly blocks.
 - Revitalizing the Port Lands and opening the area to existing and new users.

Green + Blue

- Similar comments in favour of this direction focused on:
 - The emphasis on water and the waterfront; a few participants specifically noted that conceptualizing water as a resource is a unique and exciting way to re-imagine the Port Lands.
 - The distribution of greenspace throughout the Port Lands.
 - Links to surrounding parks and pathways (e.g., Don River Valley, Leslie Street Spit).
 - The inclusion of small greenspaces within residential areas for children.
 - Opportunities for active and passive recreational uses to connect to the water (e.g., floating docks, recreational boating, etc.).

Exceptions + the Exceptional

- Many participants also appreciate the focus on maintaining and re-imagining the area's industrial heritage (e.g., silos as public art, Hearn as a cultural hub).

2. What, if anything, concerns you? Why?

While many participants expressed support about the directions for the vision and urban structure, they also raised several concerns, as summarized under the same themes and topics below:

Stitching to the City

- A few participant comments highlighted the need for more north-south corridors, particularly south of the Ship Channel (e.g., as alternate options during emergency situations, to increase access to the Hearn, etc.).
- The cost of developing new draw/lift bridges to continue north-south connections over the Ship Channel was also raised as a concern by some participants.

Uniting the Harbour + the Wilds

- Recurring comments also highlighted concerns about:

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- The absence of east-west pedestrian connections across the Don River (e.g., from Villiers Island to the rest of the Port Lands).
- The cost of developing new bridges to continue east-west connections over the Don River.
- The possibility that the street network will contribute to wind tunnels.
- Too much consideration for a “car-friendly” environment.
- The limited number of looping or circular waterfront trails.
- The vision for the Ship Channel; a stronger vision is needed to realize its potential as a unique water and port related amenity.

Resilient Urban Fabric

- Based on the proposed block sizes, some participants are concerned that that large scale development will not be “human scale” and void of activity.
- A few comments also noted that the transition in built form (e.g., density and scale) from the City to the Port Lands to too abrupt.
- A few participants also highlighted the need to ensure a diversity of architecture and ownership.

Green + Blue

- Based on the comments received, several participants feel that:
 - The amount of proposed greenspace is not enough.
 - There are not enough connections between the Port Lands and the Harbour, Toronto Islands and Leslie Street Spit; several participants noted that more connections are needed than those proposed in the framework.
 - Isolated green spaces could have been used for development or industrial uses (e.g., Commissioners Street/Broadview Avenue).

Exceptions + the Exceptional

- A few participants noted that the current port functions appear to be missing from the plans and should be included.
- Community stakeholders feel that preserving Marine Terminal 35 would impact the ability to create the greenspace envisioned for Promontory Park and should not be retained, while comments from other participants suggested re-purposing Marine Terminal 35 for community activities (e.g., local skating rink).

3. What refinements, if any, would you like to see explored?

Feedback from participants included several suggestions to improve the key directions for the vision and urban structure:

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Stitching to the City

- Recurring suggestions to refine this component of the plans focused on:
 - Refining the street network to include more north-south connections.
 - Undertaking additional studies to determine if the proposed street network will be sufficient.
 - Integrating the proposed transportation network with planned transit projects/stations (e.g., GO RER, Relief Line, etc.).

Uniting the Harbour + the Wilds

- Several participants offered similar suggestions to refine this aspect of the plans:
 - Improve connections between the Port Lands and the Harbour, Toronto Islands and Leslie Street Spit (e.g., docking facilities for water taxis and ferries, bridge connections, etc.).
 - In addition to linear flows, consider circular pathways for recreational opportunities near the water.
 - Broaden the vision to include other active transportation/recreational opportunities (e.g., cross country skiing, skating, canoeing, etc.) to experience the Port Lands.

Resilient Urban Fabric

- Many participants suggested including more greenspace and public space (e.g., plazas) within the development blocks.
- Other suggestions included:
 - Making sure the urban fabric supports the development of connected neighbourhoods in the Port Lands as rivers and major roadways create psychological barriers that isolate communities.
 - Ensuring street widths and blocks are as small as possible particularly on Villiers Island (i.e., to support fine grain uses).

Green + Blue

- Suggested refinements included:
 - Creating connections on the water to support connectivity between different areas within the Port Lands and Harbour (e.g., water taxis or ferry services, a channel to create a direct connection between the Port Lands and Leslie Street Spit).
 - Integrating more greenspace in the framework. Several participants noted that revitalizing the Port Lands provides an incredibly unique opportunity to create a major green space in the City.

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- Clarifying what will happen to current port uses in the future.
- Ensuring existing recreational boating clubs and marinas are maintained (e.g., Outer Harbour Sailing Club).

Exceptions + Exceptional

- A few participants recommended ensuring that as many historical buildings and heritage features (e.g., silos) are preserved and incorporated into any new designs or buildings.
- Other participants suggested making sure that Marine Terminal 35 does not obstruct views to and from Promontory Park; a few participants also suggested removing Marine Terminal 35 altogether.

Character + Place

1. What do you like about the different character and place elements of the plans?

Based on feedback from participants, there was general support for the different character and place elements of the emerging plans. The top recurring comments about the elements participants liked are summarized below according to the following themes and topic areas:

Preferred Land Use Direction

- Many participants expressed positive comments about:
 - The balanced and enhanced land use direction that will ensure flexibility and robustness over the next 50 years.
 - Building on the existing character and uses (e.g., film and media, industrial and port functions) in the Port Lands.
 - Retaining existing industrial uses, and adding buffers as needed, to preserve jobs and job opportunities.
 - Creating distinct, but inclusive, neighbourhoods within the Port Lands, each with their own identity and character (i.e., sense of place and space).
 - Emphasizing mixed-use development to support the creation of vibrant urban districts in the Port Lands (e.g., critical mass of residents and jobs).
 - Clustering of similar uses on a broader scale.
 - Balancing between public space/parks and mixed-uses.
 - Maintaining character-defining historical sites and landmarks (e.g., the Hearn).

Built Form

- Similar positive comments were received about:
 - Minimum/maximum building heights to support other framework objectives (e.g., protecting view corridors).

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- Requiring developers to use buildings materials that will support longevity, adaptability and reuse.
- Enhancing views to the City and local heritage features (e.g., the Hearn).

Biodiversity + Cohabitation

- Many participants were pleased with the inclusion of biodiversity in City building processes and the integration of built and natural areas to support biodiversity.

Sustainability

- Recurring feedback also expressed support for the focus on sustainability in the framework.

Community Infrastructure

- Positive comments about this aspect of the plans pertained to:
 - The inclusion of affordable housing in the framework.
 - The creation of year-round destination areas (i.e., sports fields, public markets).
 - The inclusion of recreational boat docks.

2. What, if anything, concerns you? Why?

Similar concerns were raised by many participants about character and place elements of the plans, as summarized below:

Preferred Land Use Direction

- Participant feedback expressed concerns about the type of land uses included in the direction:
 - The concentration of Film, Media and Creative uses in the Media City district may be insufficient to create a commercially desirable precinct, particularly without a catalyst like the CBC or TIFF.
 - Maintaining industrial operations will limit the opportunity to create a vibrant urban area (e.g., a residential neighbourhood on Polson Quay).
- Some participants noted that there is still a high degree of separated uses (e.g., residential, industrial) which will impact efforts to animate the Port Lands and create connected urban districts.
- Varying concerns were also raised about the compatibility of different uses in the Port Lands, specifically the impacts of:
 - Introducing sensitive uses, such as residences near existing industrial operations or port activities (e.g., pushing out industrial uses in view of the health and environment impacts on future residents).

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- Living/working near the high voltage transmission towers located south of the Ship Channel (e.g., health concerns).
- Some feedback also emphasized concerns about the proposed residential population density, particularly on Villiers Island, noting that it is insufficient to support needed community services or to keep the different areas animated at all times.
- Other concerns included:
 - The absence of land designated for power generation, transmission and distribution.
 - The variation in scale and urban fabric for the McCleary District (i.e., too drastic, not enough porosity).

Built Form

- Recurring concerns emphasized that the proposed maximum building heights are too tall and will change the character of the area (e.g., shadow impacts on parks and streets).
- Other concerns included:
 - The limited ability to adapt over the long-term if tall buildings are developed.
 - The impact of glass-walled condominiums on local character.

Biodiversity + Cohabitation

- Several participants raised concerns about the impact of light pollution from new development on migratory birds that use the Leslie Street Spit as a stopover.
- Other comments expressed concerns about the impact of the cormorant population on local air quality and the presence of “nuisance” animals.

Sustainability

- The hard (impermeable) surfaces in existing built up areas was raised as a concern in the feedback received.

Community Infrastructure

- Many participants raised similar comments about:
 - Balancing the needs of residents and visitors (e.g., local vs. destination parks, year-round destinations and cultural activities).
 - Lack of water-based activities, specifically for children other than boating (e.g., swimming, ice skating, sailing).
 - The ability to animate different areas (e.g., Ship Channel, Keating Channel) at all times of the year.
 - The apparent lack of any planning for places of worship.

3. What refinements, if any, would you like to see explored?

Feedback from participants included several suggestions to help refine the character and place elements of the plans:

Preferred Land Use Direction

- Based on recurring comments, some participants recommend a broader mix of uses in the land use direction, specifically within the following precincts: Media City, McCleary District, and Villiers Island.
- Several participants suggested minimizing the amount of land designated for industrial uses, while others noted that more space could be designated for employment uses.
- Other recurring comments include:
 - Consider the needs of existing industrial uses that plan to stay over the long-term (e.g., recognize Lafarge as a permitted use).
 - Increase the integration of the PortsToronto property with the rest of the Port Lands through higher and better uses.
 - Designate land for power generation, transmission and distribution.
 - Avoid introducing sensitive land uses near areas with known noise and air emission issues (i.e., do not rely on source mitigation to ensure compatibility).
 - Maintain the dock wall for port uses.
- Further refinements to specific precincts submitted as additional feedback by community stakeholders include:
 - *Polson Quay* – Designate this precinct to reflect the long term aspiration for the lands, not an interim condition. Feedback from some participants suggested the development of a mixed-use precinct consisting of residential as well as entertainment and destination uses. Conversely, feedback from other participants recommends recognizing the current industrial operations (i.e., Lafarge) as a current use and supporting the potential for future industrial expansion.
 - *Media City* – Consider the master plan for a mixed-use precinct being developed by Pinewood Studio.
 - *South River* – Designate this as a residentially biased precinct, with retail, entertainment and water-related uses at strategic locations to animate the Ship Channel.
 - *Turning Basin District* – Designate this precinct for residential uses with adjacent greenspace, to balance the exclusive employment zones in the Warehouse District and East Port.

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Figure 5: Facilitated roundtable discussion at Workshop #1. Source: Lura Consulting.

Built Form

- Refinements, as suggested by participants, include:
 - Ensuring unique and interesting buildings by providing architectural/design guidance.
 - Considering a lower maximum building height (e.g., 20-storeys).
 - Requiring flexibility in the design of building podiums to permit the evolution of uses based on community needs (e.g., a daycare now, but an office later, or vice-versa).
 - Prioritizing different building types and tenures (e.g., co-ops, single family homes, etc.).
 - Ensuring built form supports the creation of places to experience the Port Lands (e.g., watching ship activity at Cherry Beach).
 - Ensuring Lake Ontario can be viewed from different scales and heights (e.g., at grade, balconies, etc.).
 - Revising the direction for built form to manage local energy needs.

Biodiversity + Cohabitation

- Comments from a few participants suggested minimizing light pollution along the southern edge of the Port Lands (e.g., south of Unwin Avenue) and along the Don River

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to mitigate bird strikes, while other suggested a green edge along the south side of Polson Quay and the Film Studio District.

Sustainability

- Several participants recommended planning for climate change and volatile weather by:
 - Prioritizing sustainable and renewable forms of energy (e.g., net-zero districts).
 - Exceeding current building code and environmental planning requirements.
 - Considering the full range of community needs (e.g., urban food production, transportation).

Community Infrastructure

- Recurring comments emphasized the need to animate the Port Lands, particularly along the water's edge, through a variety of recreational uses and amenities, including:
 - Boat clubs and storage facilities;
 - Restaurants and designated food truck areas;
 - Health offices and clinics;
 - Dog parks;
 - Movie theatres;
 - Houseboats;
 - Gathering places;
 - Community centres;
 - A swimming pool (adjacent to the dock wall of the Ship Channel);
 - Staking rinks (either an indoor ice pad or seasonal space on the Keating Channel);
 - Winter activities (e.g., cross country skiing, skating);
 - Small scale retail and convenience centres;
 - Gas stations/garages;
 - Places of worship;
 - Public art;
 - City-wide destinations; and
 - Nightlife.

Transportation + Servicing

1. What do you like about the preferred solutions for streets, transit and municipal servicing?

Comments from most participants revealed support for the transportation and servicing components of the emerging plans. Highlights of what these participants liked about the preferred solutions for streets, transit and servicing are summarized below according to the following themes and topics areas:

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Transportation

- Comments from many participants consistently indicated support for the proposed transportation network, noting that it appears well thought out and will enhance connectivity in the Port Lands. They particularly like the proposed dedicated streetcar routes.
- *Broadview Extension*
 - There is agreement among participants that Broadview Avenue should be extended to enhance north-south connectivity and multi-modal options between the Port Lands and the City, and should be prioritized.
 - Recurring comments from many participants expressed support for the preferred alignment presented for the Broadview Extension; many comments noted that the creation of a view corridor to the Hearn was an added benefit.
- *Eastern Avenue*
 - A few participants, as indicated in their feedback, support the modification of Eastern Avenue to create a continuous complete street with bike lanes.

Pedestrian + Cycling Network

- Many participants were generally pleased with the proposed network for cycling and walking, and emphasized the benefit of integrating transit, cycling and pedestrian routes.

Municipal Servicing

- *Stormwater*
 - Feedback from several participants also indicated support for the proposed stormwater solutions, noting that the new approaches to manage stormwater are “cool”.

2. What, if anything, concerns you? Why?

Comments from some participants and community stakeholders also expressed concerns about specific elements of the transportation and servicing components of the emerging plans, as summarized below:

Transportation

- Feedback from several participants revealed concerns about cost, aesthetics and demand for shared streets which were perceived as “anti-car”. They noted the need to ensure the street network is accessible to all modes of transportation, including cars.
- *Broadview Extension*

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- While there is agreement that an extension is needed to enhance connections to the Port Lands, recurring feedback from some participants and community stakeholders revealed a range of views about the preferred solution for the Broadview Extension. Many participants voiced support for the diagonal “spine” which provides views to the Hearn, however there were also a few participants who felt that the diagonal alignment is not practical. Other participants expressed concerns about the impact of the southern segment of the alignment on: privately-owned properties, particularly south of Commissioners Street and properties within the McCleary District; future plans to redevelop these properties, and; potential improvements to transit service, and connections to destination areas near the Port Lands (e.g., Don River mouth, Keating Channel, etc.).
- Additional comments from community stakeholders expressed concerns about the initial flood protection strategy for the northern segment of the Broadview Extension alignment, noting potential negative impacts to current studies to enhance transit service in the area (e.g., GO RER, SmartTrack, Relief Line planning). The comments also noted that the alignment for Broadview Avenue should prioritize transit connections, instead of creating a view corridor to the Hearn.
- There is also concern among a few participants that the extension will turn Broadview Avenue into a highway with lots of traffic.
- *Cherry Street*
 - A few comments highlighted concerns about the impact of truck routes on Cherry Street on proposed residential uses nearby.

Pedestrian + Cycling Network

- A few participants commented that while connecting bike lanes on Eastern Avenue to those on Richmond and Adelaide Streets is a good idea, the proposed route is “awkward” and indirect.
- A few comments also highlighted the need for more pedestrian and cycling connections between Villiers Island and the rest of the Port Lands.

Goods Movement

- Feedback, specifically from industrial stakeholders, expressed concerns about protecting truck access to existing industrial uses in the Port Lands (e.g., Lafarge) and highlighted the need for more details about the Goods Movement Strategy (e.g., specific routes).

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Municipal Servicing

- *Stormwater*
 - A few concerns were received about the ability of proposed green infrastructure measures (e.g., bioswales) to absorb rainfall from large storm events.

3. What refinements, if any, would you like to see explored?

Transportation

- Refinements to the proposed transportation network, as suggested by participants include:
 - Adding more north-south options to enhance connectivity between the Port Lands and the City;
 - Integrating the proposed transportation network with plans from other studies currently underway (e.g., Gardiner East EA, TTC Relief Line, GO RER).
 - Extending current streetcar routes into or near the Port Lands (e.g., Bayfront East LRT).
 - Improving the capacity of streetcar routes outside the Port Lands to minimize service disruptions on future routes within the Port Lands;
 - Considering flexible designs for streets and rights-of-way to meet future infrastructure needs; and
 - Considering electric buses to supplement transit service in the Port Lands; electric buses were noted to be efficient, practical, and cost-effective.
- *Broadview Extension*
 - Feedback from community stakeholders suggested that alignment with two right angle turns should be considered as it would better serve residents. They noted that while a diagonal route with direct views to the Hearn is desirable, the alignment for the Broadview Extension should be designed to meet the needs of transit users who start and end as pedestrians. They also noted that a meandering alignment offering different views of the Hearn can also have a desirable architectural effect.
 - Feedback from some stakeholders suggested that the approach utilized to study Unwin Avenue should also apply to the Broadview Extension.
 - A few comments also explicitly expressed support for the proposed extension of Broadview Avenue south over the Ship Channel via a lift bridge.
- *Carlaw Avenue*
 - A few participants suggested a bridge connection at Carlaw Park Street over the Ship Channel to enhance north-south connections.

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- *New North-South Street*
 - Pape Avenue was identified by local residents during previous consultations as a preferred option for a new north-south connection instead of nearby residential streets (e.g., Winnifred, Caroline or Larchmount Avenues). Comments noted that Pape Avenue is a wider street that would mitigate traffic and lessen the impact on local residents, while reviving the area.
 - Comments from other participants suggested a bridge connection at Caroline Avenue over the Ship Channel to enhance north-south connections.
- *Don Roadway*
 - Participant comments suggested a bridge of high architectural quality to continue the Don Roadway over the Ship Channel.
- *Commissioners Street*
 - Community stakeholders suggested narrowing the width of Commissioners Street to create a comfortable pedestrian realm. They feel that eliminating the hydro towers would support the creation of an “intimate” complete street while freeing up land for new retail or commercial space that to help animate the street.

Pedestrian + Cycling Network

- A few refinements were suggested to enhance the pedestrian and cycling network, including:
 - Pedestrian and cyclist lanes on the Don Roadway bridge over the Ship Channel; and
 - Prioritizing pedestrian and cyclist connections to surrounding destinations (e.g., Don River Trail, Toronto Islands).

Goods Movement

- Feedback from industry stakeholder suggested that a comprehensive system of truck routes with built in redundancy is essential (e.g., access is needed from Lafarge’s property on Polson Quay along Basin Street, north along the Don Roadway to Commissioners Street (to connect to the East Port), Lake Shore Boulevard and the Don Valley Parkway).

Municipal Servicing

- *Water + Wastewater*
 - A few participants suggested continuing to explore different ways to manage and improve water quality in the Port Lands (i.e., do not rely only on traditional sewer infrastructure systems).

Villiers Island Precinct Plan

1. What are the strengths of the precinct plan?

Many positive comments were received about the overall vision for the Villiers Island Precinct Plan, as summarized below:

Precinct Plan Framework

- *Mobility + Access*
 - Similar comments from many participants indicate connections within the precinct and to surrounding areas (e.g., City, Harbour, and Don River) are well defined.
 - Some participants also commented that the grid pattern will enable future residents and visitors to navigate the area easily.
 - A few comments indicated support for transit service within the precinct.
- *Parks + Open Spaces*
 - Positive comments were also received about the location and amount of greenspace and open space on the Island.
 - A few participants also specifically expressed support for the vision and design of Promontory Park.
- *Activity + Uses*
 - Several participants noted that the precinct plan succeeds in creating a focal point with complementary uses and activities.

Built Form

- Most participants like the strategic location of towers on the south side of the Island to protect views and reduce unwanted impacts (e.g., from shadows).
- Many participants also like the emphasis on retaining industrial heritage sites.

Character Areas

- *Keating Promenade + Old Cherry Street*
 - Similar comments from a few participants indicated that the Keating Promenade is envisioned as a desirable place.
 - The vision for Old Cherry Street as a Distillery District-like corridor was also well received, as indicated by a few participants.

2. What, if anything, concerns you? Why?

Precinct Plan Framework

- *Mobility + Access*

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- Similar comments from a few participants raised concerns about the potential of Villiers Island to become an exclusive neighbourhood, based in part by the focus on “shared streets” which are perceived to keep non-residents out and limited connections to other areas of the Port Lands.
- Other concerns raised by participants about mobility and access on Villiers Island ranged from:
 - The impact of noise from truck traffic and overflights from the Billy Bishop Toronto City Airport.
 - The need for more east-west connections to the rest of the Port Lands.
 - The need for more water-based connections to the Harbour and the Toronto Islands.
- *Parks + Open Spaces*
 - Some concerns were expressed about the need for more parks and open space within and between building blocks.
- *Activity + Uses*
 - Industry stakeholders expressed concerns about locating high density mixed-use and residential buildings across from Lafarge’s property.

Built Form

- Concerns were raised by a few participants regarding the built form direction, including:
 - The impacts of locating a row of tall buildings on the south side of the Island (e.g., shadows, limited views).
 - The maximum height for buildings, which is perceived as too high.
 - The need to ensure heritage buildings and features are preserved and incorporated into any future buildings or plans.
 - The absence of traditional single-family homes which is perceived to support the creation of an exclusive residential community.
 - Low residential density (and the inability to support non-residential uses).

Character Areas

- *Centre Street*
 - Similar concerns from a few participants highlighted the absence of a connection from Centre Street over the Don River to the rest of the Port Lands.
- *Harbourside + New Cherry Street*
 - A few participants are concerned about the noise impacts of programming at the catalytic site in Promontory Park, particularly as sound is amplified over the water.

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- Concerns raised by other participants noted that pedestrian-only access to the west-edge heritage dock may not be sufficient to support the desired level of activity.

3. What refinements, if any, would you like to see explored?

Precinct Plan Framework

- *Mobility + Access*
 - Similarities in the feedback received highlighted the following suggestions to refine the mobility and access components of the framework:
 - Consider more north-south and east-west access points to enhance connections between Villiers Island the rest of the Port Lands and the City (e.g., cycling and pedestrian bridges).
 - Consider more sites for docking facilities to enhance water-based connections.
 - Ensure the streetscape is people-friendly and accessible to individuals with different abilities.
 - Ensure parking is available.
 - Create more fine grain blocks and streets to support an inviting pedestrian realm.
- *Parks + Open Spaces*
 - Suggested refinements for parks and open spaces emphasized the need to create larger public squares as well as urban parks between and within building blocks.
- *Activity + Uses*
 - A range of similar comments from a few participants to refine the proposed activities and uses on Villiers Island suggested:
 - Ensuring activities and uses are year-round;
 - Making sure schools and community centres are located close together.
 - Diversifying the proposed uses to create a complete and sustainable community.
 - Including a public feature on the south side of the Island.
 - Including a community health centre.
 - Specifying potential catalytic uses.
 - Identifying an area that will be perceived as a centre of the community.
 - Ensuring the City and Harbour can be viewed from different elevations on the Island.

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- Locating mixed-use and residential high rise structures away from the area of influence for noise and air quality.

Built Form

- A few participants suggested refining the built form direction to include cascading building heights to protect view corridors (from the north end to the south end of the island), while others proposed focusing on lower and mid-rise buildings heights.

Character Areas

- *Keating Promenade + Old Cherry Street*
 - A few participants called for refinements including:
 - Making Cherry Street pedestrian-only with supporting uses located at-grade (e.g., retail); raise-able bollards could be used to admit occasional traffic.
 - Considering ways to animate the north side of the Keating Channel year-round, and particularly in the winter (e.g., skating).
 - Creating a water's edge promenade with a variety of uses (e.g., restaurants, shops, services, etc.) on both sides of the Keating Channel.
- *Centre Street*
 - A few participants suggested stepping-back buildings on Centre Street at lower floors, while others recommended a larger public square at Old Cherry and Centre Streets.
 - Comments from a few participants also suggested exploring a through street connection from Centre Street across the Don River to the McCleary District.
- *River Park + Commissioners Street*
 - Re-naming River Park to recognize the history of First Nations in the area (e.g., using the term used by First Nations people, "Wonscotonach") was also suggested in the feedback received.
- *Harbourside + New Cherry Street*
 - Refinements, as suggested by a few participants, focused on strategies to animate this character area, including:
 - A film education or entertainment centre (e.g., indoor and outdoor film activities, performing art, and multi-media space) for the catalytic use on the west end of Villiers Island.
 - A City of Toronto museum as a catalytic use at Promontory Park.
 - Docking facilitates for boats, water taxis or ferries at the west-edge heritage dock.

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- Repurposing Marine Terminal 35 for community uses (e.g., indoor ice rinks), although other comments recommended eliminating the Marine Terminal.
- A swimming pool separated from harbour waters along one side of the pier in Promontory Park.
- A variety of amenities and programming for the silos (e.g., an observation deck/restaurant on top of the concrete silos, rock climbing, etc.).

Other Feedback

Participants also provided the following additional feedback:

- Consider accelerating the timeline for implementation, specifically the re-naturalization of the Don River mouth.
- Clarify how the vision will be applied in practice to overcome business-as-usual or political inertia (e.g., unwillingness to implement innovative stormwater management and green infrastructure interventions).
- Balance the needs of future residents and visitors in the Port Lands, particularly on Villiers Island.
- Apply a broader City-wide perspective to the plans to ensure the Port Lands become a destination as envisioned.
- Consider the costs and benefits of implementing these plans against other City priorities.
- Consider sourcing ideas from international urban designers to continue the design work in the next phase of the planning process.
- Be creative and ambitious – this is an unprecedented opportunity to redevelop a significant area of the City!

4. Next Steps

The feedback received during this round of consultations will be used to make refinements, as needed, and finalize the plans and preferred solutions. The City of Toronto and Waterfront Toronto will subsequently draft the Official Plan Amendments and Transportation and Servicing Master Plan for the emerging plans and continue consultations with the public and stakeholders as needed. It is anticipated that the project team will report to Council in Spring 2016.

For more information please visit: www.portlandsconsultation.ca.



**Appendix A –
Open House Questions of Clarification and Feedback**

A. Questions of Clarification

A summary of the discussion following each Open House information session presentation is provided below. Questions are noted with **Q**, responses are noted by **A**, and comments are noted by **C**.

Information Session 1: Vision + Urban Structure

Session 1:

Q. Bioswales are a good idea to improve water quality, but what happens if there is a flood event that overwhelms the bioswales?

A. The bioswale channels will be sized to mitigate flooding. Some channels will remain dry. There will also be infrastructure in place for upstream and downstream flows. I encourage you to go to the Transportation + Servicing information session to learn more about plans to manage flooding. There are other infrastructural projects also being undertaken in the City of Toronto to manage stormwater (e.g., sanitary trunk sewer upgrades along Lake Shore Blvd.).

Q. The sewer systems cannot handle water from major floods which results in sewage flowing into Lake Ontario and the closure of local beaches (e.g., Sugar Beach). Is something being done to fix this?

A. The vision shows how water can add to the character and perception of water in the Port Lands. Our engineers took this vision of water and added a technical lens to ensure it would be sustainable, manageable, and drinkable.

A. In the City of Toronto, combined sewers were built in the past and when there is heavy rain, overflows spill directly into the lake. We are deepening our catch-basins so that we can hold more water.

C. On-site smaller systems trump larger tunnels and water treatment plants that never seem to be large enough. Chicago just experienced a huge flood even though it has hundreds of miles of pipes to manage stormwater and sewage. These pipes are 30 feet in diameter and are still not large enough, which results in overflowing. Chicago has the opportunity to create reservoirs that were once old quarries. You can never build the system big enough and you can try to treat everything that is collected, but what ends up happening is that it will spill out into the lake. We have to get very serious about looking at different ways of managing water to protect water quality. We also want to make sure we can see Lake Ontario from a human scale, and not just from the perspective of a balcony.

A. This feedback is good. I encourage everyone to record their comments in their discussion guide.

Q. With regards to land use planning, how do the differing uses work together, particularly with industrial uses?

A. To learn more about the land use direction, go to the Character + Place information session or speak to staff at the open house. Keep in mind that this planning framework will evolve over time. There are existing heavy industrial uses in the Port Lands. Mitigation of any noise and/or air impacts will be addressed in the implementation of the plan to ensure compatibility between different uses.

Session 2:

Q. I am delighted to hear that the “blue” space is equally important in the vision. Will the Ship Channel continue to be used?

A. Yes, it will be continue to be used. Since ships use it to turn, the edges of the Ship Channel can be used and become part of the character of the Port Lands.

Q. Would it be possible to use the Ship Channel for rowing, both sporting and recreation?

A. We are starting to explore a co-mingling of land uses, and boating may be part of this. All of the bridges will be designed and built to accommodate boating (recreational and sporting). We don't have any one specific idea for uses on the water, but we want to make sure it's flexible for lots of co-existing land uses (which may not happen at the same time).

Q. Will the existing rail line remain in place?

A. Yes, it will remain because it is occasionally used by the Port. We do support maintaining the rail line there for the opportunities it brings (e.g., public transit or shipping goods). The rail line has even been used in filming.

Session 3:

Q. On the Don Roadway, there is supposed to be a flood protection landform—is that still planned?

A. Yes, the flood protection landform (in this area called the Valley Wall Feature) is shown on the plan. We can actually build on top of the flood protection landform. Any development would be above ground. The Toronto and Region Conservation Authority (TRCA) has also been part of this visioning process; it oversees the conservation of flora and fauna in other areas of the City, including the Port Lands. Developing on top of the landform also draws people to the history of the Port Lands.

Q. How many hectares or acres are the Port Lands?

A. The Port Lands is over a kilometre in length. It is an estimated 100 hectares, if not more.

Post Meeting Clarification: The Port Lands are approximately three kilometres in length and 325 hectares (excluding existing parks and open space south of Unwin Avenue).

Q. Will PortsToronto continue its operations? How long will PortsToronto remain there?

A. PortsToronto operations will remain in perpetuity. We can accommodate and build around them. They have been open-minded to who and what their neighbours could be as the Port Lands evolve.

Post Meeting Clarification: PortsToronto is designated "Existing use Areas" and it is anticipated they will continue their operations.

Q. Will the rail line owned by PortsToronto be expanded?

A. No. The rail line will be maintained and is part of Ports Toronto's operations on occasion. There are reasons to keep the rail line as part of a multi-use trail as well as the potential to revive it as part of a trolley for local beach transport. It could have future incarnations.

Q. Conceptualizing water as a resource is a great idea to uniquely brand this area. How do you translate the vision into a finished product where water is completely integrated into the actual development? How does it work in terms of engineering challenges and financial cost?

A. The engineers and Waterfront Toronto understand what we want to do with the Port Lands. We aren't sure how much the implementation will cost at the end of the day, but we know that it will be possible.

A. The City of Toronto is also already ahead of the game here with green infrastructure initiatives. For example, the Green Streets Initiative is testing out green infrastructure in street rights-of-way. This initiative is happening in concert with planning in the Port Lands.

Session 4:

Q. Fantastic job on the vision. We live in a very political city. Who is going to manage this vision? Is this meant to be an evolutionary vision? Who is going to ensure that the planning goes according to the way it is set out through this consultation process?

A. This framework presents the City as process as opposed to prescribing a solution for the Port Lands. It sets up the Port Lands on a trajectory for success. What are the big moves that will contribute to the Port Lands? It's about understanding that the blocks have flexibility to accommodate differing land uses; it's about the street network and connections. We usually plan for 30 years and not for 50 years, but this will likely be reviewed every 10 years. We need to think about the big pieces. Changing technologies and evolving ideas can change the plan which is why it will be reviewed regularly. We have to step back a bit on some of the areas in the Port Lands such as the film industry, south of the Ship Channel, and Polson Quay, which will all be further studied at a later date. It's not necessary to know who will make it happen, but making sure we get the big pieces right so that we give people the tools to implement those pieces. People need to take ownership of a vision and politicians who are accountable to them have to listen. People can help hone the vision and make it a reality.

Session 5:

Q. What are the initial steps? It seems to be the Lower Don re-naturalization. Given the slow pace of investment, maybe we'll get lucky and those north-south streets will get built first, but how do you conceive of the streets and the public realm coming before development (people living/working there) and how do you deal with that incomplete urban fabric?

A. Re-naturalizing the mouth of the Don River is the first step in this process. We are trying to figure out the next catalysts. We believe you need to put the public realm first as a catalyst and that this encourages good development. The street network is fundamental to connecting the city and the wilds. A resilient street network is needed to connect neighbourhoods.

Q. Have you thought about a dense network for waterway connections for smaller water craft?

A. We speculated a lot on water transportation with various strategy dock spaces. The Ship Channel will always be used for shipping but it doesn't preclude other water uses. Bridges over the Ship Channel will be sized to allow larger ships and other boats (e.g., kayaks) to pass.

Q. The Don River supports movement by kayak or canoe north- and south-wards. There is a need for new connections from Ashbridges Bay.

A. Good comment. We are thinking about connections. Some of the streets would hold water in terms of stormwater, but we could also think about it as a transportation opportunity as well. We can even consider water taxis.

Q. There are lots of sailing clubs in the Port Lands, will they be affected?

A. The sailing clubs will be a use that would stay and be part of the land use mix. We want to encourage more uses as opposed to limiting them. Current uses south of the Ship Channel will remain; there won't be significant changes in those uses. A new kayak boat launch is proposed on Villiers Island.

Q. Are you considering cable rail lines?

A. There are existing rail lines that are used occasionally by PortsToronto. We see making use of the existing rail lines, possibly for transportation.

Session 6:

Q. Will the Ship Channel still be used for ships?

A. Yes, but it will also be used for recreational uses. All the bridges would have to lift for clearance. The ships will turn in the turning basin. The Channel's edge can be used as an opportunity to improve the public realm and connect the water with the public life.

C. The ground-up is the important part missing from the vision. It is the connection to the City of Toronto and it will need to accommodate significant population growth and possibly employment growth (particularly industrial related and live-work employment uses). It is located next to First Gulf which is important for employment growth. We need to talk about residential growth and where it should be located and how it will be serviced.

Water as a resource is an important overriding vision. This vision presents a way to re-imagine the city differently. One of the ways is to live close to the green and blue. With climate change and species extinction, this place is really important to experiment with resiliency, particularly with the wildlife corridor. How can we live better and more respectfully with the water (an incredible resource) and with wildlife and clean air—to me those are the elements that are very exciting about this vision.

It's also about the sustainability of the buildings that are built. The Port Lands should have the most advanced building code and environmental and sustainable planning requirements. It should be more than just giving a nod to the Bird-Friendly Guidelines. We need to emphasize why the Port Lands is super special.

Q. The urban structure plan looks very suburban. Pockets are needed to connect the systems. The way it generally happens in most animated cities is by allowing neighbourhoods and systems to grow together. Any thought on loosening the neighbourhoods so they grow together?

A. What you see is more of a scale exercise. Each one of these neighbourhoods is substantial with many, many streets and we aren't even showing them all yet on these plans. Villiers Island has the kind of massing to sustain the required density. We can live differently in order to live next to the natural systems. There are substantial neighbourhoods that are connected with bridges that may be built in the future.

C. Creating connections on the water could help connect the neighbourhoods. A ferry at the corner of Villiers Island or water taxis are both options. They would help change the way we move around in the Port Lands.

A. Yes, we have been exploring similar ideas.

Q. Are there any provisions made for sporting events like the Olympics? Will there be any bridges to the Toronto Islands?

A. There are no specific provisions for the Olympics at this time. The Olympics is being looked at everywhere in the City, not just the Port Lands. Provisions for general recreational sports like rowing or kayaking would be made in the Port Lands. The Port Lands are already fairly well connected to the Toronto Islands, although it is not shown as part of this plan.

Session 7:

Q. Is there a timeline for this development?

A. There is and there isn't, because a lot is still unknown. But the one thing that will unlock the Port Lands is the Don Mouth Naturalization and Flood Protection Project. Once it is implemented, it will unlock the rest of the Port Lands for development. Infrastructure will be the next priority (the streets, etc.) to add value to any development that is proposed.

A. The timeline foresees construction beginning in 8 years, around 2023. Villiers Island is the first place we expect development to happen. The rest of the Port Lands will take longer to build out.

Session 8:

Q. What I see is on the two-dimension plane, but you also have airspace as a third plane for consideration. The Hearn stack is part of your vision but it's also a consideration of the Billy Bishop Toronto City Airport airspace. In a way this protects the Port Lands. Is the intent to maintain the stack or will it be removed?

A. We believe it will remain. It is a heritage property and we want to protect it.

A. It is provincially-owned and is a question for the owner. It is subject to Provincial rules as opposed to local or municipal by-laws. What you see here is a sense of a lot of interest in the stack for its heritage value.

Q. What is the relative height of the stack compared to the proposed massing for Villiers Island?

A. The height of the buildings on Villiers Island ranges between 20-29 storeys.

Q. Will this happen or is it just a pipe dream?

A. It is a 50 year plan. The intent is to review the plan every 10 years. The purpose of this framework is to set the Port Lands up for success in terms of big moves. Are these big moves going to happen is the real question? The first big move is naturalizing the mouth of the Don River. It has a high price tag, but there is lots of interest in terms of funding and construction. Once the river is complete, potential for development will open up in the Port Lands; it will be market driven in terms of a timeline. We do believe that Villiers Island would be the first area to develop. Transit will also be key. There are initiatives already underway and moving forward. The Relief Line and Smart Track are both studies which will look at improving transit. There are a lot of pieces in place to help this move forward.

Q. To make those big moves you need to bring people to the Port Lands so they know there is potential to build. Is that happening?

A. Yes, there are two revitalization projects underway. One is the Hearn and the other is the Maritime Hub. The revitalization would not include residential options just yet, but would include amenities like restaurants and shops. Other things we are looking at are more temporary, installation based, or festival based to promote the Port Lands to people who want to visit it.

Information Session 2: Character + Place

Session 1:

Q. What makes film, media and creative uses particularly desirable in the Port Lands?

A. It is in part the fact that those uses are already in the Port Lands and that an industry of supporting businesses has evolved around them. It is also a strategically sound base of operations for the film industry as it is proximate to shooting locations across the downtown as well as spaces in the Port Lands (e.g., back lots, soundstages).

Q. Does reliance on film, media and creative uses put employment uses in the Port Lands at risk if the film industry moves away or collapses?

A. No industry is risk-free, but there is a major push at the municipal and provincial level to grow and expand the film, media and creative sector and any supporting businesses. Our planning efforts focus on built-form requirements to help ensure that buildings will be flexible so they can easily be retrofitted in the future for other uses.

Q. Have you determined the amount of housing that will be allocated to Villiers Island?

A. Villiers Island is envisioned to be more of a residential community, supporting local commercial and retail uses and the adjacent Unilever employment area. The proposed split between residential and commercial uses is 80/20.

Q. Will there be height restrictions?

A. Responding to the intensity of areas to the north, development on the Island will be scaled down to a maximum of 29 storeys along Commissioners Street. In general, there will be more mid-rise development (e.g., 8 to 10 storeys). Taller towers would only be permitted at strategic locations in order to minimize shadows on public spaces.

Q. What will the character of the neighbourhood be like in the winter? Will people want to be there during the cold months?

A. We are planning for all-season uses. This includes things like mitigating windy conditions and public realm features that provide shelter and comfort. Things like splash pads can be used as skating rinks in the winter. There may also be opportunities for skating on the turning basin of the Ship Channel or on the Keating Channel. The built form of the neighbourhood can be conducive to year-round use.

Session 2:

C. I understand that no new land has been set aside for new power generation. Please consider revising this as it is essential. It could be located underground or distributed.

Q. What provisions are being made for climate change and extreme weather conditions?

A. The framework does take into account higher flows of water in the Port Lands.

Q. What about water coming from the lake to the Port Lands?

A. Development will be setback from the lake and buffered by natural and greenspaces. Some areas will be raised by up to 3 metres to protect against flooding.

Q. There is a large increase in the amount of land identified for Film, Media and Creative uses. Is it anticipated to grow that much? Is there demand to support the increase?

A. It includes related and adjacent businesses in the sector. We hope that we can support that level of growth.

Q. PortsToronto owns a large piece of land there - what goes on there? Have they been part of the planning process?

A. The land they own is used for warehousing and storage; there are also some cargo and ready-mix uses.

Q. Has there been any indication they (PortsToronto) will give up some of the land?

A. No.

C. In order to support a successful film sector, the area needs to be occupied 70% of the time. I am concerned about how an influx would impact existing business. There needs to be more diverse uses to create a great urban district with commercial desirability. I suggest that is the best way to support the film industry in this area.

Session 3:

Q. I heard that the current industrial facilities include cement and salt. Are there any poisonous gases in the area?

A. There are natural gas mains that connect to the Portlands Energy Centre, but there are no other gases or hazardous materials that we are aware of.

Q. What is the plan for the area south of the Ship Channel and north of Unwin Avenue?

A. We drew our boundary to exclude that area, so that it can be dealt with it later in the context of the Lake Ontario Park Master Plan.

Q. Is there a plan to re-purpose the silos?

A. The silos are difficult to reuse, but we are looking for ways that they can be transformed into a “catalytic use.” We are looking at what other cities have done with similar industrial artefacts (e.g. museums, cultural centres, recreation uses).

Q. Will all residential uses have passive energy designs to achieve Net Zero Energy use?

A. Yes, that would be the goal.

Q. What is the plan to curb car use or provide parking? There are some personal auto users that will continue to drive.

A. We are actively trying to encourage people to drive less, but it is a good point. Please put it in your discussion guide.

Session 4:

Q. Broadview Avenue is intended to become a major thoroughfare and spine in the area. Has the film industry expressed any aversion to a major transit or transportation artery right beside them?

A. The film industry is currently supportive of this idea as the extension would add more connections to their sites, while reducing the amount of parking they must provide and increasing opportunities for transit or cycling.

Q. Are any community amenities like hospitals or high schools planned for the Port Lands?

A. Those amenities would be located to the north. Our consultations with school boards indicated that the community could be supported by educational facilities further north.

Q. Does that include hospitals too? Those transportation spines become more important if that is the case.

A. Yes.

Q. Is there a typo in the legend where it refers to the PortsToronto and Lafarge existing uses?

A. Yes there is an error. The Lafarge site is the wrong shade. The long-term vision is that these lands will end up as a mix of commercial and light industrial uses within the Film, Media and Creative sector. This is very far off. Existing industrial uses will stay as long as they want – we support that. In terms of introducing more sensitive uses, we are actively researching what mitigations would need to be in place to make that possible.

Q. Is there a timeline for completing Lake Ontario Park?

A. Lake Ontario Park is massive; part of it continues to expand. We have made some progress with a few quick start projects that are beginning to work towards the vision. The master plan itself is still unfunded. We are proceeding with elements as funding becomes available.

Session 5:

Q. What needs to be done before development can take place? When is it scheduled to start?

A. Flood protection needs to be in place before significant development can occur. We are currently completing due diligence required to be eligible for funding.

Q. Will there be roads and walkways along the Ship Channel?

A. We are making sure we activate and animate some of the edges of the Ship Channels at appropriate locations. We are proposing a water's edge promenade all along the north side which could be expanded in the future if industrial uses vacate.

Q. How will contaminated properties be dealt with?

A. They are being considered in more detail as part of the due diligence exercise. The Port Lands were developed using mostly fill material – this used to be the mouth of the Don River. There are a whole host of challenges including contamination. A comprehensive environmental management plan is being developed but will be managed site by site through a risk management process.

Q. Which level of government is providing funding for flood protection?

A. All three levels are being approached.

Q. The Hearn is owned by the Province – have you consulted with them?

A. Yes, we have met with the Ontario Power Authority and Studios of America.

Q. Regarding the land use direction for Polson Quay – has Lafarge considered relocating?

A. They have indicated that they have no plans to relocate at the moment.

Session 6:

Q. How was the 20 % target for affordable housing reached? How many people are on the waiting list?

A. We need a certain amount of market housing in order to support the development of affordable housing. The broader City policy is also 20%. We don't have the numbers on hand regarding the number of people on a waiting list. Staff from the City's Community Policy group is at the open house and can provide more information.

Q. Would Unwin Avenue be closed to public? Many runs and events are routed through that area.

A. It would be closed during events with the required road closure permits (e.g., car chases, runs, etc.).

Q. How will the Hearn be used?

A. We are hoping the Hearn will become a catalytic use. There could be a request for expression of interest at some point in the future.

Q. On some maps the Don Roadway appears as a dotted line and on others not at all. I am concerned about the ability of wildlife to travel down the Don Valley into the Leslie Spit area. The gap that will be created by Villiers Island will make it difficult. If there is no bridge to connect the Don Roadway, it will be even more difficult for wildlife to transition into the lower site.

A. We are protecting for a future connection which is why it is shown as a dotted line

Q. Is there going to be a marsh at the mouth of the Don River?

A. There will be some marsh components – they will function as an outlet during storm events.

Session 7:

Q. Polson Quay and the area to the west of the film studio district should focus on residential uses. The framework does not include enough residential. We may be overreacting to the presence of Lafarge as we've managed to mitigate the impacts of Redpath's operations. Polson Quay is very desirable location and could potentially develop more quickly than other areas in the Port Lands.

A. The Lafarge air and noise study indicates impacts in terms of noise, which must be mitigated in order to meet regulatory requirements and ensure compatibility. A more detailed study should be completed at the precinct planning stage. We agree that is a prime location – land values may increase so much that Lafarge may eventually choose to relocate. We can make it clearer that we're identifying this as an area with future potential for residential uses.

Q. I agree the plan needs more residential density to avoid a dreary development. If the private sector doesn't want to build what you envision, it won't happen – will we have 30 years of Ontario Municipal Board (OMB) fights?

A. This framework is about the City's aspirations for its lands. These planning documents provide more direction for future land use. The system we have in Ontario is what it is – not all appeals will be resolved without going to the OMB.

Q. Have you consulted with PortsToronto about their future needs and aspirations in the area?

A. We have not been addressing their future plans although we have met with them as part of this planning process.

Q. It seems like a natural consideration to plan for floating communities in the basins. Why isn't that provided for, even in theory?

A. The Ship Channel is still actively used for shipping purposes. The turning basin is also needed to help ships turn around. There may be some opportunity for floating community amenities.

Session 8:

Q. Can you clarify if the non-residential values in the McCleary district are the minimum values?

A. Yes, they are the minimum within that district.

Q. What will the Hearn be used for?

A. That has not yet been defined, but we envision a catalytic use. The Hearn is very large and can accommodate many different uses (e.g., venue space, museum, art gallery, etc.).

Q. Are standards for building material and efficiency something you have to negotiate within the limits of the Ontario Building Code? I would like to avoid glass and metal as exterior cladding, which is not very sustainable.

A. We are looking at a more robust policy direction that would then be adopted into the zoning by-law. We need to create the policy framework to deal with building materials, at which point we have the ability to ask developers to build better buildings.

Q. Will you be developing a framework to prioritize certain building materials over others?

A. There are some opportunities to direct the types of building materials used. Waterfront Toronto also has existing minimum green building standard to which developers will be held.

Information Session 3: Transportation + Servicing

Session 1:

No questions.

Session 2:

Q. How will traffic on the Broadview Extension move over the Ship Channel?

A. A lift bridge will have to be built.

Q. Is there a case for ferry services to bear non car travel?

A. Docking capabilities for water taxis and personal water vehicles are part of the broader vision for the Port Lands. Modelling was not completed for a significant amount of water travel as the City's forecasts do not currently see ferries as meeting a significant demand, however, it will be looked at in the future.

Q. I've sensed a quandary in terms of the water treatment station types and locations. I believe clean water is very important and price should not be an issue when considering disinfection. Are you sure that clean water will not be an issue for the Port Lands?

A. We absolutely agree. Water quality is an important priority and the three treatment station locations we have chosen will address this issue appropriately.

Session 3:

Q. A general problem in the City in terms of building new public transit (e.g., SmartTrack, Relief Line) is that there is no space for the martialling yards for the trains. The Port Lands are a huge area. Shouldn't we be using the Port Lands as a martialling area for our new public transit projects instead of employment and residential uses?

A. There are other locations in the City that have been identified for martialling yards. They are existing yards that could be expanded or new sites that could be developed into martialling yards. Space in the Port Lands for martialling yards is therefore not needed. Also, none of the proposed alignments for the new transit projects run through the Port Lands; a new spur would have to be created.

Q. Energy servicing is at or near capacity in that area. How much discussion has there been on energy servicing and potential district energy solutions? What is the plan to upgrade the transformer station, and lastly, will there be any incentives for companies utilizing a net-zero energy program?

A. There is a project looking at a net-zero target for the area with the intention of utilizing renewable energy. Please see the boards in the open house.

Q. Since energy is needed before any sort of development can occur, what is the timeline in terms of energy servicing?

A. The detailed phasing work has not been developed yet; they are concentrating on the overall framework first. However, prior to addressing energy servicing, the re-naturalization of the Don River mouth needs to be completed. The anticipated completion date for the Don River re-naturalization is 2023, after which servicing in the Port Lands can be addressed.

Q. Is all of this being fed through development charges?

A. Yes.

Session 4:

Q. Will the two east-west rights-of-way to the south limit development opportunities in this area? Is it redundant to have two east-west rights-of-way in this area?

A. The east-west road to the south is flexible; that book isn't closed yet and can be modified.

Q. Why isn't district energy included in the plan?

A. This team focused on water and wastewater servicing. There is an objective for a net zero energy system in the area which is being addressed by a different team. The point of that plan is to provide a framework for all other services, not just water and wastewater. Please see the open house boards.

Q. Does the Broadview Extension pass through the hydro substation? If so, would the substation have to be moved?

A. Yes it does pass through the hydro substation. We will have to move the substation.

Session 5:

Q. Does the Ashbridges Bay Water Treatment Plant have the capacity to deal with increasing levels of wastewater? Will the Port Lands be self-sufficient?

A. It is an issue the team has been looking at. To achieve sustainability objectives and principles, we started by looking at the City's overall needs. In terms of the Port Lands, the drain on the system is quite small. The intent is to maximize existing infrastructure in nearby communities and ensure development is based on aggressive water conservation principles.

Q. What if the rest of the downtown continues to grow (e.g., First Gulf's proposed development)? Would you consider broadening the servicing studies for the Port Lands to accommodate wider City needs?

A. There are many strategies in place that look at different ways to achieve the capacity needed to meet the needs of this community.

Post Meeting Clarification: A significant amount of employment growth is being contemplated as part of the studies, including First Gulf's site. Some wider needs are therefore being addressed. Toronto Water is also currently updating some broader city studies that have been integrated in the work currently underway in this area such as the Waterfront Sanitary Servicing Master Plan and the Don River and Central Waterfront EA. These are assessing growth in the downtown.

C. Make sure Cherry Street is mapped consistently (i.e., original vs. new alignment).

Q. Higher order transit was mentioned, but have other forms of transit been considered?

A. Yes, the potential for other forms of transit exists.

C. I would like to see an expansion of streetcar lines into the Port Lands.

A. The City is currently considering a reset of several waterfront transit initiatives.

Q. Efforts to mitigate flooding will push the streetcar routes beneath the berm – will road widening under the berms be contemplated? Will the results of the Gardiner East EA be integrated with this study?

A. Yes, these issues have all been considered in this study.

Session 6:

Q. Is underground parking feasible? If not, will a structured parking garage be considered?

A. There are geotechnical and geomorphological constraints associated with developing underground parking in the Port Lands. There may be potential for wrapped or structured parking facilities.

Q. How will the remediation of contaminated soils be handled?

A. The MOECC has good policies on how to deal with fill for different developments and infrastructure projects.

Q. Does the transportation plan include provisions for complete streets, woonerfs, etc.?

A. Complete streets are considered in the transportation plans.

Post Meeting Clarification: There are concepts for shared streets and laneways in the plans. These would be further developed during precinct planning and has been advanced further for Villiers Island.

Q. I am concerned about employment areas becoming dead spaces at night.

A. This is a long-term plan; there is also a need to protect industrial and employment uses in the area.

Session 7:

Q. What is the timeline to get to the next phase of the EA?

A. The Don River re-naturalization and flood protection work have to be implemented before development can start in the Port Lands, subject to funding. The Don River re-naturalization is estimated to be complete by 2023.

Q. The material presented emphasized plans for transit in the Port Lands. Will there be standards for reduced parking?

A. Yes, there is an emphasis on reducing car use in the Port Lands.

Q. Why does the Don Roadway protect for future transit expansion?

A. It is being held over from the Lower Don Lands Redevelopment plan.

Session 8:

Q. Will public transit service be prioritized – another situation like Liberty Village or South Etobicoke should be avoided?

A. The Cherry Street streetcar could be extended southward. This area is included in the Waterfront LRT reset study.

Q. What is the current modal split for the shoulders of the downtown core?

A. The Gardiner East EA determined the transit mode share to be roughly a 55% to 65% split.

Information Session 4: Villiers Island Precinct Plan

Session 1:

Q. What do people who are visiting by car do with the car once they arrive on Villiers Island?

A. Parking will be underground and/or internal to the block much like it is in the West Don Lands. It is important for people to be able to move through the community by car, but greater priority is being placed on walking and cycling. There may be opportunities to close certain streets to cars in the long-term.

Q. What is the rationale for maintaining the silos?

A. They are part of the area's industrial heritage and are listed as such. They are also a distinct landmark feature. There has been a lot of discussion on this topic (e.g., How do they fit in a public space? Are there other community uses that could be attached to these structures?)

Q. Is there a height limit for buildings on Villiers Island?

A. The height ranges from three stories to just under 30 stories.

Q. What percentage of affordable housing is being planned for Villiers Island? Should it be reconsidered given the number of people who will be working there?

A. We are aiming to achieve 20% affordable rental housing units on publicly owned lands.

Q. What is the relationship between the prescribed building heights and the possibility that they will not increase given historic challenges regarding building heights and OMB verdicts?

A. On publicly owned lands, development agreements with developers can be signed that preclude them from going to the OMB. We have been successful at holding our developers to our plans in other precincts and that will continue here.

Session 2:

Q. The north-west corner of Promontory Park used to be bigger – can you clarify why it appears smaller?

A. It is within the designated Ship Channel area so that lobe has been carved back to accommodate a request from PortsToronto.

Q. Are there any plans for community skating rinks or curling rinks on Villiers Island? There are lots of people who live along the waterfront and those amenities are lacking. Maybe MT35 would be a good location for them.

A. An arena is not specifically planned in this precinct. We have thought about larger playing areas. It's a good comment as we need to think about programming for all seasons. One thing to note is that the topography on Villiers Island varies to accommodate flood protection.

Q. How high above the water level is the Island and what is the materiality of the dock walls?

A. All of the Keating Channel will stay as hard rock wall and about half of it is soft (rocks, etc.). There are constraints on where floating docks can be located as they must be able to carry water in flood conditions. We are exploring the most practical ways for people to access the water. The Keating Channel can get pretty shallow, but it could be navigated in a smaller craft like a kayak.

Session 3:

Q. Have you considered the impact of introducing animals like dogs in natural areas?

A. There are some formalized park areas and naturalized park areas by the base of the river. We would not like to see dogs roaming free and damaging the naturalized areas so some dog parks may be planned but our vision is for these spaces to be as fluid as possible.

Q. The south-west corner of the precinct requires at-source mitigation from the Lafarge facility. Would you consider moving some of the employment and commercial uses that are currently proposed in the west and north into the area of influence of the Lafarge facility? It would not be a good site for residential uses and there will be inevitable conflicts given Lafarge's desire to remain.

A. We haven't finalized what the on-site noise mitigation is or what could be handled via building construction (e.g. glazed windows). This is the optimal site for residential so hopefully the noise can be managed. There is a similar situation near Redpath with residential slated to go in nearby.

Q. Has any thought been given to using the Keating Channel and Don River as part of the transportation network?

A. We have thought about water taxis. There is some opportunity in the north-west section of the Island to introduce taxi platforms.

Q. Has any thought been given to using Cherry Street to ease congestion given the timeline for implementation and potential disruption caused by the development of the Gardiner Hybrid option?

A. If we do get our funding, one of the first priorities will be the work on Cherry and Commissioners Streets – that work will be completed before work on the Gardiner is underway. Those streets can be a relief valve while that work goes on.

Q. There will be lots of trucks associated with industry – can the road system handle them?

A. Cherry Street has many functions to perform and one of them is to accommodate shipping and trucking activities. It will be a major street.

C. Noise on the water is always an issue so please consider that when thinking of programming for Promontory Park. Consider a little boat club so people can keep small boats in the park. Make sure the streetscape is people-friendly too.

A. The park has been designed to showcase and enable people to enjoy views of the City, not necessarily for large events (e.g., concerts). Something like a boat club, similar to community clubs currently at Cherry Beach, is desirable. Lots of work has been done to set appropriate setbacks.

Q. Does the timeline to implement the flood mitigation measures include the entire flood mitigation initiative? Will it be phased?

A. It will be implemented as one big project, not phased, unless we cannot get all the needed funding.

Session 4:

Q. There are no green spaces in and amongst any of the buildings designed for families. When you're a family living in an area, you don't let your kids out of your sight, so if this is for families, there are huge limitations.

A. This will be one of the best areas in the City in terms of being served by park area. We moved away from pocket parks so we could focus them in terms of space. The space has not been designed yet – there will be play areas and/or neighbourhood playgrounds within street blocks for children.

Q. What source did you use for the population projections?

A. The number is derived out of planning from the ground up. The City has made projections for how many people might live throughout the Port Lands.

Q. Will the new Cherry Street displace the existing drawbridge?

A. Yes, but we will look at ways to retain its character or reference it in some way.

Q. Where do you see community entertainment and gathering spots?

A. Retail, restaurants, a community centre, etc. are all planned. The high streets would be main locations for these uses as opposed to one specific spot.

Session 5:

Q. Will the bridge at New Cherry Street continue to be a swing bridge?

A. No, it would be rebuilt at a higher level to permit small craft to pass under it. All the water-based use around the Island from the bridge would be recreational uses (e.g., canoes, kayaks, and small craft).

Q. Does the transportation plan include cars on Villiers Island?

A. Yes, cars are being provided for. The grid is being planned for permeability to allow cars to move through, with restrictions. There will be some public parking, but it will be located off lanes and alleyways.

Q. What is mode split for cars and public transit? What assumptions were made?

A. I do not have specific numbers on hand, please refer to the display boards in the open house area.
Post Meeting Clarification: Transit mode splits vary across the Port Lands. The team has taken a bottom-up approach which involved identifying future routes, type of transit, headways and number of passengers that could be accommodated. Transit has been maximized to an average of 62% across the Port Lands. We are assuming 10% for active transit as a worst case scenario. The balance of trips would be private automobile.

Q. What are the plans for integrating transit or LRT lines?

A. Two major streetcar lines are planned for Cherry Street and Commissioners Street.

Q. Will the towers be primarily commercial?

A. There may be some flexibility – but right now they are being advanced as residential. There is some opportunity for commercial uses in the podiums.

Q. Have you considered land swapping to avoid towers being developed in locations where they are not planned for?

A. If a landowner were open to this, it would be something to explore.

Session 6:

Q. Flood protection is the first thing that has to happen -- how much is that going to cost?

A. The cost is approximately one billion dollars. The work would protect the Port Lands and other surrounding areas from flooding.

Q. Where is the funding coming from?

A. The City has committed to fund a third of the cost. The Federal and Provincial governments are working on it. We are completing due diligence exercise to confirm the pricing; we are confident it will move forward.

Session 7:

Q. What is the link with the Keating Channel Precinct Plan?

A. The Keating Channel Precinct Plan focused on the north side of the Channel. The western corner resulted in an approved and zoned plan.

Q. Once the re-naturalization of the river is completed, will you be able to build all the parks?

A. The areas along the river (e.g., wetlands) will be built as part of the re-naturalization and flood protection work. Promontory Park and Keating Promenade would probably be built out as separate projects, funded through development.

Q. Are there any safety concerns about locating elementary schools on the water?

A. Harbourfront Community School is an example where this has been done before – it is not an issue for them. The school will be fenced. The benefit is that the school can access the park without crossing the road.

Q. How much land needs to be expropriated for the river valley?

A. None - all the land is owned by the City.

Q. What about the fill required to develop the western edge of the island?

A. It works almost perfectly that the soil removed while excavating the river valley can be used where fill is required to build out the Island. There will be some soil that cannot be reused, due to contamination, but otherwise it will be put to use building the base of the park as part of the river project.

C. I am skeptical of the success of “shared streets” like the woonerfs being proposed. Safety in these areas is also a concern.

Q. I understand the work to re-naturalize the mouth of the Don River is subject to funding. How much will it cost?

A. In total, about one billion dollars. The flood protection works will benefit more than just the Island, including the rest of the Port Lands and south of eastern area. The request is out to the three levels of government to split the cost three ways. So far there has been interest from all three levels. We are currently working out the mechanics of the funding.

Session 8:

Q. I am concerned that 8,000 people is not a sufficient population for the level of animation on the street that you are hoping for. It could be a retail dead zone if it isn't enough.

A. We are doing more research and analysis on retail to confirm if it is enough.

Q. What is the central gathering place or the place that people know where they are in relation to everything else?

A. Villiers Street and the Keating Promenade are envisioned as high streets with historic buildings, shopping, etc. (e.g., Roncesvalles Avenue).

C. As a suggestion, consider ending the street in a T – there should be some kind of “ta-da” feature (e.g., a statue, public art, etc.).

C. I am also concerned that 8,000 people is not enough density, specifically to support the needed community services.

Q. What is the rationale for the podium and tower heights at Commissioners Street? Could the podium heights be lowered if the towers were permitted to be higher? My concern is that the podium heights will be overwhelming from street level and are not human scale.

A. Shading the public spaces and Keating Channel was a concern – locating the towers further north would have had the same effect.

Q. I think the Marine Terminal #35, if retained, would really dominate the park – unless there is a way to scale it back; it could really overwhelm its surroundings. How is that being studied and will that be taken into account?

A. It will be assessed as part of the park design as the City requires a Heritage Evaluation Report. Any modifications to the heritage site require a Heritage Impact Assessment. The resource was listed by City Council.

Q. Question about clearance heights for the new bridges over Keating Channel - What will be able to pass under the new bridges over the Keating Channel if they will no longer be swing or lift bridges?

A. I cannot recall the specific numbers; staff in the open house area may be able to provide a definitive answer.

B. Feedback on Discussion Questions

A total of eight (8) completed Discussion Guides were submitted by participants at the Open House. The feedback is recorded below.

Vision + Urban Structure

1. What do you like about the directions for the overall vision and urban structure?

- Reduction in car use. Considers the Ship Channel for east-west transportation. Small greenspaces within residential areas for kids.
- The area will be improved for residential uses.

2. What, if anything, concerns you? Why?

- I belong to the Outer Harbour dragon boat club. They have been at Unwin Avenue near the Outer Harbour sailing club since 2006. There are also a lot of sailing and rowing clubs along the Outer Harbour. I would like these uses maintained and easy access to them.

3. What refinements, if any, would you like to see explored?

- A water channel between the Outer Harbour and Leslie Street spit is required so canoers and kayakers can cut through instead of going around the entire Leslie Street Spit.
- The vision is very sound. I look forward to future details linking the overall vision with the Relief Line stations at Cherry-Front, Unilever, and Carlaw-Queen.

Information Session 2: Character + Place

1. What do you like about the different character and place elements of the plans?

- I like that the industrial aspects are being maintained and that proper buffer zones are in place.
- The focus on affordable housing and walkability.
- I like the proposed live and work aspect.

- I was surprised by the strong reference to the film production sites as a long-term use. I expected them to move elsewhere to accommodate more urban intensification, but I am pleased that this proposed/preferred plan accommodates everyone positively. Good Work!

2. What, if anything, concerns you? Why?

- I think the 29-storey towers are too tall and will change the character of the area. It is good that there is a park opposite from the towers but their shadows and presence will make the streets more imposing. A 20-storey building would be more appropriate.
- The cormorant population in the Leslie Street Spit impacts air quality. There is a lack of connections to Toronto Island Park – it doesn't exist in any of your images. Consider a connection via water. No more glass-walled condos.
- Other than small crafts, what active water-based uses are possible for children? The school on Villiers Island could be okay for a playing field but what about swimming lessons and sailing/boating instruction, or an ice rink for recreation? Where is there room for growth in the needed power generation, transmission and distribution system? Prioritize sustainable energy.
- Very sound placement proposals.
- Access to the screen field, sailing clubs and location shoots are all along Unwin Avenue. There are also lots of marathons and runs through this area and the Leslie Street Spit.

3. What refinements, if any, would you like to see explored?

- There may be too much of a focus on residential. It would be a more desirable place if light industrial uses were located inside Villiers Island or the McCleary District. There is a chance to do something different and really integrate people and their work. Right now this is on the light side with only offices. A factory or light manufacturing would make the story genuine. Industrial and residential uses are still highly segmented.
- The catalytic use on the west end of Villiers Island could be an education or entertainment centre (e.g., indoor and outdoor film activities, performing art, multi-media space) for film, building on the existing film studio area on Polson Quay. Prioritize the creation of a net-zero district; not just LEED type buildings. There will be a need for some new energy generation sources and land use provision for them. Plan for climate change and volatile weather (e.g., storm walls).
- The Warehouse District appears to be the last phase and least reviewed, but could be strongly influenced by the Relief Line. Light industry and media may remain a perfect fit with a subway two blocks north, but acknowledgement that the subway could alter the plans for the Warehouse District might be prudent.
- How about an animal sanctuary? How about houseboat/condo type residences like at Bluffers Park?

Information Session 3: Transportation + Servicing

1. What do you like about the preferred solutions for streets, transit and municipal servicing?

- The Broadview Extension alignment with a view of the Hern and brings streetcar/LRT service south into the Port Lands is a fantastic.
- This was the best presentation of the three I attended due to the presenter (Ann Joyner of Dillon) and the clear presentation of material. A very thoughtful, well integrated plan!

- The Broadview Extension is an excellent plan.
- The Broadview ‘Spine’ on a diagonal to show the Hearn tower is GREAT! Continuing on to Unwin Avenue is perfect too. I am also pleased that the east-west major street on the Unilever site is confined instead of crossing west over the river to join other streets. The stormwater plan is really cool!

2. What, if anything, concerns you? Why?

- There are no heavy rail systems (e.g., GO Transit, GO Regional Express Rail or TTC subway). The City’s problem of limited space for marshalling yards for GO RER or TTC Relief Line subways could be addressed by using space in the Port Lands.
- My only concern is the truck/transport vehicular traffic coming south on New Cherry Street. Please reference King Edward Avenue in Ottawa as an example for what is definitely not a residential-friendly environment. King Edward Avenue (north/south) runs through the middle of downtown and is the main trucking route across the interprovincial bridge (MacDonald-Cartier) to Hull (Gatineau) Quebec.
- No major concerns. The transport plan will mesh very smoothly and nicely with the Relief Line and other rail services north of the area.

3. What refinements, if any, would you like to see explored?

- A study to include a regional or international rail hub in the Port Lands. Use of ‘ground effect’ water landing aircraft.
- I am interested in seeing the rights-of-way able to accommodate future infrastructure innovations such as waste pipelines (e.g., Stockholm).
- Greater reference of linkages between the transportation plan and the Relief Line stops at Cherry-Front, Unilever and Queen-Carlaw.

Information Session 4: Villiers Island Precinct Plan

1. What are the strengths of the precinct plan?

- I like that the parks are mostly left as wide open greenspaces. These are the most multi-use spaces. Other parks, like Sherbourne Common North, are too busy and have too many design features to be actually useful. I like the planning along the Keating Promenade. That should be a very desirable place.
- On the whole, love it.
- Towers on south side only – well done. Sample skyline view lines shown looking east from Sherbourne Common/ east Bayfront really emphasize how well that height planning works for the Precinct. Good Job! Retaining the industrial heritage sites and making ‘Old Cherry’ into a Distillery-style link are really inventive and exciting proposals. Well done! I am also pleased that Promontory Park is now less pronounced at the north-west part of the Island.

2. What, if anything, concerns you? Why?

- Promontory Park – watch noise levels over water at catalytic site. More water taxi options. I also have concerns about noise from trucks and overflights from the island airport.

- I have mild concerns for the west-edge heritage dock. Pedestrian access only makes it pretty much a dead-zone, no? Tour boats, water taxis, etc. would seem to be natural uses for this area, but admittedly are easily accommodated elsewhere.

3. What refinements, if any, would you like to see explored?

- Cherry Street should become a full pedestrian street. These abound in Germany and France, and they work really well. To go with this, I would require all the retail to be at grade on this street as well. No one likes to live at grade anyway, and if you want this to be a strolling street then the two uses mesh nicely. Raise-able bollards can be used to admit occasional traffic. Consider incorporating one or two pad ice rinks (indoor). It doesn't have to be large, but this area desperately needs one. We need one now, even before East Bayfront or Villiers Island is built. The arena options by the Power Plant or Cherry Beach are too far. People would have to drive. Transit is not really an option with hockey equipment. Having an arena placed where people have to drive does not speak for the sustainability of the whole precinct. MT-35 may be a perfect place. It looks large enough and is easily accessible from future transit on Cherry Street, or from East Bayfront using the bridge. I recommend this option to be explored. Toronto is too warm in winter for a reliable outdoor rink and we do not even have one of those to service this part of the City.
- On Centre Street step back buildings at lower floors. Dog parks – Yes! Consider a Boat Club option.
- Provide for energy land uses (e.g., generation, transmission, distribution corridors or underground if possible). Make sure the community is accessible for to individuals with disabilities. Include space for small boat crafts – in parking areas?
- The proposal is really, really sound. Well done. Note: with a naturalized Don River, I'm hoping 'River Park' will eventually be named after the river name that First Nations people used, which I believe was 'Wonscotonach.' Please consider that rather than another silly 'name the park' contest.

Other Feedback

- The presenters of the Port Lands Planning Precinct spoke too quickly, too softly and simply respected the power point presentation. I could not hear the questions on many of the screens. The presenter for topic #3 was excellent.
- Great job today! Really well done, well planned. The four-sessions in rotation set-up is smart and keeps viewers minds more alert and fresh. While having more detail always available through the day on the panels works really well to avoid too much chatter/question during the sessions. Great Job! One mistake though – page 3 should also be a separate handout!



**Appendix B –
Workshop #1 Placemaking in the Port Lands
Feedback from Facilitated Roundtable Discussions and Mapping Exercise**

A. Facilitated Roundtable Discussion

Feedback from the roundtable discussions (as recorded by the table facilitators at Workshop #1) is documented below.

Breakout Session 1: Vision + Urban Structure

1. What do you like about the directions for the overall vision and urban structure?

Table One

- North-south and east-west road network connections are good.
- Broadview Avenue vision is good as a spine. There are not enough major north-south connections; any additional connections would be helpful.
- More study required to determine if road network will work (i.e., is truck access sufficient)?

Table Two

- The different systems that are layered to make up the Port Lands.
- The current port functions and activities are missing (e.g., the bridge and Ship Channel). Where is the active port? What will happen to these uses? Where does it go? Clarify the future of these uses.
- Sugar beach is a popular place to watch the ship activity. Create places and moments experience.
- Strong north-south and east-west connections – bring everything together with small blocks.
- Leverage on the views back to the City and sight lines to the Hearn.

Table Three

- Transportation is important.
- Green space! I love how it is distributed!
- Building a neighbourhood for families.
- Don River is an amazing recreational link (e.g. cycling).
- The area is fantastic for sailing.
- I love the connection to the water.
- I love core grid/ “stitching” to the City.
- I love the honouring of industrial heritage.
- Hearn station as cultural hub.
- I love the emphasis on different ‘neighbourhood’ characters throughout the Port Lands.

Table Four

- Adding the river to reduce flooding.

Table Five

- Incorporating water.
- Emphasis on the waterfront.
- Preservation of the Hearn and preserving heritage buildings.
- Thinking in terms of neighbourhoods (sub-characters (refinement)).
- Attention on the Ship Channel.
- Push space outside of communities.
- Mixed-use.
- Concepts made reuse, linkages.
- Streets as places and connections.
- Strong east-west connections.
- Broadview Extension.

Table Six

- The idea of a market.

Appendix B – Workshop #1 Feedback

- Seeing the Hearn from Broadview Avenue.
- Many interpretations of neighbourhoods and communities.
- Parks and pathways.
- Access to the lake – younger generations think that the lake is still polluted but it is not.

Table Seven

- Green Space (existing) – Leslie Street Spit/Tommy Thompson Park Street/ ROW with character penetrating into Port Lands.
- Water – opening up the area (routes via water).
- Retaining existing uses.

Table Eight

- The street network, “stitching” is very detailed in terms of the assets that need to be addressed.
- The focus on Green-Blue.
- Orientation around the water.
- Bridges: Broadview Avenue and Don Roadway.
- North-south connections.
- Balance between pedestrian and bicycle lanes.

Table Nine

- Sight line of Broadview Extension; nice design element.
- Uniting the harbour and wilds.
- Complete streets.
- Opportunities in Ship Channel for floating docks.
- Different streets, different character, different look.
- Industrial character to each community.

2. What, if anything, concerns you? Why?

Table One

- Truck access is insufficient (e.g., Lafarge). The plans show new uses where Lafarge currently is. Lafarge is not going anywhere.
- Ministry certificate in danger. Cement operations create nuisances – residential uses in area.

Table Two

- It is not clear how much consultation was done with the industry to meet their needs.
- The only residential area is on Villiers Island. Will it be lively 24/7? Where will all the people live? Concerns that it will be vacant after 6:00 pm.

Table Three

- Lack of connection to sailing community. There is a need for more consideration for recreational boating!
- Is the street network too grid-like? What does this do for wind tunnels?
- Ensure that we don't push out existing industries!
- Ontario Hydro -- 100-year lease? Profit?
- Connections to the south of the Ship Channel -- what if one is cut-off (i.e. by an accident).
- Transit connections – will there be transit along Unwin Avenue?

Table Four

- Drawbridges are expensive (is the cost worth it right away?).
- Are the replacements coming long-term because they are low priority?
- Will heavy trucks use Broadview Avenue or Cherry and Commissioners Streets?

Table Five

- Develop naturally, do not micro manage. I am not sure if creativity can be mandated.
- Provide architectural guidance.
- Extension of Broadview Avenue, further refinement through Film Studio blocks.
- Proposed development blocks adjacent to Ship Channel.
- Concerns about the wilds and bringing in ‘nuisance’ animals.
- Isolated green space, or turning away major development sites (at Commissioners Street/Broadview Avenue).

Table Six

- Will the water be clean enough for swimming, kayaking and watersports?

Table Seven

- Light pollution emanating from buildings and bird strikes on buildings. Keep lights away from the edge of the Port Lands (e.g., south of Unwin Avenue and along the Don River).
- Hard surfaces in film/industrial areas.

Table Eight

- Vision not sufficiently developed.
- What is the human activity in the vision?
- What is the big story?
- How does industry fit in to this mixed- use area?

Table Nine

- Transmission lines/compatibility with residential uses.
- Ground floor animation along the Ship Channel.
- Greenspace in the winter/animation in the winter.
- Pedestrian connection across the river.
- Wind protection.
- Air quality along Ship Channel.

3. What refinements, if any, would you like to see explored?

Table One

- Revisit views of the Ship Channel as views for residential (i.e., condominiums).

Table Two

- Lines along the water’s edge are very rigid. Is there activity on the north side? Consider ways to activate the shoreline.
- Examples to consider: Vancouver’s False Creek – it has a varied shoreline with lots of activity; Burlington Bridge to watch the ships; Bathurst Street – entertainment plaza and attractions.
- Turning basin – water square? What is the use?

Table Three

- Family housing!

Table Four

- Access to the Don Valley Parkway (DVP).

Table Five

- Views.
- Keep opportunities for skating along the water open.
- Refinements to street network.
- Green space within development blocks.
- Publically accessible plaza space.

Table Six

- Is there a breakdown of how the plan will be implemented over 50 years?
- Create opportunities for Segway/bike use.

Table Seven

- Clarify and review how many people living on Villiers Island will work in the Port Lands to reduce commuting.
- Look at destination/origins for the rest and employment.
- Is Villiers Island enough for residential development if the area to the south is not mixed-use too?
- Clarify and review if the number of people living on Villiers Island will work for the Port Lands (e.g., reduce travel).
- Look at origin/destinations for residential and employment uses.

Table Eight

- Higher-level inspirational view.
- All things for all people.
- The lands are on the water and running through it.
- Emphasize access to the lake.
- Looks fragmented.

Table Nine

- Ensure that the river/swamps are attractive (e.g., water quality, adequate flow).
- What can be done upstream to ensure good water quality?

Breakout Session 2: Character + Place

1. What do you like about the different character and place elements of the plans?

Table One

- Destination area (i.e., sports fields, OSC, dome, Edwards Gardens).

Table Two

- Support for no large format is good.
- Film district -- movie theatres.
- West Don Lands -- spaces that are accessible.
- Broadview Avenue? What is that like?

Table Three

- Like zones/districts/neighbourhood – each is unique, nothing is uniform.
- Cautious about compatibility of land uses.
- Good evolution of what currently exists.
- Creating a year-round destination.

Table Four

- Shared streets influence future design.

Table Five

- Mixed-use, provides needed services.
- Different neighbourhoods, encourage varying modes of travel.
- Resilient and sustainable.
- PortsToronto site has so much potential.
- I like the different neighbourhoods.
- Plans build upon existing character.

Table Six

- Like the idea of Film District and industry.
- Adding biodiversity is important/ habitat for animals.

Table Seven

- Planning for biodiversity. City is a habitat and has many functions.
- Focus on water as a resource, land use, connects everything.
- Welcoming for all (similar to Harbourfront, Evergreen Brickworks).
- Destination.

Table Eight

- Like mixed-use idea.
- Sustainability and innovation.
- Impose minimum standards.
- Mixed mode of transit; different sets of streets.
- Biodiversity.
- Minimum 20% affordable housing (serves people through their life cycle).

Table Nine

- Mixed-use housing/affordable housing.
- Key areas of community with a distinct character; sense of space and place.
- Work done with film industry; appreciation of that industry.

2. What, if anything, concerns you? Why?

Table One

- North of Lake Shore – lot density is high. South of Lake Shore – lot density is low. There is not enough of a transition in scale.

Table Two

- Restaurant/activity.
- Where ever possible edges and open space should be activated to draw people down.
- No bridges or water taxis? How do you get across?
- If the Hearn is re-purposed as a destination then there should be more ways to get there than one.
- Flexibility within the buildings.
- McCleary District – varies in scale. There is a drastic change in fabric. Riverside blocks as you go to the Silos and McCleary District. In addition to the streets, there is a need for more porosity to able to bring people down and through the blocks to the water’s edge.

Table Three

- Will the residential component impact the film industry? Can they still function with sensitive uses around them?
- Will each neighbourhood be complete?
- Should the Don Roadway be green on the east side?

Table Four

- Flooding – Don Mouth naturalization comes first.
- Parking.
- What if dredging reveals contaminants? How will you treat it?

Table Five

- Higher and better use at PortsToronto. Emphasize better uses, rather than remaining as a single-use port.
- Polson Quay can be residential.

Appendix B – Workshop #1 Feedback

- Concerns about reserving so much land for Film, Media and Creative uses. Do not want to be part of an employment park.
- More flexibility in the Film, Media and Creative uses area.
- Rent control for building entrepreneurs, pioneers.

Table Six

- Need ice hockey rinks.
- Need to balance the needs of people who will live in Port Lands who need to travel within the area against the influx of people who will visit it as a destination.

Table Seven

- Heat loss/district energy is possible/ more energy is possible from Port Lands Energy Centre.
- Lighting – bird strike issues.

Table Eight

- Not enough residential density – point them out.
- There appears to be a balance issue.
- Who is living along the Ship Channel?
- Adaptability is reduced when big buildings go up.

Table Nine

- Marketing for residential development; how do we get people to live down here?
- Transit infrastructure.
- Public Art Plan (e.g. monuments, sculptures).
- Noise from the Gardiner Expressway.
- Political interference -- protection against more Ferris wheel ideas.

3. What refinements, if any, would you like to see explored?

Table One

- Connections.
- Move elevations – visual interest views.

Table Two

No comments recorded.

Table Three

- There should be lots of natural gathering spaces.
- Well-lit promenade.

Table Four

- How will the river naturalization effect currents?

Table Five

- Clarify live/work uses; concerned about communities of commuters.
- What does a day look like? Access issues should be explored.
- PortsToronto should be better integrated.
- Look further at getting people from Villiers Island to south of Unwin Avenue.

Table Six

No comments recorded.

Table Seven

- More information on how things will be done (i.e., how to get to net zero energy?).
- If net energy is not possible, then perhaps the form of residential housing should be changed (e.g., instead of high-rise, consider townhouses or lower density forms).
- Consider contractual obligations to ensure net zero energy.

Table Eight

- Animate the Ship Channel with various recreational activities.
- How do you visualize it?

Table Nine

No comments recorded.

Breakout Session 3: Villiers Island Precinct Plan

1. What are the strengths of the precinct plan?

Table One

- Variety of uses.
- The building heights on the south side of Villiers Island are problematic in terms of shadows.
- Disagreement about two destinations – may be too much traffic and should be on opposite ends of the island to create more places for people to go.

Table Two

- Cherry Street can support the height.

Table Three

- 'Everything'.
- Innovative ideas.
- Great promenade.
- Potential water taxi/ferry.
- Transit.

Table Four

- Hotel/residential overlooking the water.
- Schools/recreation/ community centre.

Table Five

- Stepped height.
- Variance within the skyline.
- Pedestrian focused.
- Residential is within safety of larger trucks.
- Mixed-use, will river form is good.
- Framing as an island, flood measures and water's edge activity.
- Bike network/pedestrian network.
- Centre Street is a strong idea.
- Embracing the water.

Table Six

No comments recorded.

Table Seven

- Mixed-use, transit accessible.
- Reuse of historic buildings.

Table Eight

- Cherry Street connection.
- Mostly residential.
- Close proximity to waterfront.

Table Nine

- Walkable streets.

- Quiet pedestrian areas.
- Streets for various needs/ thoughtful.
- Maintains silos as attractions.
- Schools and amenities for complete communities.

2. What, if anything, concerns you? Why?

Table One

- Woonerf Streets are concern – Inaccessible for vehicles (e.g., taxis), exclusive to pedestrians [some disagreement at the table].
- Land use compatibility (e.g., between Lafarge and residential uses on Villiers Island).
- Cherry Street alone insufficient to support proper density.
- Requires permission for places of workshop.

Table Two

- Cherry Street can support true height.

Table Three

- Could the Island be greener internally?
- Building heights – 29 storeys is too high!
- Developers will do what they want (e.g., get variances).
- Variety of building heights, sizes, types

Table Four

- Will retail be available?
- Will people come to the Maritime Hub?

Table Five

- Tall buildings will cast shadows in certain locations.
- Rows of towers, will block sunlight and views.
- The current massing proposal has challenges around facades/facings.
- Not able to support non-residential aspirations due to lower density.
- Retail plan.
- Catalytic use.
- Concerns about connections from water's edge back to Centre Street.

Table Six

- Centre Street local.
- But a softer transition in built form and activity is smart.
- Commissioners Street.
- More relaxed activity on some streets; intimate scale uses.
- Retail? Will it be available?
- Will people come to the Maritime District?

Table Seven

- Potential compatibility issues with industrial uses.
- Is two points of access across the Keating Channel enough?
- Will the bridge over Broadview Avenue ever be built?
- Get rid of the Marine Terminal.
- Bigger square/courtyard area as a gathering area.

Table Eight

- Character statement should indicate that streets need to be further defined.
- What about the other side of the Ship Channel?

- Seems isolated.

Table Nine

- Representation of parkland/water is inconsistent on the maps.
- Issues related to shadows/lighting/impact of taller buildings.

3. What refinements, if any, would you like to see explored?

Table One

- Centre street requires more study (e.g., east-west connections).
- East-west connection east of the Don Roadway.

Table Two

No comments recorded.

Table Three

- Opportunities for water taxis or ferries (e.g., accessible docking).
- Wide sidewalks.
- Year-round activities.
- Community health centre – not hospital.

Table Four

- Green P parking on Villiers Island – need to accommodate parking.
- Waterfront access/riverboats.
- Program Cherry Street all the way down to the Maritime Hub.

Table Five

- Built form: cascading buildings, buildings on stilts for views and flood protection.
- Refine the catalytic use idea (we don't need another opera house).
- Focus more on lower mid-rise buildings.
- Density needed to support retail.
- Placement of buildings.
- Buildings and built forms for families.
- Viability of plan now versus development.

Table Six

No comments recorded.

Table Seven

- Do not want to see 40 storey buildings.
- Is density sufficient for retail?

Table Eight

- Careful thought on retail along the Ship Channel.
- Keep schools and community centre close to each other
- Define retail uses.
- What's the character?
- Where does transit fit?

Table Nine

No comments recorded.

B. Participant Feedback Recorded on Maps

A summary of the feedback recorded on the maps is provided below:

Map: Vision and Urban Structure

Map One

- Consider a larger public square at Old Cherry and Centre Streets.
- There is a bird monitoring station on the Leslie Street Spit.
- There is a wetland on the west side of the Don Roadway, south of the naturalized Don River.

Map Two

- Consider ways to animate the north side of the Keating Channel in the winter.
- Will there be a pedestrian/cycling bridge on the north side of the Keating Channel?

Map Three

- Consider a large public market beside the Hearn with cultural programming to generate east-west activity.

Map Four

- Consider the needs of existing industrial uses that plan to stay over the long-term (e.g., Lafarge).
- Truck access is needed from Lafarge's property on Polson Quay along Basin Street, north along the Don Roadway to Commissioners Street (to connect to the East Port), Lake Shore Boulevard and the Don Valley Parkway.
- Consider a through street connection from Centre Street across the Don River to the McCleary District.

Map Five

- Will there be ferry connections at the western edges of Promontory Park or Polson Quay?
- Concerns about dust blowing north over the Ship Channel from PortsToronto's property.
- Will the Cherry Street bridge over the Ship Channel be a lift bridge?
- Concerns about pollution from ship traffic impacting the South River district.
- Will the Don Roadway bridge over the Ship Channel be of high architectural quality?
- Consider a lift bridge where Broadview Avenue travels across the Ship Channel.
- Consider a bridge connection between the Port Lands and the Toronto Islands across the Eastern Gap.
- Clarify where the transmission wires from the transmission towers south of the Ship Channel will go. Concerns about living/working near high voltage wires.
- Consider a connection to the north side of the Keating Channel from Villiers Island. Will noise from the Gardiner Expressway impact the Keating Promenade?

Map Six

- Remove the Marine Terminal from Promontory Park.
- Consider a green/vegetation edge along the south side of Polson Quay and the Film Studio District.
- Consider a swimming pool within the Ship Channel.
- Include pedestrian and cycling lanes on the Don Roadway bridge over the Ship Channel.
- Consider bridge connections at Carlaw Park Street and Caroline Avenue over the Ship Channel to enhance north-south connections.

Map: Preferred Land Use Direction

Map One

- Consider a mix of uses instead of creating an employment park of Film, Media and Creative uses (south of Commissioners, between the Don Roadway and Carlaw Avenue).
- The area owned and operated by Lafarge on Polson Quay is a spectacular location, surrounded by waterfront on three sides. Ensure spectacular character in buildings and uses on this site. The City should consider buying this property.

Map Two

- What is the distance between the Gardiner Expressway and the Keating Promenade?
- Extend the Don Roadway south over the Ship Channel with a bridge/crossing.



**Appendix C –
Workshop #2 Connecting the Port Lands +
South of Eastern Areas
Feedback from Facilitated Plenary Sessions**

A. Facilitated Plenary Discussions

A summary of the discussion that followed each presentation is provided below. Questions are noted with **Q**, responses are noted by **A**, and comments are noted by **C**.

Overview Presentation: Transportation + Servicing

Q. Has more consideration been given for bridges over the Ship Channel?

A. We have only identified one bridge location, but will protect for more in the future.

Q. Can you speak to goods movement and trucks routes in the Port Lands – they were not covered in the overview presentation?

A. They will be covered in the following presentations.

Session 1: South of Eastern Transportation

Q. I understand there has been a lot of consultation with the public and stakeholders located north and south of Eastern Avenue; have you consulted with people located east and west of the study area?

A. Thousands of notices were mailed out to a broad geography surrounding the study area, as well as notices issued through social media and local newspapers (e.g., Toronto Sun, Beach Riverdale Mirror). We have tried to engage as many people as possible in this process. There have been no major concerns expressed from people who would be travelling from east to west or vice versa.

Q. Is Caroline Avenue, south of Eastern Avenue, proposed to be a two-way street?

A. Yes.

Q. How will the Gardiner East EA affect east-west connections through the First Gulf site?

A. It is a complex study area that is further complicated by flood protection requirements, challenges with grading, and issues with existing ramps to the Don Valley Parkway (DVP). The Port Lands and South of Eastern EA is not looking at extending the east-west connection across the Don River.

Q. Will the Broadview Extension fit beneath the Gardiner Expressway ramps?

A. We did test to make sure it is possible to travel under the ramps if they remain in place. There is enough height clearance depending on the final alignment of the Broadview Extension.

Q. Why is the preferred alignment for the Broadview Extension diagonal as opposed to being straight? This seems disruptive to landowners. How critical is it to decide the Broadview Extension alignment right now?

A. The Port Lands and South of Eastern EA requires a solution that mitigates flood risks. Our understanding from our discussions with First Gulf is that it is important to them to have a direct connection to the proposed Regional Express Rail (RER) alignment. The preferred alignment for the Broadview Extension does take into consideration various land use aspirations; it is also feasible.

Q. What is the rationale for a diagonal alignment?

A. Five options were evaluated; this was the best one. The preferred alignment does have more property impacts than the other options studied, but it also achieves more of the overall EA objectives. A by-product of the preferred alignment is a view corridor to the Hearn. We do understand that we need to continue to work with stakeholders in the area to address the concerns that have been raised.

C. The proposed Broadview Extension alignment runs through the secured Pinewood Studios land owned by Castlepoint. This is a concern to us. We look forward to continuing discussions with the City on this matter.

C. The view corridor of the Hearn from the preferred Broadview Extension alignment was a nice reveal at the Open House, which I like about the diagonal alignment.

Q. Did you consider extending other transit route connections into this area (e.g., Queens Quay East)?

A. That would require a separate EA as it is outside the scope of the Port Lands and South of Eastern EA; it may be looked at in the future. The City is exploring this through the Waterfront Transit Reset.

Q. Did you consider any short, medium, or long-term solutions for transportation and transit? Will there be any new north-south connections for cyclists? Leslie Street is inadequate.

A. We have not really considered phasing at this time. We want to get the plan right, and then we will identify when various pieces of infrastructure will be implemented. Once the plan has been confirmed, cost estimates will need to be prepared and developed into an overall financial strategy.

Session 2: Port Lands Street and Transit Network

Q. What happens if all the current transit proposals/initiatives get approved (e.g., Gardiner East EA, SmartTrack, RER, Relief Line, etc.)? How quickly will the Port Lands and South of Eastern EA work be updated to reflect changes to these projects? Does the EA already consider the above projects?

A. City departments and Waterfront Toronto are communicating and keeping each other up-to-date regarding other projects currently underway. We continue to meet with Transportation Planning about the Relief Line RER, etc. to make sure that our plan does not preclude the creation of a transit station.

Q. I like the emphasis on complete streets in the framework. In addition to linear flows, it would also be nice to have some circular pathways near the water (e.g., Keating Channel). With regards to Lake Shore Boulevard, was there any thought given to treatments to make it more pedestrian friendly?

A. Lake Shore Boulevard was originally part of this study however the Gardiner East EA team now handles this. The project teams do coordinate and communicate with each other regularly. The intent is for Lake Shore Boulevard to become a more urbanized street through various initiatives (e.g., First Gulf's proposal).

C. The Broadview Extension should be used to take people to the waterfront and connect people to the river and surrounding parks (e.g., McCleary District). The diagonal route does not achieve this and would in fact bisect the McCleary residential area. The diagonal route aligned with the Hearn stack is a nice idea but not necessarily practical. An alignment that meanders on route to the Hearn can also have a nice effect. An alignment with two right angle turns should be considered as it would better serve residents.

A. We will take your comments into consideration as we refine the plans. There are also operational considerations that have to be taken into account. The intent of creating a continuous spine was to reimagine Broadview Avenue as a civic or signature street that is elevated to the scale of the whole city.

Q. From my understanding you have studied several options for Unwin Avenue while taking into consideration several technical factors. Is that correct?

A. At this particular time, we know that Unwin Avenue will need to be realigned. We have not identified what that alignment is as it requires further study (e.g., sub-service utility exploration). The work on Unwin Avenue was completed to gain a better understanding of the challenges associated with different alignments, similar to what was done for the Broadview Extension.

Q. What you just outlined also applies to the Broadview Extension, which I think you should approach in the same way. It is a suggestion as several concerns have been raised as well as the need to address other challenges with the preferred Broadview Extension alignment.

Q. How much consultation has been carried out with the TTC regarding new connections in the Port Lands (e.g., New Cherry Street)? What does the TTC Waterfront Reset cover in the Port Lands? What is the Don Roadway transit line there for? The Cherry Street loop looks incomplete.

A. The Waterfront Transit Reset will assess transit options for east-west connectivity to the western waterfront. The new transit route depicted on Cherry Street has been approved as part of another EA. The key routes that this EA covers include the Broadview Extension, Commissioners Street and linking with transit service on Leslie Street. Enhancing transit and improving connections in this area is quite challenging. We will be meeting with the TTC in early 2016.

Q. Will the King Street and Broadview Avenue streetcar routes have their own rights-of-way (ROW) outside the Port Lands? I don't want to see service impacts in mixed traffic areas lead to negative impacts in the dedicated ROW areas that are being proposed in the Port Lands.

A. Broadview Avenue is intended to have its own ROW. We can note that service to the Port Lands depends on improving transit service outside the Port Lands.

Q. Please explain goods movement in relation to the plan? Only truck routes were presented, however they were mentioned as part of a solution – what are the other aspects being suggested?

A. The overall goods movement strategy will incorporate a variety of measures (e.g., mitigating conflict between trucks and other uses, adjustment to road design, truck routes, signage and communications, etc.). The truck routes are currently still under discussion.

Q. This is a futuristic planning exercise - has any emphasis been put on a climate change model that considers land use, transit, stormwater management, urban food production, goods movement, etc.?

A. We have given thought to how climate change can be addressed in various aspects of the study. With respect to transportation, we are focusing on transit and alternative transit options over vehicular use. On the stormwater management side, the model takes into consideration current state levels and impacts on outlets and inverts.

C. The point I am trying to make is that everything is integrated. It is important to consider the full range of needs with respect to climate change (e.g., urban food production, flood protection, transportation).

A. There are many integrated components to the plan. Tonight the focus is on transportation and servicing. We can touch base after to talk about climate change in more detail.

Q. The word “refinement” in the discussion questions implies that major components have already been decided on. Will any substantial changes be made to the street network (e.g., Broadview Extension)?

A. It depends on the commentary from the workshops. We have noted the concern with the proposed alignment for the Broadview Extension and will continue discussions about it.

Q. Villiers Island is lacking east/west connections with the rest of the Port Lands. Why is there no Centre Street connection over the river to the rest of the Port Lands?

A. Additional routes were not identified as being necessary, but pedestrian routes (e.g., bridges) are currently being looked at.

Session 3: Water, Wastewater and Stormwater Management

Q. How realistic is it for stormwater management and green infrastructure to actually be implemented? Could these proposals be reverted back to conventional facilities if there is no Council support? Has district energy been considered as part of this plan?

A. We are confident we can achieve Council endorsement. Green infrastructure is the direction the City is currently moving toward. District energy is a conversation for another day.

Q. I am concerned that we will see development as usual (e.g., no overland flows, limited greenspace near buildings). How will stormwater management be better than the current state?

A. Every lot will be responsible for managing stormwater on its own property. The ideas framing water as a resource enhance the City’s minimum requirements to manage stormwater.

Q. When you get an intense rainfall, where does the water come from and where is it going? I am concerned about the capacity of green infrastructure measures to deal with rainfall from large storm events.

A. The proposed flood protection measures will control water coming south down the Don River into the lake. Individual lots and roads in the Port Lands will be required to manage the water where it falls. Current City standards are concerned about large volumes of water that are created by development as opposed to future climate change scenarios. The City is considering increasing the retention standard from 5mm to 10 mm.

Q. Is a north-south stormwater management plan possible? Is the proposed east/west network realistic?

A. All of the new north-south streets will have stormwater features integrated into them, though not to the same scale as Commissioners Street. There is still a need for underground pinnings, open channels, storm sewers, and hybrid systems in some areas.

C. In all of your drawings, the “complete streets” are all the same. I can’t see the water treatment functions that were referred to.

A. Many interesting features are being proposed. We can connect after the workshop to discuss them.

B. Feedback on Discussion Questions

A total of four (4) completed Discussion Questions forms were submitted by participants at Workshop #2. The feedback is recorded below.

Vision + Urban Structure

1. What do you like about the directions for the overall vision and urban structure?

- New transit and cycling options in the Port Lands.

2. What, if anything, concerns you? Why?

- The amount of greenspace; it is not enough.

3. What refinements, if any, would you like to see explored?

- There is still too much consideration for a “car-friendly” environment.

Information Session 2: Character + Place

1. What do you like about the different character and place elements of the plans?

No feedback provided.

2. What, if anything, concerns you? Why?

No feedback provided.

3. What refinements, if any, would you like to see explored?

- Ensure unique, interesting places and character – there are too many ugly spaces in this City. This is an opportunity to make something great. The plans for Logan, Eastern and Revival are boring and blocky!

Information Session 3: Transportation + Servicing

1. What do you like about the preferred solutions for streets, transit and municipal servicing?

- The transit network looks good. Very much like new thinking on stormwater management. I am happy with the suggested alignment of Broadview Avenue.
- An excellent network of bicycle infrastructure – the Eastern Avenue extension is great! Good street grid. Great use of water as a resource in stormwater management (e.g., adding water to public

realm through bioswales connects to its history as a marshland). I also like the dedicated streetcar routes.

- At the community meeting last year, Leslieville residents noted the Pape Extension as an option, on the diagonal, as opposed to narrow residential Winnifred, Caroline or Larchmount Avenues. Pape Avenue is a wider street and an extension here would provide traffic mitigation, while reviving the area and lessen the impact on local residents.

2. What, if anything, concerns you? Why?

- The grading of Broadview Avenue south of the rail line on the Unilever site – small berms are a very poor solution. Do the definitive berm along the Don EARLY to make planning in the area easier. The waterfront trails are somewhat limited – they are priority!
- Existence of the nearby Gardiner Expressway should be removed. Below minimum recommended width of cycle tracks on local streets (in cross-sections).
- How are you managing traffic flows from a small/narrow residential street like Caroline Avenue (north of Queen) to a four metre vehicular two-way street?

3. What refinements, if any, would you like to see explored?

- Do the mouth of the Don River realignment first.
- Extending Broadview is an excellent idea. It may need to be tweaked. More north-south connections are needed (e.g., Caroline Avenue). Could Bayfront East LRT be extended eastward along Lakeshore Boulevard? It would be a more direct route. I love the idea of connecting Eastern Avenue bike lanes to those on Richmond and Adelaide Streets, but the route shown seems very awkward and indirect. It may require improvements. More pedestrian/cycling bridges to Villiers Island and over the Ship Channel are needed. What about other active transportation/recreation opportunities (e.g., cross country skiing, skating, canoeing, etc.)?
- There is a need to balance growth and managing the residents that live south of Queen Street or Eastern Avenue (e.g., Carlaw Avenue, Logan Avenue, Caroline Avenue, Leslie Street, etc.). More creative approaches need to be looked at.

Information Session 4: Villiers Island Precinct Plan

1. What are the strengths of the precinct plan?

- I like the overall vision set out for the Island. It features several different areas with different activities and uses with lots of parks and open spaces; it is well connected to the larger City as well as within the Island.
- The overall plan succeeds in creating a focal point that will connect the urban city with the harbour and with the naturalized mouth of the Don River.

2. What, if anything, concerns you? Why?

- Since it is going to feature not only a primary neighbourhood for residents as well as focal points which will attract a large number of visitors who will not live on the island, care must be taken to ensure that these two features are compatible such that the large number of outside visitors does not negatively impact the residential neighbourhood. While the Island seems to be well connected

to the urban area to the north and to other areas of the Port Lands (via roads, transit, bike trails etc.), it seems to lack good water connections with the rest of the harbour and the Toronto Islands. While the Island will feature ground level views of the harbour and City, it does not provide an opportunity to view the same sites from a higher elevation.

3. What refinements, if any, would you like to see explored?

- Provide more sites scattered around the island for canoes and water taxis. Consider creating a City of Toronto museum as a catalytic use at Promontory Park. In one of the displays showing waterfront development in other cities, one feature that caught my eye was the installation of a swimming pool separated from the harbour waters along one side of a pier. Maybe this could be considered somewhere along the shoreline of Promontory Park (e.g., along one part of the western dock). Look at installing an observation deck/restaurant on top of the concrete silos just to the east of New Cherry Street. Perhaps the outside of these silos could feature rock-climbing activities. The Keating Channel is an important component of the Villiers Island Precinct. I suggest looking at the feasibility of converting a portion of it to a skating rink in the winter (similar to what Ottawa does with the Rideau Canal). It might be necessary to install temporary barriers at each end to ensure that there are no currents that could affect the ice thickness.



**Appendix D –
Completed Discussion Guides**

A. Completed Discussion Guides

Feedback submitted by participants online is recorded below and organized according to the Discussion Questions. A total of 28 Discussion Questions forms were submitted online.

Vision + Urban Structure

1. What do you like about the directions for the overall vision and urban structure?

- The focus on different districts and protecting existing industrial uses while they are in operation.
- I like the emphasis on mixed-use and density, but I think it needs to be more mixed-use (retail, office, schools, and residence in the same building).
- Breaking the precinct down into smaller districts helps make it manageable. I like the preservation of jobs and job opportunities. This planning should reflect the wishes of the whole city and not solely the wishes of downtown residents and developers. The plan for the Port Lands could use more sensitivity towards those who will never live there (i.e., more parks, cultural activities, interesting destinations, etc. to appeal to non-residents).
- The balance between public space/parks and mixed uses, and transportation connections.
- The groundwork has been set in place to provide resiliency in its evolution with time. The plan features “good bones or skeleton” to permit sustainable development. These bones include 6 north-south signature streets to connect the area with the larger city, 3 strong east-west corridors which will intersect with the north-south streets to provide a lattice foundation. The plan also includes a smaller street grid within the foundation lattice to give smaller more pedestrian friendly blocks. These blocks which will be more local in nature are natural locations for a variety of activities and uses. Plan provides for great networks of public transit and cycle paths. Plan provides a significant amount of park land.

2. What, if anything, concerns you? Why?

- I do not think the plans do justice to such a large central site like the Port Lands. We should be dreaming big with ideas such as a significant office area like Canary Wharf in London, or La Defence in Paris. When in the history of Toronto will we have such a large swatch of central land become available again? Let’s use Port Lands to its full advantage. There should be more focus on metropolitan wide destinations, and maybe even a night life component.
- There needs to be a diversity of architecture and a diversity of ownership. Too many large scale developments are void of human scale, and are bland.
- I am concerned that Villiers Island is being planned to be an exclusive neighbourhood favouring only those who want to live in condominiums and have very little interaction with the larger city. Villiers Island should be more accessible to everyone; it needs to be friendly to whoever wants to visit. Maybe it needs more access points; as planned it has limited accessibility from the north and east. Only two streets actually provide meaningful access: Cherry and Commissioners. This should be improved.
- I want to make sure as many historical buildings and silos are preserved and incorporated into any new designs/buildings. I still feel that there is room for green space/public space within some of the planned buildings blocks.
- While the vision calls for good connections with the city and within itself from east to west, I believe the area’s connection with the harbour, Toronto Island and Leslie Street spit could be improved.

While the concept of creating different neighbourhoods within the Port lands is good (i.e., Media City, South Port, etc.), efforts should be made to ensure some degree of integration or mixed uses within each neighbourhood. Totally unique or separate areas for different functions mimics former city building efforts (i.e., residential, industrial). This approach might open us up to the possibility of creating “dead” areas at certain times of the day. The Ship Channel is a major feature of the Port Lands. Care must be taken to ensure that it is a lively and interesting feature. Diagrams in the presentation material suggest edges that are not that active and interesting. Friends of mine have lamented the loss of harbour restaurants which had a maritime feel (there was one over by the Tip Top building in the west and one in the East Bayfront area which were not fancy but were funky in character). Efforts should be made to include several of these in the Port Lands.

3. What refinements, if any, would you like to see explored?

- There is room for a much more significant employment zone, and nightlife area.
- Push the limits on what mixed-use can be. Build podiums to be flexible; a daycare now, but an office later, or vice-versa. The need for various owners and tenures is important. The City should explore supporting more co-ops as well.
- The pedestrian, cycling and transit planning seem very thorough. There needs to be equal accessibility for all modes of travel, including private vehicles. The street plans, especially the 'shared streets', should be reconsidered for equity and long-term integration into the City.
- Small parks/public space within some of the larger planned blocks.
- While in Vancouver last summer, I had the opportunity to see the extensive use of small water taxis that connected all points along the shore of False Creek. These taxis were small and featured reasonable fares. I would suggest creating a more extensive network of water taxi connections within the Port Lands to connect not only different areas of the Port Lands but also with the Toronto Island, Leslie Street Spit and the shoreline along the north side of the Toronto harbour (maybe even as far as the western sections of the harbour. The northern edge of the Ship Channel is a great place for watching Port Activities as well as for enjoying the sun unencumbered by tall buildings. This edge would be a great place for restaurants and cafes with outdoor patios from which the public could watch the port activities (similar to Sugar Beach where the public can watch the sugar freighters dock). Again in B.C. last summer in Victoria, I visited an area of the harbour where houseboats were moored. These were actual residences decorated in a wide variety of styles and colours. The wharfs bordering these houseboats were jammed with tourists. I would suggest creating an area somewhere which would feature a similar houseboat site. Not sure if the north side of the channel is suitable but maybe in the turning basin. If the north side of the channel is not suitable for mooring houseboats, perhaps it would be an ideal site for accommodating harbour tour boats and/or Great Lakes Tour boats.

Character + Place

1. What do you like about the different character and place elements of the plans?

- It seems this suffices new condominiums, the film industry and current placed businesses. Other than the new river delta, that is the only new thing. Nothing else has changed.
- I like the variety of uses and focus on five minute living and transit access in the Villiers Island Precinct. The improved park spaces and focus on maintaining historical landmarks (e.g., the Hearn)

will give good character. The recreational boat docks will provide a great opportunity for physical activity.

- Aside from Villiers Island and the new mouth of the Don River, it does not look much different than what exists. Maybe it is just because it is a map that is hard to read.
- The clustering of similar uses is a good idea.
- It is a good mix of various uses and a good amount of parkland.
- It is not clear from this map what the density or height of residential building will be.
- I like the plan for Villiers Island and the surrounding green space. Allowing space for film and media uses and that the plan preserves uses for shipping and port functions.
- Plan features a balanced and enhanced land use direction which will ensure flexibility and robustness over the next 50 years. Plan allows for the development of several distinct and different neighbourhoods (i.e. Villiers Island, Media City etc.) which mimics the way in which Toronto has evolved. These neighbourhoods will be self-sufficient and will focus on a variety of uses including residences, port activities and film industry functions. Plan calls for the incorporation of many heritage sites and landmarks that will serve as landmarks and destination points. Plan calls for a critical mass of residents and jobs. Plan calls for a built structure that is flexible in design, has minimum heights and is built with materials which will support longevity, adaptability and reuse. Plan calls for the integration of the built up areas with the naturalized areas such as Mouth of Don, Cherry Beach and Leslie Street Spit. Plan will feature a robust biodiversity.

2. What, if anything, concerns you? Why?

- After all this talk, nothing is really going down there but new condominiums and film stuff that no one sees. How is that any different than Liberty Village, Riverside or Leslieville? Is this the brilliant insight into what could be a major redo for such a large piece of land? You are booting out T&T? It is one of the major positive locations in all of Corktown, Riverside, and Leslieville.
- The timeline seem unambitious. The Don River naturalization and creation of these neighbourhoods will provide necessary relief for downtown. Can this not be accelerated?
- What is the land value of Venice versus Toronto's Port Lands? Are we missing the opportunity to create something amazing instead of a place to store a pile of salt and recycle concrete?
- Media city sounds so generic. Many cities have built them, and they turn out to be generic places. Without a big catalyst like CBC moving there, I do not see it working. There is also a need for more connections.
- The apparent lack of any planning for places of worship. People have spiritual needs too.
- The character element of a 'shared street' is basically anti-car. Call it what it is please!
- I would like to see the Gardiner Expressway removed to really open up the Port Lands.
- There is not nearly enough green space. The Port Lands provide an incredibly unique opportunity to create more greenspace; so much of it has reverted back to nature. It could be one of the last opportunities to create a major green space in the City.
- The amount of space dedicated for industrial and light industrial because of environmental concerns and proximity to future community.

3. What refinements, if any, would you like to see explored?

- Food truck locations, since the city does not like them. Give people a reason to visit the area. - Delegating it to industrial is a bit of a waste. It is prime real estate.

- I would like to see a more aggressive timeline. The TTC streetcars should explore direct connections to downtown along the waterfront and capacity improvement to the streetcar lines that will branch to serve this area (e.g., exclusive rights-of-way).
- Think bigger; Toronto always goes for bronze.
- Explore the idea of a pedestrian bridge to the Toronto Islands; even a moveable one. The Port Lands are surrounded by greenspace, and yet much of it required backtracking to the Leslie Street Spit. Creating a link to the Islands would make the Port Lands very central in the minds of Torontonians.
- I would like to see residential planning for a part of the Port Lands that would allow single family homes to better reflect the traditional character of the east side of Toronto.
- Consider appropriating some PortsToronto land and running a ferry from the Breeze Terminal to the Island.
- More green space.
- Reducing industrial and light industrial or finding ways to add more green space in the area (even if is not for public use, but for beautification).
- Since there is going to be a Media City area, you might want to encourage participation by TIFF (Toronto Film Festival organization) to build a multiscreen cinema that would promote films produced in the area but also films from around the world. Since Toronto is such a film conscious city, you should ensure that there is a regular theatre in one of the neighbourhoods.

Information Session 3: Transportation + Servicing

1. What do you like about the preferred solutions for streets, transit and municipal servicing?

- The extension of Broadview Avenue should be a City priority. No doubt it will be a time consuming process, however, it looks to be the only way in which the Port Lands can be really connected to the rest of the City.
- This will turn Broadview Avenue into a highway. This is not good.
- It is very hard to see the images and the fonts.
- There is a good amount of proposed streetcar rights-of-way and proposed cycle lanes. I really like the water's edge promenade – I wish it could be on both sides of the canal.
- The street grid and water as a resource is a great idea.
- I like the integration of pedestrian, cycling and transit networks – it is very thorough. I hope it is totally accessible to wheelchairs everywhere.
- I love the connectivity and vision for transportation.

2. What, if anything, concerns you? Why?

- Keep traffic low on Broadview Avenue. Streetcars are okay to keep traffic down and not create a highway.
- That it will take too long to implement.
- I am not sure why we cannot have the Don Valley Parkway/Gardiner Expressway connection above the rail line.
- Nothing specific – the plan looks well thought out and emphasizes the correct priorities.
- The block sizes and lack of connections to the Toronto Islands.

- I do not like the overt anti-car bias in the current plans. “Shared street” is a euphemism for ‘woonerf’ streets which are designed to be anti-car. Planning to make all new local streets ‘shared streets’ is not the Toronto way of sharing and does not create equal access for all.
- I do not like the planning for experimental ‘shared streets’ aka ‘woonerfs’. There is too much money at stake to experiment here; these streets exist nowhere else in Toronto (except the soon to be opened West Don Lands) and there is no huge demand from the public to make these in the Port Lands. Not necessary!
- Any opposition to LRT/streetcar planning.

3. What refinements, if any, would you like to see explored?

- Keep traffic out of Riverside.
- It is waterfront property; the value could be enormous if it is designed with that in mind.
- Would love to see both edges of the canal prioritized with a water’s edge promenade that is a thriving location for locals, tourists and businesses (restaurants, shops, services, etc.). But if the south side of the canal is truly set to be beautiful wetland/protected nature, then I think the plan works as is.
- The north-south cycle connections along the Don Trail need to be very clear, and given priority access. Explore more pedestrian priority streets – Malmö Sweden’s waterfront has done this exceptionally well. Pedestrian streets need to have careful attention to the scale and use of buildings in order for them to work. A pedestrian/cycle bridge to the Islands needs to be explored, or at least the potential link should be examined. The Islands are Toronto’s greatest resource, and the future residents of the Port Lands deserve to have access to them. We need to make a circuit or network of connections not isolated neighbourhoods.
- I would like to see at least two more bridges connecting Villiers Island to the Port Lands; another bridge to the south and another to the east. As currently planned, Villiers Island has limited access and not much appeal for the rest of the City.
- Make sure cycling infrastructure remains.

Information Session 4: Villiers Island Precinct Plan

1. What are the strengths of the precinct plan?

- The grid pattern enables the user to navigate the area easily.
- The public spaces; the exclusivity of living on a small island.
- The amount of green space around the perimeter of the island. Good mixed-use planning.
- I like the overall vision set out for the island. It features several different areas featuring different activities and uses. It has lots of parks and open spaces, is well connected to the larger city as well as within the island. The overall plan succeeds in creating a focal point that will connect the urban city with the harbour and with the naturalized mouth of the Don.

2. What, if anything, concerns you? Why?

- It Looks fantastically expensive: three new bridges, and the river. I see what you are doing by trying to give the Don a place to go instead of it dumping into the Keating Channel, but this seems unfathomably costly to create a couple kilometres of new shoreline and basically digging a new riverbed. It is just such a madly complicated piece of construction to end up with what is really a

glorified moat around Villiers Island. Not to mention the new shoreline already created on the north-west corner of the site. It also seems like the silos are gone near the Cherry Street lift bridge. Why? I think the space created on the south side along the shore of the new river/moat will be nice. But the phenomenal cost of this few hectares of green space might be better used for other things.

- The size of blocks and widths of streets should be as small as possible. The best streets and neighbourhoods have a fine grain of laneways and streets.
- The plan so far seems to focus exclusively on residential and small-scale commercial uses. The plan needs more diversity of uses. To build 'whole & sustainable' communities you will need to allow for other human needs such as: health offices and clinics, a community centre, convenience centres, gas stations/garages, small shops, places of worship such as temples, mosques, churches, etc.
- There is a lack of access to the Island. The projections made that support this limited access are wrong-headed. I want to see more pedestrian and cycling bridges on the east side of the Island. Why not build small bridges at the east end of Centre Street and Villiers Street to connect them with the rest of the neighbourhood?
- I am concerned with the planning for 'shared streets'. These have the potential to create exclusive residential neighbourhoods with poor street life and limited access to outsiders. Have we not learned from the planning mistakes of Regent Park? Those small closed streets are being ripped up now! Why build more? These 'shared streets' have no place in an inclusive neighbourhood. They are meant to keep outsiders out. They are the antithesis of an inclusive and equal City.
- The height of proposed buildings – it would be nice to make sure there's a balance. Also, the amount of green space/urban parks and public space within blocks of buildings could be improved. Make sure any heritage buildings and silos are preserved and incorporated into the future designs of any buildings or plans.
- Since it is going to feature not only a primary neighbourhood for residence it also going to feature focal points which will attract a large number of visitors who will not live on the island. Care must be taken to ensure that these two features are compatible such that the large number of outside visitors does not negatively impact the residential neighbourhood. While the island seems to be well connected to the urban area to the north and to other areas of the Port Lands (via roads, transit, bike trails etc.), the island seems to lack good water connections with the rest of the harbour and Toronto Islands. While the island will feature ground level views of the harbour and city, it does not provide an opportunity to view the same sites from a higher elevation.

3. What refinements, if any, would you like to see explored?

- I don't see any slips or finger docks on the 'Western Dock'. Please add some slips, some dockage somewhere in all of this planning. Start to acknowledge the water as part of your planning, not just the land. In the drawings you have a massive dock, looks about 40 feet deep at the widest. Turn this into public slips so pleasure boaters can land boats and dock them temporarily. If done properly, this will become a revenue stream and a huge convenience for boaters who are visiting the harbour from other parts of the GTA or further away. This can be OHM satellite or a P3 venture.
- I would like to see further refinements to create more fine grain blocks and streets. We need to support long and narrow plots of land that support narrow storefronts, and enable an interesting place to walk.
- I would like to see better road access for Villiers Island. I would hate to have an emergency evacuation of the island using only the roads planned to date. Chaos!

Appendix D – Completed Discussion Guides

- I want to see some kind of public feature on the south-east side of the Island. As planned, all the 'public' places are on the north and west side. The south-east side could accommodate a sculpture garden or a small botanical garden or something else with public appeal.
- Add small urban parks/public space within blocks.
- Provide more sites scattered around the island for canoes and water taxis. Consider creating a City of Toronto museum as a catalytic use at Promontory Park. In one of the displays showing waterfront development in other cities, one feature that caught my eye was the installation of a swimming pool separated from the harbour waters along one side of a pier. Maybe this could be considered somewhere along the shoreline of Promontory Park (i.e. along one part of the western dock). Look at installing an observation deck/restaurant on top of the concrete silos just to the east of New Cherry St. Perhaps the outside of these silos could feature rock climbing activities. Keating Channel is an important component of the Villiers Island Precinct. I suggest looking at the feasibility of converting a portion of it to a skating rink in the winter (like Ottawa does with the Rideau Canal). It might be necessary to install temporary barriers at each end to ensure that there are no currents that could affect the ice thickness.



 **TORONTO**


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Conservation
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**Appendix E –
Additional Written Feedback from Participants**

 **LURA**
LISTEN · UNDERSTAND · RELATE · ADVANCE

Additional Feedback from Participants

West Don Lands Committee:

Thank you for the opportunity to respond to the Port Lands Planning Framework Consultation work to date and for the opportunity to be involved in the many phases of consultation through the stakeholder and public meeting process.

We want to specifically acknowledge the tremendous amount and quality of work that has been done by the planning team. The team has thoroughly and thoughtfully canvassed a broad range of factors that will be important to consider as the Port Lands planning process continues. The framework that is developing has identified a number of important themes to guide future land use planning, including:

- the “Blue-Green” framing of the unique development context (proximity to the water including Lake Ontario, a naturalized Don River mouth, the Keating channel and the Ship channel and to parkland/wildlife corridors such as the Don Greenway and Lake Ontario Park)
- a commitment to high levels of environmental and social sustainability
- the developing biodiversity lens
- an emphasis on connectivity - transit, active transportation, and multi-modal connections to the rest of the city
- the creation of vibrant new residential and mixed use neighbourhoods
- support for film, media, and innovative employment uses
- understanding and incorporating current and future port and city services requirements
- incorporating flexibility to respond to changing conditions and priorities over the long term

Below we have identified certain concerns that we feel need further consideration. We have also concluded by proposing that the extensive body of work developed by the planning team should now be taken to a higher conceptual level through an international review or design competition.

Concerns:

- Extension of Broadview - may need a pause while other planning initiatives catch up
 - There is strong consensus that this is an important connector, but...
 - There are significant challenges at the northern end with the initial flood protection strategy;
 - Negative impacts on the transportation hub planning (RER, Smart Track, Downtown Relief Line), which is in the early stages, need to be resolved;
 - Similarly, negative impacts of both the flood protection strategy and the route planning on the First Gulf/21 Don Roadway development, itself in a very early stage, need to be resolved.
 - routing south of Lakeshore also presents some challenges
 - The diagonal route through the McLeary Precinct does not appear to provide optimal transit access for that residential community or for travellers from the north wanting to access the Don River mouth and Keating Channel. While a diagonal route that frames the Hearn could be an interesting option, that aesthetic consideration should not drive the

Appendix E – Additional Written Feedback from Participants

decision-making. Rather, the alignment for this important transit street should, as a first consideration, meet the needs of transit users who start and end as pedestrians.

- The proposed routing south of Commissioners Street which is proposed to run to the west of the existing Bouchette St. alignment is also problematic for Pinewood Studio and should be reconsidered
- Polson Quay – The designation of this precinct should reflect the long term aspiration for the lands, not an interim condition
 - We suggest this should be designated as predominantly a mixed residential and entertainment/destination district
 - It is one of the most spectacular (and valuable) development sites
 - The opportunities for entertainment and tourism are significant
 - The proximity to water and park amenity also make it a desirable residential location
 - The current designation as a media employment centre does not take appropriate advantage of the location’s assets
 - The challenges posed by Le Farge should be addressed through a search for ameliorating strategies, not inoculation of a prime development opportunity
 - It is important to identify acceptable interim uses, but those uses should not lead the vision
 - Significant residential density on both Villiers Island and Poulson Quay is desirable if the Port Lands are to be a successful extension of the city with residential districts that work.
- River Park South – We would like to see this designated as a residentially biased precinct, with retail, entertainment and water-related uses at strategic locations along the Ship Channel
 - River Park South’s strategic location between the Don mouth, the Don Greenway and the Ship Channel makes this a potentially spectacular place to live and enjoy the unique blue-green character of the Port Lands
 - A 24/7 residential population is needed to support uses that will animate the Ship Channel. This cannot be achieved with a block of employment uses that are not related to enjoyment of the precincts natural features
- Ship Channel – The Ship channel needs a stronger vision to realize its potential as a unique water and Port related amenity
 - Currently the uses contemplated in the precincts along the northern edge of the Ship Channel are primarily employment. We do not see that that approach will achieve the animation and access that we had hoped for.
 - Given that the south side is expected to remain devoted to Port and city service activities and therefore inaccessible to the public, land use on the north side should be focused on ensuring that this unique landscape is animated. We feel that this must include a significant residential component with thought given to providing waterside features that can draw residents, employees and visitors
- Film Studio District/Media City/Pinewood Studio
 - Pinewood Studio is developing a master plan that includes residential and mixed uses along the Don Roadway and the Ship Channel with the secure studio space concentrated in the northeast corner along Commissioners Street.
 - The Studio master plan has the potential to animate the segment of the Ship Channel within this district and if connected with a similar usage patterns in the

Appendix E – Additional Written Feedback from Participants

Poulson Quay, River Park South and Turning Basin precincts (significant residential, with other retail and entertainment uses along the water's edge could provide a context for enlivening the entire northern edge of the Ship Channel.

- Turning Basin/Turning Basin District - needs more adjacent green space and a residential component to support transformation of the Turning Basin into a community amenity.
 - As with the Ship Channel, it is proposed that employment uses only surround the Turning Basin
 - Given the recreational potential of the Turning Basin, it would seem desirable to balance the exclusive employment zones to the east and north with a strong residential component within the Turning Basin district.
- Villiers Island –
 - Finding/creating the centre of the community is a challenge and still needs work
 - With residential loaded along the transit route, and particularly along the southern edge, it is still not clear how the Keating Channel edge will be successfully animated
 - Preservation of Marine Terminal 35 is a challenge to the vision of a green river mouth spilling out into the Inner Harbour. If any part of the Marine Terminal is to be retained (and we are not convinced that it should be), it must be made to harmonize with the concept of Promontory Park as an explosion of green that can be viewed from other parts of the Inner Harbour
- Connecting residential precincts
 - Looking at the plans for Villiers Island, Poulson Quay, and McLeary, we are struck by the need to ensure that these precincts develop as connected urban neighbourhoods and not as disconnected or isolated suburbs, Rivers and major roadways create psychological barriers that isolate communities. There is a need to think creatively and proactively about this challenge.
- Commissioners Street - could we also consider a narrow version?
 - Commissioners Street will be an important connection and it is appropriate that it be designed as a complete street. But maintaining its excessive width may work against creating a comfortable pedestrian realm.
 - We question whether retention of the hydro towers is desirable, especially if eliminating them could result in a more intimate and pedestrian- and bike-friendly street. A narrower road allowance might also free up land for new retail or commercial space that could animate and civilize the street,

Taking the Framework to the Next Level: Inviting a High Level International Urban Design Review

- Revitalization of the Port Lands is an extraordinary opportunity for a large and strategic extension of the City of Toronto. It provides an opportunity to reimagine the form and function of the city of the future – including an opportunity to reconsider our relationship to an increasingly precarious natural world
- Toronto is not alone in this process. There are urban designers around the world that are developing innovative approaches for an urban future that may need to look and function very differently than current urban forms
- We feel that a necessary next step in the planning process would be to invite a group or groups of internationally active urban designers to take the design work to a higher conceptual that can provide a unifying vision for the Port Lands.

Appendix E – Additional Written Feedback from Participants

- This is an approach that has been used successfully across the waterfront for projects of varying complexity (Queens Quay, Lower Don, Sugar Beach, for example)
- It is an approach that, in addition to developing a guiding narrative can also potentially identify innovative solutions to some of the challenges that we have identified above. (This is precisely what happened in the course of the Don Mouth design competition.)

Much of the preparation work for such a step is already completed. The excellent work of the planning team has essentially produced an issues report that could become the brief for an international design competition or expert review.

Property Owner

Below you will find my comments not to deploy streetcars in the Port Lands due to infrastructure cost, accelerated road damage/maintenance over time, higher unit replacement cost, and unattractive overhead electrical canopy, also excessive rail-track noise pollution.

Dedicated TTC paths can be used, however requires larger roads contributing to higher cost.

Closing:

Electric Busses of various sizes should be deployed for efficiency, practicality, long-term cost management, visual road aesthetics and deployment flexibility.

Area Resident:

Dear Ms. Ritz

We met briefly after last night's Port Lands meeting at the Morse Junior school. Thank you for suggesting that I write you directly with my concerns. I would like to give you my general opinion on the continuing planning process before tonight's meeting at the Fire Academy.

I have attended dozens of similar meetings going back to the original TWRC consultations more than a decade ago. I think this process is important and I encourage WT and the City to keep trying to engage people. This kind of public engagement would never happen in my old home town of Montreal. If the City actively and sincerely tries to guide this redevelopment based on public input it will only help in reaching a successful conclusion.

But I have noticed several changes in these meetings that are less than positive.

My first observation is that public attendance at these meetings seems to be declining. Many of the people that would never have missed this type of meeting a decade ago no longer show up anymore. I attribute this to several reasons.

First is the incredibly long build-out times involved. People get discouraged with the decades long redevelopment timeframe. They may feel that their opinions and observations will get overlooked in the years ahead so why bother getting involved now. This may very well prove to be correct.

Second is the lack of interest and engagement shown by the city at large. I have rarely met anyone at

Appendix E – Additional Written Feedback from Participants

these meetings who is from North York, Etobicoke or Scarborough. Most often attendees are from central downtown neighbourhoods. I think this is because there is a larger city wide perspective that has been consistently overlooked by planners. I hope that the Port Lands are being planned for the benefit of all Torontonians wherever they live. But I'm not convinced that is the case.

You are aware that the Waterfront Toronto's tripartite funding comes from all taxpayers in Toronto and indeed all of Ontario and Canada. But I think there is an undeniable reality that the planning for Villiers Island so far has emphasized mainly residential development. This new residential neighbourhood is exclusive and is being targeted only towards those who have a keen desire to live downtown. The lack of planning for any single family houses (not condos) and major retail or entertainment uses are evidence of this. This is a prescription for failure in my opinion.

Third is the sense that the opinions and expressions of desire articulated at these meetings is frequently overlooked and/or cherry picked for support of pre-existing planning outcomes. Waterfront Toronto has been deaf to any suggestions that are contrary to the planning dogma of the current regime. Desires and opinions that are different from current dogma may be politely noted (or not noted at all) but ultimately dismissed. Given the time I could give you concrete detailed examples of where this has already happened in the public process. I would welcome the chance to meet you in person and discuss this with you.

Last I would like to make a general comment on the role of City Planning staff at these meetings. I think it is an excellent use of resources to have City planners help facilitate the roundtable discussions at these meetings. However, at last night's meeting the planner at our table was less than helpful. The planner seemed reluctant to record all the observations made by our group. Opinions that didn't fit the pre-existing planning model were either dismissed or discouraged. There wasn't a free exchange of ideas. I fear the report the facilitator submits will not reflect the diversity of opinion expressed at the table. I hope this observation is wrong but my experience leads me to doubt it.

Further I hope that any staff attending tonight's meeting at the Fire Academy will be encouraged to be more fair and open to criticism of the plans made to date. If City planners are sincere in trying to gain public trust in this process it will take more effort to act upon the desires expressed by the public. City planning is an evolving process; the millions being spent now to correct the past planning mistakes of Regent Park should be stark evidence that City planners don't have all the answers to building a great city.

Area Resident:

Dear Ms. Santo,

The accessible waterfront space that Waterfront Toronto has developed despite the usual "politics" that are involved with such activities is impressive. It has attracted very positive publicity in media of the US. The Pittsburgh Post-Gazette, for one.

I wonder if you have been to the Halifax waterfront, which I think of as the gold standard of pedestrian-accessible waterfront.

I will be in Montreal and Vermont during the time period spanning the upcoming meetings on the Port Lands but I will check on your progress when I return.

Johnston Litavski Planning Consultants/Lafarge:

We are planning consultants to Lafarge Canada Inc., the owner and operator of the Polson Street Cement Terminal at 54 Polson Street. We attended the above noted Open Houses on their behalf.

On behalf of Lafarge, we are writing to express their frustration with and objection to these plans. In our view these plans directly contradict the direction provided by City Council in 2012, and assurances provided by Waterfront Toronto, to recognize the importance of the Polson Street Cement Terminal. In our opinion, the plans are designed to lead to the cessation of the Lafarge Polson Street Cement Terminal, and are contrary to principles of good land use planning.

Polson Street Cement Terminal:

Lafarge has owned and operated the cement terminal located at 54 Polson Street since 1929 and is a major distributor of cement in the Toronto area. Business has continued to grow since distribution activity began in 1930. The Polson Street Cement Terminal has served the construction industry in the GTA for more than 80 years, providing a competitive product made possible by water transportation and the rapid truck delivery afforded by its central location and access to the regional highway network via the Don Valley Parkway and the Gardiner Expressway.

Lafarge has made significant capital investments in the Polson Street terminal to ensure a viable and efficient cement distribution and storage system, in keeping with the company's long-term plans for the facility. These have included renovations to the storage silos, upgrading many of the supporting mechanical systems, installing an upgraded compressor system, and roof repairs. The facility's electrical and computerized operating system has also been upgraded, and most recently, a LEED certified concrete lab testing facility has been built on the site to conduct product testing for all of Ontario.

In addition, Lafarge has installed an additional unloading system that will allow for other larger vessels to unload at this facility. To date the site has received product from SB Roman and St Mary's Barge, and there are future plans to bring in larger vessels into the facility.

Lafarge is continuing to develop its long term plan for the expansion of the capacity of the facility.

Port Lands Character + Place – Land Use Direction:

The Lafarge lands are shown as "Film Media and Creative (FMC) Mixed Use*". The * indicates "Residential uses subject to appropriate buffers and source/ receptor mitigation measures and minimum FMC uses to be determined at precinct planning".

In addition, a double dashed line is in place near/at the Lafarge dock wall indicating "Future Naturalization".

Neither draft policies nor other explanatory text are provided and so it is difficult to precisely understand the effect of this Land Use Direction. However, our understanding is that this Land Use Direction:

- does not permit or recognize the existing Cement Terminal use,
- will permit sensitive / residential land uses to be located within this area,
- potentially requires at source mitigation of noise and air quality issues by Lafarge, and,
- will result in the loss of the dock wall which Lafarge requires for shipping access.

Lafarge requests that:

Appendix E – Additional Written Feedback from Participants

- the Cement Terminal land use be recognized as a permitted use, and encouraged to continue to operate and expand. “Port Toronto and Lafarge Existing Uses”, (sic) as shown on the schedule, would appear to be an appropriate classification, or another appropriate classification that recognizes industrial uses in the Port;
- sensitive land uses not be permitted within any area determined to be influenced by noise and air emission issues;
- no reliance should be placed on at source mitigation; and
- the dock wall be maintained.

Lafarge is confused and frustrated by the differences in land use classifications used in recent documents. At the November 3-4, 2015 meetings with the Industrial Users group, the land use classifications noted the presence of Lafarge. However, at the November 14-18 public consultation meetings, the land use classification was changed to the aforementioned terms.

Villiers Island Precinct Plan:

We are very concerned to see that the Precinct Plan would locate mixed use/ residential buildings across from Lafarge property, and that the highest density mixed use/residential development (understood to be 26-29 storey buildings) would be located nearby. We suggest that an alternate location for these mixed use/ residential high rise structures be found on Villiers Island, beyond the area of influence for noise and air quality.

Air Emission and Noise Studies:

We understand that air emission and noise studies conducted on behalf of the City indicate that mitigation will be required at source in order for existing industries including Lafarge to continue to meet environmental requirements. These studies should be provided to Lafarge, and we ask that a meeting with the consultant occur.

Transportation + Servicing:

At the November 3, 2015 Industrial Users meeting, a plan was shown that did not provide truck access to the Polson Terminal. Lafarge requires primary and secondary truck routes to the Terminal. A comprehensive system of truck routes with built in redundancy is essential.

It is also not clear if the modelling used to evaluate the routes properly accounted for Lafarge’s truck movements. In later public meetings we were disappointed to see that the issue of goods movement in the Port Lands was indicated as being “under review”.

The traffic study should be provided to Lafarge, and a meeting with the consultant should occur.

City Council Decision re: Port Lands Acceleration Initiative

At its meeting on October 2, 2012, City Council requested that the Deputy City Manager and Chief Planner address issues of water access, road access, catalyst sites and land use compatibility identified in the letter from Lafarge dated September 7, 2012 (attached). We submit that the Plans fail to reflect this direction by Council.

In view of these serious issues, we request a meeting be scheduled between Lafarge representatives, the City and Waterfront Toronto, prior to any further work proceeding on these Plan, or consideration by City Council.

APPENDIX B:

**STAGE 1
ARCHAEOLOGICAL
ASSESSMENT**

**Stage 1 Archaeological Assessment
(Background Research and Property Inspection)**

**Port Lands and South of Eastern Avenue
Transportation and Servicing Master Plan
Municipal Class Environmental Assessment
Lots 9-15, Broken Front Concession
Former Township of York, York County
City of Toronto, Ontario**

Prepared for:

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Stage 1 Archaeological Assessment (Background Research and Property Inspection)

Port Lands and South of Eastern Avenue Transportation and Servicing Master Plan Municipal Class Environmental Assessment Former Township of York, York County City of Toronto, Ontario

EXECUTIVE SUMMARY

Archaeological Services Inc (ASI) was contracted by Dillon Consulting Limited (Toronto) on behalf of the City of Toronto to conduct a Stage 1 Archaeological Assessment (Background Research & Property Inspection) for the Port Lands and South of Eastern Transportation and Servicing Master Plan in the City of Toronto, Ontario. The purpose of this study is to develop a transportation and servicing master plan for the following areas: the lands north of the Ship Channel and east of the Don Roadway to Leslie Street, and the lands south of the Ship Channel and south of Eastern Avenue.

The Stage 1 Archaeological Assessment determined that six previously registered archaeological sites are located within 1 km of the study area. A review of the historical and archaeological contexts of the study area suggests that it has potential for the identification of Aboriginal and Euro-Canadian archaeological resources, depending on the degree of previous land disturbance.

Based on the results of the property inspection and prior research in the study area it was determined that the study area does not require Stage 2 archaeological assessment. This is due to documented deep and extensive land disturbance negating archaeological potential. Previous assessments, however, have recommended that specific sections of the study area require archaeological monitoring during construction to document any archaeological resources which may exist. We are proposing to carry these recommendations forward.

In light of these results, ASI makes the following recommendations:

1. The majority of the Port Lands study area and the entire South of Eastern Avenue study area do not require further archaeological assessment on account of deep and extensive land disturbance negating archaeological potential;
2. The *ACMS* recommended that LDP-2 and LDP 4, which are included in the Port Lands study area, require archaeological monitoring. A licensed archaeologist must be present to monitor the removal of topsoil for all areas indicated in order to document any archaeological resources which may be present. The *ACMS* also recommended that while LDP-6, included in the Port Lands study area, does not require further archaeological action it should be subject to interpretation and commemoration as part of the development; and,
3. Should the proposed work extend beyond the current study area then further Stage 1 assessment must be conducted to determine the archaeological potential of the surrounding lands.



Notwithstanding the results and recommendations presented in this study, ASI notes that no archaeological assessment, no matter how thorough or carefully completed, can necessarily predict, account for, or identify every form of isolated or deeply buried archaeological deposit. In the event that archaeological remains are found during subsequent construction activities, the consultant archaeologist, approval authority, and the Cultural Programs Unit of the Ministry of Tourism, Culture and Sport should be immediately notified.



**ARCHAEOLOGICAL SERVICES INC.
ENVIRONMENTAL ASSESSMENT DIVISION**

PROJECT PERSONNEL

<i>Senior Project Manager:</i>	Lisa Merritt, MSc [MTCS licence P094] <i>Senior Archaeologist, Class EA Manager, Environmental Assessment Division</i>
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<i>Field Director:</i>	Bruce Welsh, PhD [MTCS licence P047] <i>Senior Archaeologist</i>
<i>Report Preparation and Graphics:</i>	Paul David Ritchie
<i>Graphics</i>	Blake Williams, MLitt [MTCS Licence P383] <i>Geomatics Specialist</i>
<i>Report Reviewers:</i>	Lisa Merritt David Robertson



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1.0 PROJECT CONTEXT

Archaeological Services Inc (ASI) was contracted by Dillon Consulting Limited (Toronto) on behalf of the City of Toronto to conduct a Stage 1 Archaeological Assessment (Background Research & Property Inspection) for the Port Lands and South of Eastern Transportation and Servicing Master Plan in the City of Toronto, Ontario. The purpose of this study is to develop a transportation and servicing master plan for the following areas: the lands north of the Ship Channel and east of the Don Roadway to Leslie Street, and the lands south of the Ship Channel and south of Eastern Avenue (Figure 1 and 2).

This assessment was conducted under the project direction and project management of Paul David Ritchie (PIF# P392-0034-2013), and the senior project management of Lisa Merritt, both of ASI.

Section 1 of the Ministry of Tourism and Culture's 2011 document *Standards and Guidelines for Consultant Archaeologists (S & G)*, administered by the Ministry of Tourism, Culture and Sport (MTCS) discusses the objectives of a Stage 1 archaeological assessment as follows:

- To provide information about the geography, history, previous archaeological fieldwork and current land condition of the study area;
- To evaluate in detail the archaeological potential of the study area which can be used, if necessary, to support recommendations for Stage 2 archaeological assessment for all or parts of the property; and
- To recommend appropriate strategies for Stage 2 archaeological assessment, if necessary.

This report describes the Stage 1 archaeological assessment that was conducted for this project and is organized as follows: Section 1.0 summarizes the background study that was conducted to provide the historical and archaeological contexts for the project study area as well as the field methods used for the property inspection that was undertaken to document its general environment, current land use history and conditions of the study area; Section 2.0 analyses the characteristics of the project study area and evaluates its archaeological potential; Section 3.0 provides recommendations for the next assessment steps; and the remaining sections contain other report information that is required by the *S & G*, e.g., advice on compliance with legislation, works cited, mapping and photo-documentation.

1.1 Development Context

All work has been undertaken as required by the *Environmental Assessment Act*, RSO (1990) and regulations made under the Act, and is therefore subject to all associated legislation. This project is being conducted under the Municipal Class EA process.

All activities carried out during this assessment were completed in accordance with the Municipal Engineers' Association document *Municipal Class Environmental Assessment* (2000, as amended in 2007 and 2011), the Ministry of the Environment document *Code of Practice: Preparing, Reviewing and Using Class Environmental Assessments in Ontario* (2009), the *Ontario Heritage Act* (2005), and the *S & G*.

Authorization to carry out the activities necessary for the completion of the Stage 1 archaeological assessment was granted to ASI by Dillon Consulting Limited (Toronto) on November 6, 2013.



1.2 Historical Context

The purpose of this section, according to Section 7.5.7 (1) of the *S & G*, is to describe the past and present land use and the settlement history and any other relevant historical information gathered through the Stage 1 background research. First, a summary is presented of the current understanding of the Aboriginal land use of the study area. This is followed by a review of the historical Euro-Canadian settlement history.

1.2.1 *Aboriginal Land Use and Settlement*

Port Lands

The area which is now the Port Lands is historically documented to have been the deltaic freshwater lagoon of the Don River (Figure 2; see Section 1.3.1). The Holocene geologic history of Lake Ontario permits the earliest dating of the lagoon formation to ca. 5,000 BP following the Nipissing Phase resurgence of lake levels (Karrow and Warner 1990: Figure 2.8, p.21). While the former Ashbridge's Marsh was likely utilised by Aboriginal peoples for fishing, hunting (ASI 2007: 10) or possibly for the harvesting of wild rice (*c.f.* Stewart 2013), the strand-nature of any solid ground precludes any permanent or long-term occupation of the locale.

South of Eastern Avenue

Southern Ontario has been occupied by human populations, if only seasonally, since the retreat of the Laurentide glacier during what is known as the Paleo-Indian period, approximately 11,000 BP (Ellis and Deller 1990: 39-43). Populations at this time would have been highly mobile, inhabiting a boreal-parkland more similar to the modern sub-arctic. By the end of the 11th millennium BP the environment had progressively warmed (see Section 1.3.1) and populations now occupied less extensive territories (Ellis and Deller 1990: 62-63).

From the 10th to the first half of the 6th millennia BP the Great Lakes' basins experienced low-water levels and so it is likely that many sites which would have been located on those former shorelines are now submerged beneath Lake Ontario. This period produces the earliest evidence of heavy wood working tools and is indicative of greater investment of labour in felling trees for fuel, to build shelter, or to produce crafts and is ultimately indicative of prolonged seasonal residency at sites. By the 8th millennium BP evidence exists for polished stone implements and worked native copper. The latter's source from the north shore of Lake Superior is evidence of extensive exchange networks. By the middle of the 5th millennium BP, during the Late Archaic (4500 BP-3000 BP) period the earliest evidence exists of fish weirs and cemeteries, indicative of increased social organization and investment of labour into social infrastructure, increased procurement of food, and establishing territories (Brown 1995: 13; Ellis *et al.* 1990; Ellis *et al.* 2009; *cf.* Sauer 1952).

The settlement and subsistence systems of the Early Woodland (1000 BC-400 BC) period are not entirely clear. Populations continued a semi-permanent existence and exploited seasonally available resources, and the harvesting of spawning fish continued to be an important part of their subsistence. Evidence still exists for extensive and complex exchange networks (Spence *et al.* 1990: 136, 138). By the second millennium BP in the Middle Woodland (400 BC-AD 1000) period evidence exists for *macro-band* camps, focussing on the seasonal exploitation of resources such as spawning fish and wild rice (Spence *et al.* 1990: 155, 164). It is also during this period that maize was first introduced into southern Ontario,



though it would have only supplemented Middle Woodland people's diet (Birch and Williamson 2013: 13-15). Bands likely retreated to interior camps during the winter.

The advent of Iroquoian culture occurs during the Late Woodland (AD 1000-AD 1649) period though full expression of Iroquoian culture is not recognised archaeologically until the fourteenth century AD. During the Early Iroquoian (AD 1000-AD 1300) phase, the communal site is replaced by the village focussed on horticulture. An Aboriginal village site is identified within 1 km of the study area. Seasonal disintegration of the community for the exploitation of a wider territory and more varied resource base was still practised (Williamson 1990: 317). By the second quarter of the first millennium BP, during the Middle Iroquoian (AD 1300-AD 1450) phase, this episodic community disintegration was no longer practised and populations now communally occupied sites throughout the year (Dodd *et al.* 1990: 343). In the Late Iroquoian (AD 1450-AD 1649) phase this process continued with the coalescence of these small villages into larger communities (Birch and Williamson 2013). Through this process, the socio-political organization of the First Nations as described historically by the French and English explorers who first visited southern Ontario was developed.

The study area is located on the edge of the Don River drainage. A Late Woodland settlement sequence has been posited for the Don River watershed based on the identification of the Moatfield and Jackes sites (much of the Jackes site has been lost to urban development; see Noble 1974 and Konrad 1973; MPP 1986) in the Lower Don (Birch and Williamson 2013: 31). The greater Don River settlement sequence has documented occupation from the early fourteenth century (e.g. Moatfield site: Williamson and Pfeiffer 2003) to the late fifteenth century (e.g. Keffer site: Finlayson *et al.* 1987). This sequence is particularly difficult to identify due to widespread destruction of sites during twentieth century urban development. It is believed that the Don River population amalgamated with the populations occupying the Middle Humber River. This joint population finally abandoned the Toronto-area in the early seventeenth century (e.g. Skandatut site: ASI 2012c) and migrated northward to historic Huronia, near modern day Penetanguishene (Birch and Williamson 2013: 38).

In the mid sixteenth century the Huron-Wendat, Petun, and Neutral inhabited southern Ontario (Trigger 1994). The various groups that later formed the Huron-Wendat confederacy were scattered in many individual villages and village clusters along the north shore of Lake Ontario, in the Trent Valley, and throughout Simcoe County. It is estimated that the Huron-Wendat population numbered about 25,000 people at this time. The ancestral Huron-Wendat are thought to have been the main group who controlled the region and the presence of European trade goods is first evident in the mid-sixteenth century where European artifacts start to make an appearance at some ancestral Huron-Wendat sites. The occurrence of European artifacts on Huron-Wendat sites increases towards the end of the sixteenth century as the interaction between the Huron-Wendat and French explorers, traders, and missionaries continued to increase in frequency and intensity. The Huron-Wendat were eventually dispersed by the Five Nations Iroquois at which point the Seneca mainly took over control of the north shore region of Lake Ontario (Ramsden 1990).

Compared to settlements of the New York Iroquois, the "Iroquois du Nord" occupation of the landscape was less intensive. Only seven villages are identified by the early historic cartographers on the north shore and they are documented as considerably smaller than those in New York State. The populations were agriculturalists, growing maize, pumpkins and squash. These settlements also played the important alternate role of serving as stopovers and bases for New York Iroquois travelling to the north shore for the annual beaver hunt (Konrad 1974).



The first Europeans to arrive in the area were transient merchants and traders from France and England, who followed Aboriginal pathways and set up trading posts at strategic locations along the well-traveled river routes. All of these occupations occurred at sites that afforded both natural landfalls for Great Lakes traffic and convenient access, by means of the various waterways and overland trails, into the hinterlands. Early transportation routes followed existing Aboriginal trails, both along the lakeshore and adjacent to various creeks and rivers (ASI 2006).

Beginning in the mid-late seventeenth century, the Mississaugas began to replace the Seneca as the controlling Aboriginal group along the north shore of Lake Ontario since the Iroquois confederacy had overstretched their territory between the 1650s and 1670s (Williamson 2008). The Iroquois could not hold the region and agreed to form an alliance with the Mississauga peoples and share hunting territories with them. In the late 1690s, the Mississaugas established their settlement of Teiaiagon on the Humber River, which sat astride the most important route of the Toronto Passage. This route connected Lake Ontario with waterways and trails to Georgian Bay and the north and gave the Mississaugas a strategic trading position (Williamson 2008). The Mississaugas traded with both the British and the French in order to have wider access to European materials at better prices, and used their strategic position on the Humber to act as trade intermediaries between the British and tribes in the north.

Following the American Revolutionary War in 1783 and the creation of the Canadian-American border, the British Crown re-newed its interest in the Toronto Passage as a means to replace its stake in the fur-trade lost with the American territory. While the Toronto Passage would prove to have limited potential for growth in the fur trade on account of traders' preference for the Ottawa River passage, Toronto became a focal interest in establishing a settlement. On September 23, 1787 the Crown purchased Toronto from the Mississaugas for a sum of £1,700 in cash and goods. The boundaries of this purchased however were not clearly understood and had to be established by a subsequent treaty in 1805 (Benn 2008: 58-59).

1.2.2 Historic Euro-Canadian Land Use: Township Survey and Settlement

Historically, the study area is located in Lots 9-15, Broken Front Concession in the City of Toronto, Former Township of York, York County.

City of York

The Town of York and York Township were re-named by Lieutenant-Governor John Graves Simcoe in 1792, either after the County of Yorkshire in England, or as a compliment to Prince Frederick, who was then the Duke of York (Gardiner 1899:216-217). Family tradition relates that the name "York" was suggested by Captain John Denison, an early brewer in the town, who is said to have told Simcoe that "No Yorkshireman would live in a place called Dublin." Simcoe asked Denison what would be a better name for the capital, to which Denison replied that he would settle in the new town if it was called "York." The name of the town reverted back to "Toronto" when the settlement was elevated to the status of a city in 1834 (ASI 2012b: 3-4; Martyn 1980:28-30).

Two surveys for a town plot at Toronto had been made by Gother Mann and Alexander Aitkin as early as 1788. These plans were not used, and a new survey for the Old Town of York was undertaken by Alexander Aitkin in the summer of 1793. This plan consisted of just ten blocks, bounded by George, Adelaide, Parliament and Front Streets. By the summer of 1797, the survey of the town had been enlarged and included land as far north as Lot (Queen) Street, and as far west as Peter Street (Winearls 1991:591; Firth 1962:11, 21). The areas between Parliament Street and the Don River and from Peter Street to the



Humber were reserved for the use of Government and the Garrison. Lands north of Queen Street were laid out in 100 acre Park Lots which were offered to members of the Executive Council and other government officials as compensation for the expense of having to move to York and sell prior improvements which were made while the government sat at Niagara (ASI 2012b: 4).

The construction of substantial structures within the town of York seems to have been slow until after the time of the War of 1812. For instance, a record of the town in 1815 listed only 44 houses in the area bounded by Peter, Front, Jarvis and Queen Streets. This enumeration did not include outbuildings such as barns and stables, nor does it appear to have included any shops or taverns (Robertson 1914:308-310). The architectural development of the town of York appears to have been a rather haphazard affair as late as the mid 19th century, a fact demonstrated by the famous photographic 'Panorama' of 1857 which showed the city as a curious amalgam of substantial brick and stone structures situated in the same blocks alongside frame and rough cast dwellings, sheds, shops, lumber yards and vacant lots (ASI 2012b: 4; Dendy1993: Plates 2-13).

East of Yonge the same kind of subdividing and house building happened in the park lots eastward to Sherbourne but past Moss Park there were mostly small cottage areas. Small cottages were also spreading north of Queen from the poorer eastern part of the Old Town into the area later known as Cabbagetown. Overall, however, the city's growth toward the Don continued to be slower, except for the General Hospital, and the Don Jail, which opened in 1865. Further to the north were the Necropolis and St. James's new cemeteries, and Rosedale, an old Jarvis estate, was being planned as a wealthy suburb (ASI 2012b: 4; Careless 1984: 96).

York Township

The history of York Township as a territorial division began in 1791 when Augustus Jones surveyed the township. The first land patents were granted in 1796 and by 1813 all of the township lands had been parcelled. By 1802 the township, bounded by the Humber River and Etobicoke Township to the west and sharing a border with Scarborough Township to the east, had a grist mill, two saw mills and two taverns. In 1801 the combined population of York, Etobicoke and Scarborough Townships and the Town of York numbered only 678 although by 1840 the population of York Township numbered more than 5,000 and this trend in growth and development continued throughout the 1880's.

As was the case in the other townships, as farmers and business people established themselves and accumulated some wealth, small log houses were replaced by larger more comfortable homes. The construction of brick and stone houses also began in the early 1830s and this reflected the continued growth of the timber and building trades, and the establishment of a more reliable agricultural economy. One of the important ingredients to the success of any area was its proximity to evolving transportation routes and the improvement of roads over time. In 1839 Kingston Road was planked all the way to York and this allowed farmers to have easier access to town markets.

Township villages followed a common pattern of development, beginning with the establishment of a saw mill, then a grist mill, followed by a variety of trades and services that supported the needs of industry and settlers. As roads and rail systems were built to bring timber, then produce and livestock, to market, other settlements were established at crossroads and junctions.

East York's development was slower than the downtown core. In the 1870s, the Beach area was developed as a summer resort offering such amenities as Woodbine Park, Victoria Park, and Kew



Gardens, as well as the new Scarboro' Heights Hotel, which was located near Beech Avenue and Kingston Road. Streetcar service along Kingston Road started in 1875 and steamers made several trips a day from downtown Toronto (ASI 2012b: 5-6).

The Eastern Beaches area contains a number of historic settlements that were formed during the early-mid nineteenth century. These include the settlements of Benlamond Park, Coleman, Doncaster, Don Mount, Leslieville, Norway, and Woodbine Riding and Driving Park (ASI 2012b: 5-6). The communities of Don Mount and Leslieville are adjacent to the study area. Don mount may have been the community described by Crossby as the post village of "Don" at the mouth of the Don River. In 1873, it contained a telegraph office on the line of the Grand Trunk Railway (GTR), and had a population of 150 people (ASI 2012a: 11; Crossby 1873:102).

Leslieville, centred at the intersection of Queen Street and Leslie Street was described in 1873 as "a thriving post village... contains a telegraph office, the Toronto nurseries covering 150 acres, several brickfields, and 8 stores. Population 400" (ASI 2012a: 14; Crossby 1873:171).

The study area includes a short section of the former Grand Trunk Railway and the Toronto & Nipissing Railway track. The Grand Trunk Railway (GTR) Company of Canada was incorporated by the Canadian government in 1852 and was planned to connect Toronto to Montreal. It began in 1853 by purchasing five existing railways: the St. Lawrence and Atlantic Railroad Company, the Quebec and Richmond Railroad Company, the Toronto and Guelph Railroad Company, the Grand Junction Railroad Company, and the Grand Trunk Railway Company of Canada East. By 1853, the Toronto and Guelph Railroad Company had already begun construction of its line. After its merger with the Grand Trunk Railway Company, the line was redirected from its original route and extended to Sarnia to be a hub for Chicago bound traffic. By 1856 the line had been built from Montreal to Sarnia via Toronto. The company fell into great debt in 1861 and while it was saved from bankruptcy by the Canadian government, in 1919 the company was bankrupt following its expansion west in an attempt to compete with the Canadian Pacific and Canadian Northern Railways (Library and Archives Canada 2005).

The Toronto & Nipissing Railway (T&NR) was chartered in 1868 to connect Toronto to Lake Nipissing. The railway opened officially at Uxbridge in 1871 and connected to Coboconk in 1872. The T&NR connected to Toronto via the GTR right-of-way (ROW), departing at Scarborough Junction. By 1873 the T&NR operated 12 locomotives. The T&NR met its down-fall by the re-gauging of many railways in the 1870's. Unable to afford the expense of re-gauging its railway to follow suit of neighbouring railways the T&NR was sold to the Midland Railway in 1881 (Cooper 2008).

1.2.3 Historic Map Review

A series of historical maps was reviewed to determine the presence of historical features within or abutting the study area during the nineteenth and/or early twentieth century. These maps were also reviewed to document the degree to which the Port Lands and South of Eastern Avenue study areas are made land. The maps reviewed included Samuel Holland's (1791) *true copy* of Augustus Jones' Plan of Dublin Township, Hering and Gray's 1889 *Plan of the City of Toronto*, and Goad's (1884; 1890; 1899) *Fire Insurance Map of Toronto* (Figures 2-8). A detailed analysis of these maps and the formation of the study area is presented in Section 1.3.3.



1.2.4 Summary of Historical Context

The background research and historic mapping demonstrates that the study area is largely situated on made land constructed at the close of the nineteenth century and further modified in the early twentieth century. Though parts of the Port Lands study area coincide with the natural beach strands of the Ashbridge's Marsh, these areas were most likely disturbed in the late nineteenth century and early twentieth century by harbour installations constructed to form the Port Lands (see Section 1.3.4; 2.0). Parts of the South of Eastern Avenue study area are shown to be natural land and may retain potential Euro-Canadian archaeological resources depending on the degree of disturbance they have undergone.

1.3 Archaeological Context

This section provides background research pertaining to previous archaeological fieldwork conducted within and in the vicinity of the study area, its environmental characteristics (including drainage, soils or surficial geology and topography, etc.), and current land use and field conditions. Three sources of information were consulted to provide information about previous archaeological research: the site record forms for registered sites housed at the MTCS; published and unpublished documentary sources; and the files of ASI.

1.3.1 Geography

In addition to the known archaeological sites, the state of the natural environment is a helpful indicator of archaeological potential. Accordingly, descriptions of the physiography and soils, are briefly discussed for the study area.

The *S & G* stipulates that primary water sources (lakes, rivers, streams, creeks, etc.), secondary water sources (intermittent streams and creeks, springs, marshes, swamps, etc.), ancient water sources (glacial lake shorelines indicated by the presence of raised sand or gravel beach ridges, relic river or stream channels indicated by clear dip or swale in the topography, shorelines of drained lakes or marshes, cobble beaches, etc.), as well as accessible or inaccessible shorelines (high bluffs, swamp or marsh fields by the edge of a lake, sandbars stretching into marsh, etc.) are characteristics that indicate archaeological potential.

Water has been identified as the major determinant of site selection and the presence of potable water is the single most important resource necessary for any extended human occupation or settlement. Since water sources have remained relatively stable in Ontario since 5,000 BP (Karrow and Warner 1990: Figure 2.16), proximity to water can be regarded as a useful index for the evaluation of archaeological site potential. Indeed, distance from water has been one of the most commonly used variables for predictive modeling of site location.

Port Lands

The vast majority of the Port Lands area consists of late nineteenth/twentieth century made land (ASI 2007: 14). The area which is now the Port Lands is historically documented to have been the deltaic freshwater lagoon of the Don River (Figure 2; see Section 1.3.1). The Holocene geologic history of Lake Ontario permits the earliest dating of the lagoon formation to ca. 5,000 BP following the Nipissing Phase resurgence of lake levels (Karrow and Warner 1990: Figure 2.8, p.21).



The South of Eastern Avenue study area is partially situated within the Iroquois Plain physiographic region of southern Ontario in sand plain. The Iroquois Plain physiographic region is characteristically flat and formed by lacustrine deposits laid down by the inundation of Lake Iroquois, a body of water that existed during the late Pleistocene. This region extends from the Trent River, around the western part of Lake Ontario, to the Niagara River, spanning a distance of approximately 300 km (Chapman and Putnam 1984:190). The old shorelines of Lake Iroquois include cliffs, bars, beaches and boulder pavements.

Glacial Lake Iroquois came into existence by about 12,000 before present (BP) as the Ontario lobe of the Wisconsin glacier retreated from the Lake Ontario basin. Isostatic uplift and the blockage of subsequent lower outlets by glacial ice produced a water plain substantially higher than modern Lake Ontario. Beginning around 12,000 BP, water levels started to drop during the next few centuries in response to sill elevations at the changing outlet. By about 11,500 BP, when the St. Lawrence River outlet became established, the initial phase of Lake Ontario began and this low water phase appears to have lasted until at least 10,500 BP. At this time the waters stood as much as 100 m below current levels. At this time isostatic uplift had started to raise the outlet around Kingston so that by 10,000 BP the water level had risen to about 80 m below present. Uplift has continued to tilt Lake Ontario upward to the northeast, propagating a gradual and transgressive expansion throughout the basin (Anderson and Lewis 1985; Karrow 1967:49; Karrow and Warner 1990).

The old sandbars in this region are good aquifers that supply water to farms and villages. The gravel bars are quarried for road and building material, while the clays of the old lake bed have been used for the manufacture of bricks (Chapman and Putnam 1984:196). This narrow strip is the most densely inhabited area because of its proximity to Lake Ontario and its climatic influences, as well as its favourable soil conditions.

Figure 9 displays the surficial geology for the study area. The mapping indicates that the entire study area is underlain by sand.

The study area is located adjacent to the Don River. The Don River drains an area of approximately 37,037 ha. The watershed consists of two main branches: the east and west Don Rivers. These branches intersect the old Lake Iroquois beach and transit the Peel plain and South Slope physiographic regions intersecting the old Lake Iroquois beach and meeting their confluence approximately at the intersection of Don Mills Road and the Don Valley Parkway, in the City of Toronto (Chapman and Putnam 1984: 103-104). The Lower Don River meets its confluence with Lake Ontario at the site of the Port Lands.

The location of the Port Lands was historically the deltaic freshwater lagoon of the Don River (Figure 2). At the beginning of the nineteenth century, the marsh around Ashbridge's Bay was perceived to be an unhealthy environment, as the source of pestilence and disease. The boundary between Toronto Harbour and Ashbridge's Bay was a narrow sandbar that extended south from the foot of Cherry Street, broken only by the mouth of the Don River. The isthmus was formed over many centuries by sands eroded from the Scarborough Bluffs which were carried westward to meet silt deposited by the Don River. The Don River had as many as five mouths in the area and the isthmus was bisected by two of them. Since at least the 1830s, a carriage path crossed the Ashbridge's Bay bar, to meet the headland and continued to Gibraltar Point at the western tip of the peninsula. A bridge was constructed across the Don River to enable people from the City to reach Lake Shore Avenue. Until 1852, this headland was a continuous land mass. However, a number of severe storms between 1852 and 1858 eroded the peninsula. This necessitated frequent repair to the small gaps that developed until a storm completely separated the peninsula from the mainland in 1858. This latest gap was not repaired. The new entrance into Toronto



Harbour became known as the Eastern Gap and separates the Port Lands from the Island today (ASI 2007:10-12).

Palaeontological evidence can provide some information on the past environment of southern Ontario. Isotope studies of Oxygen-18 and Carbon-13 can provide information on past climate conditions. By comparing quantities of Oxygen-18 and Carbon-13 in marl deposits with quantities found in normal meteoric water it is possible to estimate past temperatures and relative humidity. Following the retreat of the Laurentide glacier in approximately 12,000 BP, the climate of southern Ontario began to warm. Until approximately 7,500 BP temperatures were still below the modern average and the climate was also quite dry. Between 7,500 BP and 5,800 BP the climate of southern Ontario had reach the modern average humidity but was approximately 2° C warmer than the modern average. Between approximately 5,800 BP and 1,500 BP the climate continued to be warmer than the modern average and but was now a very moist climate. After 1,500 BP the temperature and humidity began to approach the present day averages (Edwards and Fritz 1988).

By approximately 11,000 BP southern Ontario was predominantly spruce parkland. By approximately 10,000 BP this had transformed into a predominantly pine woodland. This pine woodland dominated until approximately 4,000 BP, at which point the environment transitioned into a mixed deciduous-coniferous forest of birch, maple, beech and hemlock. This woodland persisted until the beginnings of European settlement in southern Ontario, at which time the forests were cleared and the region began to be dominated by meadow species and birch (Bernabo and Webb 1976; McAndrews 1981).

Following the retreat of the Laurentide glacier the southern Ontario was a boreal like environment and supported a sub-arctic ecosystem including extinct megafauna. By between 10,000 BP and 7,000 BP the mixed coniferous-deciduous woodland would likely have been inhabited by more familiar species such as caribou or other cervids. By 2,000 BP the ecosystem would have been similar to that of the present day. The area of the Ashbridge's Marsh would not have come into existence until after 5,000 BP when during the Nipissing Phase low water level in the Lake Ontario basin resurged to the modern lake levels. The deltaic freshwater lagoon of the Ashbridge's Marsh would have been a haven for aquatic plant and animal life.

1.3.2 Previous Archaeological Research

In Ontario, information concerning archaeological sites is stored in the Ontario Archaeological Sites Database (OASD) maintained by the MTCS. This database contains archaeological sites registered within the Borden system. Under the Borden system, Canada has been divided into grid blocks based on latitude and longitude. A Borden block is approximately 13 km east to west, and approximately 18.5 km north to south. Each Borden block is referenced by a four-letter designator, and sites within a block are numbered sequentially as they are found. The study area under review is located in Borden block *AjGu*.

According to the OASD (MTCS 2013), six previously registered archaeological sites are located within 1 km of the study area. Background research has indicated that two additional sites are located within 1 km of the study area (ASI 2010d). Site details are presented in Table 1.

According to the background research, seven archaeological assessments have been conducted within 50 m of the study area (ASI 2007; 2010a; 2010b; 2010c; 2012b; 2013; Golder 2013; Poulton 2004). Part of the study area was also the subject of the *Waterfront Toronto Archaeological Conservation and Management Strategy* (ASI 2008). Due to access constraints the Poulton (2004) assessment was not



reviewed for this assessment. The remainder of previous assessments and the *Waterfront Toronto* study are reviewed below.

Table 1: List of previously registered sites within 1 km of the study area

Borden #	Site Name	Cultural Affiliation	Site Type	Researcher
AjGt-1	Ashbridge	Archaic; Woodland; Historic Euro-Canadian	Undetermined; residence	Doroszenko [OHF] 1997; 1998; 2000; 2001; Latta [OHF] 1998; TBE 1987
AjGt-2	Leslieville Public School	Euro-Canadian	Habitation; market garden; schoolyard	Hamalainen [ARC] 1985
AjGu-16	Thornton Blackburn	Late Woodland; Iroquoian; Euro-Canadian; Afro-American	Campsite; residence; schoolyard	Smardz [TBE] 1985
AjGu-35		Euro-Canadian	Residence	Williamson <i>et al.</i> [ASI] 1996
AjGu-41	Parliament	Euro-Canadian	Government Building	Williamson [ASI] 2000
AjGu-46		Euro-Canadian	Windmill	Dieterman [ASI] 2003
AjGu-61	Toronto Lime Kiln Works	Euro-Canadian; 1830s- 1850s	Residence; lime kiln	Slocki 2008
AjGu-65	Bright-Barber	Euro-Canadian; 1850s	Residence	McGuire [ASI] 2010
AjGu-66	Smith-Barber	Euro-Canadian; 1840s- 1860s	Soap and Candle factory	McGuire [ASI] 2010

ARC- Archaeological Resource Centre
 ASI – Archaeological Services Inc.
 OHF - Ontario Heritage Foundation
 TBE – Toronto Board of Education

ASI (2007) conducted a Stage 1 archaeological assessment (existing conditions) for the Don Mouth Naturalization and Port Lands Flood Protection Project in the City of Toronto under the project direction of Rob Pihl (MCL PIF P057-340-2006). The Stage 1 archaeological assessment determined an inventory of 12 archaeological resource features. Only four of these (LDP-1; LDP-2; LDP-3; LDP-4) were recommended to be subject to archaeological monitoring. The remainder of the study area was reported to not retain archaeological potential due to deep and extensive land disturbance.

ASI (2010a) conducted a Stage 1 archaeological assessment for the Coordinated Provincial Individual/Federal Environmental Assessment and Integrated Urban Design Study of the Gardiner Expressway and Lake Shore Boulevard Reconfiguration in the City of Toronto under the project direction of Rob Pihl (MCL CIF P057-587-2010). This assessment conducted an inventory of features of potential archaeological value, the identification of areas of potential was hampered by the complexity and variability of individual property development histories as well as the undefined scope of impacts proposed by the project. This assessment recommended that the study area be subject to further Stage 1 archaeological assessment once preliminary or detailed design had been completed.

ASI (2010b) conducted a Stage 1 archaeological assessment for the Hearn Switching Station Expansion project in the City of Toronto under the project direction of Katie Bryant (MTC PIF P264-111-2010). The Stage 1 determined that the study area did not retain archaeological potential on account of previous

ground disturbances. The study area was recommended to be considered free of further archaeological concern.

ASI (2010c) conducted a Stage 1 archaeological assessment for the Light Rail Vehicle Fleet Maintenance and Storage Facility project in the City of Toronto under the project direction of Rob Pihl (MCL PIF P057-558-2009). The Stage 1 determined that the study area did not retain archaeological potential on account of deep and extensive land alterations. The study area was recommended to be considered free of further archaeological concern.

ASI (2012b) conducted a Stage 1 archaeological assessment for the Eastern Beaches Basement Flooding Class Environmental Assessment Study in the Former Township of York, York County in the City of Toronto under the project direction of Lisa Merritt (MTCS PIF P094-166-2012). The project assessed the alignments of a series of proposed sewers. This assessment did not identify areas of archaeological potential within the present study area. Areas identified as not having archaeological potential were recommended to be considered free of further archaeological concern.

ASI (2013) conducted a Stage 1 archaeological assessment for the Ashbridges Bay Treatment Plant Class EA study in Concession 1 from the Bay, Former Township of York, County of York in the City of Toronto under the project direction of Rob Pihl (MTCS PIF P057-718-2012). The Stage 1 determined that parts of the study area possess archaeological potential and require archaeological monitoring during construction to document any archaeological resources that may be present. The remainder of the study area was determined to not retain archaeological potential was recommended to be considered free of further archaeological concern.

Golder & Associates (2013) conducted a Stage 1 archaeological assessment of 629, 633 and 675 Eastern Avenue (Part of Lots 11 and 12 and Part of Water Lots in Front of Said Lots 11 and 12, Broken Front Concession, Geographic Township of York, and Part of Lot 5, Registered Plan D-81) in the City of Toronto under the project direction of Dr. Peter Popkin (P362-0055-2013). The Stage 1 determined that the study area does not retain archaeological potential on account of deep and extensive land disturbances and recommended that it be considered free of further archaeological concern.

ASI (2008) prepared the *Waterfront Toronto Archaeological Conservation and Management Strategy (ACMS)* for Waterfront Toronto in order to better inform the planning and development review process especially pertaining to the preservation and documentation of archaeological resources, to develop a framework for the evaluation of significant archaeological resources, to identify best practices for the preservation, interpretation, commemoration and exhibition of archaeological resources within a holistic framework, and to explore opportunities for new archaeological interpretive concepts. Pertinent to the present assessment, this document inventoried three archaeological resource features (LDP-2; LDP-4; LDP-6). Only two of these features (LDP-2; LDP-4) were recommended to be subject to archaeological monitoring during construction. LDP-6 was recommended to not require further archaeological action however it should be subject to commemorative or interpretive initiatives as part of new development to the satisfaction of the Manager of Heritage Preservation Services.

1.3.3 Formation and Development of Study Area

In an earlier time, Fisherman's Island, as the east-west peninsula formerly occupying the area of the Port Lands was historically known, was used by Aboriginal peoples for hunting and fishing. An appealing location, combined with an abundant source of fish, soon lured Europeans across the isthmus to the



peninsula (which ran roughly east to west encompassing the present day Toronto Islands). Samuel Holland's (1791) *true copy* of Augustus Jones' Plan of Dublin Township (Figure 2) and Hering and Gray's (1889) *Plan of the City of Toronto* (Figure 3) demonstrate that the current Port Lands area was marshland from before Euro-Canadian settlement until the late nineteenth century. Several storms in the mid-nineteenth century broke through the peninsula at the area of the present East Gap, isolating Toronto Islands (ASI 2007: 10). By the late nineteenth century Ashbridge's Bay was a dumping ground for municipal waste and sewage—uses which were incompatible with the growing use of the area for cottages and recreation (ASI 2007: 10).

Apart from issues related to the dumping of sewage, the main concern with Ashbridge's Bay was its apparent tendency to migrate into Toronto harbour. In 1850, Sanford Fleming determined that 12 hectares (ha) had been added to the western section of the sandbars over the previous 50 years. In dealing with these issues, the famous American civil engineer, James Eads, prepared a report on the preservation of the Toronto Harbour in 1881. With regard to Ashbridge's Bay, he recommended that a double row of sheet piling be constructed between the harbour and the sandbar. This project was undertaken, but heavy storms in the spring of 1882 caused such damage to the work in progress that the length of the piling had to be considerably increased. The work was completed over the course of the next year. Eads had also recommended that the Eastern Gap should be made permanently navigable with the construction of breakwaters. This work was completed in 1882 as well (ASI 2007: 10).

Goad's *Fire Insurance Map of Toronto* series were reviewed to examine development to the study area in the late nineteenth and early twentieth century. Goad's 1884 maps indicate that Ashbridge's Bay still existed by this date and that the Don River existed in its natural course (Figures 4 and 5). Goad's 1890 map indicates that the Don River was channelized by this time (Figure 6). Goad's 1899 maps indicate that Ashbridge's Marsh was then in-filled to consolidating the artificial harbour of Ashbridge's Bay, forming much of the Port Lands study area as well as much of the South of Eastern Avenue study area (Figures 7 and 8).

By the early years of the twentieth century, development on the peninsula was intensifying. Cottages replaced many of the shacks and boathouses of the area's largely transient residents. By 1911, two small foundries were located on either side of Keating's Channel, and a factory was being built in the middle of the north-south sand spit (ASI 2007: 10-11).

Small-scale fishing enterprises lined some sections of the harbour edge while on the sandbar and outer headland there were two clusters of cottages. Whereas most of the cottages appear to have been built by squatters, about 20 cottages on the outer bar are shown as having been located on surveyed lots that were leased. On the lakefront of Fisherman's Island was a wide boardwalk (Stinson 1990: 8). In the late 1920s, however, the residents of the cottages had their leases expropriated and their cottages were either demolished or relocated. This coincided with the Toronto Harbour Commission's lake filling operations (ASI 2007: 11).

The largest industrial complex to be developed within the Port Lands area was that of British Forgings Limited, although it was a short-lived operation. It was the first large plant built on the land newly made in Ashbridge's Bay. It housed the largest electric steel plant in the world, and was constructed in the remarkably short time of six months. Work began in February 1917 on a 51 ha site to build the steel mill to produce forgings from scrap steel for the war effort. Steel production commenced in August, and the company produced 9,000 tons per month until the end of the war. The plant closed at the end of the war, but was reopened by Welsh steel company Baldwins Ltd. in 1919. Although Baldwins added new



facilities to the plant, the operation was not successful and the plant was closed again in 1926. It remained abandoned and was dismantled over the following few years (ASI 2007: 11-12).

The 1912 waterfront plan had anticipated that warehousing and heavy industry would become the predominant uses of the reclaimed Ashbridge's Bay area and at first, the British Forgings plant seemed to fulfill these expectations for the Lower Don and Port Lands areas. However, between the wars, most of the land was used for storage of fuel and building materials. By 1931, 41 industries operated in the Port Industrial District, but most of the land was physically occupied by coal storage yards. British-American Petroleum, Imperial Oil and McColl-Frontenac established tank farms and oil refineries in the 1920s. However, changes in petroleum marketing dictated that this would be a short-lived industry. The Hearn thermal electric power station, built in 1950, continued the demand for coal storage in the Port Lands. As with East Bayfront, the Harbour Commissioners anticipated a growth in ship traffic in the 1950s and built extensive dock facilities. Water traffic never developed on the scale expected (ASI 2007: 12).

1.3.4 Property Inspection and Existing Conditions

The Port Lands study area is a constructed landscape on Toronto's lake shore which was a historic hub for lake shipping and industry. Parts of the Port Lands have been re-purposed for recreational use however it largely remains as an industrial area. The South of Eastern Avenue study area has recently seen a resurgence of development, including large film studio complexes and new big box type commercial developments.

The Stage 1 property inspection was conducted Dr. Bruce Welsh (P047) of ASI, on November 28, 2013, in order to gain first-hand knowledge of the geography, topography, and current conditions and to evaluate and map archaeological potential of the study area. It was a visual inspection only and did not include excavation or collection of archaeological resources.

Weather conditions for the inspection were a overcast with a temperature of approximately -2°C. Previously identified features of archaeological potential were examined, additional features of archaeological potential not visible on mapping were identified and documented as well as any features that could affect assessment strategies. Field observations are compiled onto the maps of the study area in Section 6.0 (Figures 12-14) and associated photography is presented in Section 7.0 (Plates 1-18).

Based on the results of the property inspection, however, it was determined that the majority of the study area does not require Stage 2 archaeological assessment. This is due to documented deep and extensive land disturbance negating archaeological potential. The ACMS has recommended that LDP-2 and LDP-4 (Figure 10), within the Port Lands study area, require archaeological monitoring during construction to document any archaeological resources which may exist (Figure 13: areas marked in pink). The ACMS also recommended that LDP-6 (Figure 10), within the Port Lands study area, be subject to interpretation and commemoration as part of the development.

2.0 ANALYSIS AND CONCLUSIONS

The archaeological and historical context has been analyzed to help determine the archaeological potential of the study area. The Port Lands study area and a large part of the the South of Eastern Avenue study area has been documented to consist of made land constructed int he late nineteenth/early twentieth century. The parts of the study area which are documented to be natural land were documented to possess



deep and extensive land disturbance due to extant land development and right-of-way (ROW) construction, negating archaeological potential (Figures 12-14: marked in yellow and orange). The ROW is constructed of a deep bed of concrete and asphalt and is also used to carry massive amounts of deeply buried utilities to service the downtown core. The installation of these utilities over the past century has destroyed any archaeological resources that may have existed in the past.

2.1 Aboriginal Archaeological Resource Potential

Despite the overall significance of the mouth of the Don River in terms of pre-contact and early contact period Aboriginal subsistence, settlement and communication systems, the vast majority of the study area is made land constructed at the close of the nineteenth century and subsequently modified in the early twentieth century (ASI 2007: 14). Any lands that are natural have been disturbed by intensive modern development.

2.2 Potential Euro-Canadian Shoreline Features within the Subject Property

The vast majority of the study area is made land constructed at the close of the nineteenth century and subsequently modified in the early twentieth century. These lands have no archaeological potential. In the remaining natural landscape, the locations of the historic pre-nineteenth century landscape and prominent nineteenth features have been identified by previous assessment and recommended to be subject to archaeological monitoring during topsoil removal (See Section 3.0).

2.3 Evaluation of Archaeological Potential

The *S & G* (Section 1.3.1) lists criteria that are indicative of archaeological potential.

The study area meets the following criteria used for determining archaeological potential:

- Primary water sources (e.g. Don River; minor tributaries)
- Past water sources (e.g. Lake Ontario; Ashbridge's Marsh)
- Previously registered archaeological sites (e.g. Ashbridge site AjGt-1)
- Areas of Euro-Canadian Settlement (e.g. City of Toronto; Don Mount);
- Early historic transportation routes (e.g. Eastern Avenue)
- Property identified with possible historic activity or occupation (e.g. LDP-2; LDP-4; LDP-6)

These criteria characterize the study area as having potential for the identification of Euro-Canadian archaeological resources, depending on the degree of land disturbance sustained.



3.0 RECOMMENDATIONS

In light of the results of this assessment, the following recommendations are made:

1. The majority of the Port Lands study area and the entire South of Eastern Avenue study area do not require further archaeological assessment on account of deep and extensive land disturbance negating archaeological potential (Figures 12-14: areas marked in yellow and orange);
2. The *ACMS* recommended that LDP-2 and LDP 4, which are included in the Port Lands study area, require archaeological monitoring (Figure 10; Figure 13: areas marked in pink). A licensed archaeologist must be present to monitor the removal of topsoil for all areas indicated in order to document any archaeological resources which may be present. The *ACMS* also recommended that while LDP-6, included in the Port Lands study area, does not require further archaeological action it should be subject to interpretation and commemoration as part of the development (Figure 10); and,
3. Should the proposed work extend beyond the current study area then further Stage 1 assessment must be conducted to determine the archaeological potential of the surrounding lands.

Notwithstanding the results and recommendations presented in this study, ASI notes that no archaeological assessment, no matter how thorough or carefully completed, can necessarily predict, account for, or identify every form of isolated or deeply buried archaeological deposit. In the event that archaeological remains are found during subsequent construction activities, the consultant archaeologist, approval authority, and the Cultural Programs Unit of the MTCS should be immediately notified.



4.0 ADVICE ON COMPLIANCE WITH LEGISLATION

ASI also advises compliance with the following legislation:

- This report is submitted to the Minister of Tourism, Culture, and Sport as a condition of licensing in accordance with Part VI of the *Ontario Heritage Act*, RSO 1990, c 0.18. The report is reviewed to ensure that it complies with the standards and guidelines that are issued by the Minister, and that the archaeological field work and report recommendations ensure the conservation, preservation and protection of the cultural heritage of Ontario. When all matters relating to archaeological sites within the project area of a development proposal have been addressed to the satisfaction of the MTCS, a letter will be issued by the ministry stating that there are no further concerns with regard to alterations to archaeological sites by the proposed development.
- It is an offence under Sections 48 and 69 of the *Ontario Heritage Act* for any party other than a licensed archaeologist to make any alteration to a known archaeological site or to remove any artifact or other physical evidence of past human use or activity from the site, until such time as a licensed archaeologist has completed archaeological field work on the site, submitted a report to the Minister stating that the site has no further cultural heritage value or interest, and the report has been filed in the Ontario Public Register of Archaeology Reports referred to in Section 65.1 of the *Ontario Heritage Act*.
- Should previously undocumented archaeological resources be discovered, they may be a new archaeological site and therefore subject to Section 48 (1) of the *Ontario Heritage Act*. The proponent or person discovering the archaeological resources must cease alteration of the site immediately and engage a licensed consultant archaeologist to carry out archaeological fieldwork, in compliance with sec. 48 (1) of the *Ontario Heritage Act*.
- The *Cemeteries Act*, R.S.O 1990 c. C.4 (as amended in 2012) and the *Funeral, Burial and Cremation Services Act*, 2002, S.O. 2002. c.33 requires that any person discovering human remains must immediately notify the police or coroner;
- The documentation related to this archaeological assessment will be curated by ASI until such a time that arrangements for their ultimate transfer to Her Majesty the Queen in right of Ontario, or other public institution, can be made to the satisfaction of the project owner(s), the Ontario MTCS, and any other legitimate interest groups.



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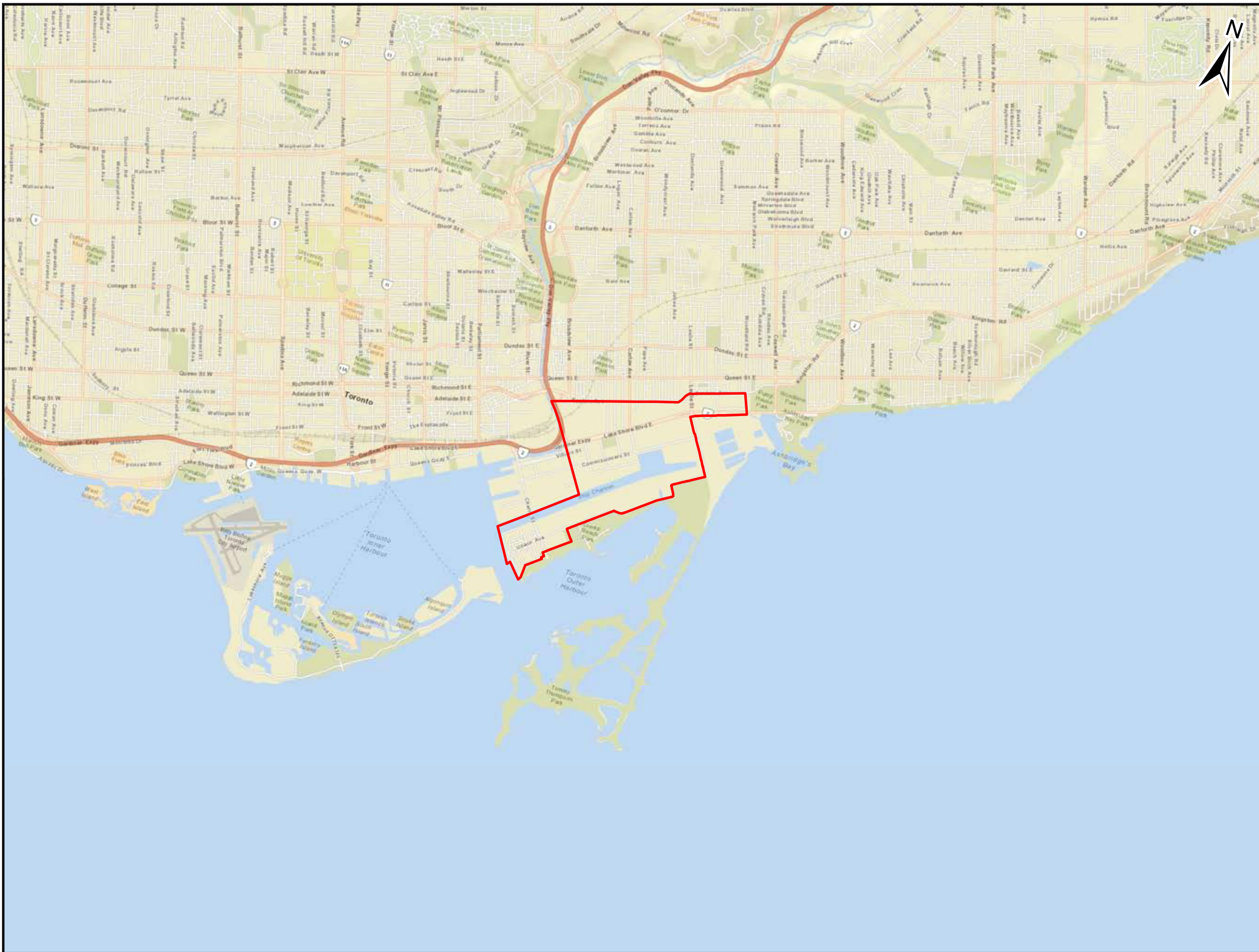
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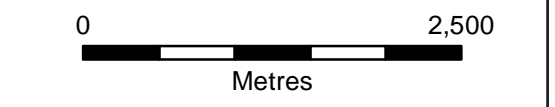
6.0 MAPS





 Study Area

BASE:
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 Sources: Esri, DeLorme, NAVTEQ, USGS, Intermap,
 IPC, NRCAN, Esri Japan, METI, TomTom, 2013



ASI PROJECT NO.: 13EA-132 DRAWN BY: BW PR
 DATE: Nov 25, 2013 FILE: 13EA132_Fig1


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Figure 1: Study Area

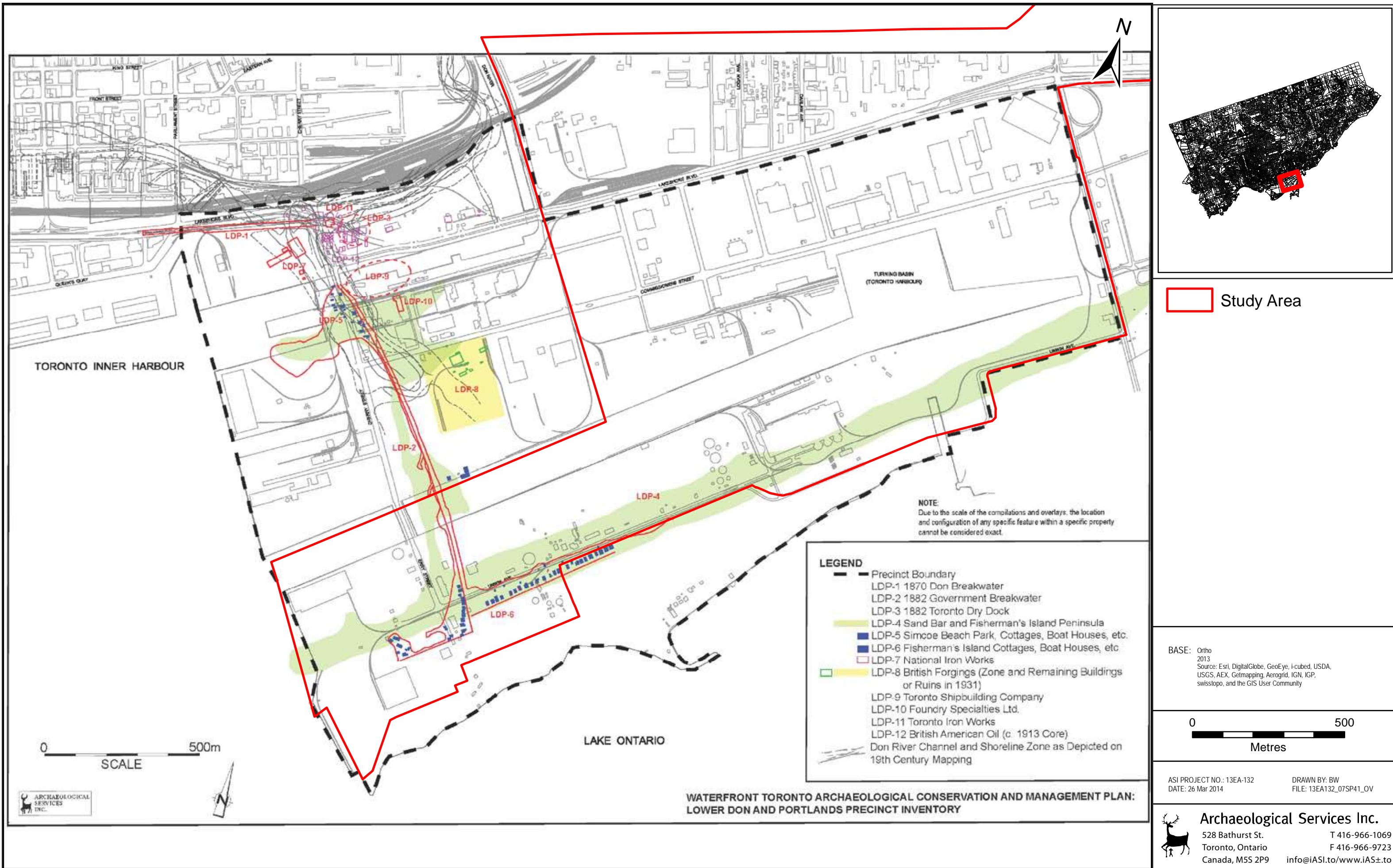


Figure 2: Study Area overlaid on ACMS map of Portlands Precinct

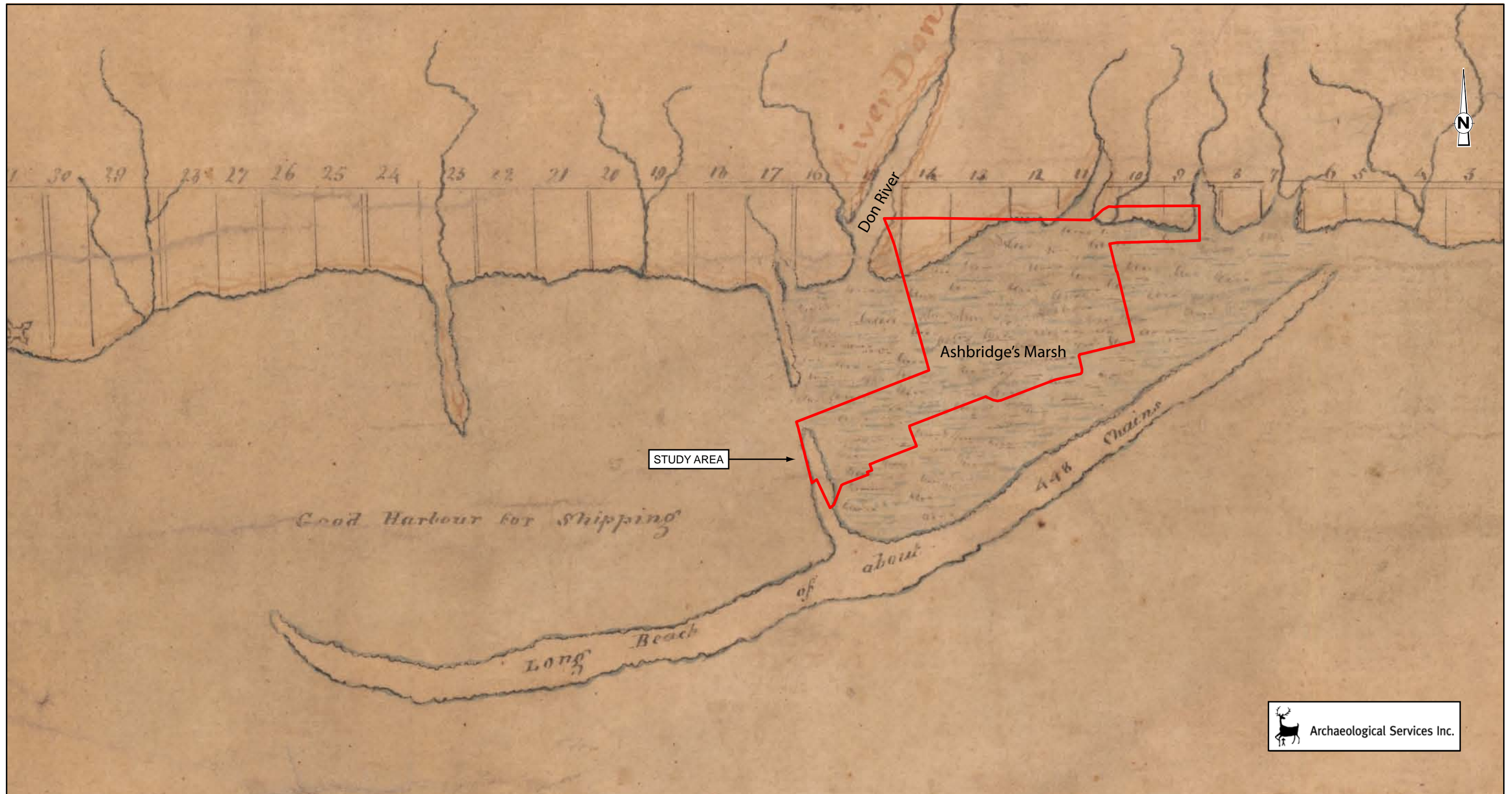
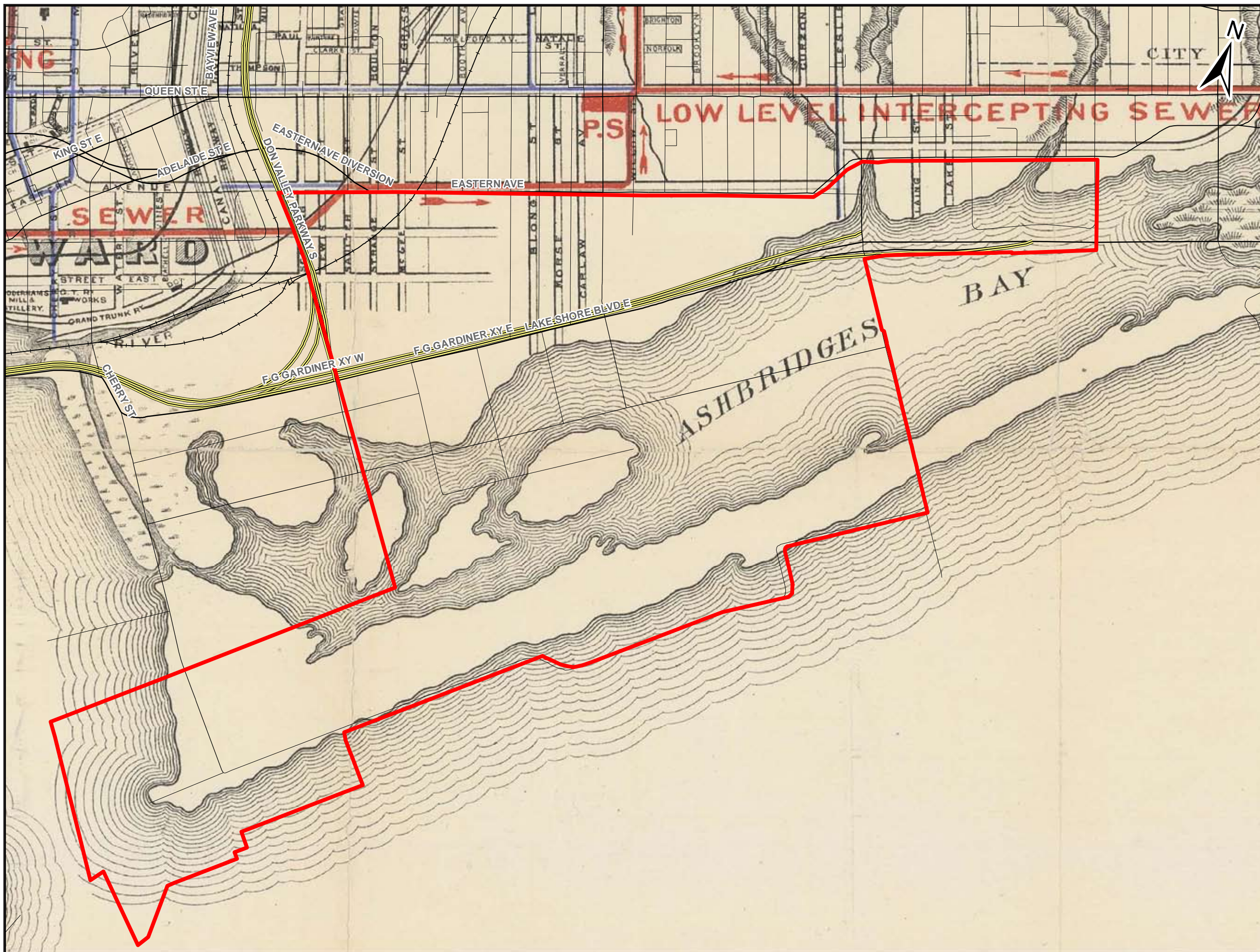

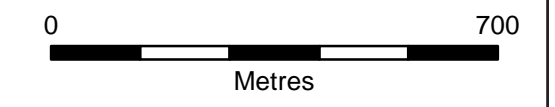


Figure 3: Study area overlaid (approximately) on Augustus Jones' 1791 Plan of the Township of Dublin (York)



 Study Area

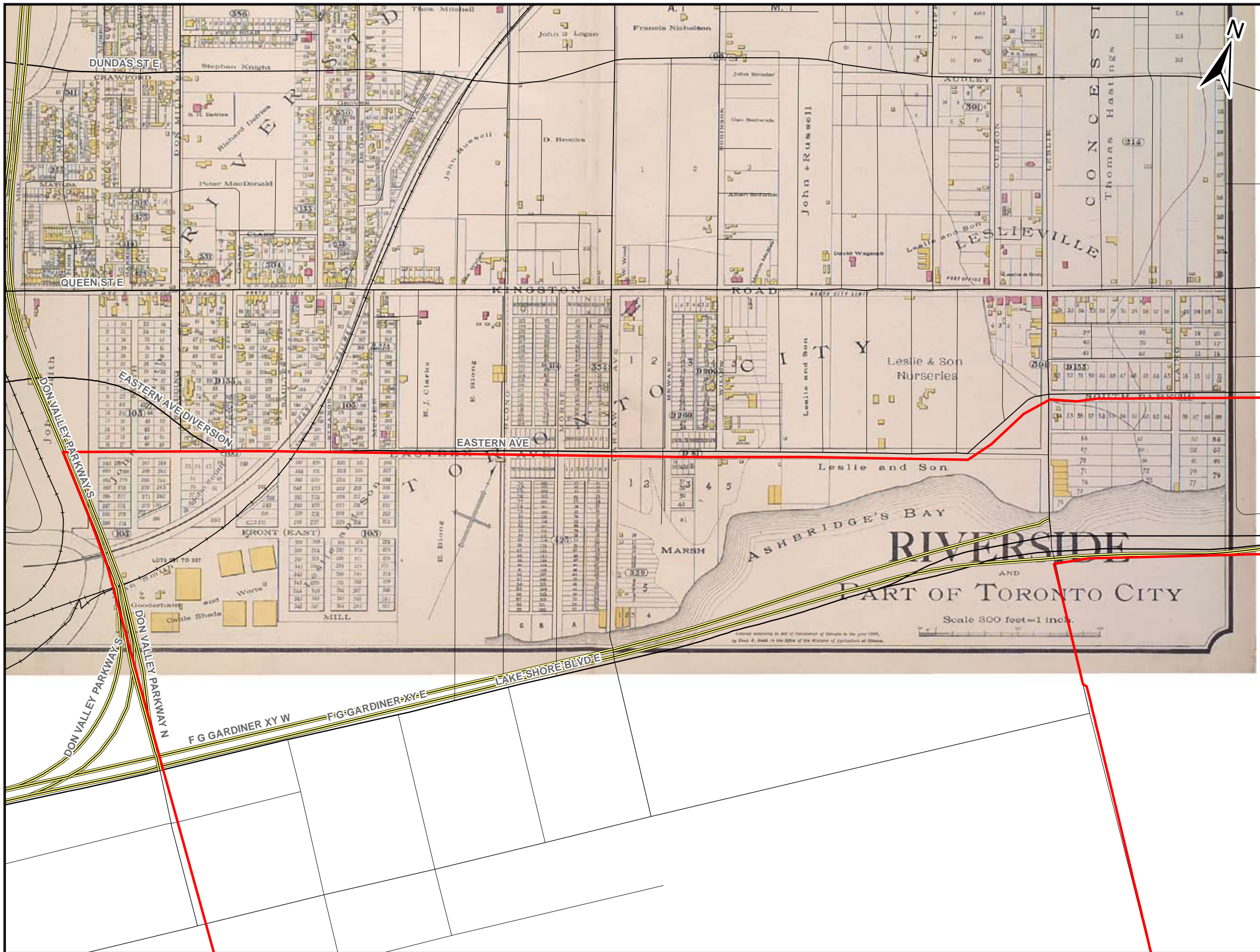
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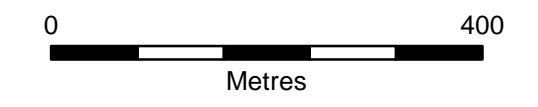
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Figure 4: Study area overlaid on 1889 Plan of the City of Toronto



 Study Area

BASE:
 World Street Map
 2013
 Sources: Esri, DeLorme, NAVTEQ, USGS, Intermap,
 IPC, NRCAN, Esri Japan, METI, TomTom, 2013



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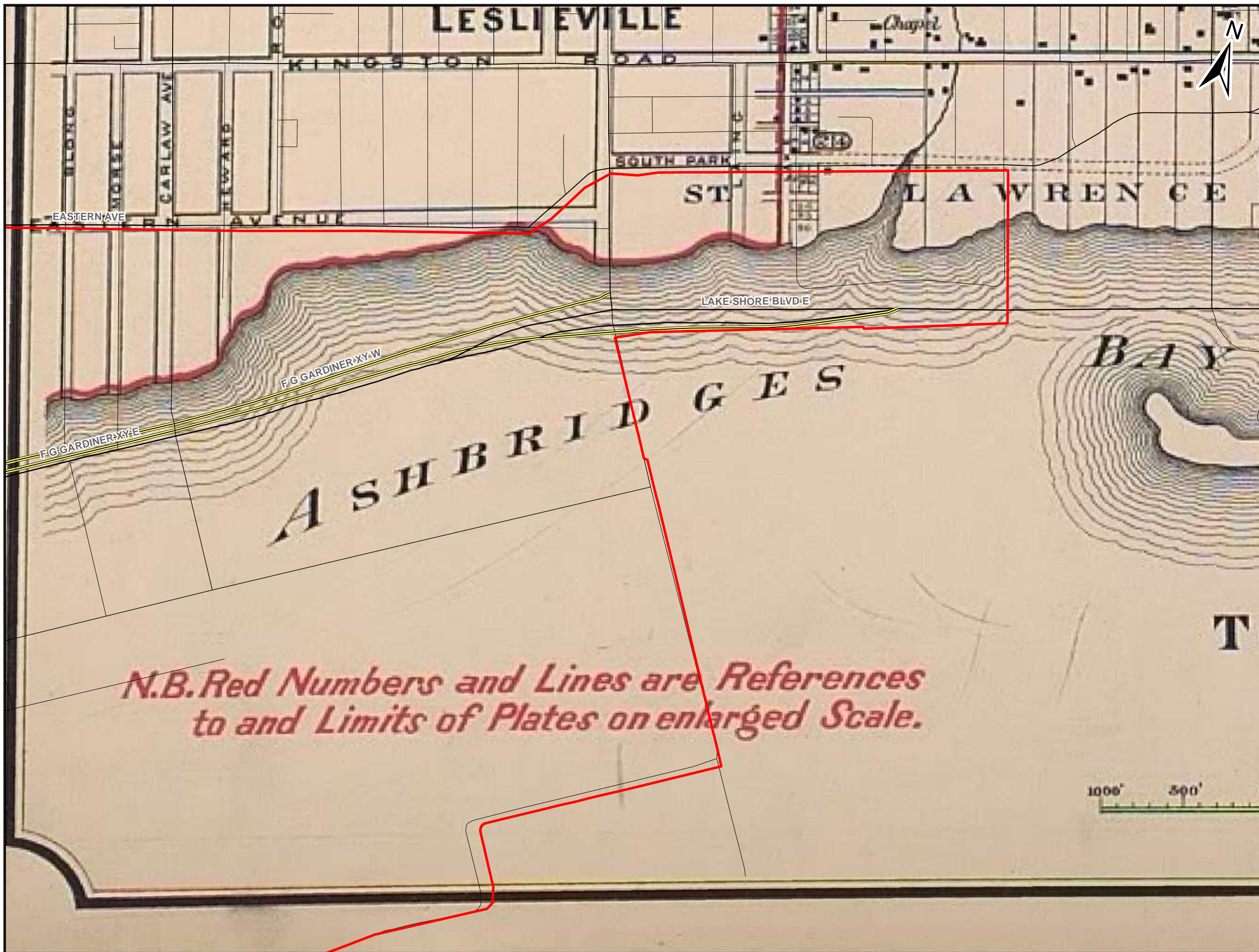

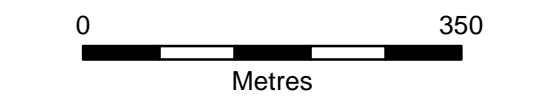
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Figure 5: Part of study area overlaid on Goad's 1884 Fire Insurance Map of Toronto (Riverside and Part of Toronto City)



 Study Area

BASE:
 World Street Map
 2013
 Sources: Esri, DeLorme, NAVTEQ, USGS, Intermap,
 iPC, NRCAN, Esri Japan, METI, TomTom, 2013



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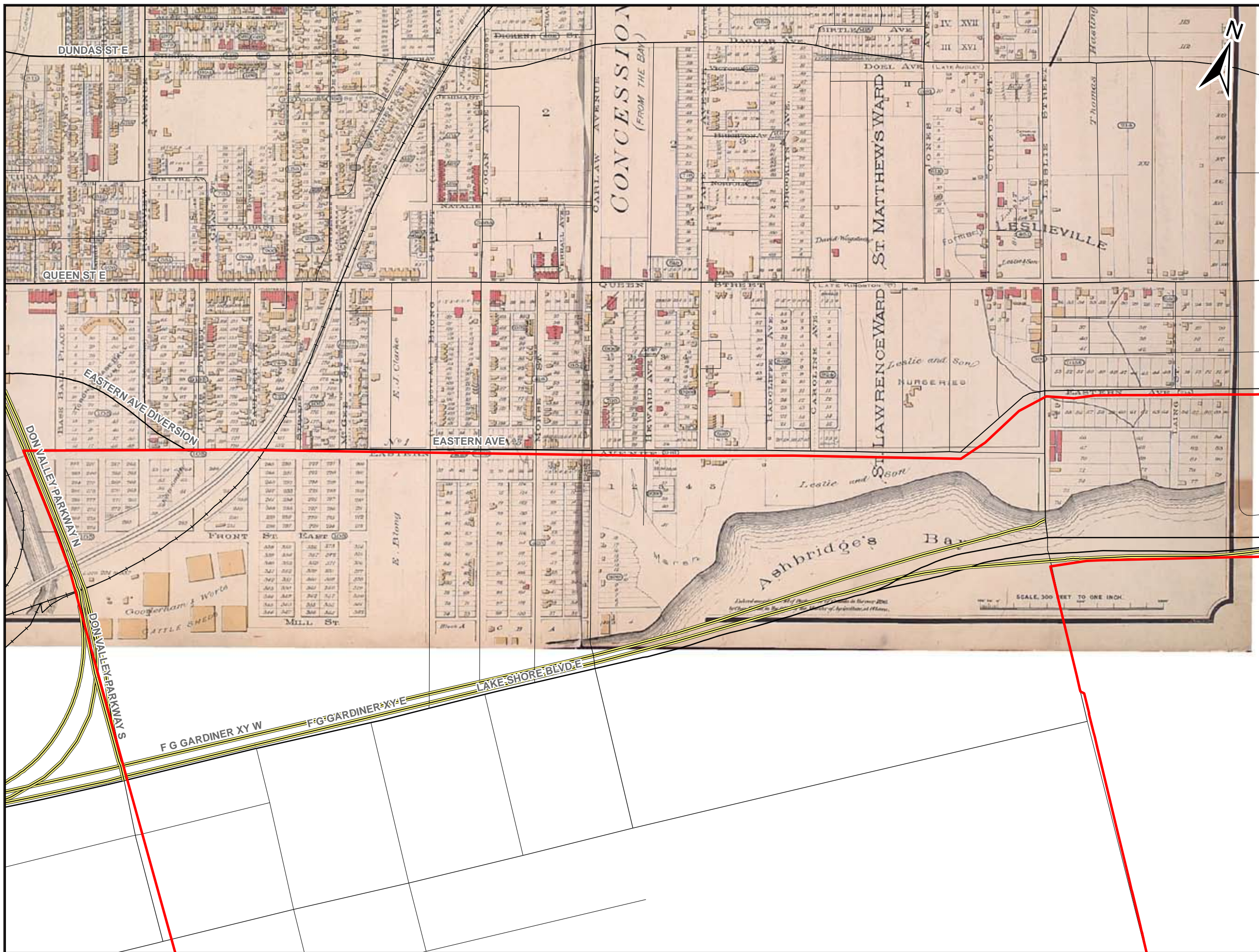

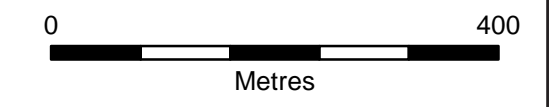
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Figure 6: Part of study area overlaid on Goad's 1884 Fire Insurance Map of Toronto (Toronto Suburbs, Eastern District)



 Study Area

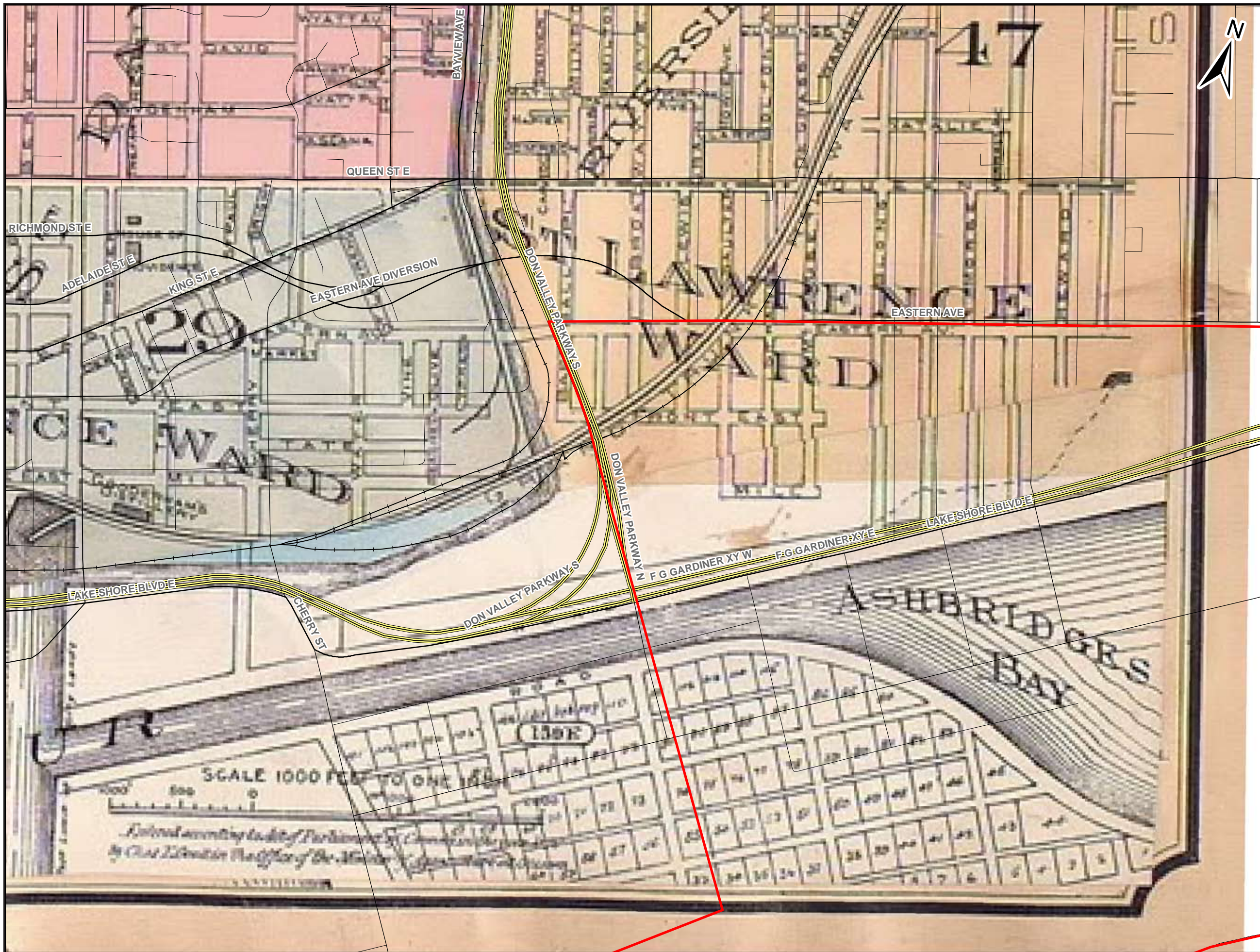
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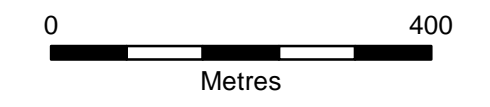
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 Canada, M5S 2P9 info@iASI.to/www.iAS±.to

Figure 7: Part of study area overlaid on Goad's 1890 Fire Insurance Map of Toronto (St. Lawrence Ward)



 Study Area

BASE:
 World Street Map
 2013
 Sources: Esri, DeLorme, NAVTEQ, USGS, Intermap,
 IPC, NRCAN, Esri Japan, METI, TomTom, 2013



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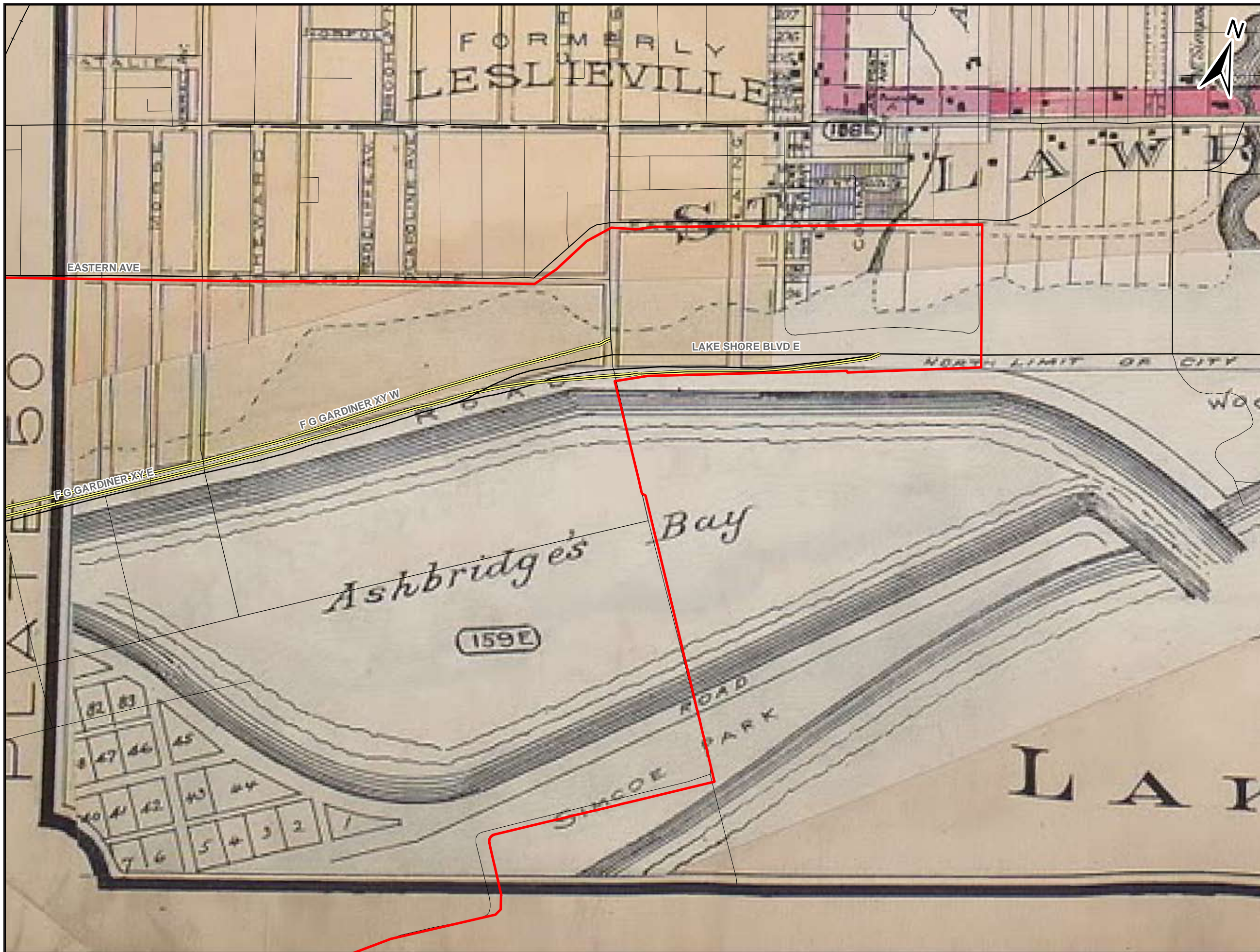

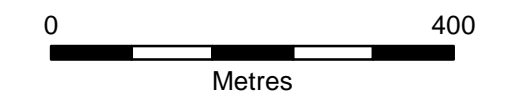
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Figure 8: Part of study area overlaid on Goad's 1899 Fire Insurance Map of Toronto (Central District)



 Study Area

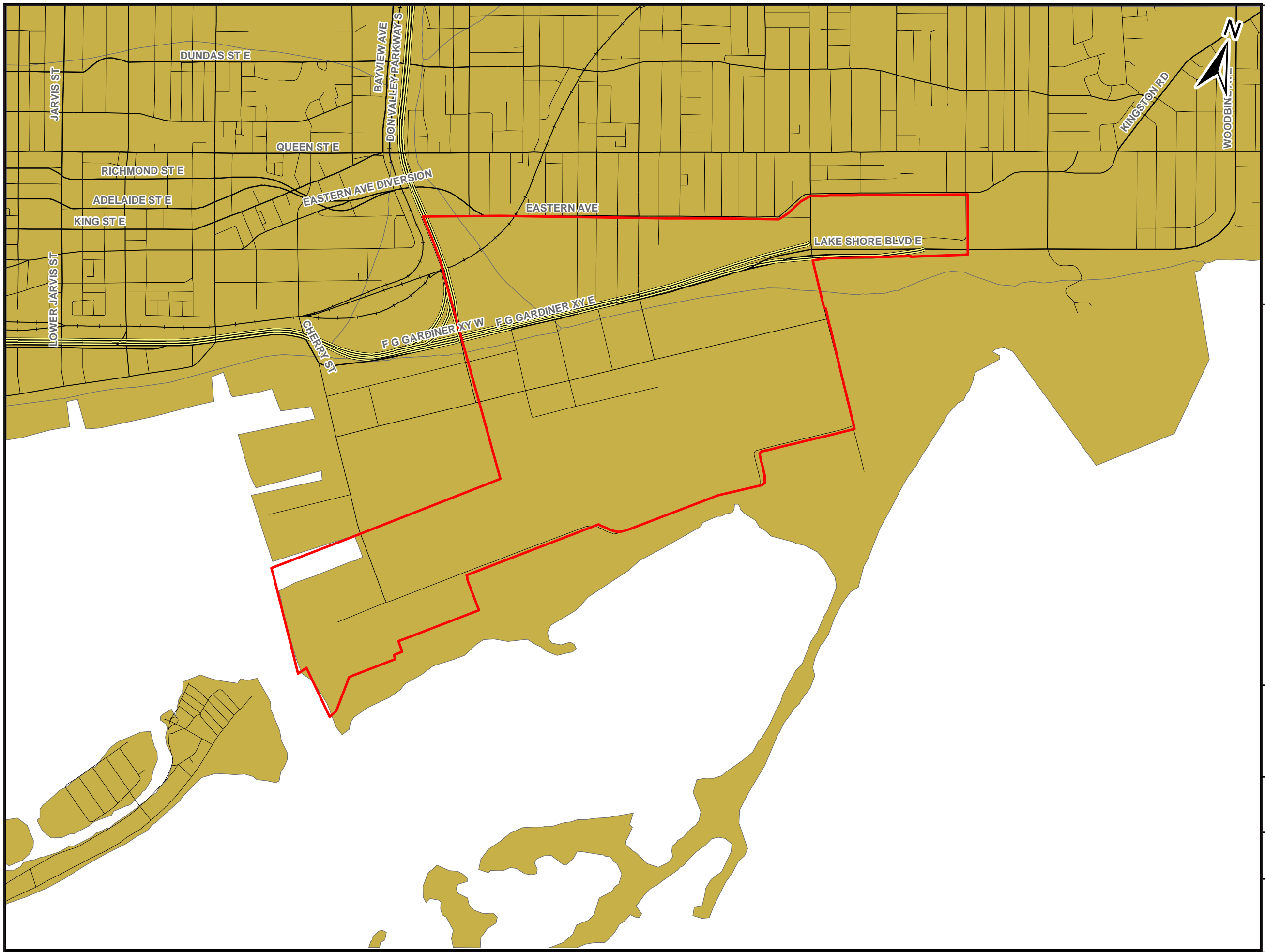
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 Sources: Esri, DeLorme, NAVTEQ, USGS, Intermap,
 IPC, NRCAN, Esri Japan, METI, TomTom, 2013



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Figure 9: Part of study area overlaid on Goad's 1899 Fire Insurance Map of Toronto (Eastern District)



- Study Area
- Sand

BASE:
 World Street Map
 2013
 Sources: Esri, DeLorme, NAVTEQ, USGS, Intermap,
 iPC, NRCAN, Esri Japan, METI, TomTom, 2013



ASI PROJECT NO.: 13EA-132 DRAWN BY: BW PR
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Figure 10: Port Lands and South of Eastern Avenue Transportation and Servicing Master Plan - Surficial Geology

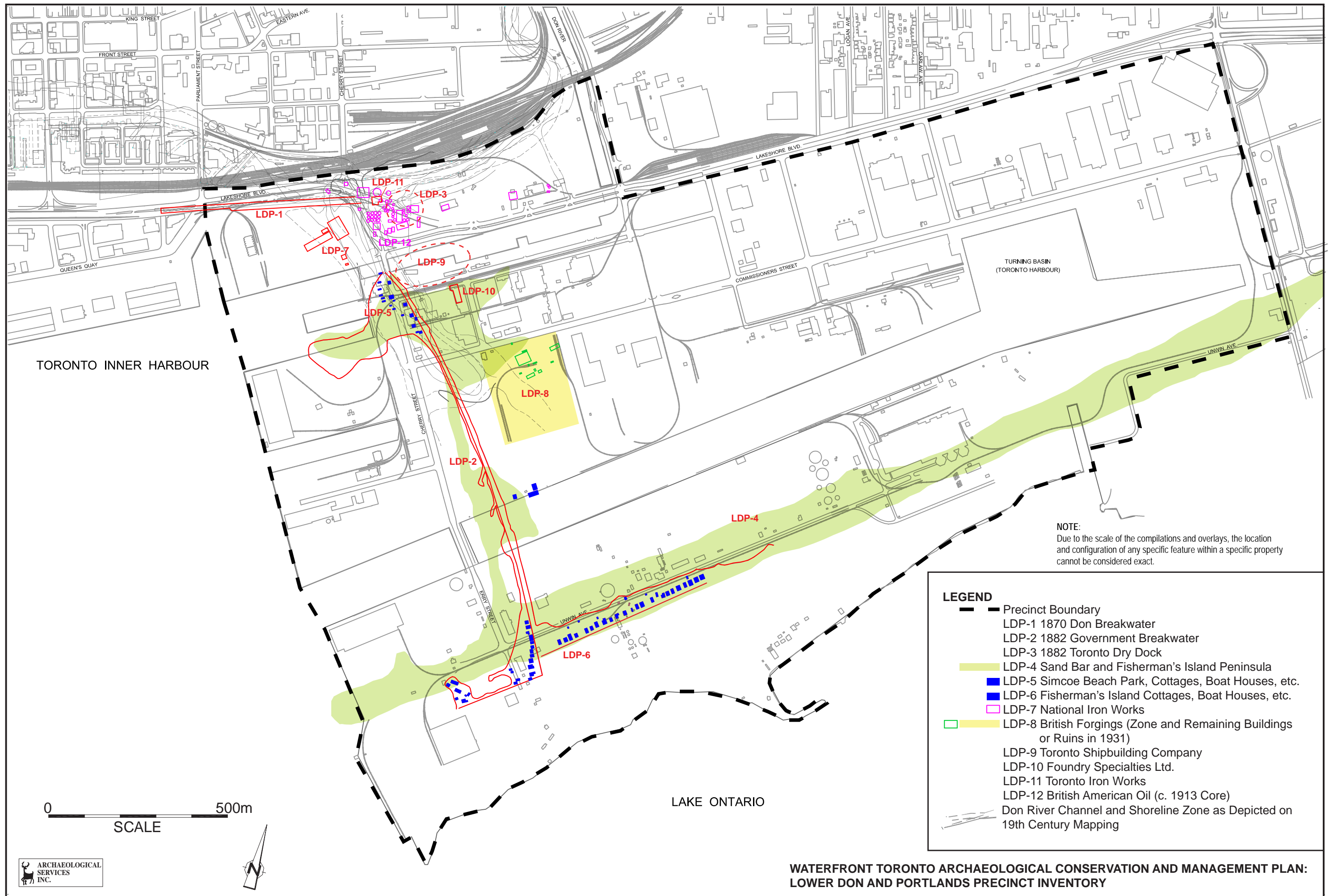

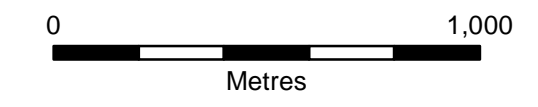


Figure 11: Portlands Precinct Archaeological Resource Features



 Study Area

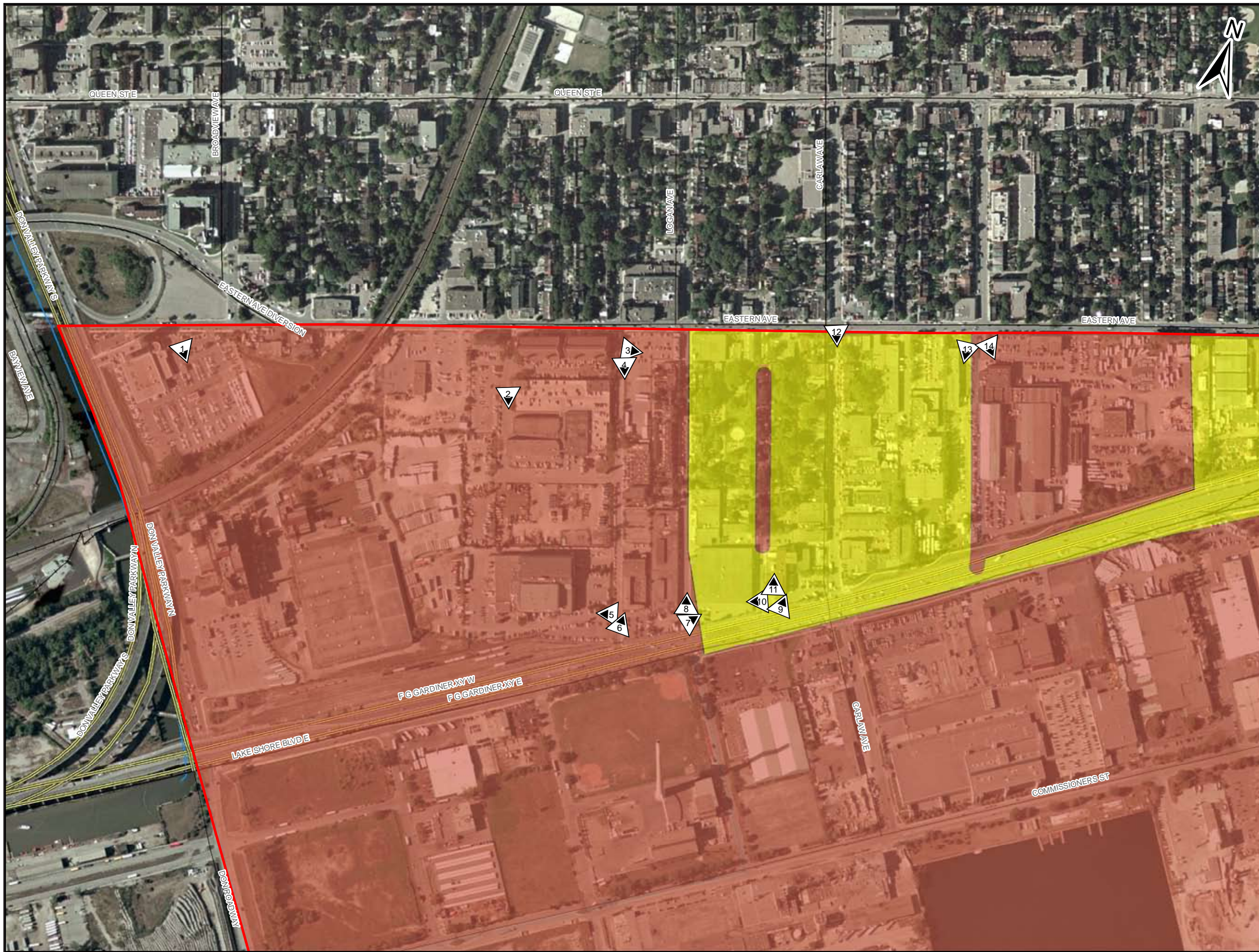
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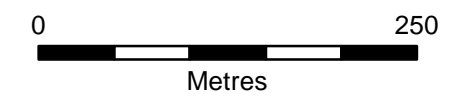
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Canada, M5S 2P9 info@iASI.to/www.iAS±.to

Figure 12: Port Lands and South of Eastern Avenue Transportation and Servicing Master Plan - Property Inspection Results (Key Map)



- Study Area
- ▲
 Photo Location and Number
- Disturbed: No Potential
- Requires Archaeological Monitoring (ASI 2007; 2008; 2011)
- Previously Assessed (ASI 2008; 2010b; 2010c; 2012b, 2013, Golder 2013)

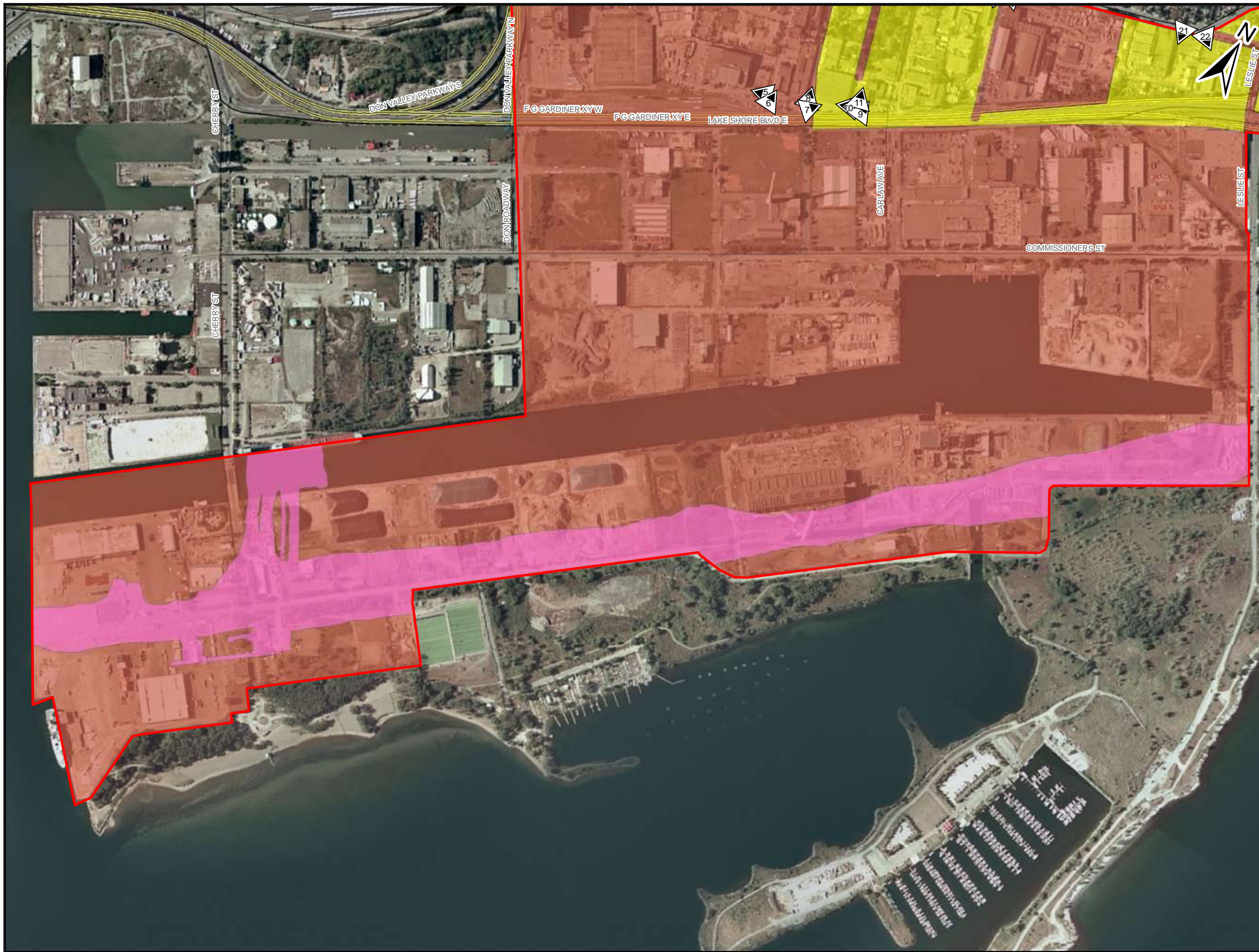
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2013
Source: Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community



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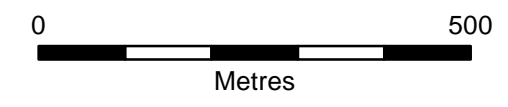
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Figure 13: Port Lands and South of Eastern Avenue Transportation and Servicing Master Plan - Property Inspection Results (Sheet 1)



- Study Area
- ▲
 Photo Location and Number
- Disturbed: No Potential
- Requires Archaeological Monitoring (ASI 2007; 2008; 2011)
- Previously Assessed (ASI 2008; 2010b; 2010c; 2012b, 2013, Golder 2013)

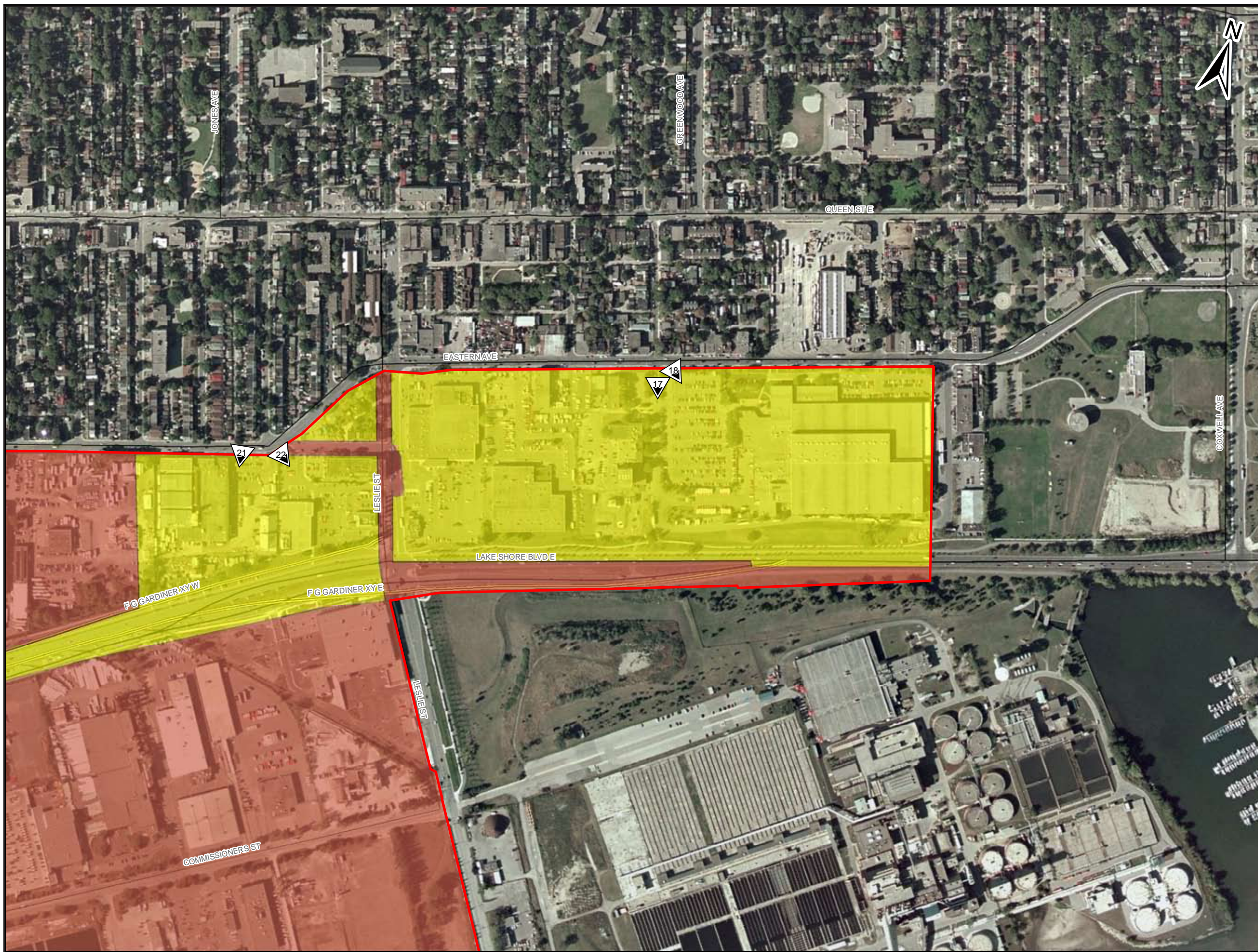
BASE: Ortho
2013
Source: Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community



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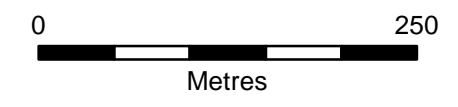
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Figure 14: Port Lands and South of Eastern Avenue Transportation and Servicing Master Plan - Property Inspection Results (Sheet 2)



- Study Area
- Photo Location and Number
- Disturbed: No Potential
- Requires Archaeological Monitoring (ASI 2007; 2008; 2011)
- Previously Assessed (ASI 2008; 2010b; 2010c; 2012b, 2013, Golder 2013)

BASE: Ortho
2013
Source: Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community



ASI PROJECT NO.: 13EA-132 DRAWN BY: BW
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Figure 15: Port Lands and South of Eastern Avenue Transportation and Servicing Master Plan - Property Inspection Results (Sheet 3)

7.0 IMAGES



Plate 1: View south of BMW dealership. Waste facility in background. Area is disturbed. No potential.



Plate 2: View south of City of Toronto facility. Area is disturbed. No potential.



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APPENDIX C:

**CULTURAL HERITAGE
ASSESSMENT REPORT**

**Cultural Heritage Assessment Report:
Built Heritage Resources and Cultural Heritage Landscapes**

Existing Conditions – Assessment of Impacts

**Port Lands and South of Eastern Transportation and
Servicing Master Plan**

**Class Environmental Assessment
City of Toronto, Ontario**

Prepared for:

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ASI File 13EA-135

December 2013
(Revised January 2015, June 2015, July 2015, January
2016, April 2016, July 2016)



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**Cultural Heritage Assessment Report:
Built Heritage Resources and Cultural Heritage Landscapes**

Existing Conditions – Assessment of Impacts

**Port Lands and South of Eastern Transportation and Servicing Master Plan
Class Environmental Assessment
City of Toronto, Ontario**

EXECUTIVE SUMMARY

Archaeological Services Inc. (ASI) was contracted by Dillon Consulting Limited, on behalf of the City of Toronto, to conduct a Cultural Heritage Resource Assessment as part of the Port Lands and South of Eastern Transportation and Servicing Master Plan. The study area is generally bounded by Toronto's inner harbour/Don Roadway, and the Don Valley Parkway to the west, Leslie Street and Woodfield Avenue to the east, Unwin Avenue and Lakeshore Boulevard to the south, and Eastern Avenue and the Ship Channel to the north, in the City of Toronto, Ontario. Desktop data collection and fieldwork were undertaken to identify built heritage resources and cultural heritage landscapes within this general study area.

The results of background historic research and a review of secondary source material revealed that the study area encompasses two main developmental zones within the City of Toronto: the original land mass of the Toronto waterfront to the east of the original Town of York, and the offshore areas that were progressively filled as the waterfront was extended into the harbour in the early twentieth century. The results of the desktop data collection and field review determined that there are a total of 25 cultural heritage resources within the study area. Of these, none are designated under Part V or IV of the *Ontario Heritage Act*, five are listed in the City of Toronto's *Heritage Inventory*, six were identified in previous environmental assessments, and 14 were identified through a combination of background research and the field review.

Based on the results of background data collection and field review of the Port Lands and South of Eastern study area, the following general recommendations have been developed.

1. Staging and construction activities should be suitably planned and undertaken to avoid impacts to identified cultural heritage resources.
2. Where feasible, proposed street ROWs or proposed improvements to existing ROWs should be configured to avoid or minimize impacts to identified cultural heritage resources and/or designed to be sympathetic to, and visually and physically compatible with the impacted resource. This includes: Commissioners Street (at BHR 11 and CHL 10); new north-south street (at CHL 8); Unwin Avenue (at CHL 9); new east-west street (at CHL 10).
3. Where built heritage resources and cultural heritage landscapes are expected to be impacted through destruction/removal/relocation of built structures or landscape features, a resource-specific heritage impact assessment (HIA) should be conducted in advance of, or at the earliest possible stage of the detailed design stage, to confirm the cultural heritage value of the resource, identify cultural heritage attributes, and develop appropriate mitigation measures. An HIA should be conducted for BHR 11, CHL 9, and CHL 10.

4. The proposed bridge across the Ship Channel (Alternative 3C: Broadview) should be suitably designed to be sympathetic to the historical industrial setting of the area in general and CHL 12 (Ship Channel) in particular. For example, the Standards and Guidelines for the Conservation of Historic Places in Canada (2010) recommend the following design guideline, among others, in relation to new additions to CHLs: "Designing a new built feature, when required by a new use, to be compatible with the heritage value of the cultural landscape. For example, erecting a new [structure] using traditional form and materials..." Design, scale, massing and material fabric of the new bridge should be sympathetic to the surrounding cultural heritage landscapes and built heritage resources, including the existing Cherry Street Bridge (BHR 10). Similar design guidelines should be considered for the proposed effluent treatment sites.
5. Where built heritage resources and/or cultural heritage landscapes are expected to be impacted through alteration of their setting, a cultural heritage documentation report should be prepared in advance of construction activities to serve as a final record of each of the resources and the study area in general. The resources should be subject to photographic documentation and compilation of a cultural heritage documentation report by a qualified heritage consultant and the report submitted to local repositories for archival purposes. Cultural heritage documentation reports should be completed for CHL 7, CHL 8, CHL 12, and CHL 14.
6. The feasibility of implementing tree protection zones should be investigated for all identified cultural heritage resources in / and adjacent to construction zones.
7. Should future work require an expansion of the study area, a qualified heritage consultant should be contacted in order to confirm the impacts of the proposed work on potential heritage resources.

**ARCHAEOLOGICAL SERVICES INC.
CULTURAL HERITAGE DIVISION**

PROJECT PERSONNEL

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<i>Project Managers:</i>	Heidy Schopf, MES <i>Cultural Heritage Specialist</i> Annie Veilleux, MA <i>Cultural Heritage Specialist and Manager, Cultural Heritage Division</i>
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1.0 INTRODUCTION

Archaeological Services Inc. (ASI) was contracted by Dillon Consulting Limited, on behalf of the City of Toronto, to conduct a cultural heritage resource assessment as part of the Port Lands and South of Eastern Transportation and Servicing Master Plan. The study area is generally bounded by Toronto's inner harbour, Don Roadway, and the Don Valley Parkway to the west, Leslie Street and Woodfield Avenue to the east, Unwin Avenue and Lakeshore Boulevard to the south, and Eastern Avenue and the Ship Channel to the north, in the City of Toronto, Ontario (Figure 1). Desktop data collection and fieldwork was undertaken to identify built heritage resources and cultural heritage landscapes within the study area.

This report was conducted under the project direction of David Robertson, Senior Archaeologist and Manager, Planning Applications and Special Projects Division, and the project management of Heidi Schopf, Cultural Heritage Specialist, both of ASI.



Figure 1: Location of the general study area in the City of Toronto.

Base Map: World Street Map (Toronto), ESRI.

2.0 BUILT HERITAGE RESOURCE AND CULTURAL HERITAGE LANDSCAPE ASSESSMENT CONTEXT

2.1 Approach and Methodology

This cultural heritage assessment considers cultural heritage resources in the context of improvements to specified areas, pursuant to the *Environmental Assessment Act*. This assessment addresses above ground cultural heritage resources over 40 years old. Use of a 40 year old threshold is a guiding principle when

conducting a preliminary identification of cultural heritage resources (Ministry of Transportation 2006; Ministry of Transportation 2007; Ontario Realty Corporation 2007). While identification of a resource that is 40 years old or older does not confer outright heritage significance, this threshold provides a means to collect information about resources that may retain heritage value. Similarly, if a resource is slightly younger than 40 years old, this does not preclude the resource from retaining heritage value.

For the purposes of this assessment, the term cultural heritage resources was used to describe both cultural landscapes and built heritage features. A cultural landscape is perceived as a collection of individual built heritage features and other related features that together form farm complexes, roadscape and nucleated settlements. Built heritage features are typically individual buildings or structures that may be associated with a variety of human activities, such as historical settlement and patterns of architectural development.

The analysis throughout the study process addresses cultural heritage resources under various pieces of legislation and their supporting guidelines. Under the *Environmental Assessment Act* (1990) environment is defined in Subsection 1(c) to include:

- cultural conditions that influence the life of man or a community, and;
- any building, structure, machine, or other device or thing made by man.

The Ministry of Culture is charged under Section 2 of the *Ontario Heritage Act* with the responsibility to determine policies, priorities and programs for the conservation, protection and preservation of the heritage of Ontario and has published two guidelines to assist in assessing cultural heritage resources as part of an environmental assessment: *Guideline for Preparing the Cultural Heritage Resource Component of Environmental Assessments* (1992), and *Guidelines on the Man-Made Heritage Component of Environmental Assessments* (1981). Accordingly, both guidelines have been utilized in this assessment process.

The Guidelines on the Man-Made Heritage Component of Environmental Assessments (Section 1.0) states the following:

When speaking of man-made heritage we are concerned with the works of man and the effects of his activities in the environment rather than with movable human artifacts or those environments that are natural and completely undisturbed by man.

In addition, environment may be interpreted to include the combination and interrelationships of human artifacts with all other aspects of the physical environment, as well as with the social, economic and cultural conditions that influence the life of the people and communities in Ontario. The *Guidelines on the Man-Made Heritage Component of Environmental Assessments* distinguish between two basic ways of visually experiencing this heritage in the environment, namely as cultural landscapes and as cultural features.

Within this document, cultural landscapes are defined as the following (Section 1.0):

The use and physical appearance of the land as we see it now is a result of man's activities over time in modifying pristine landscapes for his own purposes. A cultural landscape is perceived as a collection of individual man-made features into a whole. Urban cultural landscapes are sometimes given special names such as townscapes or streetscapes that describe various scales of perception from the general scene to the



particular view. Cultural landscapes in the countryside are viewed in or adjacent to natural undisturbed landscapes, or waterscapes, and include such landuses as agriculture, mining, forestry, recreation, and transportation. Like urban cultural landscapes, they too may be perceived at various scales: as a large area of homogeneous character; or as an intermediate sized area of homogeneous character or a collection of settings such as a group of farms; or as a discrete example of specific landscape character such as a single farm, or an individual village or hamlet.

A cultural feature is defined as the following (Section 1.0):

...an individual part of a cultural landscape that may be focused upon as part of a broader scene, or viewed independently. The term refers to any man-made or modified object in or on the land or underwater, such as buildings of various types, street furniture, engineering works, plantings and landscaping, archaeological sites, or a collection of such objects seen as a group because of close physical or social relationships.

The Minister of Tourism and Culture has also published *Standards and Guidelines for Conservation of Provincial Heritage Properties* (April 2010; Standards and Guidelines hereafter). These Standards and Guidelines apply to properties the Government of Ontario owns or controls that have cultural heritage value or interest. They are mandatory for ministries and prescribed public bodies and have the authority of a Management Board or Cabinet directive. Prescribed public bodies include:

- Agricultural Research Institute of Ontario
- Hydro One Inc.
- Liquor Control Board of Ontario
- McMichael Canadian Art Collection
- Metrolinx
- The Niagara Parks Commission.
- Ontario Heritage Trust
- Ontario Infrastructure Projects Corporation
- Ontario Lottery and Gaming Corporation
- Ontario Power Generation Inc.
- Ontario Realty Corporation
- Royal Botanical Gardens
- Toronto Area Transit Operating Authority
- St. Lawrence Parks Commission

The Standards and Guidelines provide a series of definition considered during the course of the assessment:

A provincial heritage property is defined as the following (14):

Provincial heritage property means real property, including buildings and structures on the property, that has cultural heritage value or interest and that is owned by the Crown in right of Ontario or by a prescribed public body; or that is occupied by a ministry or a prescribed public body if the terms of the occupancy agreement are such that the ministry or public body is entitled to make the alterations to the property that may be required under these heritage standards and guidelines.



A provincial heritage property of provincial significance is defined as the following (14):

Provincial heritage property that has been evaluated using the criteria found in Ontario Heritage Act O.Reg. 10/06 and has been found to have cultural heritage value or interest of provincial significance.

A built heritage resource is defined as the following (13):

...one or more significant buildings (including fixtures or equipment located in or forming part of a building), structures, earthworks, monuments, installations, or remains associated with architectural, cultural, social, political, economic, or military history and identified as being important to a community. For the purposes of these Standards and Guidelines, “structures” does not include roadways in the provincial highway network and in-use electrical or telecommunications transmission towers.

A cultural heritage landscape is defined as the following (13):

... a defined geographical area that human activity has modified and that has cultural heritage value. Such an area involves one or more groupings of individual heritage features, such as structures, spaces, archaeological sites, and natural elements, which together form a significant type of heritage form distinct from that of its constituent elements or parts. Heritage conservation districts designated under the Ontario Heritage Act, villages, parks, gardens, battlefields, mainstreets and neighbourhoods, cemeteries, trails, and industrial complexes of cultural heritage value are some examples.

Additionally, the *Planning Act* (1990) and related *Provincial Policy Statement (PPS)*, which was updated in 2014, make a number of provisions relating to heritage conservation. One of the general purposes of the *Planning Act* is to integrate matters of provincial interest in provincial and municipal planning decisions. In order to inform all those involved in planning activities of the scope of these matters of provincial interest, Section 2 of the *Planning Act* provides an extensive listing. These matters of provincial interest shall be regarded when certain authorities, including the council of a municipality, carry out their responsibilities under the *Act*. One of these provincial interests is directly concerned with:

- 2.(d) the conservation of features of significant architectural, cultural, historical, archaeological or scientific interest

Part 4.7 of the *PPS* states that:

The official plan is the most important vehicle for implementation of this Provincial Policy Statement. Comprehensive, integrated and long-term planning is best achieved through official plans.

Official plans shall identify provincial interests and set out appropriate land use designations and policies. To determine the significance of some natural heritage features and other resources, evaluation may be required.

Official plans should also coordinate cross-boundary matters to complement the actions



of other planning authorities and promote mutually beneficial solutions. Official plans shall provide clear, reasonable and attainable policies to protect provincial interests and direct development to suitable areas.

In order to protect provincial interests, planning authorities shall keep their official plans up-to-date with this Provincial Policy Statement. The policies of this Provincial Policy Statement continue to apply after adoption and approval of an official plan.

Those policies of particular relevance for the conservation of heritage features are contained in Section 2-Wise Use and Management of Resources, wherein Subsection 2.6 - Cultural Heritage and Archaeological Resources, makes the following provisions:

2.6.1 Significant built heritage resources and significant cultural heritage landscapes shall be conserved.

A number of definitions that have specific meanings for use in a policy context accompany the policy statement. These definitions include built heritage resources and cultural heritage landscapes.

A built heritage resource is defined as: “a building, structure, monument, installation or any manufactured remnant that contributes to a property’s cultural heritage value or interest as identified by a community, including an Aboriginal community” (PPS 2014).

A cultural heritage landscape is defined as “a defined geographical area that may have been modified by human activity and is identified as having cultural heritage value or interest by a community, including an Aboriginal community. The area may involve features such as structures, spaces, archaeological sites or natural elements that are valued together for their interrelationship, meaning or association” (PPS 2014). Examples may include, but are not limited to farmscapes, historic settlements, parks, gardens, battlefields, mainstreets and neighbourhoods, cemeteries, trailways, and industrial complexes of cultural heritage value.

In addition, significance is also more generally defined. It is assigned a specific meaning according to the subject matter or policy context, such as wetlands or ecologically important areas. With regard to cultural heritage and archaeology resources, resources of significance are those that are valued for the important contribution they make to our understanding of the history of a place, an event, or a people (PPS 2014).

Criteria for determining significance for the resources are recommended by the Province, but municipal approaches that achieve or exceed the same objective may also be used. While some significant resources may already be identified and inventoried by official sources, the significance of others can only be determined after evaluation (PPS 2014).

Accordingly, the foregoing guidelines and relevant policy statement were used to guide the scope and methodology of the cultural heritage assessment.



2.2 Municipal Policies

The City of Toronto's Official Plan provides regulatory tools for conserving cultural heritage resources within the City of Toronto. The following information was obtained from Official Plan Amendment (OPA) 199, as part of the *Official Plan Five Year Review: Official Plan Amendment to Adopt new Heritage and Public Realm Policies* report prepared by City Planning Division in September 2012. All policies relevant to this study are provided below.

Policy Statements 2, 4 and 11, contained within Section 3.1.5 of the city's Official Plan state:

2. Properties of potential cultural heritage value or interest will be identified and evaluated to determine their significance using provincial criteria and will include the consideration of cultural heritage values including design or physical value, historical or associative value and contextual value. The contributions of all of Toronto's diverse cultures will be recognized in determining the cultural heritage value of properties on the Heritage Register.

4. The impacts of proposed alterations, development, and/or public works on, or adjacent to, a property on the Heritage Register will be assessed to ensure that the integrity of the heritage property's cultural heritage value and attributes will be conserved, prior to work commencing on the property, to the satisfaction of the City. This assessment will be achieved through a Heritage Impact Assessment, consistent with the requirements of Schedule 3 of the Official Plan.

11. Prior to undertaking an approved alteration to a property on the Heritage Register, the property will be recorded and documented by the owner, to the satisfaction of the City.

The following policy statements specifically address raising heritage awareness:

13. Potential and existing properties of cultural heritage value or interest, including cultural heritage landscapes and heritage conservation districts, will be identified and included in area planning studies and plans with recommendations for further study, evaluation, and conservation.

The following policy statements specifically address Heritage Impact Assessments:

20. A Heritage Impact Assessment will evaluate the impact of a proposed alteration to a property on the Heritage Register, and/or the impact of the proposed development of a property adjacent to a property on the Heritage Register, to the satisfaction of the City.

21. A Heritage Impact Assessment will be required for the proposed demolition of a property on the Heritage Register, and/or for the demolition of a property adjacent to a property on the Heritage Register, to the satisfaction of the City.

22. A Heritage Impact Assessment may be required where a development application may obstruct or detract from a view included as a cultural heritage value or attribute of a property on the Heritage Register and/or a view identified on Map 7a or 7b, to the satisfaction of the City.

23. In addition to a Heritage Impact Assessment, the city may request a Heritage Conservation Plan to address in detail the conservation treatments for the subject heritage property. The City may also request a Heritage Interpretation Plan to promote a heritage property identified in a Heritage Impact Assessment, to the public.



It should be noted that the City of Toronto's Terms of Reference for Heritage Impact Statements was updated in 2011 and is available online¹.

City of Toronto Heritage Impact Assessment Terms of Reference (2010)

The following policy statements specifically address Built Heritage Resources:

25. New construction on, or adjacent to, a property on the Heritage Register will be designed to protect the cultural heritage values, attributes and character of that property and to minimize visual and physical impact on it, including considerations such as scale, massing, materials, height, building orientation and location relative to the heritage property.

26. The alteration of a property on the Heritage Register may be approved if it has been determined by the City that the alteration will not negatively affect the cultural heritage values and attributes of the property.

27. Where it is supported by the cultural heritage values and attributes of a property on the register, the conservation of whole or substantial portions of buildings and structures on those properties is desirable and encouraged. The retention of facades along is discouraged.

The following policy statements specifically address Cultural Heritage Landscapes:

43. Potential cultural heritage landscapes will be identified and evaluated to determine their significance and cultural heritage values. Significant cultural heritage landscapes will be included on the Heritage Register and/or designated under either Part IV or Part V of the Ontario Heritage Act.

Policy Statement 45 adds the following in regards to Heritage Views:

45. The view to a property on the Heritage Register, including cultural heritage landscapes, will be conserved where the view is included on Map 7a or 7b and/or;

- a) The view is identified in the Council adopted cultural heritage values or attributes for a property on the Heritage Register; and/or
- b) The property is identified as a landmark in the cultural heritage values or attributes of a property on the Heritage Register.

Finally, it should be noted that OPA 199 defines "adjacent" as:

...those lands adjoining a property on the Heritage Register and lands that are separated from a property on the Heritage Register by land used as a private or public road, highway, street, lane, trail, right-of-way, walkway, green space, park and/or easement, or an intersection of any of these;...

¹ City of Toronto Heritage Impact Statement Terms of Reference available at:
<http://www1.toronto.ca/City%20Of%20Toronto/City%20Planning/Urban%20Design/Files/pdf/Heritage/HIA%20Terms%20of%20Reference.pdf>



2.3 Data Collection

In the course of the cultural heritage assessment, all potentially affected cultural heritage resources are subject to inventory. Short form names are usually applied to each resource type, (e.g. barn, residence). Generally, when conducting a preliminary identification of cultural heritage resources, three stages of research and data collection are undertaken to appropriately establish the potential for and existence of cultural heritage resources in a particular geographic area.

Background historic research, which includes consultation of primary and secondary source research and historic mapping, is undertaken to identify early settlement patterns and broad agents or themes of change in a study area. This stage in the data collection process enables the researcher to determine the presence of sensitive heritage areas that correspond to nineteenth and twentieth century settlement and development patterns. To augment data collected during this stage of the research process, federal, provincial, and municipal databases and/or agencies are consulted to obtain information about specific properties that have been previously identified and/or designated as retaining cultural heritage value. Typically, resources identified during these stages of the research process are reflective of particular architectural styles, associated with an important person, place, or event, and contribute to the contextual facets of a particular place, neighbourhood, or intersection.

A field review is then undertaken to confirm the location and condition of previously identified cultural heritage resources. The field review is also utilized to identify cultural heritage resources that have not been previously identified on federal, provincial, or municipal databases.

Several investigative criteria are utilized during the field review to appropriately identify new cultural heritage resources. These investigative criteria are derived from provincial guidelines, definitions, and past experience. During the course of the environmental assessment, a built structure or landscape is identified as a cultural heritage resource if it is considered to be 40 years or older², and if the resource satisfies at least one of the following criteria:

Design/Physical Value:

- It is a rare, unique, representative or early example of a style, type, expression, material or construction method.
- It displays a high degree of craftsmanship or artistic merit.
- It demonstrates a high degree of technical or scientific achievement.
- The site and/or structure retains original stylistic features and has not been irreversibly altered so as to destroy its integrity.
- It demonstrates a high degree of excellence or creative, technical or scientific achievement at a provincial level in a given period.

Historical/Associative Value:

- It has a direct association with a theme, event, belief, person, activity, organization, or institution that is significant to: the City of Toronto; the Province of Ontario; or Canada.

² Use of a 40 year old threshold is a guiding principle when conducting a preliminary identification of cultural heritage resources (Ministry of Transportation 2006; Ministry of Transportation 2007; Ontario Realty Corporation 2007). While identification of a resource that is 40 years old or older does not confer outright heritage significance, this threshold provides a means to collect information about resources that may retain heritage value. Similarly, if a resource is slightly younger than 40 years old, this does not preclude the resource from retaining heritage value.



- It yields, or has the potential to yield, information that contributes to an understanding of the history of the: the City of Toronto; the Province of Ontario, or Canada.
- It demonstrates or reflects the work or ideas of an architect, artist builder, designer, or theorist who is significant to: the City of Toronto; the Province of Ontario; or Canada.
- It represents or demonstrates a theme or pattern in Ontario's history.
- It demonstrates an uncommon, rare or unique aspect of Ontario's cultural heritage.
- It has a strong or special association with the entire province or with a community that is found in more than one part of the province. The association exists for historic, social, or cultural reasons or because of traditional use.
- It has a strong or special association with the life or work of a person, group or organization of importance to the province or with an event of importance to the province.

Contextual Value:

- It is important in defining, maintaining, or supporting the character of an area.
- It is physically, functionally, visually, or historically linked to its surroundings.
- It is a landmark.
- It illustrates a significant phase in the development of the community or a major change or turning point in the community's history.
- The landscape contains a structure other than a building (fencing, culvert, public art, statue, etc.) that is associated with the history or daily life of that area or region.
- There is evidence of previous historic and/or existing agricultural practices (e.g. terracing, deforestation, complex water canalization, apple orchards, vineyards, etc.)
- It is of aesthetic, visual or contextual important to the province.

If a resource meets one of these criteria it will be identified as a cultural heritage resource and is subject to further research where appropriate and when feasible. Typically, detailed archival research, permission to enter lands containing heritage resources, and consultation is required to determine the specific heritage significance of the identified cultural heritage resource.

When identifying cultural heritage landscapes, the following categories are typically utilized for the purposes of the classification during the field review:

Farm complexes:	comprise two or more buildings, one of which must be a farmhouse or barn, and may include a tree-lined drive, tree windbreaks, fences, domestic gardens and small orchards.
Roadscapes:	generally two-lanes in width with absence of shoulders or narrow shoulders only, ditches, tree lines, bridges, culverts and other associated features.
Waterscapes:	waterway features that contribute to the overall character of the cultural heritage landscape, usually in relation to their influence on historic development and settlement patterns.
Railscapes:	active or inactive railway lines or railway rights of way and associated features.
Historical settlements:	groupings of two or more structures with a commonly applied name.



Streetscapes: generally consists of a paved road found in a more urban setting, and may include a series of houses that would have been built in the same time period.

Historical agricultural landscapes: generally comprises a historically rooted settlement and farming pattern that reflects a recognizable arrangement of fields within a lot and may have associated agricultural outbuildings, structures, and vegetative elements such as tree rows;

Cemeteries: land used for the burial of human remains.

Results of data collection, field review, and impact assessment are contained in Section 3.0; while Sections 4.0 and 5.0 contain conclusions and recommendations with respect to potential impacts of the undertaking on identified cultural heritage resources.

3.0 BUILT HERITAGE RESOURCE AND CULTURAL HERITAGE LANDSCAPE ASSESSMENT

3.1 Introduction

This section provides a brief summary of historical research and a description of previously identified above ground cultural heritage resources that may be affected by the proposed infrastructure improvements. A review of available primary and secondary source material was undertaken to produce a contextual overview of the study area, including a general description of Euro-Canadian settlement and land use. Historically, the study area is Lots 10-14, Broken Front in the former Township of York, York County. Historic property owners and features located within the study area are provided in Table 1.

Table 1: Historic Lots and Concessions in the study area

Concession#	Lot#	Property Owner(s) 1860	Historical Feature(s) 1860	Property Owner(s) 1878	Historical Feature(s) 1878
Broken Front	14	J. Clark, H. Blond	NA	Mrs. Clarke, E. Blong	NA
	13	William Gorre, Frank Heward	NA	G.D. Morse, Frank Heward	NA
	12	Frank Heward, Toronto Nursery, Geoffrey Leslie, C.C. Small	NA	Frank Heward	NA
	11	Toronto Nursery, Geoffrey Leslie	NA	Geoffrey Leslie and Sons, Toronto Nurseries	NA
	10	NA	NA	NA	NA

In addition, much of the study area sits on made land and thus was not included in the Crown Survey.

The following historical summary does not consist of a comprehensive account of the land use history of the large study area. Rather, it is intended to describe the various agents of change that are represented by known or potential material remains. A large part of the information is derived from previous large-scale

archaeological planning and management studies, such as the ongoing *Master Plan of Archaeological Resources for the City of Toronto* (ASI et al. 2004) and *Waterfront Toronto's Archaeological Conservation and Management Strategy* (ASI et al. 2008). The historical research conducted for these studies consisted of extensive reviews of secondary sources.

3.2 Historical Context

The study area encompasses two main developmental zones within the City of Toronto: the original land mass of the Toronto waterfront that was laid out as the Town of York (South of Eastern), and the offshore area that was progressively filled as the waterfront was extended into the harbour during the twentieth century (Port Lands). The following divides the history of the study area into five broad themes: Early History; Maritime and Industrial Development; Railway Period; Land Reclamation and Early Twentieth-Century Industry; and Post-War Period.

3.2.1 Early History

When first established in 1793, the Town of York formed a compact plot within the area now bounded by Front, George, Duke and Berkeley streets. To the east of the town plot, lay the “Government Reserve” or “Government Park”. The Park was bounded by the Don River on the east, the marsh and harbour to the south, Parliament Street on the west and Carleton Street to the north. This land was primarily intended as a defensive buffer to shield the town in the event of an attack from the east. The first legislative (Parliament) buildings for the new capital were constructed near the periphery of this reserve, and it was proposed further that the official residence of the lieutenant-governor be erected within “the Park.” The Park was, however, used as a recreational retreat by the early inhabitants of York since the woods were free of heavy underbrush and crossed by a few trails, which were used for walking and riding. Moreover, some residents found this a convenient place for grazing their livestock during the spring and summer. The first “Patent Plan” for York (circa 1800) showed this tract labelled as the “Government Lease.” To the west of the town lay the Garrison Reserve, which was centred on Fort York. The Garrison maintained control of those lands east of Garrison Creek, between the lakeshore and the present Queen and Peter streets until the 1830s.

The area between the Garrison Reserve and the original Town was gradually brought into the civic sphere. In 1797, the town plot was initially expanded to York Street and then again as far as Peter Street, which abutted the military reserve. These new lands were to be occupied by a number of public buildings, including a church, school, court house, jail and market (Firth 1962:42-44, 46). The process of granting lots to actual settlers had commenced prior to the summer of 1797 although preference for the choice front lots was shown to “the higher Officers of Government.” Some lots on the streets not facing the water were actually reserved for various trades, such as tinsmiths, blacksmiths, saddlers, wheelwrights, coopers, shoemakers and bakers. The westerly extension of the Town of York was known as “New Town” in order to distinguish it from the original ten blocks laid out by Aitken in 1793. Most of the lots within the “Old Town” of York were patented at an early date between August 1796 and the War of 1812. Lots granted in the late 1810s and into the 1830s and even later were mainly issued to the trustees of religious congregations or for public buildings.

The construction of substantial structures within the town of York seems to have been slow until after the time of the War of 1812. For instance a record of the town in 1815 listed only 44 houses in the area



bounded by Peter, Front, Jarvis and Queen Streets. This enumeration did not include outbuildings such as barns and stables, nor does it appear to have included any shops or taverns. The architectural development of the town of York appears to have been a rather haphazard affair as late as the mid-nineteenth century, a fact demonstrated by the famous photographic *Panorama* of 1857 which showed the city as a curious amalgam of substantial brick and stone structures situated in the same blocks alongside frame and rough cast dwellings, sheds, shops, lumber yards and vacant lots.

While the growth and development of the civilian town continued throughout the early nineteenth century, expanding inland to the present Queen Street by the 1830s, with additional lots having been surveyed as far north as Bloor Street, use of the waterfront remained restricted to commercial and transportation functions. This necessitated the construction of harbour infrastructure. The comparatively thin mantle of lake bottom sediments overlying bedrock along the shore prohibited a reliance on deeply-driven piles to construct shoreline features. As in many other places, freestanding timber cribs were used to build the foundations for wharves and piers. During this early period, the southern limits of lakefilling and wharf construction were defined by the “Old Windmill Line,” an arbitrary line, established in 1837, from the Gooderham windmill, at the foot of Parliament Street, west to a prominent headland near the site of Fort Rouillé around the foot of Dufferin Street.

Most of the South of Eastern area remained primarily agricultural for much of the nineteenth century, linked to York/Toronto by the Kingston Road Bridge across the river at Queen Street. A bridge had been constructed over the Don as early as 1804-1806. The bridge was destroyed by British forces upon their retreat from the town during the Battle of York in 1813. It was replaced in 1814 and protected by earthworks and batteries, but again seems to have been destroyed or dismantled as, for a time, ferry service was provided from one side of the Don to the other. In April 1822, a public subscription was taken up for the construction of a new wooden bridge across the river. This structure, known as “Angell’s Bridge” after its engineer, contained at least five arches. It was apparently not completed until June of 1823. This bridge appears to have stood until 1850, when it was washed away by an early spring freshet. It was succeeded by several later bridges of wood, iron, and finally reinforced concrete construction.

The marsh known around Ashbridge’s Bay was perceived to be an unhealthy environment, the source of pestilence and disease at the beginning of the nineteenth century. This understanding persisted and by the late nineteenth century it was a dumping ground for municipal waste and sewage—uses which were incompatible with the increasing popularity of the area for cottages and recreation. Both Tremaine’s *Map of the County of York, Canada West* (Figure 4) and the 1878 Miles & Co. *Illustrated Historical Atlas* (Figure 7) indicate that the area directly to the west of Ashbridge’s Bay was characterized by marshland.

3.2.2 Maritime and Early Industrial Development

The first major wharf structures, the King’s, Cooper’s and Merchant’s wharves, were in place by *circa* 1820 at the foot of Peter, Church and Frederick streets, respectively. By 1842, seven new wharves had been added to the waterfront. As wharves multiplied over the course of the next few decades, and as they were extended further and further into the lake, the landward ends of the slips between them were filled. This pattern of gradual development, known as “wharfing out,” was responsible for the creation of relatively small blocks of new land, particularly between Church and Berkeley streets between the 1870s and 1880s.

Much of the land near the mouth of the Don River remained undeveloped into the 1830s. The earliest structures were erected along Cherry, Palace and King Streets, such as the Cherry Street Hotel which was



originally built as a school house in 1859. King Street contained industrial buildings such as carriage works and small shops and businesses. Three major industrial concerns played a key role in shaping the development of the area, including: Gooderham & Worts mill and distilleries and associated businesses, from the 1830s onward; the Toronto Gas Light & Water Company, later Consumers' Gas, which was founded in 1841; and the Davies Meat Packing Company, later Canada Packers, who founded their first slaughterhouse there in 1861. In addition, numerous iron-working mills were established in the area from a very early date. Residential development in this area was concentrated north of Mill Street, providing housing for workers employed by the various industries. Many of these people were Irish immigrants from County Cork, leading to the neighbourhood being called Corktown. Originally a low-density mix of industry and workers' cottages, Corktown's population grew and the area was traversed by numerous small laneways that were built to squeeze additional housing into the area.

As pressure on the waterfront increased during the second half of the nineteenth century, more deliberate and ambitious "crib and fill" operations were carried out to create substantial areas of made land³ in these projects, cribs that were basically identical to those used in wharves were used to build walls around the perimeter of the area of open water that was to be filled. The fill used during this first phase of expansion included sewage, municipal waste (chiefly in the form of coal cinders), material from construction sites, and material dredged from the harbour bottom. The latter type of fill may be expected to contain fragments of derelict boats, wharf structures and other marine material.

The boundary between Toronto Harbour and Ashbridge's Bay was a narrow sandbar that extended south from the foot of Cherry Street, broken only by the mouth of the Don River. The isthmus was formed over many centuries by sands eroded from the Scarborough Bluffs which were carried westward to meet silt deposited by the Don River. The Don River had as many as five mouths in the area and the isthmus was bisected by two of them. Since at least the 1830s, a carriage path crossed the Ashbridge's Bay bar, to meet the headland and continued to Gibraltar Point at the western tip of the peninsula. A bridge was constructed across the Don River to enable people from the city to reach Lake Shore Avenue. Until 1852, this headland was a continuous land mass. However, a number of severe storms between 1852 and 1858 eroded the peninsula. This necessitated frequent repair to the small breaches that developed until a storm completely separated the peninsula from the mainland in 1858. This latest breach was not repaired. In fact, it became a new entry point to the harbour, known as the Eastern Gap.

In 1868-1869, a series of "Winter Reconnaissance" maps of the City of Toronto and the surrounding countryside were produced by the Royal Engineers. In addition to the structures noted along the south side of Queen Street, the existence of a "stoneware pottery" was also indicated on the east side of Broadview Avenue, as well as a "cattle byre" on the south side of the railway immediately after it crossed the Don River. The pottery existed into the late nineteenth century, and was depicted in the 1884 edition of *Goad's Atlas*, set amid a growing residential neighbourhood. The cattle byre represents the early stages of the transfer of the Gooderham & Worts cattle feedlots to the east side of the river. These operations reached a massive scale in the following decades, and were long deemed to be a nuisance by the local

³ The terms used to describe the areas created by the southward expansion of the waterfront, and the processes involved in their development are those defined by Seasholes (2003). While these may not correspond to civil engineering usage, they are more accurate characterizations of the activities that took place along the shore of Toronto Harbour. "Made land" is created by filling in shallow foreshores, river flats, and marshes. Such work is "landmaking" rather than "land filling" or "land reclamation" Land reclamation proceeds by diking, pumping and draining seasonally or permanently inundated lands, or those affected by tides. Land filling represents the addition of material to raise the grade of existing land, be this to improve drainage or for other reasons (Seasholes 2003:2).



inhabitants, since the manure was discharged into the Don River and into Ashbridges' Bay, and was considered to be a serious health risk.

In addition to issues related to the dumping of sewage, the main concern with the Ashbridge's Bay marsh was its apparent tendency to migrate into the Toronto harbour. In 1850, Sir Sanford Fleming determined that 12 hectares had been added to the western section of the sandbars over the previous 50 years. In dealing with these issues, the famous American civil engineer, James Eads, prepared a report on the preservation of the Toronto Harbour in 1881. With regard to Ashbridge's Bay, he recommended that a double row of sheet piling be constructed between the harbour and the sandbar. This project was undertaken, but heavy storms in the spring of 1882 caused such damage to the work in progress that the length of the piling had to be considerably increased. The work was completed over the course of the next year. Eads had also recommended that the Eastern Gap should be made permanently navigable with the construction of breakwaters. This work was completed in 1882 as well.

3.2.3 Railway Period

The main proponents of these much more extensive campaigns of landmaking were the railways, which needed access to the harbour and space for their yard and station facilities. The three major railway companies, the Ontario, Simcoe and Huron Railway (later renamed the Northern Railway), the Great Western Railway and the Grand Trunk Railway, all entered Toronto in the 1850s and set about cutting down the south face of the original shorecliffs and filling along virtually the entire waterfront. The fill used to create the new land behind the crib walls of the Esplanade in the 1850s included sewage, "cellar dirt" excavated on construction sites in the town, and most importantly, material cut from the south edge of the shoreline terrace by the railways as they built their waterfront lines. The railways concentrated their efforts only on the construction of causeways for their track beds and the areas to be occupied by their yards and stations (Figures 2 and 3).

The waterfront was radically altered by the railways, as tracks, terminals, freight stations, utilities and new wharves were erected. Numerous industrial operations were attracted to the area as well, given the ready access it offered to both the rail and shipping networks. These developments also expanded westwards from the original core as the military relinquished its control of the Garrison Reserve west of Peter Street.

By the 1860s, when the railways had completed their first phases of construction, the lakefront in the central portion of the study area had been altered significantly. The majority of railway facilities were located between Fort York and John Street, on land which was relatively inexpensive compared to more desirable areas at the foot of Yonge Street. The most dramatic change of the period was the filling of the harbourfront from Bathurst Street to Parliament associated with the development of the Esplanade (between Spadina and the Don River) as the major rail corridor, despite the fact that it had originally been intended as a public thoroughfare (HRL 1989:55).

The numerous tracks within the narrow area to the south of Front Street created an exceedingly busy corridor, which caused great inconvenience for traffic between the city and the harbour. In addition, Canadian Pacific became a major transcontinental carrier in the 1880s and though its lines lay mostly in the northern part of the city, it quickly acquired access to the waterfront, building a variety of facilities in the 1890s (HRL 1983:23-25) and causing further congestion. The growing transportation system was accompanied by commercial and industrial development as factories, warehouses and service industries sprang up across the entire waterfront. These ranged from comparatively small operations to very large



complexes, such as those of the Gooderham & Worts distillery and the Davies Meat Packing Company.

In 1893, the southern limit within which construction and filling was permitted along the Toronto harbour front was extended to the “New Windmill Line.” The expansion was necessary to allow for the development of deep water piers in Toronto’s harbour without the need for dredging, as the Great Lakes navigation system was moving to the use of boats with drafts of greater than 10 feet (HRL 1989:57). The City constructed a new shorewall of rock-filled timber cribs along the New Windmill line and began to fill the area with municipal waste (HRL 1989:58). This work was largely complete by 1899 and included the creation of Lake Street. Many of the older wharves were rendered redundant by this new phase of expansion and were buried. It was anticipated that this new area of landmaking would be sufficient for Toronto’s needs for the next 30 years.

The South of Eastern area remained undeveloped as late as the 1850s. The 1851 Dennis and Fleming *Topographical Plan* shows only a single structure south of Queen Street. By 1858, the *Boulton Atlas* shows that some streets had been laid out on the east side of the river as some larger parcels were surveyed and sold for residential development. These were Eastern Avenue, called Park Street, Front Street, known as Palace Street, and a now disused portion of Mill Street which was then called Front Street East. The Grand Trunk Railway (GTR) crossed the Don by the mid nineteenth century, as it does today, between Mill and Front Streets. New bridges provided crossing points at Eastern Avenue and for the GTR line.

By 1861, as the population of the City of Toronto began to increase, available land on the east side of the Don River was developed for both residential and industrial purposes. Tremaine’s *Map of the County of York, Canada West* (Figure 6) shows a heavy black outline on both sides of Queen Street, which indicated that the street was heavily developed. The map also shows a network of streets surveyed between Eastern Avenue and the marsh land to the west of Ashbridge’s Bay.

By 1876, waterworks had been constructed along Queen Street on the east side of the Don River as far as McGee Street. Fire hydrants had been provided along Lewis, Saulter and McGee Streets between Queen Street and Eastern Avenue. The 1878 Miles & Co. *Illustrated Historical Atlas* (Figure 7) mapping reveals that Eastern Avenue (South Park Street) had been opened across the width of the study area. However, no cross streets had yet been built between McGee and Logan. Increased industrialization characterized the South of Eastern area over the following two decades, according to the *Toronto Harbour Commissions Waterfront Conditions* map published in 1912 (Figure 4).

3.2.4 Land Reclamation and Early Twentieth-Century Industry

Extending the harbour lands to the New Windmill Line was not the only waterfront issue in the late nineteenth century. Ashbridge’s Bay and the Toronto Island became the foci of a number of development proposals between 1886 and 1909 (Reeves 1992:20). Ashbridge’s Bay was a marshy inlet at the foot of the Don River, bounded on the west by a sand spit and on the south by the peninsula which was later breached to form the Toronto Islands. In 1884, the federal government constructed a breakwater along the western side of the sandspit creating a new shape to Toronto’s inner harbour, and consolidating the north-south passage to the peninsula—known erroneously as Fisherman’s Island. Small-scale fishing enterprises lined some sections of the harbour edge while on the sandbar and outer headland there were two clusters of cottages. Whereas most of the cottages appear to have been built by squatters, about 20 cottages on the outer bar are shown as having been located on surveyed lots that were leased. Cottages replaced many of the shacks and boathouses of the area’s largely transient residents. On the lakefront of



Fisherman's Island was a wide boardwalk (Stinson 1990:8). In the late 1920s, however, the residents of the cottages had their leases expropriated and their cottages either were demolished or relocated. This coincided with the Toronto Harbour Commission's lake filling operations.

The Toronto Harbour Commission was founded in 1911 and operated until 1999. The Toronto Harbour Commission was a joint federal-municipal government agency that was tasked with managing the Toronto harbour and waterfront lands and provide for their improvement. In 1912, the Toronto Harbour Commission released an ambition redevelopment plan that addressed the whole area from the Humber River to Victoria Park Avenue (Plummer 2011; Toronto Harbour Commissioners 1912). The work was guided by five commissioners: Lionel H. Clark, Robert Home Smith, Robert Gourlay, F.S. Spence, and Thomas L. Church, and the Toronto Harbour Commissioner's chief engineer, E.L. Cousins (Reeves 1992:67).

The 1912 Toronto Harbour Commissioners plan was to cost \$19 million and had the goal of turning Toronto's waterfront into a modern port (Plummer 2011) (Figure 4). The plan called for dredging the harbour to a depth of 24 feet and using this dredged will to create land for industrial, commercial, and recreational purposes (Plummer 2011). The plan was well received when it was released and was adopted by the City's Board of Control in 1912 (Plummer 2011). The plan divided the waterfront into three sections that each had a specific class of development (Reeves 1992: 70). The Eastern Section, which contains the study area, was slated mainly for industrial development with some commercial and dock development also permitted (Figure 5). The plan placed great emphasis on the industrial sector and the "reclaiming" of Ashbridge's Bay was the plan's focal point (Reeves 1992: 70). As a result, Ashbridge's Bay was filled with 27 million cubic yards of material to create nearly 650 acres of industrial land and another 365 acres of land devoted to streets, railway reservations and waterways (Reeves 1992: 70). A main feature of this new landmass was the ship channel, which was capable of handling the largest shipping vessels in Lake Ontario at the time. The plan also included a recreational strip along the southern edge of the section, which included cottages, a seawall, a protected waterway, a boulevard, and parkland. The plan had a lasting impact on the lands within the study area since many of the plan's elements were implemented. Indeed, the predominant presence of industrial development, the ship channel, and the recreational space along the southern edge of the study area were results of the 1912 Toronto Harbour Commissioners plan.

This renewed programme of landmaking was undertaken in 1916. It involved the construction of a concrete harbour head wall that extended between the Don River and Bay Street and marked the new southerly extension of the Toronto shoreline approximately 335 metres south of Lake Street. The area behind the wall was filled in with sediments dredged from the harbour floor, and the project was completed in stages. The progression of this filling is evidenced in a series of topographic maps of the City of Toronto (Figures 9-11). West of Yonge Street, this work was largely completed by 1926. The work took somewhat longer to complete between Yonge Street and Cherry streets, due to legal and financial issues associated with filling. While some work was carried out in the 1930s, the 1912 landmaking plan was not completed until the lands south of Queen's Quay were filled in 1952.

Agricultural activities such as the Toronto Nurseries owned by George Leslie appear to have disappeared by the second decade of the twentieth century, replaced by a growing number of industrial businesses and residential neighbourhoods. Historic topographic maps of the City of Toronto (Figures 9-11) reveal this drastic change.

The 1912 waterfront plan had anticipated that warehousing and heavy industry would become the predominant uses of the filled Ashbridge's Bay area. However, between the wars, most of the land was



used for storage of fuel and building materials. By 1931, 41 industries operated in the Port Industrial District, but most of the land was physically occupied by coal storage yards lining the Ships Channel (Figure 12). British-American Petroleum, Imperial Oil and McColl-Frontenac established tank farms and oil refineries in the 1920s (Figure 13). However, changes in petroleum marketing dictated that this would be a short-lived industry.

3.2.5 Post-War

The Hearn thermal electric power station, built in 1950, continued the demand for coal storage in the Port Lands. As with East Bayfront, the Harbour Commissioners anticipated a growth in ship traffic in the 1950s and built extensive dock facilities. The landmaking plans started in 1912 were completed when the lands south of Queen's Quay were filled in 1952. Water traffic, however, never developed on the scale expected. As with other parts of the City, this period included the construction of civic infrastructure, such as the Gardiner and the City Incinerator. Industrial development continued to grow during this time period as well.



3.2.6 Maps and Images

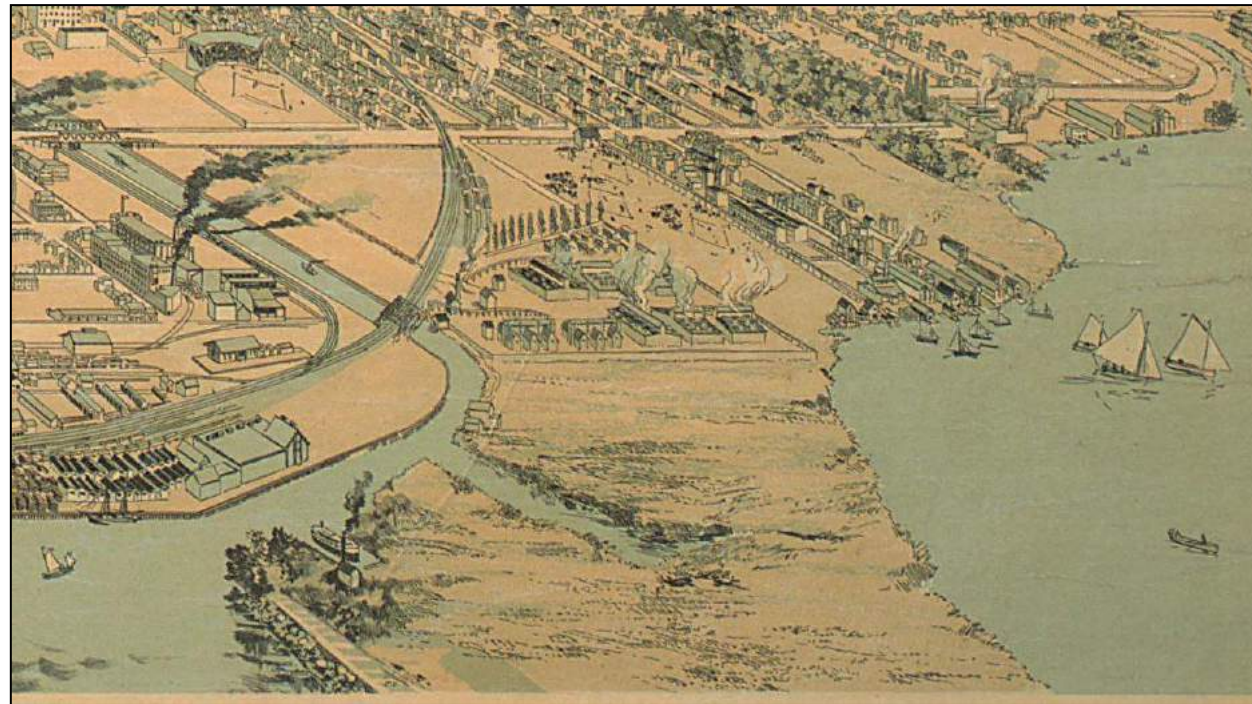


Figure 2: Bird's eye view of railway bisecting the South of Eastern study area in 1892
Source: *Toronto Railway Company's Map Showing Street Railway Lines, 1892*

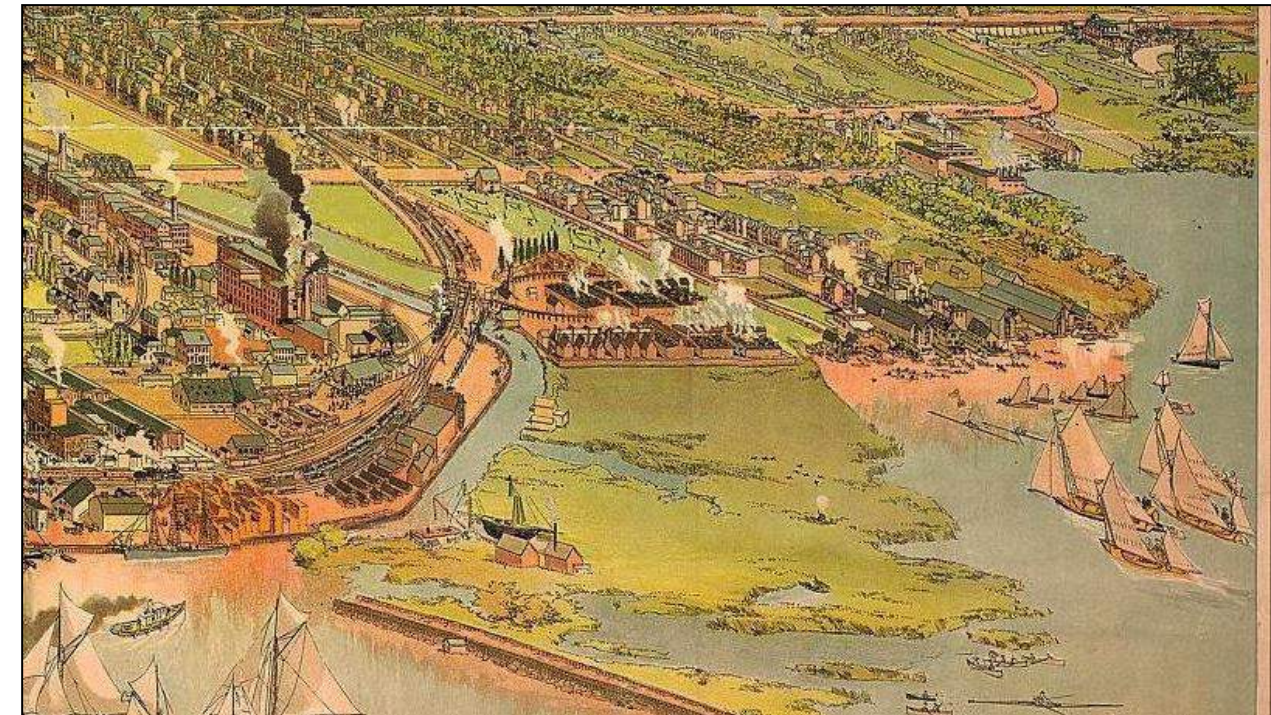


Figure 3: Bird's Eye View of railway bisecting the South of Eastern study area in 1893
Source: *Bird's-eye view, looking n. From harbour to n. of Bloor St. and some points beyond, from Humber R. on the west to Victoria Park Ave. on the east, 1893*



Figure 4: Map of the 1912 Toronto Harbour Commissioners Plan
Reference: Toronto Harbour Commissioners (1912)

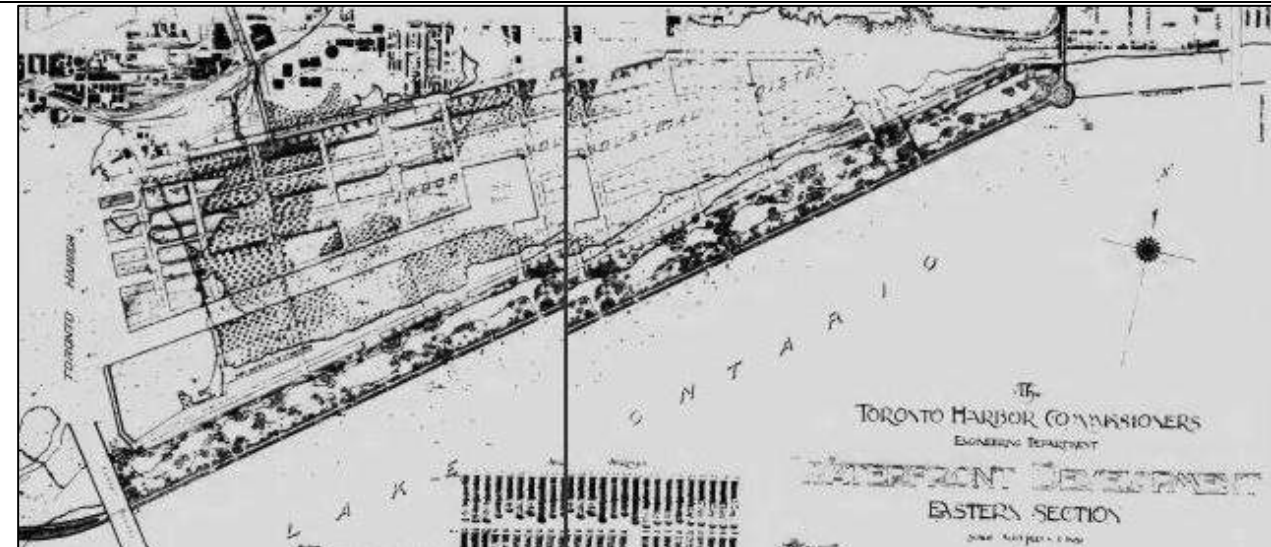


Figure 5: Map of the Eastern Section of the 1912 Toronto Harbour Commissioners Plan
Reference: Toronto Harbour Commissioners (1912)

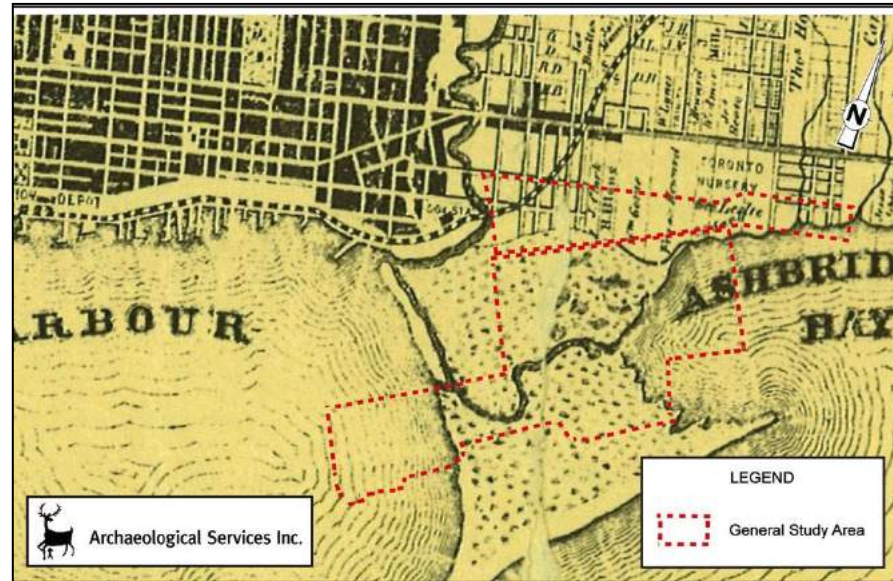


Figure 6: General Study Area
 Base Map: Tremaine's Map of the County of York (Tremaine 1860)

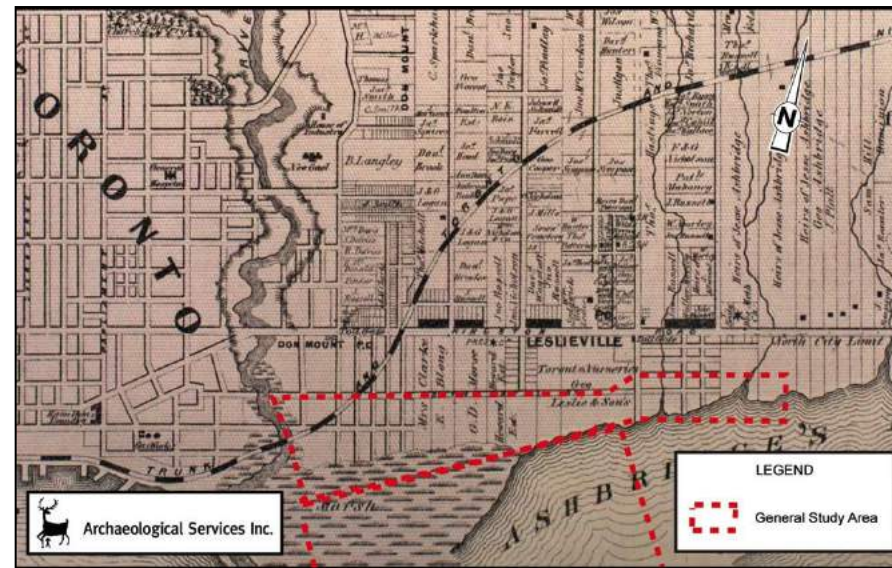


Figure 7: Approximate location of the general study area.
 Base Map: Illustrated historical atlas of the county of York and the township of Bradford in the County of Simcoe (Miles & Co/ 1878).

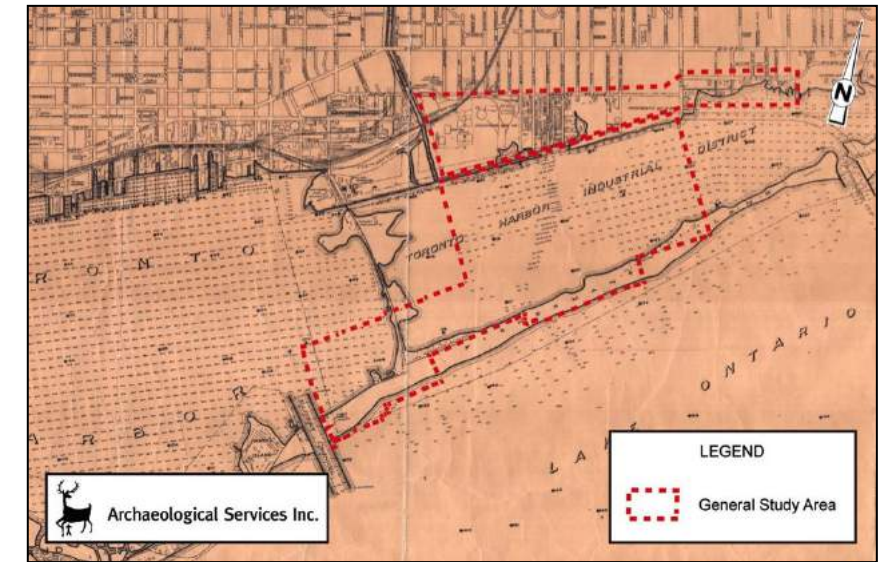


Figure 8: Approximate location of the general study area on the 1912 map of the Toronto Waterfront
 Base Map: The Toronto Harbour Commissioners Waterfront Conditions (Cousins 1912)

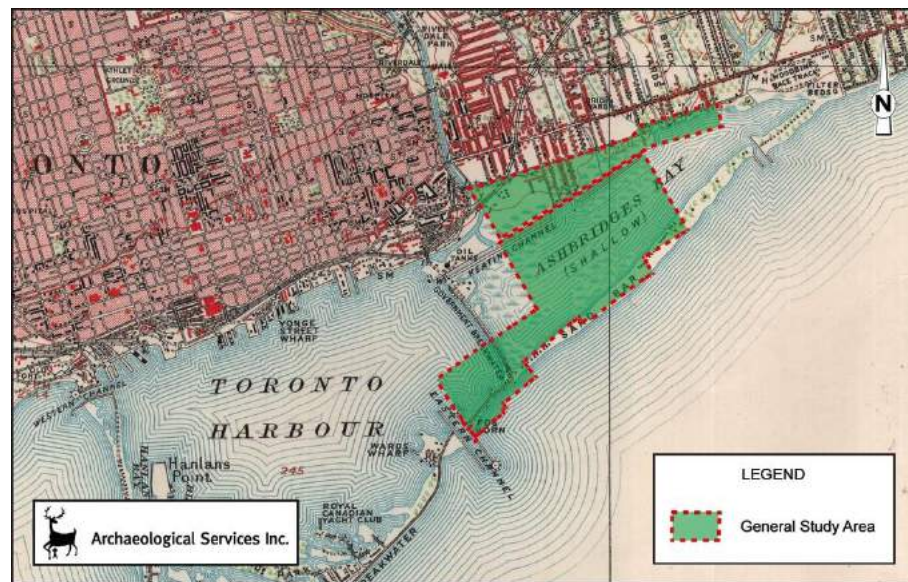


Figure 9: The general study area overlaid in the 1909 historic topographic map of Toronto
 Base Map: Toronto Sheet No. 34 (Surveyed 1907, Published 1909)

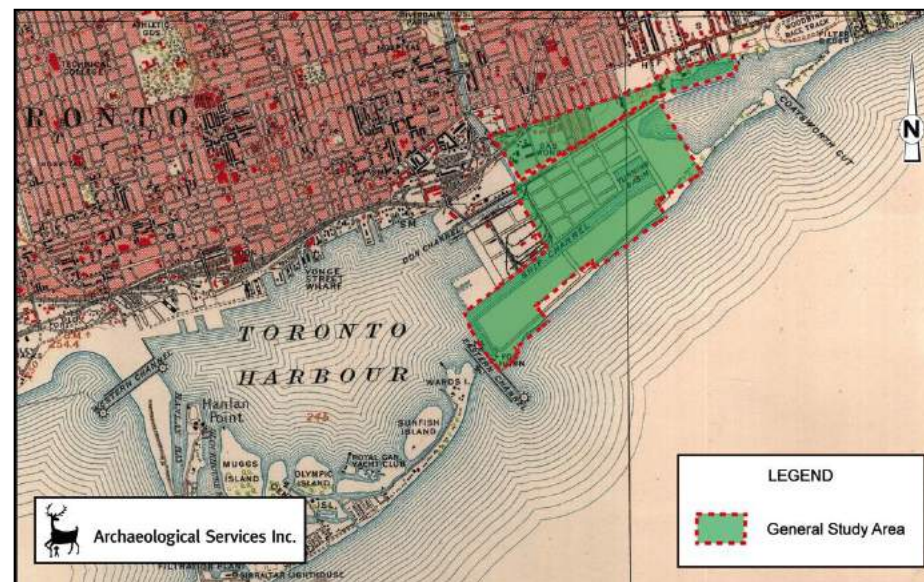


Figure 10: The general study area overlaid on the 1918 historic topographic map of Toronto
 Base Map: Toronto Sheet No. 34 (Reprinted with corrections 1918)

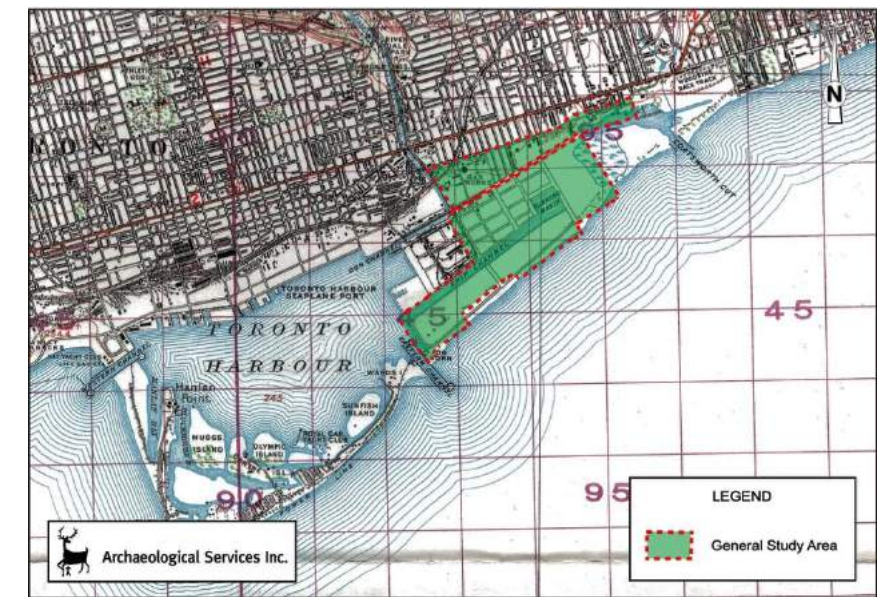


Figure 11: The general study area overlaid on the 1931 historic topographic map of Toronto
 Base Map: Toronto Sheet No. 34 (Surveyed 1923, Reprinted 1931)



Figure 12: View of freighters and coal storage along the Ship Channel, looking east
Source: Toronto Public Library (942-1-35)



Figure 13: View of tank farms and refineries along Cherry Street, looking south towards the Ships Channel
Source: Toronto Public Library (942-1-35)

3.3 Identification of Cultural Heritage Resources

Preliminary identification of cultural heritage resources within the Port Lands and South of Eastern Transportation and Servicing Master Plan study area was conducted through a review of the following sources: the City of Toronto's *Inventory of Heritage Properties* (2013a) and *List of Heritage Conservation Districts* (2013b); the Government of Ontario Ministry of Culture's *Ontario Heritage Properties Database* (2008); and the Federal Government's *Canada's Historic Places* website. The City of Toronto's *Inventory of Heritage Properties* (2013a) provides a list of cultural heritage resources of value within the confines of the City of Toronto. The City's *List of Heritage Conservation Districts* (HCD) (2013b) provides a list of HCDs in the City of Toronto. In addition, the City of Toronto was contacted directly to gather any information on cultural heritage resources within the study area (email communication 22 November 2013).

Cultural heritage resources were also identified through a review of compendium environmental assessment studies, including the following:

- *Cultural Heritage Assessment Report: Light Rail Vehicle Fleet Maintenance and Storage Facility, City of Toronto* (ASI 2010)
- *Cultural Heritage Resource Assessment Report: Toronto Waterfront Sanitary Master Servicing Plan Class EA, City of Toronto* (ASI 2012)

A review of the inventory and background research revealed that a total of four built heritage resources (BHR) and seven cultural heritage landscapes (CHL) have been previously identified within the general study area.

3.3.1 Port Lands and South of Eastern Study Area – Existing Conditions

The Port Lands and South of Eastern study area is generally bounded by Eastern Avenue to the north, Leslie and Woodfield streets to the east, Unwin Avenue to the south, and the Don Roadway and the Toronto's Inner Harbour to the west, in the City of Toronto, Ontario. The study area generally consists of early to mid-twentieth century industrial land use and new commercial development, with small residential areas interspersed.

The South of Eastern area is characterized by industrial, commercial, and residential buildings and streetscapes spanning the late nineteenth and twentieth centuries (Plates 1-5). Many of the industrial landscapes and residential streetscapes from the early twentieth century survive intact, and are still utilized, demonstrating a persistent connection between the area and its industrial heritage.

The Port Lands area is strongly characterized by industrial land uses and building complexes that date to the first half of the twentieth century and that are historically, architecturally, and contextually associated with the Harbour Commission Plan (1912) for the Port Lands District.

Although there has been some new development within this area, it is largely an intact, early twentieth-century industrial area that retains numerous buildings, building complexes, bridges, and landscape elements (Plates 6-8) that trace development of Toronto's Inner and Outer harbour and over hundred years of intense port development.



Due to the drastic landscape changes that occurred as part of the Harbour Commission Plan of 1912, little remains above-ground that relates to the earliest periods of Euro-Canadian survey and settlement, nor that is associated with the nineteenth-century maritime and industrial development of the study area. The Railway Era is represented in the form of rail corridors and bridges. The era of land reclamation and early twentieth century industrial development, which is directly associated with the Harbour Commission Plan of 1912, is well represented within the study area. Resources from this time period generally consist of large, two-storey brick industrial buildings as well as Victorian and vernacular row-housing built for the growing population of industrial workers inhabiting the area. Other resources from this time period include infrastructure such as the Ship Channel and railways. The post-war period is generally represented by civic infrastructure building, and the commemoration of past infrastructure, as well as further industrial development.

Table 2 provides a summary of built heritage resources (BHR) and cultural heritage landscapes (CHL) identified in the study area and Figure 14 provides an overview of their location. Table 3 provides a summary of the number and types of cultural heritage resources as they relate to the various historical eras described in Section 3.2 above. Detailed descriptions of these resources are provided in Section 7.0 of this report and detailed mapping of these resources is provided in Section 8.0.



Plate 1: East view along Eastern Avenue towards Leslie Street.



Plate 2: East view along Eastern Avenue towards Revival Film Studios.



Plate 3: North view along Heward Avenue towards Eastern Avenue.



Plate 4: West view along bike path lining Lakeshore Boulevard East.





Plate 5: North view along Morse Street towards Eastern Avenue. Note the residential character of the street.



Plate 6: East view along Commissioners Street.



Plate 7: East view across the turning basin of the Ship Channel.

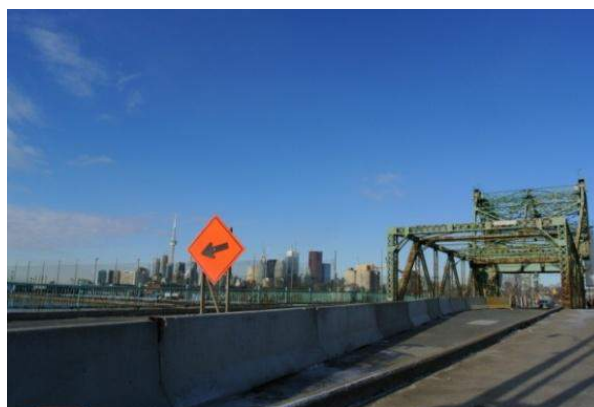


Plate 8: View northwest towards downtown Toronto.

Table 2: Summary of Built Heritage Resources (BHR) and Cultural Heritage Landscapes (CHL) in the study area

Resource	Location	Type	Recognition
BHR 1	849 Eastern Avenue	Industrial Building	Identified during field review
BHR 2	20 Mosley Street	Industrial Building	Previously identified (ASI 2010)
BHR 3	721 Eastern Avenue	Industrial Building	Identified during field review
BHR 4	549 Eastern Avenue (Wolf Electric and Lighting Ltd.)	Industrial Building	Identified during field review
BHR 5	69 Heward Avenue	Industrial Building	Identified during field review
BHR 6	19-29 Logan Avenue	Industrial Building	Identified during field review
BHR 7	415 Eastern Avenue	Industrial Building	Listed by the City of Toronto
BHR 8	Crossing eastern Avenue east of Sunlight Park Road	Bridge	Identified during field review
BHR 9	29 Basin Street (Sun Oil Company Building)	Industrial Building	Listed by the City of Toronto
BHR 10	Cherry Street Bridge	Bridge	Listed by the City of Toronto
BHR 11	450 Commissioners Street	Industrial Building	Previously identified (ASI 2012)
BHR 12	Crossing Don Valley Parkway and Don River	Bridge	Identified during field review
CHL 1	West side of Leslie Street	Streetscape	Previously identified (ASI 2010)



Resource	Location	Type	Recognition
CHL 2	between Mosley Street and Eastern Avenue Remnant piers of the Gardiner Expressway onramp along the north side of Lakeshore Boulevard East	Memorial	Identified during field review
CHL 3	South side of Eastern Avenue between Carlaw Avenue and Morse Street	Streetscape	Identified during field review
CHL 4	Carlaw Avenue, Lakeshore Boulevard East to Queen Street East	Streetscape	Previously identified (ASI 2012)
CHL 5	Morse Street between Eastern Avenue and Lakeshore Boulevard	Streetscape	Identified during field review
CHL 6	50-94 Booth Ave (433 Eastern Avenue)	Industrial Complex	Listed by the City of Toronto
CHL 7	Rail corridor running diagonally through the northwest corner of the study area, from the Don Roadway to Eastern Avenue	Railscape	Identified during field review
CHL 8	Rail yard located directly north of Lakeshore Boulevard East	Railscape	Identified during field review
CHL 9	440 Unwin Avenue (Hearn Generating Station)	Industrial Complex	Listed by the City of Toronto and identified as a Provincial Heritage Property
CHL 10	400 Commissioners Street (City of Toronto Incinerator, 1953)	Industrial Complex	Listed by the City of Toronto
CHL 11	Hydro Corridor along Commissioners Street between the Don Roadway and Bouchette Street	Hydro Corridor	Identified during research and field review
CHL 12	Ship Channel	Waterscape	Identified during research and field review
CHL 13	55 Unwin Avenue	Industrial Complex	Identified during field review
CHL 14	Throughout Port Lands area	Railscape	Previously identified (ASI 2012)





Figure 14: Location of cultural heritage resources in the study area

Table 3: Types of BHRs and CHLs Representing Thematic Periods

	Commercial/Industrial	Bridge	Memorial	Streetscape/Residential	Infrastructure
Early History					
Maritime and Industrial Development					
Railway Period		BHR 8, BHR 12			CHL7, CHL 8
Land Reclamation and Early Twentieth-Century Industry	BHR 2, BHR 3, BHR 5, BHR 6, BHR 7, BHR 9, CHL 6,	BHR 10		CHL 1,CHL 3, CHL 4, CHL 5	CHL 12, CHL 14
Post War	BHR 1, BHR 4, BHR 11, CHL 10, CHL 13, CHL 9		CHL 2		CHL 11

3.4 Screening for Potential Impacts

To assess the potential impacts, identified cultural heritage resources are considered against a range of possible impacts as outlined in the document entitled *Screening for Impacts to Built Heritage and Cultural Heritage Landscapes* (MTC November 2010) which include:

- Destruction, removal or relocation of any, or part of any, heritage attribute or feature (III.1).
- Alteration (which means a change in any manner and includes restoration, renovation, repair or disturbance) (III.2).
- Shadows created that alter the appearance of a heritage attribute or change the exposure or visibility of a natural feature or plantings, such as a garden (III.3).
- Isolation of a heritage attribute from its surrounding environment, context, or a significant relationship (III.4).
- Direct or indirect obstruction of significant views or vistas from, within, or to a built or natural feature (III.5).
- A change in land use such as rezoning a battlefield from open space to residential use, allowing new development or site alteration to fill in the formerly open spaces (III.6).
- Soil disturbance such as a change in grade, or an alteration of the drainage pattern or excavation (III.7)

A number of additional factors are also considered when evaluating potential impacts on identified cultural heritage resources. These are outlined in a document set out by the Ministry of Culture and Communications (now Ministry of Tourism, Culture and Sport) and the Ministry of the Environment entitled *Guideline for Preparing the Cultural Heritage Resource Component of Environmental Assessments* (October 1992) and include:

- Magnitude: the amount of physical alteration or destruction which can be expected;
- Severity: the irreversibility or reversibility of an impact;
- Duration: the length of time an adverse impact persists;
- Frequency: the number of times an impact can be expected;
- Range: the spatial distribution, widespread or site specific, of an adverse impact; and
- Diversity: the number of different kinds of activities to affect a heritage resource.

Once a preferred design for the Port Lands and South of Eastern project has been identified, all cultural heritage resources identified within and adjacent to the study area will be evaluated against the above criteria and a summary of impact screening results provided. Various works associated with infrastructure and transportation improvements have the potential to affect cultural heritage resources in a variety of ways, and as such, appropriate mitigation measures for the undertaking need to be considered.

Where any identified, above ground, cultural heritage resources which may be affected by direct or indirect impacts, appropriate mitigation measures should be developed. This may include completing a heritage impact assessment or documentation report, or employing suitable measures such as landscaping, buffering or other forms of mitigation, where appropriate. In this regard, provincial guidelines should be consulted for advice and further heritage assessment work should be undertaken as necessary.

3.4.1 Proposed Interventions

Transportation

As part of the evaluation of alternatives for the proposed undertaking, the overall study area was divided into sub-areas (Figure 15). A number of alternatives were proposed for each sub area. Following the evaluation process, a preferred EA street layout was selected. The preferred alternatives are as follows:



- Sub Area 1: Broadview Connections
 - 1-B.2: Realigned Saulter (Under) and New North South Street
- Sub Area 2: East of Carlaw and West of Leslie
 - 2-B: Caroline
- Sub Area 3: Ship Channel Connections
 - 3-C: Broadview
- Sub Area 4: Eastern and Midblock, East-West Connections between Eastern and Lakeshore
 - 4-A.3: Urbanize
 - 4-B.2: New East-West Connection in Unilever Precinct
- Sub Area 5: LakeShore and the Ship Channel
 - 5-D: Multiple Connections
- Sub Area 6: South of the Ship Channel
 - 6-C: Realign and Urbanize



Figure 15: Location of the Portland Master Plan Sub-Areas

Source: City of Toronto, Transportation and Servicing

Stormwater

The preferred alternative for stormwater management is the “Water as a Resource” alternative and described as follows:

Future development occurs and is supported by combination of storm sewer network and open channel systems within designated pilot areas. Stormwater management approach highlights sustainability, low-impact development and incorporating water into the public realm. Proposed street layout and DMNP EA flood protection measures will be in place.

The storm sewer network and open channel systems are all located within the proposed ROWs for the preferred EA street layout.



Stormwater – Effluent Treatment

North of the Ship Channel, the preferred alternative is to allow for future stormwater to be treated in two possible locations: Location A – Turning Basin Water Square, and Location C – Satellite facility near Ashbridges Bay Treatment Plant. Two options are described as follows:

- Option 2-E: All treatment flows to satellite facility near the Ashbridges Bay Treatment Plant (C). This option leverages existing assets and future infrastructure proposed in the Inner Harbour Tunnel (IHT).
- Option 2-F: Treatment flows are split between the satellite wet weather flow treatment facilities near the Ashbridges Bay Treatment Plant (C) and flows can also travel to an independent location (A) to provide an opportunity to explore innovative alternative UV treatment options in the future, not just dependent on IHT.

South of the Ship Channel the preferred location for water treatment is Location B – The Greenway, which is described as follows:

- Option 2-A: All treatment flows to facility at Don Greenway Park area (B). This provides an opportunity to explore innovative alternative UV treatment options for South of Ship Channel, creates an independent treatment system, can be integrated with the natural environment, provides opportunities for public interaction and education on stormwater treatment processes.

Water and Wastewater

All pipes and sewers for the water and wastewater systems will be completed within the existing rights of way for the EA street network.

3.4.2 Potential Impacts to Identified Cultural Heritage Resources

The preferred EA street network for the Port Lands and South of Eastern Transportation and Servicing Master Plan in relation to identified cultural heritage resources is presented in Section 8.0. The following table (Table 4) considers the potential impacts of the preferred alternative on identified cultural heritage resources.



Table 4: Impacts to identified Cultural Heritage Resources and Recommended Mitigation Strategies		
Resource	Discussion of Impact(s)	Mitigation Strategies
BHR 1 849 Eastern Ave Industrial Building	No anticipated impacts	No mitigation measures needed
BHR 2 20 Mosley St Industrial Building	No anticipated impacts	No mitigation measures needed
BHR 3 721 Eastern Ave Industrial Building	No anticipated impacts	No mitigation measures needed
BHR 4 549 Easter Ave Industrial Building	No anticipated impacts	No mitigation measures needed
BHR 5 69 Heward Ave Industrial Building	No anticipated impacts	No mitigation measures needed
BHR 6 19-29 Logan Ave Industrial Building	No anticipated impacts	No mitigation measures needed
BHR 7 415 Eastern Ave Industrial Building LISTED	<i>Preferred alternative 1B2: Realigned Saulter and New North-South Street</i> No negative impacts to BHR 7 (415 Eastern Ave) anticipated as the proposed ROW between Eastern and Lake Shore is not expected to extend beyond the limits of the existing pavement width.	No mitigation measures needed
BHR 8 Crossing Eastern Ave Bridge	No anticipated impacts	No mitigation measures needed
BHR 9 29 Basin St Industrial Building LISTED	No anticipated impacts	No mitigation measures needed
BHR 10 Cherry St crossing over Ship Channel Bridge LISTED	No anticipated impacts	No mitigation measures needed

Table 4: Impacts to identified Cultural Heritage Resources and Recommended Mitigation Strategies		
Resource	Discussion of Impact(s)	Mitigation Strategies
BHR 11 450 Commissioners St Industrial Building	<i>Preferred Alternative 5D: Multiple Connections</i> Potential displacement or destruction of BHR 11.	Commissioners Street ROW should be configured to avoid impacts to BHR 11. If reconfiguration of Commissioners Street is not feasible, a resource-specific HIA should be conducted to confirm the cultural heritage value and attributes of BHR 11 and propose specific measures to minimize impacts to the cultural heritage resource.
BHR 12 Railway crossing Don Valley Parkway and Don River Bridge	No anticipated impacts	No mitigation measures needed
CHL 1 West side of Leslie St, between Mosley St and Eastern Ave Streetscape	No anticipated impacts	No mitigation measures needed
CHL 2 Former Gardiner Expressway on-ramp Memorial	No anticipated impacts	No mitigation measures needed
CHL 3 South side of Eastern Ave, Carlaw Ave to Morse St Streetscape	No anticipated impacts	No mitigation measures needed
CHL 4 Carlaw Ave, Lakeshore Blvd East to Queen St East Streetscape	No anticipated impacts	No mitigation measures needed

Table 4: Impacts to identified Cultural Heritage Resources and Recommended Mitigation Strategies		
Resource	Discussion of Impact(s)	Mitigation Strategies
CHL 5 Morse St, Eastern Ave to Lakeshore Blvd Streetscape	No anticipated impacts	No mitigation measures needed
CHL 6 50-94 Booth Ave (433 Eastern Ave) Industrial Complex LISTED	<i>Preferred Alternative 1B2: Realigned Saulter and New North-South Street</i> No negative impacts to CHL 6 (Booth Yard) anticipated as the proposed ROW between Eastern Ave and Lakeshore Blvd is not expected to extend beyond the limits of the existing pavement width.	No mitigation measures needed
CHL 7 Northwest corner of study area Railscape	<i>Preferred Alternative 1B2: Realigned Saulter and New North-South Street</i> Site-specific alteration to the setting of CHL 7 (Railscape) through the introduction of a new ROW under the rail embankment. Although irreversible and permanent, the alteration is considered of low magnitude as it does not impact heritage attributes typically associated with rail corridors (e.g., alignment, width of the right-of-way, and arrangement of tracks). The historical function of the rail line also remains unchanged.	High potential to mitigate impacts to CHL 7 given the nature of impacts. Potential mitigation measure(s) to CHL 7 include documentation of existing conditions in advance of construction activities.
CHL 8 North of Lakeshore Blvd East Railscape	<i>Preferred Alternative 1B2: Realigned Saulter and New North-South Street</i> Site-specific alteration to the setting of CHL 8 (rail yard) required to accommodate the introduction of a new ROW through the yard. Although irreversible and permanent, the alteration is considered of medium magnitude as the introduction of vehicular traffic through the yard is not in keeping with the historical context of the resource. The alterations, however, do not impact heritage attributes typically associated with individual rail corridors and the historical function of the rail yard remains unchanged.	New north-south street should be configured to minimize impacts to CHL 8 and designed to be sympathetic and physically and visually compatible with the resource. Documentation of existing conditions should be conducted in advance of construction activities.

Resource	Discussion of Impact(s)	Mitigation Strategies
CHL 9 440 Unwin Ave Industrial Complex LISTED; PROVINCIAL HERITAGE PROPERTY (PHP)	<i>Preferred Alternative 6C: Realign and Urbanize</i> Alteration to the setting of CHL 9 (Hearn Generating Station) through the realignment of Unwin Avenue through the property. Known landscape features (e.g., circulation routes, smokestack) are located within the zone of realignment which is concentrated along the southern portion of the property. Further landscape features associated with CHL 9 may be identified within the zone of realignment with more detailed assessment. Although irreversible and permanent, the alteration is considered of low magnitude.	Realignment and improvements to Unwin Avenue should be configured to minimize impacts to CHL 9 and be sympathetic to and visually and physically compatible with the resource. A resource-specific HIA should be conducted to confirm the cultural heritage value and attributes of CHL 9 and propose specific measures to minimize impacts to the cultural heritage resource. This property is subject to the <i>Standards and Guidelines for Conservation of Provincial Heritage Properties</i> (MTCS 2010).
CHL 10 400 Commissioners St Industrial Complex LISTED	<i>Preferred Alternative 5D: Multiple Connections</i> Irreversible and permanent alteration to CHL 10 by introducing a new ROW through the property, potentially removing built structures and landscape features associated with the property. Potential removal of mature trees associated with CHL 10 along Commissioners Street to accommodate ROW widening.	New east-west street and improvements to Commissioners Street should be configured to minimize impacts to CHL 10 and be sympathetic to and visually and physically compatible with the resource. A resource-specific HIA should be conducted to confirm the cultural heritage value and attributes of CHL 10 and propose specific measures to minimize impacts to the cultural heritage resource.
CHL 11 Commissioners St Hydro Corridor	<i>Preferred Alternative 5D: Multiple Connections</i> Potential decommissioning and removal of one or more hydro towers associated with CHL 11 to accommodate improvements to Commissioners Street.	Where feasible, decommissioned hydro towers (CHL 11) should be preserved in-situ as landscape features commemorating the industrial history of the area.

Resource	Discussion of Impact(s)	Mitigation Strategies
CHL 12 Ship Channel Waterscape	<p><i>Preferred Alternative 3C: Broadview</i> Site-specific, irreversible and permanent alteration of low magnitude to CHL 12 (Ship Channel) through the introduction of new bridge across the Ship Channel that is not in keeping with the historic fabric and appearance of the channel. Only one bridging point has crossed the channel since the 1930s (existing Cherry Street Bridge).</p> <p><i>Proposed Effluent Treatment Locations A and B</i> Site-specific alteration to the setting of CHL 12 (Ship Channel) through the introduction of new effluent treatment sites that is not in keeping with the historic fabric and context of the channel. Although irreversible and permanent, the alteration is considered of low magnitude. The historical function of the Ship Channel remains unchanged.</p>	<p>Opportunity to design a new bridge that is sympathetic to the historical industrial setting of the area. For example, the Standards and Guidelines for the Conservation of Historic Places in Canada (2010) recommend the following design guideline, among others, in relation to new additions to CHLs: "Designing a new built feature, when required by a new use, to be compatible with the heritage value of the cultural landscape. For example, erecting a new [structure] using traditional form and materials..." Design, scale, massing and material fabric of any new structural feature should be sympathetic to the surrounding cultural heritage landscapes and built heritage resources, including the existing Cherry Street Bridge (BHR 10).</p> <p>Similarly, the new effluent treatment sites should be designed to minimize impacts to CHL 12 and to be sympathetic and physically and visually compatible with the resource.</p> <p>Documentation of existing conditions should be conducted in advance of construction activities.</p>
CHL 13 55 Unwin Ave Industrial Complex	No anticipated impacts	No mitigation measures needed
CHL 14 Throughout Port Lands Railscape	<p><i>Preferred Alternative 2B: Caroline</i> Site-specific alteration to the setting of CHL 14 (railscape) required to accommodate the introduction of a new ROW. Although irreversible and permanent, the alteration is considered of low magnitude as it does not impact heritage attributes typically associated with rail corridors (e.g., alignment, width of the right-of-way, and arrangement of tracks). The historical function of the rail line also remains unchanged.</p>	Potential mitigation measure(s) to CHL 14 include documentation of existing conditions in advance of construction activities.

As the storm sewer network and open channel systems are all located within the proposed ROWs for the preferred EA street layout, no additional impacts to cultural heritage resources are anticipated due to proposed stormwater management interventions. Any potential impact will be captured by the impact assessment of the EA street layout above. It should be noted that the proposed stormwater management system is intended to protect cultural heritage features from future flooding by directing stormwater to a managed system within the streets as development proceeds.

Similarly, as all pipes and sewers for the water and wastewater systems will be completed within the existing rights of way for the EA street network, no additional impacts to cultural heritage resources are anticipated for this particular intervention.

4.0 CONCLUSIONS

The results of background historic research and a review of secondary source material, including historic mapping, revealed a study area with an industrial history dating back to the nineteenth century. The field review confirmed that these areas retain a number of twentieth-century cultural heritage resources. The following provides a summary of field review and data collection findings:

- Twelve built heritage resources and 14 cultural heritage landscapes were identified in the Port Lands and South of Eastern study area: Five were listed as heritage resources by the City of Toronto (BHR 7, 9, 10 and CHL 6, 10, 9), six identified in previous environmental assessments (BHR 2 and BHR 11 and CHL 1, 4, 14), one is a Provincial Heritage Property (CHL 9), and 15 identified during field review (BHR 1, 3, 4, 5, 6, 8, 12, and CHL 2, 3, 5, 7, 8, 11, 12, 13).
- Of the 26 identified cultural heritage resources nine are buildings (BHR 1-7, 9 and 11), three are bridges (BHR 8, 10, 12), four are streetscapes (CHL 1, 3, 4, 5); three are railways or railyards (CHL 7, 8, 14); (CHL 6); one a memorial (CHL 2), four are industrial complexes (CHL 6, 9, 10, 13), one is a hydro corridor (CHL 11), and one is a waterway (CHL 12).
- Identified cultural heritage resources are historically, architecturally, and contextually associated with early twentieth-century land use patterns, industrial processes, and historic industry and settlement in the Port Lands and the South of Eastern study area, City of Toronto.

5.0 RECOMMENDATIONS

New development in the Port Lands and South of Eastern study area has the potential to affect cultural heritage resources in a variety of ways. Potential impacts can include: direct impacts that result in the loss of resources through demolition, or the displacement of resources through relocation; and indirect impacts that result in the disruption of resources by introducing physical, visual, audible, or atmospheric elements that are not in keeping with the resources and/or their setting.

Based on the results of background data collection and field review of the Port Lands and South of Eastern study area, the following general recommendations have been developed.

1. Staging and construction activities should be suitably planned and undertaken to avoid impacts to identified cultural heritage resources.



2. Where feasible, proposed street ROWs or proposed improvements to existing ROWs should be configured to avoid or minimize impacts to identified cultural heritage resources and/or designed to be sympathetic to, and visually and physically compatible with the impacted resource. This includes: Commissioners Street (at BHR 11 and CHL 10); new north-south street (at CHL 8); Unwin Avenue (at CHL 9); new east-west street (at CHL 10).
3. Where built heritage resources and cultural heritage landscapes are expected to be impacted through destruction/removal/relocation of built structures or landscape features, a resource-specific heritage impact assessment (HIA) should be conducted in advance of, or at the earliest possible stage of the detailed design stage, to confirm the cultural heritage value of the resource, identify cultural heritage attributes, and develop appropriate mitigation measures. An HIA should be conducted for BHR 11, CHL 9, and CHL 10.
4. The proposed bridge across the Ship Channel (Alternative 3C: Broadview) should be suitably designed to be sympathetic to the historical industrial setting of the area in general and CHL 12 (Ship Channel) in particular. For example, the Standards and Guidelines for the Conservation of Historic Places in Canada (2010) recommend the following design guideline, among others, in relation to new additions to CHLs: "Designing a new built feature, when required by a new use, to be compatible with the heritage value of the cultural landscape. For example, erecting a new [structure] using traditional form and materials..." Design, scale, massing and material fabric of the new bridge should be sympathetic to the surrounding cultural heritage landscapes and built heritage resources, including the existing Cherry Street Bridge (BHR 10). Similar design guidelines should be considered for the proposed effluent treatment sites.
5. Where built heritage resources and/or cultural heritage landscapes are expected to be impacted through alteration of their setting, a cultural heritage documentation report should be prepared in advance of construction activities to serve as a final record of each of the resources and the study area in general. The resources should be subject to photographic documentation and compilation of a cultural heritage documentation report by a qualified heritage consultant and the report submitted to local repositories for archival purposes. Cultural heritage documentation reports should be completed for CHL 7, CHL 8, CHL 12, and CHL 14.
6. The feasibility of implementing tree protection zones should be investigated for all identified cultural heritage resources where tree removal is planned.
7. Should future work require an expansion of the study area, a qualified heritage consultant should be contacted in order to confirm the impacts of the proposed work on potential heritage resources.



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7.0 CULTURAL HERITAGE RESOURCE INVENTORY





Table 5: Inventory of Built Heritage Resources (BHR) and Cultural Heritage Landscapes (CHL) in the study area





Resource	Address/ Location	Type	Recognition	Historical Theme	Description	Photos
BHR 1	849 Eastern Avenue	Industrial Building	Identified during field review	Post War	<p>Design: This two storey brick warehouse sits on a concrete foundation and features original/early windows on the first floor of the north façade and large double wooden doors. The second floor windows of the north façade have been replaced by brick, air conditioning units, and new windows. The brick at the east and west elevations appear to be older than that at the front of the building. Historic mapping reveals little about the building’s date of construction.</p> <p>Historical: Aerial photography from 1954 appears to indicate its existence, however the brickwork on the east and west elevations, as well as the windows on the first floor, suggests an earlier build date. The building appears to currently be owned by the Toronto District School Board.</p> <p>Context: The building maintains the twentieth-century industrial character of the area.</p>	  <p>View of the north elevation of 849 Eastern Avenue. View of the east elevation of 849 Eastern Avenue.</p>
BHR 2	20 Mosley Street	Industrial Building	Previously identified (ASI 2010)	Land Reclamation and Early 20 th Century Industry	<p>Design: This multi-storey brick building features concrete foundations and window sills and likely dates to the first part of the twentieth century. Brick columns flank replaced windows featuring metal muntins and a one-storey brick and concrete addition extends south of the original structure.</p> <p>Historical: Historic topographic maps do not indicate the building’s existence prior to 1931, though the structure, minus the addition, is extent in aerial photography produced in 1954.</p> <p>Context: The building is representative of the twentieth-century industrial character of the area.</p>	  <p>View of 20 Mosley Street on west side of Leslie Avenue. View of north and west elevations of 20 Mosley Street.</p>
BHR 3	721 Eastern Avenue	Industrial Building	Identified during field review	Land Reclamation and Early 20 th Century Industry	<p>Design: This brick building is made up of three distinct structures. The westernmost structure appears to be original. It consists of a two-storey building on concrete foundations, featuring common bond brickwork, concrete sills, multi-paned windows with metal muntins, and a neoclassical concrete entryway replete with brick pilasters. A second building, several meters to the east, also features common bond brickwork (painted pink) and concrete sills, though the windows have been replaced and the entryway is markedly less ornate. The two structures are connected by a newer brick addition that features brickwork, large garage-style doors, and new windows under the sill of the</p>	 





Resource	Address/ Location	Type	Recognition	Historical Theme	Description	Photos
					north elevation. Historical: A review of historic mapping reveals that a single structure was extant on the property by 1931, though it is not clear when the subsequent structures were constructed. Context: The building maintains the twentieth-century industrial character of the area.	View of the north elevation of 721 Eastern Avenue. View of 721 Eastern Avenue and surrounding landscape from the west.
BHR 4	549 Eastern Avenue (Wolf Electric and Lighting Ltd.)	Industrial Building	Identified during field review	Post War	Design: This brick building features an irregular footprint, corrugated brick, common bond brickwork, concrete sills, and paneled windows with metal muntins. A concrete addition extends south from the original structure. Historical: The structure appears on aerial photography from 1954 but is not extant on 1931 topographic mapping, indicating that it was built in the intervening decades. Context: The building is representative of the twentieth-century industrial character of the area.	 <p>View of 551 Eastern Avenue from north side of Eastern Avenue.</p>  <p>Oblique view of 551 Eastern Avenue, looking west.</p>
BHR 5	69 Heward Avenue	Industrial Building	Identified during field review	Land Reclamation and Early 20 th Century Industry	Design: This two-storey building features a rectangular footprint, concrete foundation, concrete sills, common bond brickwork, segmental arch with brick voussoirs, brick pillasters, and replaced windows. Two additions, a single-storey at the north and a two-storey at the south of the structure, continue most of the architectural features such as the brickwork, replaced windows, and concrete foundations and sills. Historical: The specific construction date of this industrial building is unknown, however the original structure is extant on topographic mapping from 1931. Context: The building is representative of the twentieth-century industrial character of the area.	 <p>Oblique view of 69 Heward Avenue, looking south.</p>  <p>View of West elevation of 69 Heward Avenue.</p>







Resource	Address/ Location	Type	Recognition	Historical Theme	Description	Photos
BHR 6	19-29 Logan Avenue	Industrial Building	Identified during field review	Land Reclamation and Early 20 th Century Industry	<p>Design: This single-storey industrial building with a rectangular footprint features both original and replaced windows, brick sills, common bond brickwork, and a concrete foundation. Several metal garage doors line the east and south elevations, interspersed among single-doored points of egress. The property is slightly setback from the sidewalk and retains a parking lot at its south end. Historic mapping was consulted to determine the age of the structure.</p> <p>Historical: Despite evidence suggesting advanced settlement and industry in the area from 1909 onward, no confirmation of the buildings existence can be confirmed prior to 1954.</p> <p>Context: The building is representative of the twentieth-century industrial character of the area.</p>	 <p>Oblique view of 19-29 Logan Avenue, looking north.</p>  <p>View of the northeast corner of 19-29 Logan Avenue. Note the replaced windows.</p>
BHR 7	415 Eastern Avenue	Industrial Building	Listed by the City of Toronto	Land Reclamation and Early 20 th Century Industry	<p>Design: This Edwardian redbrick building was built in 1908 by The Consumers' Gas Company as the Meter House (head office) for the adjacent plant. The building features a number of character-defining heritage features, including cast stone detailing, a classical stone portico with Ionic columns and 'Consumers' Gas Company' inscription, and pressed metal cornices. In addition, the building features arched windows with segmental arches consisting of brick voussoirs and keystones, cut stone foundation, and stone sills. The building underwent repairs and heritage conservation in 2010, at which time the brickwork, cast stone, and metal cornice were preserved.</p> <p>Historical: A plaque recording the company's directors for the year 1907 is visible at the northeast corner of the building. For a time the building housed the World Journal, a Chinese Language newspaper, and is now a retail furniture outlet.</p> <p>Context: The building is representative of the twentieth-century industrial character of the area.</p>	 <p>Detail of the northwest corner of 415 Eastern Avenue.</p>  <p>Oblique view of the north elevation of 415 Eastern Avenue.</p>






Resource	Address/ Location	Type	Recognition	Historical Theme	Description	Photos
BHR 8	Crossing eastern Avenue east of Sunlight Park Road	Bridge	Identified during field review	Railway Period	<p>Design: This bridge was built in 1926 to carry the Canadian National Railway across Eastern Avenue between the Don Valley Parkway and Booth Avenue in a northeast/southwest direction. The structure is a three span, steel girder bridge with concrete abutments and wingwalls. The central span extends across four lanes of Eastern Avenue traffic, while the two remaining spans at the northeast and southwest cross pedestrian sidewalks. The soffit is comprised of woodslat, metal, and concrete while the beams are made of riveted steel. Historic mapping reveals that the railway alignment has been extent since the mid-nineteenth century. However, it is likely that the current structure replaced a level crossing rather than a previous bridge.</p> <p>Historical: The bridge is historically connected to earlier crossings across Eastern Avenue, and particularly with the Grand Trunk Railway line completed in 1856.</p> <p>Context: The bridge design and construction date maintains the twentieth-century industrial character of the area.</p>	 <p>View of Canadian National rail bridge, looking west.</p>  <p>Detail of steel girder on the Canadian National rail bridge. Note the inscription: "Canadian National Railway – Courtesy & Service."</p>
BHR 9	29 Basin Street (Sun Oil Company Building)	Industrial Building	Listed by the City of Toronto	Land Reclamation and Early 20 th Century Industry	<p>Design: The following is an excerpt of the reason for listing as provided by the City of Toronto: "Featuring a rectangular plan, the building rises two stories under a flat roof with a triangular pediment at the north end. Cast stone detailing is applied to red brick walls. Stone piers with caps organize the principal (north) façade into three bays and continue along the side elevations (east and west). A broad horizontal band course divides the stories. Centered on the principal (north) façade, the main entrance incorporates a Classical entablature with a name band marked "office". Another name band, positioned beneath the pediment, reads "Sun Oil Company Ltd." The fenestration is symmetrically placed on all elevations and features flat-headed openings with single, paired and tripartite windows."</p> <p>Historical: The Sun Oil Company occupied this location as early as 1921. The building was designed by T.H. Mothershill and Company in 1930 and was built soon after. The building was included on the City of Toronto Inventory of Heritage Properties in 2003.</p> <p>Context: The building maintains the twentieth-century industrial character of the area. It was identified by the City as a building that stands out among the industrial structures in the Port Lands Industrial Area with its attention to detailing.</p>	 <p>View of 29 Basin street's north elevation from the north side of Basin Street.</p>  <p>Oblique view of the west elevation of 29 Basin Street.</p>


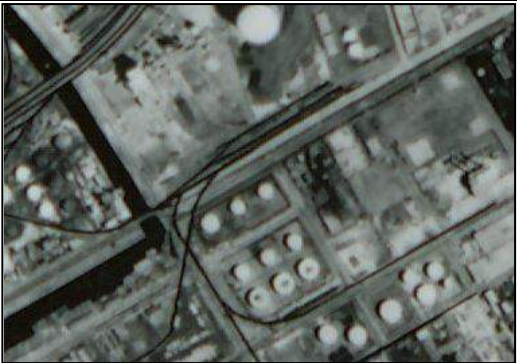


Resource	Address/ Location	Type	Recognition	Historical Theme	Description	Photos
BHR 10	Cherry Street Bridge (over Ship Channel at Cherry Street)	Bridge	Listed by the City of Toronto	Land Reclamation and Early 20 th Century Industry	<p>Design: Built in 1931 by the Dominion Bridge Co. Limited according to the design of the Strauss Engineering Corporation, the Cherry Street Bridge is a later example of a Strauss heel trunnion bascule bridge (a lift bridge activated by counterweights). This structure is a representative example of a bridge type that is exceptionally rare in Canada. It features metal truss members, two concrete counterweights, and a metal deck flanked by wood and concrete pedestrian paths. It originally featured wooden sidewalks which were replaced in 1953.</p> <p>Historical: The bridge type was designed by American structural engineer Joseph Baermann Strauss, perhaps best known as the engineer responsible for the Golden Gate Bridge. Located at the Ship Channel, it opened the southern sector of the Port Lands Industrial Area for development: a lift bridge was necessary to permit large lake-going vessels to use the channel.</p> <p>Context: The bridge maintains the twentieth-century industrial character of the area. It is the only remaining bascule bridge in the City of Toronto.</p>	 <p>View of the Cherry Street Bascule Bridge, looking south.</p>  <p>View of the Cherry Street Bascule Bridge, looking north.</p>
BHR 11	450 Commissioners Street	Industrial Building	Previously identified (ASI 2012)	Post War	<p>Design: The small brick building located immediately adjacent to the Commissioners Street right-of-way was constructed around 1950 and originally housed the Commissioners Transformer Station, part of the Toronto Hydro-Electric System. The square structure as a flat roof, is of solid brick construction and features concrete foundations. The front facade is characterised by original six-over-six pane windows with concrete sills, as well as brick lintels over the windows and centrally located door. The exterior of the structure has not been greatly altered, although original signage and exterior features associated with the transformer station have been removed.</p> <p>Historical: The building is visible on aerial mapping dating from 1950.</p> <p>Context: The structure and its former use maintain the industrial character of the area and has direct associations with power generation, a major feature of the Port Lands.</p>	 <p>1951 photo of the former Commissioners Transformer Station. <i>City of Toronto Archives, Fonds 1231, f1231_it0109</i></p>  <p>Close-up of building located immediately adjacent to Commissioners Street.</p>

Resource	Address/ Location	Type	Recognition	Historical Theme	Description	Photos
BHR 12	Crossing Don Valley Parkway and Don River	Bridge	Identified through review of historic mapping and/or field review	Railway period	<p>Design: The CN Rail crossing of the Lower Don River is a five span bridge built in several stages. From east to west: the three eastern spans featuring concrete abutments, piers and deck were built in 1949 to carry the railway over the north and south bound lanes of the Don Valley Parkway and a service road; the middle span is a steel deck plate girder superstructure on concrete abutments that was built in 1928-1930, which was originally two spans with the main span over the Don River (remains intact) and a shorter span to the east side that was demolished to make way for the Don Valley Parkway structure; and lastly, the single western span, a concrete structure that was built in 2007 to accommodate the widening at this location for flood control purposes and to provide pedestrian access under the railway tracks as part of the Don Watershed Trail.</p> <p>Historical: The bridge is historically associated to earlier bridge crossings carrying the Grand Trunk Railway over the Don River. The original alignment of the Grand Trunk Railway crossing existed between the 1850s and 1920s, at which time it was shifted slightly to accommodate the new elevated track for the Canadian National Railway as part of the widespread grade separation project in Toronto. The former bridge was a heavy iron truss bridge built in 1892 on the original 1856 stone abutments. The stones from the original abutments were salvaged and incorporated into the Don Watershed Trail as informal seating and as part of the retaining wall on the west side of the Don River.</p> <p>Context: The bridge design and construction date maintains the twentieth-century industrial character of the area.</p>	 <p>View of Canadian National rail bridge over the DVP and Don River looking south. (Image courtesy of Google Streetview, accessed 11 August 2015)</p>  <p>Aerial view of the subject bridge in 1953. City of Toronto Archives, Series 12, 1953, i0188</p>
CHL 1	West side of Leslie Street between Mosley Street and Eastern Avenue	Streetscape	Previously identified (ASI 2010)	Land Reclamation and Early 20 th Century Industry	<p>Design: The small cluster of houses along Eastern Avenue, Leslie Street, and Mosley Street comprise a residential subdivision of circa 1930s semi-detached dwellings of the same or similar design that either front on to Leslie St or are immediately adjacent. The subdivision features brick houses with a combined gable and flat roof, shed dormers, interior brick chimneys, and arches featuring brick voussoirs over the first storey windows.</p> <p>Historical: The dwellings, likely constructed as workers houses for surrounding industrial parks, are extant in aerial photography dating from 1954, though not on historical topographic maps prior to 1931.</p> <p>Context: The brick, terraced houses of the streetscape maintain the character of an early twentieth-century industrial landscape.</p>	 <p>Oblique view of the southern elevation of 20th century houses on the west side of Leslie Street</p>  <p>View of 20th century houses on the west side of Leslie Street</p>

Resource	Address/ Location	Type	Recognition	Historical Theme	Description	Photos
CHL 2	Remnant piers of the Gardiner Expressway onramp along the north side of Lakeshore Boulevard East	Memorial	Identified during field review	Post War	<p>Design: This public art instillation commemorates the former Gardiner Expressway East right of way, which terminated at Leslie Street. The Gardiner Expressway was constructed between 1955 and 1966 to alleviate traffic congestion problems facing the city in the middle of the twentieth century. The 1.4 kilometre section of the expressway between the Don River and Leslie Street was completed in 1966 and was intended to link up with the proposed Scarborough Expressway.</p> <p>Historical: After a number of studies weighing the benefits of demolition and refurbishment, the City of Toronto decided to pull down this section of the Gardiner Expressway in 2001.</p> <p>Context: These piers constitute a significant heritage site, commemorating an important component of Toronto's civic history.</p>	 <p>Pillars commemorating the former Gardiner Expressway ROW, looking west</p>  <p>Detail of public art instillation commemorating former Gardiner Expressway ROW</p>
CHL 3	South side of Eastern Avenue between Carlaw Avenue and Morse Street	Streetscape	Identified during field review	Land Reclamation and Early 20 th Century Industry	<p>Design: The houses lining the south side of Eastern Avenue between Carlaw Avenue and Morse Street are examples of early twentieth-century row-housing, likely built for the growing population of industrial workers inhabiting the area.</p> <p>Historical: Collectively, they feature two-storey massing, gable roofs with dormers, brick façades, jack arches above replaced windows, and monochrome brickwork above and below the windows. Historic mapping confirms that settlement had begun area as early as 1909, corresponding to extant architectural features.</p> <p>Context: The bricked, terraced-housing maintains the industrial character of the area.</p>	 <p>View of Victorian rowhouses along the South side of Eastern Avenue between Carlaw Avenue and Morse Street</p>  <p>Oblique view of Victorian rowhouses along Eastern Avenue, looking east</p>




Resource	Address/ Location	Type	Recognition	Historical Theme	Description	Photos	
CHL 4	Carlaw Avenue, Lakeshore Boulevard East to Queen Street East	Streetscape	Previously identified (ASI 2012)	Land Reclamation and Early 20 th Century Industry	<p>Design: Carlaw Avenue, between Lakeshore Boulevard Eastern Avenue, functions as a transitional streetscape that is characterized by early to mid twentieth-century industrial and residential land uses and building development. At the southern end of this corridor, the Carlaw Avenue right-of-way is lined by modified industrial buildings located in very close proximity to the road right-of-way, and largely concentrated on the east side of the road. On the west side of the road and towards Eastern Avenue, the streetscape is anchored by semi-detached and row houses designed in a relatively utilitarian and vernacular style, emphasizing a small foot print, narrow building width, and prototypical hallmarks of Toronto urban development, such as the bay and gable motif. These buildings are generally of frame construction and serve as a good example of design transitions in working class residential development in the early to mid twentieth century.</p> <p>Historical: The streetscape has direct associations with the industrialization of the area as it provided residence for those who worked in the surrounding industry.</p> <p>Context: The streetscape maintains the industrial character of the area through the maintenance of former workers' residences and industrial buildings.</p>	 <p>Source: City of Toronto website: http://www.toronto.ca/archives/maps/aerial-photography-1947.htm; Scale 1:18,000</p>  <p>Source: Bing Maps 2012; Scale 250 feet to 50 metres</p> <p>Aerial photography from 1947 and 2012 of Carlaw Avenue streetscape between Lakeshore Boulevard East and Eastern Avenue.</p>	 <p>View of houses on the west side of Carlaw Avenue</p>  <p>View of industrial building on east side of Carlaw Avenue</p>
CHL 5	Morse Street between Eastern Avenue and Lakeshore Boulevard	Streetscape	Identified during field review	Land Reclamation and Early 20 th Century Industry	<p>Design: Morse Street between Eastern Avenue and Lakeshore Boulevard is representative of an early twentieth-century residential streetscape. The area consists of two and two-and-a-half-storey row-houses, made primarily of brick and featuring gabled roofs with single, shared dormers.</p> <p>Historical: The buildings generally maintain a uniform setback of five metres from the curb and mature trees lining the street. Historic mapping confirms that residential settlement had commenced on Morse Street as early as 1909 and has direct associations with settlement in the area.</p> <p>Context: The streetscape maintains the industrial character of the area through the maintenance of former workers' residences.</p>	 <p>View of Morse Street, looking north toward Eastern Avenue</p>  <p>Typical residences on the east side of Morse Street</p>	






Resource	Address/ Location	Type	Recognition	Historical Theme	Description	Photos
CHL 6	50-94 Booth Ave (433 Eastern Avenue)	Industrial Complex	Listed by the City of Toronto	Land Reclamation and Early 20 th Century Industry	<p>Design: The cultural heritage landscape at 50-94 Booth Ave (433 Eastern Avenue) consists of multiple industrial buildings with build dates spanning the twentieth century. Two brick structures built in 1912 are visible from the Eastern Avenue right of way. The buildings both feature a rectangular footprint, English Garden Wall bond brickwork, Spanish Colonial style parapet walls at either end of their gabled roofs, paneled windows with wood muntins, window arches with brick voussoirs and keystones, large wooden doors, and brick parapets.</p> <p>The remainder of the property features industrial buildings dating to the late nineteenth century as well as a number of parking areas which are not considered to retain cultural heritage value.</p> <p>Historical: Originally designated the Consumer's Gas, Station "B", the structures at 50 and 94 Booth Avenue are now owned by the City of Toronto and used for Works and Emergency Services, Urban Development Services, and Economic Development.</p> <p>Context: The buildings at 50 and 94 Booth Avenue maintain the industrial character of the area. Today, the twin structures stand as a prominent visual landmark along Eastern Avenue with their design, proximity to the sidewalk, and established trees along the northern property line.</p>	 <p>View of east elevation of 50-94 Booth Avenue.</p>  <p>Oblique view of 50-94 Booth Avenue</p> 
CHL 7	Rail corridor running diagonally through the northwest corner of the study area, from the Don Roadway to Eastern Avenue	Infrastructure (Railscape)	Identified during field review	Railway Period	<p>Design: The Canadian National rail corridor crosses the Don River and enters the study area between Lakeshore Boulevard and Eastern Avenue, traveling northeast and leaving the study area between the Don Valley Parkway and Booth Street.</p> <p>Historical: The allignemtn has changed little from that which was set down in the mid-nineteenth century and corresponds to the rail corridor recorded in Charles Magnus' <i>City of Toronto</i> lithograph (1855). Three major railway companies, the Ontario, Simcoe and Huron Railway (later renamed the Northern Railway), the Great Western Railway and the Grand Trunk Railway, all entered Toronto in the 1850s and set about cutting down the south face</p>	 <p>View of the rail corridor looking southwest.</p>  <p>View of rail corridor looking northeast.</p>




Resource	Address/ Location	Type	Recognition	Historical Theme	Description	Photos
					<p>of the original shorecliffs and filling along virtually the entire waterfront. The railways concentrated their efforts only on the construction of causeways for their track beds and the areas to be occupied by their yards and stations. The waterfront was radically altered by the railways, as tracks, terminals, freight stations, utilities and new wharves were erected. Numerous industrial operations were attracted to the area as well, given the ready access it offered to both the rail and shipping networks.</p> <p>Context: This intact railway alignment represents a significant element in Toronto's industrial, transportation, and settlement history and is important in defining the industrial character of the area.</p>	
CHL 8	Rail yard located directly north of Lakeshore Boulevard East	Infrastructure (Railscape)	Identified during field review	Railway Period	<p>Design: This railyard is located just north of Lakeshore Boulevard East and features three tracks at the west that converge to make one track at the east end. The railyard originally consisted of six or seven spurs, some of which have since been removed.⁴ A review of aerial mapping suggests that four spurs remain.</p> <p>Historical: Although historic mapping, such as Barclay, Clark & Co. Lithographers' <i>Bird's-eye view</i> of Toronto (Figure 3) suggest that a burgeoning railyard existed here in the late nineteenth century, its existence is confirmed only in aerial photography taken in the 1940s and 1950s. The railyard is still in use by Toronto Water and occasionally by Ports Toronto.⁵</p> <p>Context: This railyard maintains the industrial character of the area.</p>	 <p>Railyard north of Lakeshore Boulevard East, looking west.</p>  <p>Aerial view of railyard in 1954 (Source: Huntington Survey Corporation Ltd.)</p>
CHL 9	Hearn Generating Station, 440 Unwin Ave.	Industrial Complex	Listed by the City of Toronto; Identified as a Provincial Heritage Property (local heritage significance)	Post War	<p>Design: The station was designed by Stone and Webster and consists of a rectangular brick building with a number of outbuildings and large smoke stack. The building's size is its dominant design feature, with a turbine hall that alone measures 300 x 45 metres. The surviving 700-foot concrete chimney was completed in 1971 using technology subsequently applied to the construction of the CN Tower. The following is an excerpt of the reason for listing as provided by the City of Toronto:</p> <p>"The Hearn Generating Station is designed in the Modern style that was introduced after World War II and distinguished by the emphasis on materials and the absence of decorative detailing. Under flat roofs, the plan is comprised of a series of interconnected sections of different heights that are linked by the use of red brick cladding, stone detailing, and varied</p>	 <p>View of former rail right-of-way along south side of Unwin Avenue, looking east.</p>  <p>View of south elevation of Hearn Plant, looking northeast.</p>



⁴ Email communication, Cassidy Ritz, City of Toronto, 13 July 2015.

⁵ Email communication, Cassidy Ritz, City of Toronto, 13 July 2015.

Resource	Address/ Location	Type	Recognition	Historical Theme	Description	Photos
					<p>fenestration. The west facade facing Cherry Street encompasses the monolithic appearance of the structure with its combination of vertical and horizontal strip windows set in stone surrounds.”</p> <p>Historical: The R.L Hearn Thermal-Electric Generating Station was constructed in 1950 as a coal-fired plant. The generating station was the first of two thermal-electric plants constructed in Ontario after World War II. A review of 1947 aerial photography confirms that this complex may have been one of the first buildings to be constructed along Unwin Avenue and as such, the complex has been noted as a landmark since its initial development given that it long stood as a lone complex surrounded by otherwise ‘man’-made lands.</p> <p>Context: The complex contributes to the historic land uses of the area and today functions as a dominant visual element in the district’s monolithic industrial land uses. The smokestack, in particular, serves as a landmark in the area due to its magnitude and prominence in the landscape. The complex terminates the vista looking south down Carlaw Avenue and in both directions along Unwin Avenue. It is also of significance at a larger geographic scale as it stands as the first of Hydro’s major thermal-electric plants.</p>	
CHL 10	400 Commissioners Street (City of Toronto Incinerator, 1953)	Industrial Complex	Listed by the City of Toronto	Post War	<p>Design: The City Incinerator and adjoining complex was built in 1953 and stands as a highly visible example of civic infrastructure building in the post war period. The property consists of a multi-storey brick building, concrete smokestack, parking lot, and a swathe of green space used as a buffer between the complex and the street. The following is an excerpt for reason for listing as provided by the City of Toronto:</p> <p>“The City of Toronto Incinerator Building is an excellent example of Modern Classical design. The complex is organized into three parts with a central body flanked by lower (north and south) sections. The three portions share flat roofs, red brick cladding, stone detailing, and flat-headed window openings. The brick piers with stone detailing, the stone band courses, and the variety of fenestration mixing vertical, square and continuous strip windows, are important features. The design is highlighted by the stepped elements at the south end of the complex that mark the entrance ramps.”</p>	 <p>View of the main incinerator building’s west elevation.</p>  <p>View of the incinerator, smokestack and trees from the south.</p>

Resource	Address/Location	Type	Recognition	Historical Theme	Description	Photos
					<p>Historical: The scale of the building and large land holdings also express the waste disposal priorities of the time; the building reflects a period in Toronto's history of waste management that was characterized by high waste production, costly yearly operations, and excessive pollution levels. In the 1970s the plant was subject to refurbishment of its internal mechanisms and the incinerator operations were closed in July 1988 in response to concern about airborne pollutants. The remaining smoke stack was constructed between 1971 and 1983, as was the modern structure in the northeast corner of the property. The Commissioners Street incinerator was the last of its kind to be built by the City of Toronto.</p> <p>Context: Today, the incinerator stands as a dominant landmark within the Commissioners Street streetscape, heavily anchoring the north side of the road and filling the block between Logan Avenue (east) and Bouchette Street (west) with its imposing building scale, dominant chimney stack, and mature elms on the southern property line. Today the building serves as a transfer station and remains a prominent visual landmark in the Port Lands area.</p>	
CHL 11	Hydro Corridor along Commissioners Street between the Don Roadway and Bouchette Street	Infrastructure (Hydro Corridor)	Identified during research and field review	Post War	<p>Design: This hydro corridor runs generally southeast to northwest down the centre of Commissioners Street, between the Don Roadway and Bouchette Street.</p> <p>Historical: The hydro corridor, which dominates the streetscape, is associated with the Hearn Thermal-Electric Generating Station.</p> <p>Context: The corridor helps maintain the industrial character of the area and has direct associations with power generation, a major feature of the Port Lands.</p>	 <p>View of hydro corridor, looking west.</p>  <p>View of hydro corridor, looking east.</p>
CHL 12	Ship Channel	Infrastructure (Canal)	Identified during research and field review	Land Reclamation and Early 20 th Century Industry	<p>Design: The Ship Channel extends from Toronto's Inner Harbour on the west to Leslie Street on the east and consists of a 2.7 kilometre canal running generally east-west through the Port Lands.</p> <p>Historical: The channel was built between 1915 and 1918 during the development of the Port Lands, which included the Turning Basin, and further expanded to Leslie Street in the late 1950s (the Leslie Slip).</p> <p>Context: The waterway is a defining feature the Port Lands district</p>	 <p>View east along the Ship Channel from Cherry</p>  <p>View East along the Ship Channel from Cherry</p>

Resource	Address/ Location	Type	Recognition	Historical Theme	Description	Photos
					through its ties to the area's industrial history.	Street Bridge. Street Bridge.
CHL 13	55 Unwin Avenue	Industrial Complex	Identified during field review	Post War	<p>Design: The industrial buildings on the corner of Unwin Avenue and Cherry Street constitute a representative mid-twentieth-century industrial landscape. The landscape is made up of two primary buildings, both setback from Unwin Avenue, one secondary structure along south of the main structures along Cherry Street, and a number of sheds and outbuildings. Both of the buildings along Unwin Avenue are have a two storey massing, rectangular footprint, and feature common bond brickwork, flat roofs, and mix of original and replaced windows. The eastern structure has a one-storey addition to the southwest and a chain link fence surrounding its perimeter. The western structure features a four bay garage extending to the southeast of the building. A smaller, two-storey brick structure is visible beyond the perimeter fencing south east of the western building.</p> <p>Historical: Buildings corresponding with the two main structures are visible on aerial mapping dating from 1954.</p> <p>Context: The structures, and their outbuildings, are part of an industrial landscape that supports the context of the area.</p>	 <p>View of northwest corner of property with main building in foreground.</p>  <p>View of north elevation of secondary building from Unwin Avenue right of way.</p> 








Resource	Address/ Location	Type	Recognition	Historical Theme	Description	Photos
CHL 14	Throughout Port Lands area	Infrastructure (Railscape)	Previously identified (ASI 2012)	Land Reclamation and Early 20 th Century Industry	<p>Design: This railscape consists of a single track which encircles much of the Port Lands. The rail line extends from the Ports Toronto site at the western end of Unwin Avenue, travels along the south side of Unwin Avenue, crosses the R.L. Hearn Thermal Electric plant property, extends northward along the west side of Lesley Street to Lake Shore Boulevard East, and connects with the rail yard west of Booth Avenue (see CHL 8).</p> <p>Historical: Railways were introduced into the Port Lands area at the outset of landmaking activities when a spur line was first established for construction purposes related to the Keating Channel; this spur line ran from the north side of the channel along the future alignment of Munition Street. The first permanent railway lines brought into the district began in 1917 when the Toronto Railway Company built a spur line from Queen Street, east of the Don River Bridge, south to Commissioners Street and westerly to Cherry Street. East-west spurs were also established along public right-of-ways as well as within individual properties to serve the various tenancies.</p> <p>Context: Railways were an integral component of original industrial uses in the district and today function as a character-defining element of the landscape. Various early-twentieth century spur lines continue to exist in the district. However, it should be noted that field survey activities were unable to identify all of these former transportation networks.</p>	 <p>View east along railway toward the R.L. Hearn Thermal-Electric plant.</p>  <p>View east along railway alignment. Note the R.L. Hearn Thermal-Electric plant in the background.</p>

8.0 PREFERRED EA STREET NETWORK AND CULTURAL HERITAGE RESOURCE LOCATION MAPPING




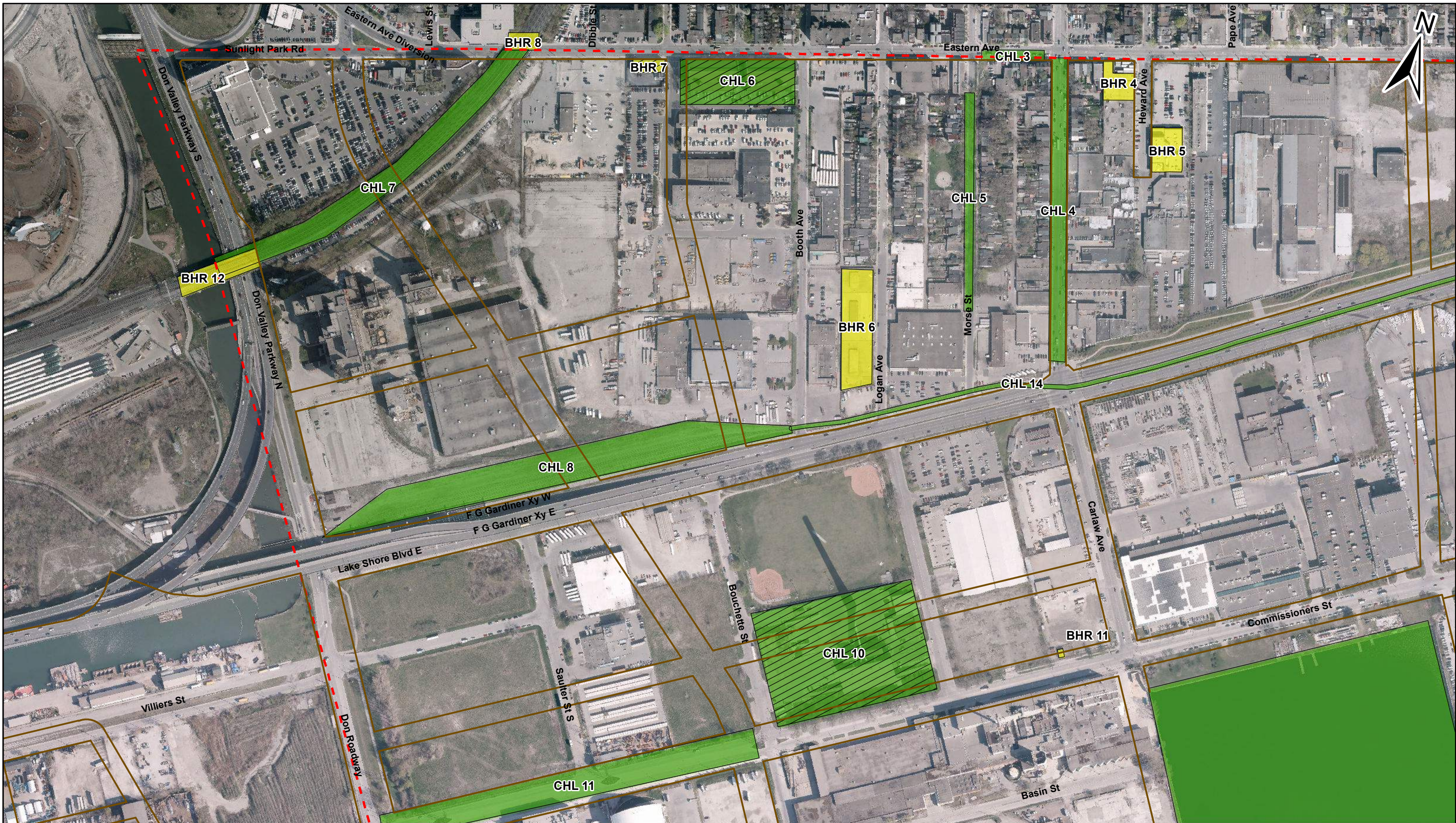



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 Study Area	 Identified during field review	 Proposed Right of Way (ROW)
 BHR	 Listed by Municipality	
 CHL	 Proposed Curb	

BASE:
 Ortho
 2012 City of Toronto
 Datum and Projection
 MTM 3D NAD 27

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Metres
 ASI PROJECT NO.: 13EA-135
 DATE: July 16, 2015
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- CHL
- Identified during field review
- Listed by Municipality
- Proposed EA Network ROW

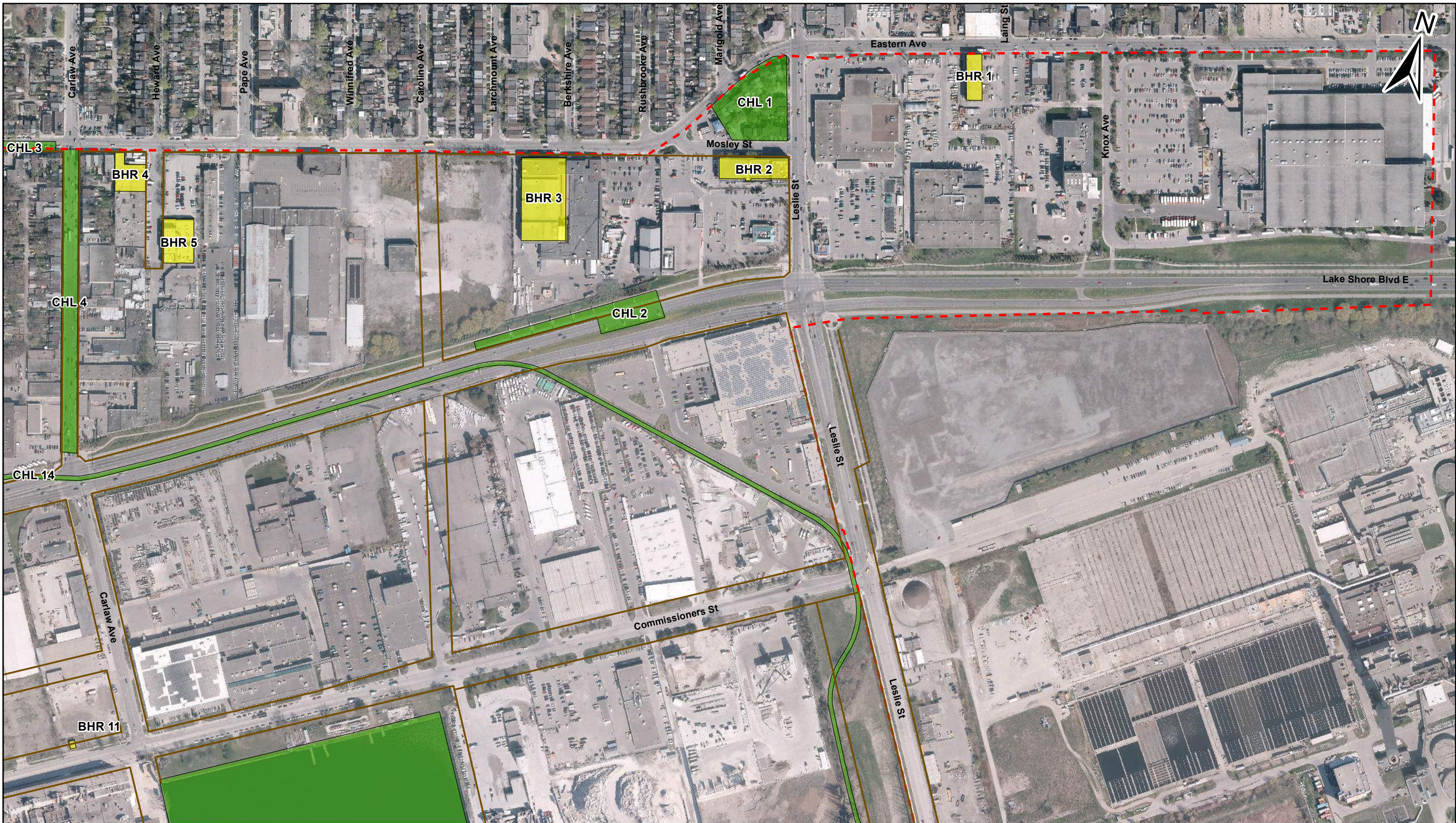
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Metres

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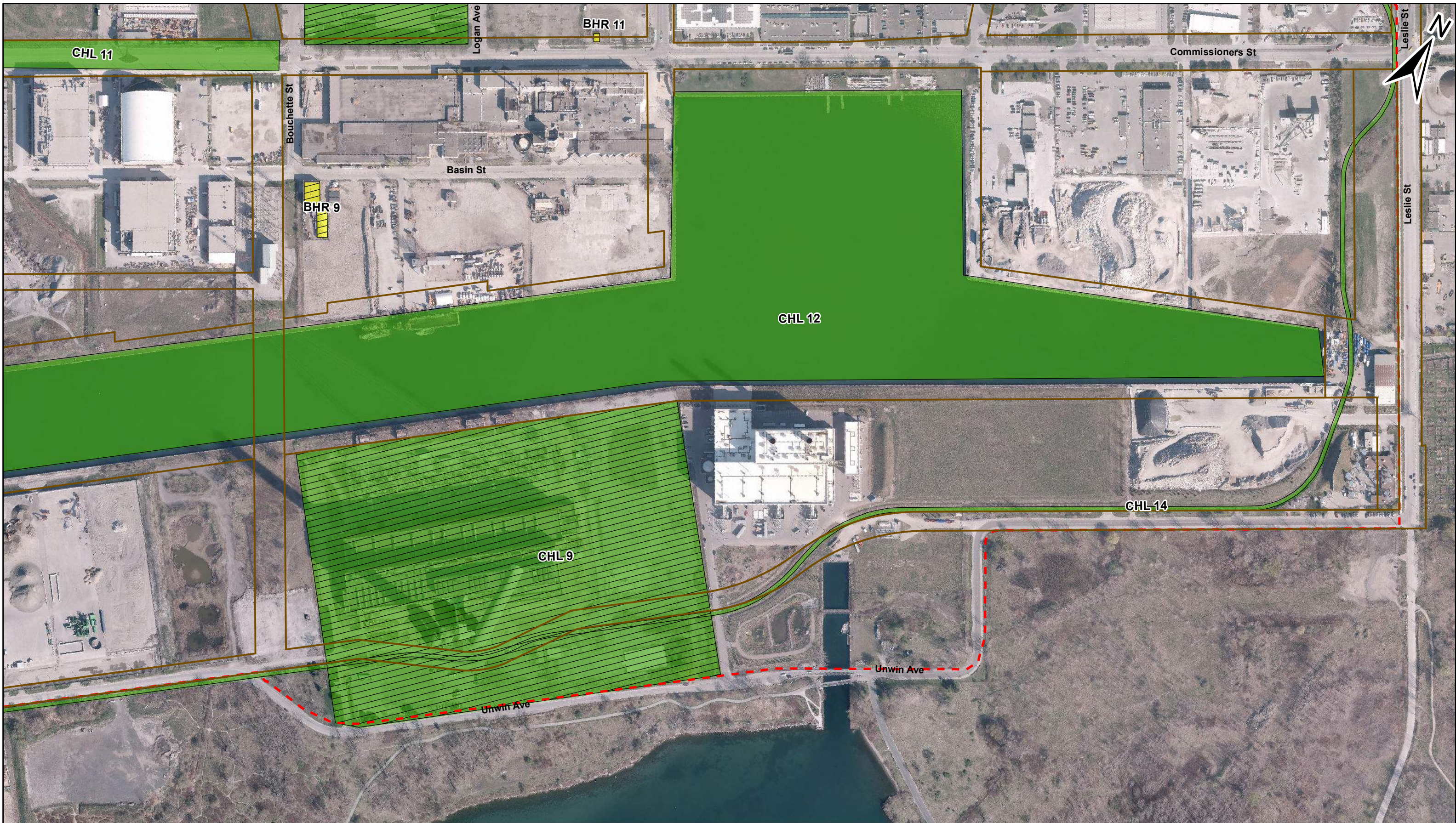
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

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-  CHL
-  Identified during field review
-  Listed by Municipality
-  Proposed EA Network ROW

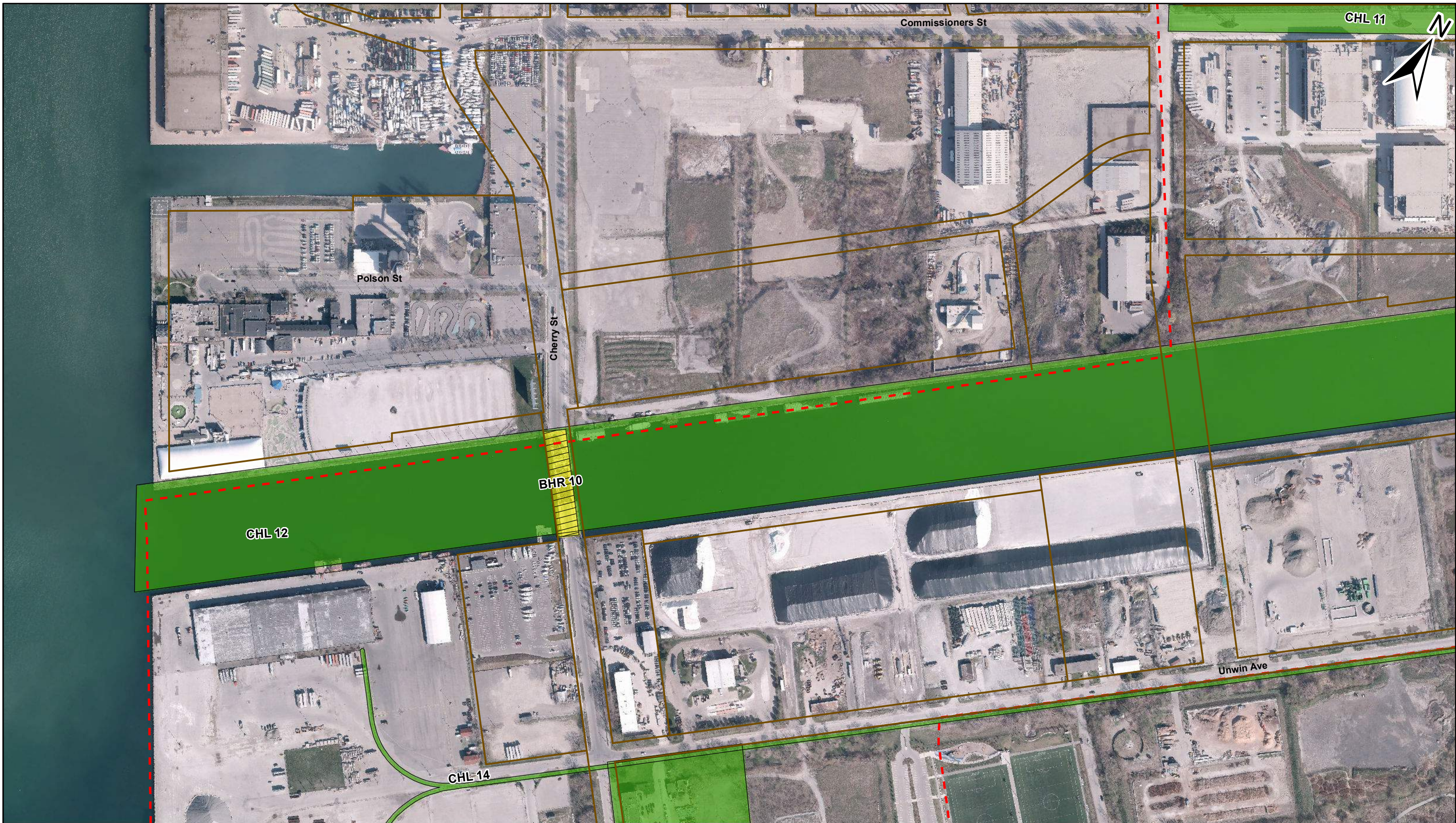
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 DATE: July 16, 2015

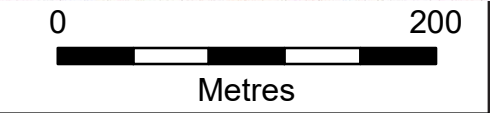
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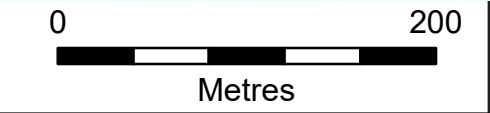
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BASE:
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APPENDIX D:
TRANSPORTATION
ANALYSIS AND
ASSESSMENT



DILLON
CONSULTING

Port Lands and South of Eastern Transportation and Servicing Master Plan

Transportation Analysis and
Assessment

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Introduction

The transportation analysis presented in this memo is intended to assist in determining the future traffic and transit needs within the Study Area and surrounding area in support of the Port Lands and South of Eastern Transportation and Servicing Master Plan (TSMP). While future transportation demand is an important consideration in developing the overall street and transit network, there are many other key considerations that are informing transportation decisions in the Study Area, and for addressing problems and opportunities identified for the project.

A foundational aspect for the overall transportation analysis for the TSMP included identifying complete street principles for the Study Area, and using these, as well as an integrated urban design lens, to determine the future function and character of each street within the network. Each street alternative developed was required to include multi-modal functionality in order to address the complete street principles, including continued accommodation of goods movement, as appropriate.

In addition to this foundational aspect, the decision-making process for determining the preferred transportation network included comprehensively assessing transportation alternatives against six revitalization objectives, and a series of qualitative and quantitative criteria and measures, established for the project to ensure that key objectives are advanced as part of creating an effective, sustainable transportation strategy that contributes to placemaking in the Study Area. The preferred solutions identified have an increased emphasis placed on ensuring the highest quality pedestrian and cycling environments to encourage and enable active transportation in and through the Study Area.

The main Master Plan document provides a more in depth review of these key considerations in establishing the preferred street and transit network.

This memo summarizes the quantitative transportation analysis using screenline analysis and micro simulation modelling to determine the traffic and transit conditions of two potential future scenarios and in support of the TSMP. The approach undertaken for the analysis was comprehensive and extensive, consisting of:

- Utilizing a bottom-up approach for establishing mode splits and standard approaches for trip generation;
- Establishing a set of performance standards to evaluate modelled networks against and that reflect multi-modal activity;
- Establishing an approach for capturing and reflecting existing and potential future goods movement during the AM and PM peak periods;
- Completion of both strategic and operational assessments of existing conditions and a comparative analysis of two future scenarios – a base case future condition and a preliminary preferred network;
- Optimization of the preferred network; and
- Completion of a number of sensitivity tests to test possible unknowns.

The analysis demonstrates that the preferred street network is capable of providing enhanced connectivity and mobility to and through the Study Area within the context of being a highly urbanized area of the city in the future.

Given the longer-term time horizons associated with the project, with an estimated full build-out for 2065, the analysis undertaken provides a high-level picture of potential future transportation demands utilizing current best practices and a conservative approach for assessing active transportation (10% mode share). Transportation modes and innovations, such as autonomous vehicles, may change and become the norm as redevelopment unfolds in the coming decades resulting in different transportation demands within the network. Further, the emphasis on, and accommodation of, active transportation in the design of streets will make walking and cycling more attractive options for moving in and through the Study Area. The preferred Land Use Direction, which strategically locates future mixed-use communities in close proximity to areas envisioned for major employment intensification may also assist in reducing reliance on driving.

Another key consideration will be decisions made with respect to higher order transit and other major infrastructure initiatives in, or within the vicinity of, the Study Area. Key studies underway concurrently with the TSMP, such as the Relief Line Assessment, the Gardiner Expressway EA and Smart Track/Regional Expressway Rail, also have the potential to dramatically change transportation mode choice in the Study Area. For instance, new higher order transit stations located within the immediate vicinity of the Unilever precinct have the potential for supporting additional employment intensification than assessed as part of the TSMP. Sensitivity tests were undertaken to anticipate the potential afforded by some of these initiatives as part of the analysis. Continued assessment in Phase 3 of the Municipal Class EA process, during precinct planning, or as part of the submission of development applications should be undertaken that would reflect any approvals for major infrastructure studies in the area and refined development yields and land uses. Transportation Demand Management Plans for proposed major employment intensification areas should also be undertaken to identify additional measures to further reduce reliance on the personal automobile.

2.0

Approach

The overall transportation analysis followed a logical progression of assessing existing transportation conditions and potential land use futures to understand potential vehicular capacity and transportation infrastructure needs. A comparative transportation modelling analysis, at both strategic and operational levels, was also undertaken to test the preferred transportation network identified through the evaluation of alternatives, further solidifying potential future transportation infrastructure needs and to assess potential limitations of the preferred and surrounding network and how these might be operationally improved.

The general approach for undertaking the assessment is identified in the following sections:

2.1

Existing Conditions

Traffic data was reviewed for the study area to build a profile of the 2013 traffic conditions. This condition is considered the starting point for understanding the baseline characteristics of the network and how it used today, and how the network is performing.

2.2

Model Development

2.2.1

Strategic Model

Strategic or macroscopic transportation modelling seeks to address the larger decisions taken by a town, city, county, region, or province's population in where they live, work, learn, shop, and play. These models simulate human behaviour relative to the "big questions" as to where they settle, how they choose to get around, and where they go. Due to their scale and the questions they seek to answer, strategic models are necessarily coarse in their treatment of the capacity of transportation facilities and the operation of facilities, intersections, and other traffic controls. They justly apply "planning level" capacity that seeks to confirm that the network itself has sufficient connections and capacity to carry the overall travel demand in the area. These models are the planning tools used in examining the larger issues surrounding mobility in an urban area.

The City of Toronto maintains a city wide transportation model using the EMME software. The model has been built to reflect the transportation demands and network conditions for the existing, mid-term 2021, and long-term 2031 horizon years based on population and employment forecasts. The model is built to assess the system wide performance of network and corridors. The focus of the strategic model is auto and transit demand and infrastructure. It does not address trucks or active modes of travel (pedestrian and cycling). As it is based on population and employment activity, it is not especially accurate in accounting for special retail, commercial or recreational centers. The 2031 network and travel forecasts from the model were used to develop the background travel activity in the study area exclusive of the study area development aspirations. Enhancements were made to the model to reflect a more detailed road network and zone structure within the study. Study area development and associated trip generation/trip distribution were estimated outside of the model and layered in the model to analyze total traffic conditions for the study horizons of 2031 and 2065. Model volumes for the major east-west and north-south corridors in the Study area were compared to existing volume to confirm the calibration (level of confidence) for the model results

2.2.2

Microsimulation Model

Microscopic transportation simulation models, or more simply microsimulation models, represent the far downstream end of the strategic models. Whereas the strategic model answers the big questions about

settlement and movement patterns in a planning area (e.g., “Where should I live?”, “Where should I work?”, “Is transit an appropriate option for me to get to work?”), microsimulation models look at the small decisions at the end of that chain. In a microsimulation model, all of the residents have already settled their decisions on where to live, work, and play and how they would like to travel between those points. A microsimulation model then looks into the behaviour of individuals as they make their way through the transportation network via their chosen travel mode. And whereas a strategic model applies “soft” planning level capacities that show approximate limits on transportation facilities (which can be exceeded), microsimulation models simulate the “hard” capacity of real-world transportation infrastructure that results in congestion when that capacity is exceeded, just as in reality. Where a strategic model checks that high level demands are met, microsimulation models ensure that the details are addressed.

The City of Toronto provided the base microsimulation model to be applied on this project. The model was originally created for use on the Gardiner Expressway East EA in the Paramics software suite. Paramics is a traffic microsimulation software package that allows for real time vehicle movement through a network, to predict future individual user travel behaviour. It is able to simulate travel flows and congestion for various changes in network or demand characteristics.

This provided significant efficiencies in creating a microsimulation model for use on this effort as the Gardiner model fully contained the relevant study area for this effort. The Paramics model contains all freeway, arterial, and collector streets within the borders of Spadina Avenue, Dundas Street, Woodbine Avenue, and Lake Ontario. This model served as the starting point for this project.

The enhanced study area network and travel demands were extracted from the EMME model in order to prepare assignments at the microsimulation level. The microsimulation model allows for the extraction of detailed intersection volume flows and performance statistics.

For the 2013 condition, model flows were compared to existing intersection turning movements to confirm the level of calibration. Calibration of travel times and vehicle queue lengths at intersection were not undertaken because of budgetary and schedule constraints.

Because of the nature of the software, only auto volumes are assigned within Paramics. Pedestrian and cycling mode while accounted for in the travel demand estimates are not specifically assigned.

2.2.3

Model Application

The following is a summary of the applications of the models in the assessment process:

- Strategic Modelling
 - EMME Model
 - City of Toronto provided outputs from their EMME strategic model to Dillon. This included the automobile travel matrices and related zone map for the 2031 horizon.
 - To allow for calculation of 2065 future year demands within the study area, the automobile activity in each of the model zones was adjusted to exclude activity within the study area. For areas outside of the focused study area, the 2031 forecasts provided by City of Toronto were considered the background condition for 2065.
 - Manual trip generation calculations were applied for 2065 development levels to determine the person-level activity in the study area.

- 2031 background activity added to 2065 Study area trip generation (assumes that the only growth between 2031 and 2065 will be related to the Port Lands and South of Eastern study area)
- VISUM Model
 - Dillon created a secondary model in the VISUM software package to allow for further refinement of the EMME model zone and roadway structure for use in microsimulation.
 - The zone and roadway structure of the EMME model (and calculated trip levels) was significantly refined to allow for existing and future microsimulation assignment
 - The origin / destination patterns from the EMME model and traffic counts were applied in creation of existing year travel matrices for the 2013 AM and PM peak hours.
 - The calculated 2065 activity levels were distributed between the VISUM model zones to calculate growth at an individual zone level and allow for differential growth in the study area (as opposed to flat growth rates)
 - The resultant origin/destination tables from this process for the 2013 AM and PM and 2065 AMD and PM peak hours were applied in the Paramics microsimulation model
- Operational Modelling - Paramics
 - Detailed network and traffic controls were created for the existing and future conditions (no transit signal priority or actuated controllers)
 - Origin / Destination tables from VISUM model imported for use in the microsimulation model
 - The resulting existing year and future year models were subsequently modified and optimised to allow for detailed testing of the various networks.
 - Assignment Parameters
 - 5 time steps / second
 - 5 minute dynamic feedback period
 - 5 random seed runs, averaged to produce representative results (seeds used: 5, 2, 15, 1, 9)
 - Default vehicle behaviour distribution for awareness and aggressiveness (bell curve)
 - Transit signal priority not used.

2.3 Strategic Assessment

The strategic assessment focuses on identifying broader corridor carrying capacity needs and deficiencies for each network scenario to be tested as part of the undertaking (Existing conditions, interim and long term horizons with changes to land use, network inclusions, and mode of travel.). This level of analysis estimates the person and auto demands along major corridors and across major screenlines in the study area to identify any network capacity shortfalls or issues, in consideration of broader area traffic conditions.

Strategic performance of the corridors was assessed based on their volume to capacity ratio (v/c ratio) and its translation to typical Level of Service (LOS) definitions. Levels of service are assigned letters as defined below:

- LOS A describes free-flow operations. Free-flow speeds prevail. Vehicles are almost completely unimpeded in their ability to manoeuvre within the traffic stream.

- LOS B represents reasonably free flow, and free-flow speeds are maintained. The ability to manoeuvre within the traffic stream is only slightly restricted, and the general level of physical and psychological comfort provided to drivers is still high.
- LOS C provides for flow with speeds at or near the free-flow speed of the freeway. Freedom to manoeuvre within the traffic stream is noticeably restricted, and lane changes require more care and vigilance on the part of the driver.
- LOS D is the level at which speeds begin to decline slightly with increasing flows and density begins to increase somewhat more quickly. Freedom to manoeuvre within the traffic stream is more noticeably limited, and the driver experiences reduced physical and psychological comfort levels.
- LOS E describes operation at capacity. Operations at this level are volatile because there are virtually no usable gaps in the traffic stream. Vehicles are closely spaced, leaving little room to manoeuvre within the traffic stream.
- LOS F operations are the result of a breakdown or bottleneck at a downstream point. LOS F is also used to describe conditions at the point of the breakdown or bottleneck and the queue discharge flow that occurs at speeds lower than the lowest speed for LOS E, as well as the operations within the queue that forms upstream.

Most urban areas are expected to experience congestion during the peak hours. Attempting to have all roadways operate at LOS C or better during the peak hours is something that has been shown to induce an increase in auto usage, which runs counter to goals surrounding sustainability and increasing the use of transit and active transportation. Most urban areas set LOS D as the target during the peak hours; this provides reasonable mobility via automobile without overbuilding and inducing extra auto demand. The City of Toronto accepts LOSE/F in peak hour urban conditions.

The LOS provided by the base transportation network was assessed by comparing the individual roadway and aggregate screenline volumes to the available capacity of the future base network. As described by the US Federal Highway Administration (FHWA): *"A volume to capacity ratio (v/c ratio) less than 0.85 generally indicates that adequate capacity is available and vehicles are not expected to experience significant queues and delays. As the v/c ratio approaches 1.0, traffic flow may become unstable, and delay and queuing conditions may occur."* Comparison of this description with those for LOS D and E above indicates that a v/c ratio of 0.85 is a reasonable analog for the breakpoint between LOS D and E; therefore, locations with a v/c ratio of 0.85 or greater indicate potential mobility issues and were investigated for potential solutions.

2.4 Operational Assessment and Performance Measures

An operational assessment explores flows of volume through intersections and along links with a detailed transportation network. It assesses the performance of signalized and unsignalized intersections, and considers the effect of congestion and delay on individual route choices through the network. The operational analysis was used in the assessment of the base future, preferred vehicle and transit networks, and each of the sensitivity tests. There are a number of statistics that can be exported from the microsimulation model. These were applied in various ways throughout the process, but the major categories are described as follows

- Global Statistics: Typical to any large area modelling study is the calculation of the overall Vehicle-Hours of Travel (VHT) and Vehicle-Distance Travelled (VDT). These quantify the overall travel time and distance for all vehicles in the network. When considered individually, these are relatively abstract values and do not necessarily indicate good or bad performance. But, when considered

together, they give an indication of the general improvement or worsening of system performance. Dividing the VDT by the VHT provides the overall average travel speed for the model

- Corridor Travel Time: Travel time along key corridors can be collected through addition of travel times along key corridors. The software produces the average delay experienced by vehicles through the analysis period. This time can be summed up as required to assess the travel time along key corridors.
- Route Travel Time: Similar to the Corridor Travel Time, Route Travel Times can be calculated by tracing important paths through the area and summing their average travel time.
- Origin / Destination Travel Time: This is unique to microsimulation models that apply an origin / destination table in their assignment and allows the analyst to collect travel times between origin and destination points regardless of route. This is an important consideration in dense urban areas with multiple paths and microsimulation drivers who do not necessarily all take the same path between two points.
- Average Vehicle Delay: The software is able to track the delay for individual vehicles as they move through the network between their origin and destination. The observed travel time is compared to the ideal and a delay is calculated. This can be produced by the software at the corridor, link, or turning movement level. Vehicle Delay is one of the classic transportation measures and provides an excellent guide to transportation network performance.
- Level of Service: Level of Service (LOS) is a classic transportation measure that equates some performance statistic to a letter grade of performance from A to F. In the case of microsimulation, this determination is based on average vehicle delay. The Highway Capacity Manual 2010 (the industry standard for concepts, guidelines, and computational procedures for computing the capacity and quality of service of transportation facilities) dictates the relationship between average vehicle delay and LOS for signalized and unsignalized intersections.

An additional note about intersection level statistics such as average vehicle delay and LOS – these are calculated as a weighted average based on the volume for each movement, as directed by HCM 2010. This prevents the overall statistics for the intersection from being biased by poorly performing movements that otherwise serve very few motorists. Result tables will, therefore, show some movements with little volume performing at LOS E or F, while the overall intersection is shown to have a LOS of C or D, for example.

2.5 Identifying Capacity Deficiencies

The identification of capacity deficiencies in the study area was assessed by comparing the capacity of the roads with the volume of traffic anticipated to use those roads to determine whether there will be adequate roadway capacity in the future. Because of the level of confidence in developing forecasts for long term horizons, this comparison is done a corridor or aggregate level using screenlines.

The volume to capacity was used to identify the prevailing level of service for the corridor. Level of service is defined by the Highway Capacity Manual as “a qualitative measure describing operational conditions within traffic stream, or their perception by motorists and/or passengers...” with these conditions generally described by “... such measures as speed and travel time, freedom to manoeuvre, traffic interruptions, comfort and convenience, and safety”. Lane deficiencies, where the volume exceed the planning level capacity, and network performance were assessed for the existing network, the future base network for 2065, and the future preferred network for 2065.

Due to the real time nature of the microsimulation model, congestion at gateway intersections to the study area can result in delays that effectively constrain the entry of vehicles to the network during the analysis period. Screenline results have been adjusted to include vehicles that were "denied entry" in simulation. Estimates based on proportionate flow through network have been made which is considered adequate for the strategic screenline analysis purposes.

2.6 Comparative Analysis

With the significant growth that is planned for the PL&SE study area, the existing network will require significant upgrades and changes to support development. A Do-Nothing alternative is not an option as the network connections required to facilitate development and transportation access are not provided.

To achieve this required connectivity a future base condition network was defined, taking street, transit and active mode elements of previously approved area plans, the Central Waterfront Secondary Plan (CWSP) and the Lowed Don Lands Environmental Assessment and adding them to the existing network. The alternative was used as the baseline future condition for determining the 2065 network performance and further defining the need for additional improvements

Deficiencies identified through the strategic screenline analysis (Section 2.5) of the future base condition network informed the development of alternative solutions for each sub area. Each alternative solution provided the necessary vehicular and transit capacity to support anticipated development. The sum of the individual assessment preferred solutions needs was identified combined with the future based network (excluding elements that were reconsidered in each sub-area) to define the Preferred Network. Part 3 of the Master Plan documents the identification and evaluation of transportation alternatives.

Comparative analysis of the two networks was accomplished by comparing the Future Base and Future Preferred networks with no mitigation or optimisation beyond the initial geometry for each condition.

The comparative analysis of the performance of these two networks is provided in Section 7 to show how the preferred network increases the ability of the network to support the long term development, while minimizing the potential for delays and congestion that lead to the failure of the transportation system.

2.7 Optimization of Preferred Street Network

A "gap" analysis was undertaken to confirm the adequacy of the recommended network from an intersection implementation perspective. The objective of the gap analysis was to evaluate the system wide network using the preferred infrastructure improvements and identify any remaining operational deficiencies (intersection delays or turning movement issues). While the carrying capacity of the preferred network has been identified as addressing area needs, the actual flows through that network may result in localized delay and capacity issues, most likely at area intersections, as travel patterns change. The "gap" analysis as used to identify any remaining deficiencies or poor operating conditions that could only be addressed by additional capacity enhancements (i.e. provision and design of auxiliary lanes, intersection control provisions).

With the strategic assessment confirming the adequacy of the preferred network from a capacity perspective, an operational analysis was conducted using the microsimulation software to identify specific local areas that may experience congestion or delays. Intersection levels of service were reviewed for overall LOS and for specific critical movements. Where additional problems identified, tests were made of alternative modifications to the geometry or operating condition to assess the effect of the change on the performance and reduce the delay to vehicles.

Section 8 describes the process taken to mitigate remaining issues and reduce delays through geometric modification and signal optimisation, which resulted in the final Future Preferred Optimised network.

2.8 Sensitivity Tests

The preferred network has been generated and assessed for full build out based on the best information of the day. There are many social, physical, and economic variables that may not hold true in the fullness of such a long planning horizon. Tests on various elements of the analysis have been undertaken to understand their significance to the finding of the assessment and, if possible, quantify their implications to the findings of the transportation assessment. These included:

- Effects of adding/removing/modifying base capacity elements: Gardiner Expressway configuration/alignment; additional collector road capacity east of Leslie Street; alternative role for Carlaw Avenue; north-south collector roads between Carlaw Avenue and Leslie Street.
- Effect of increased transit service and infrastructure.
- Alternative long term land use.

2.9 Phasing and Implementation

The Preferred Network identifies the 2065 requirements of the transportation network. The long term network will need to be phased in, subject to land use development and travel growth in specific areas over the course of the 50 year timeline. To identify the phasing and implementation priorities for transportation system capacity service only, the preferred network performance was determined using the interim land use. The objective of this assessment was to identify the areas where a surplus of capacity would exist. Infrastructure improvements where such capacity surplus exists can be deferred subject to consideration of other parameters such as desire for connections to improve community character, desire for connections to provide block and street pattern to support development, desire to respond to development opportunities, water, waste water and storm-water servicing needs. The remaining improvements are considered the priority improvements for the shorter term for transportation capacity only.

3.0

Existing Conditions

The following sections discuss the extent and characteristics of the existing transportation network in the Port Lands and South of Eastern study area. Transportation infrastructure was assessed to document the baseline conditions included in the study area - the street network, transit network, active transportation and the movement of goods and services. Overall the study area lacks transit, lacks an engrained street network and pedestrian cycling facilities. The limited network of streets makes the area vulnerable to increased auto dependency and congestion in the future.

3.1

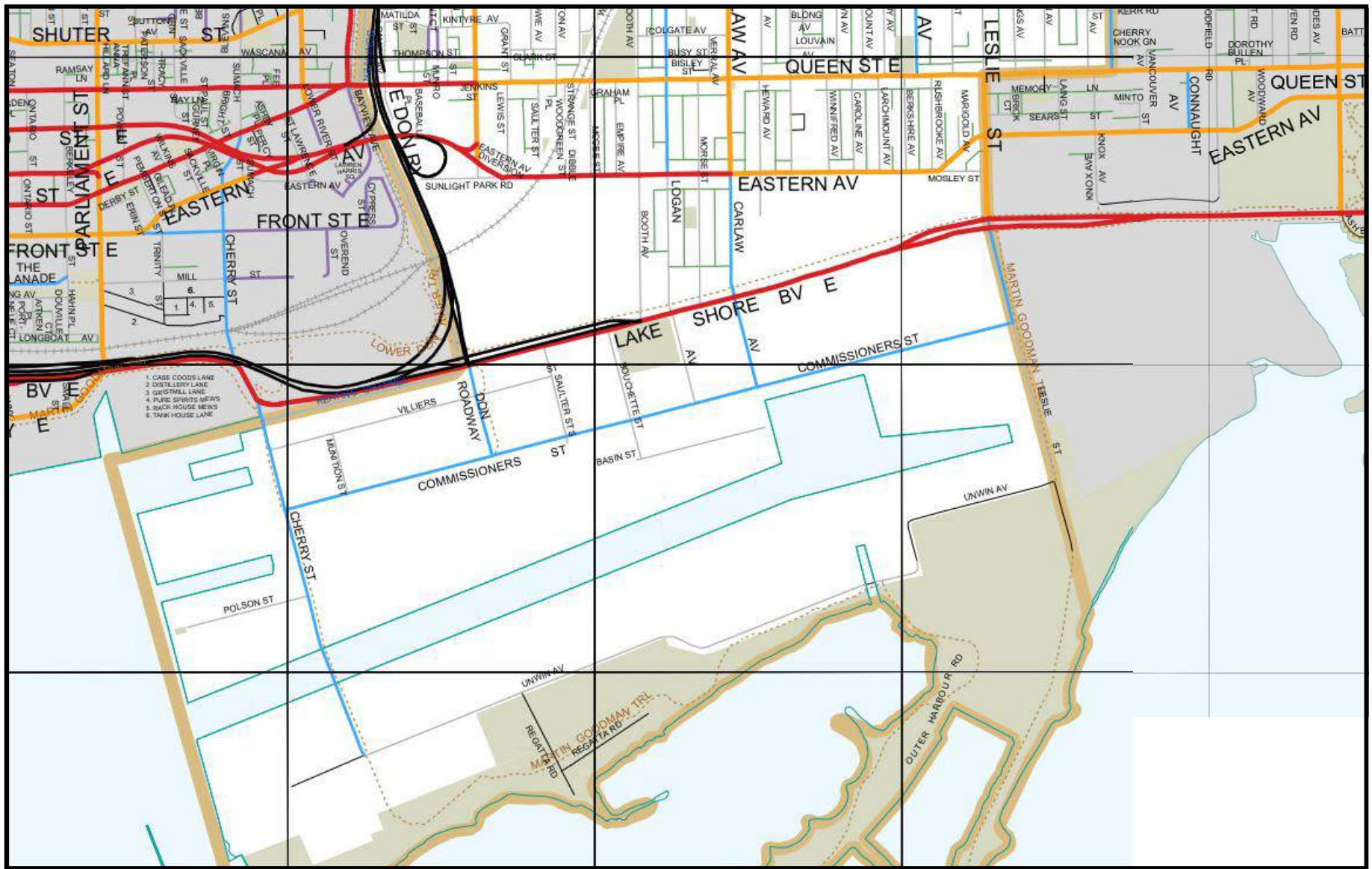
Street Network

Figure 1 shows the existing Street Network in the Study Area. The area is characterized by a mix of urban and rural cross sections (curb and gutter versus soft shoulder and ditch, varying provision and design of pedestrian space), poorly delineated lane designation, poor asphalt conditions, and discontinuous collector and local roadway connections. These conditions result in ambiguous role and function of local, collector and arterial streets.

3.2

Transit

Transit service in the study area is provided by the Toronto Transit Commission (TTC), which provides limited service to the study area via two local bus routes and one express route. There is a GO rail corridor that travels through the study area and continues westward to Union Station via the Lakeshore East line which runs north of Lake Shore Boulevard East and Eastern Avenue; however, the stations are located outside of the study area. GO bus service operates along the DVP/Gardiner. Figure 2 displays the existing transit routes and Table 1 provides a summary of existing transit service schedules. The transit routes and transit service schedule has been recently revisited by the TTC. Table 1 provides the routes and schedule based on 2013 service.



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Road Classification System

- Provincial Expressway
- Toronto Expressway
- Major Arterial
- Minor Arterial
- Collector
- Local
- Ward Boundary
- City Boundary
- Other
- Laneway
- Pending
- Park Roads
- Reserved Bus Lane
- City Boundary

Physical Features

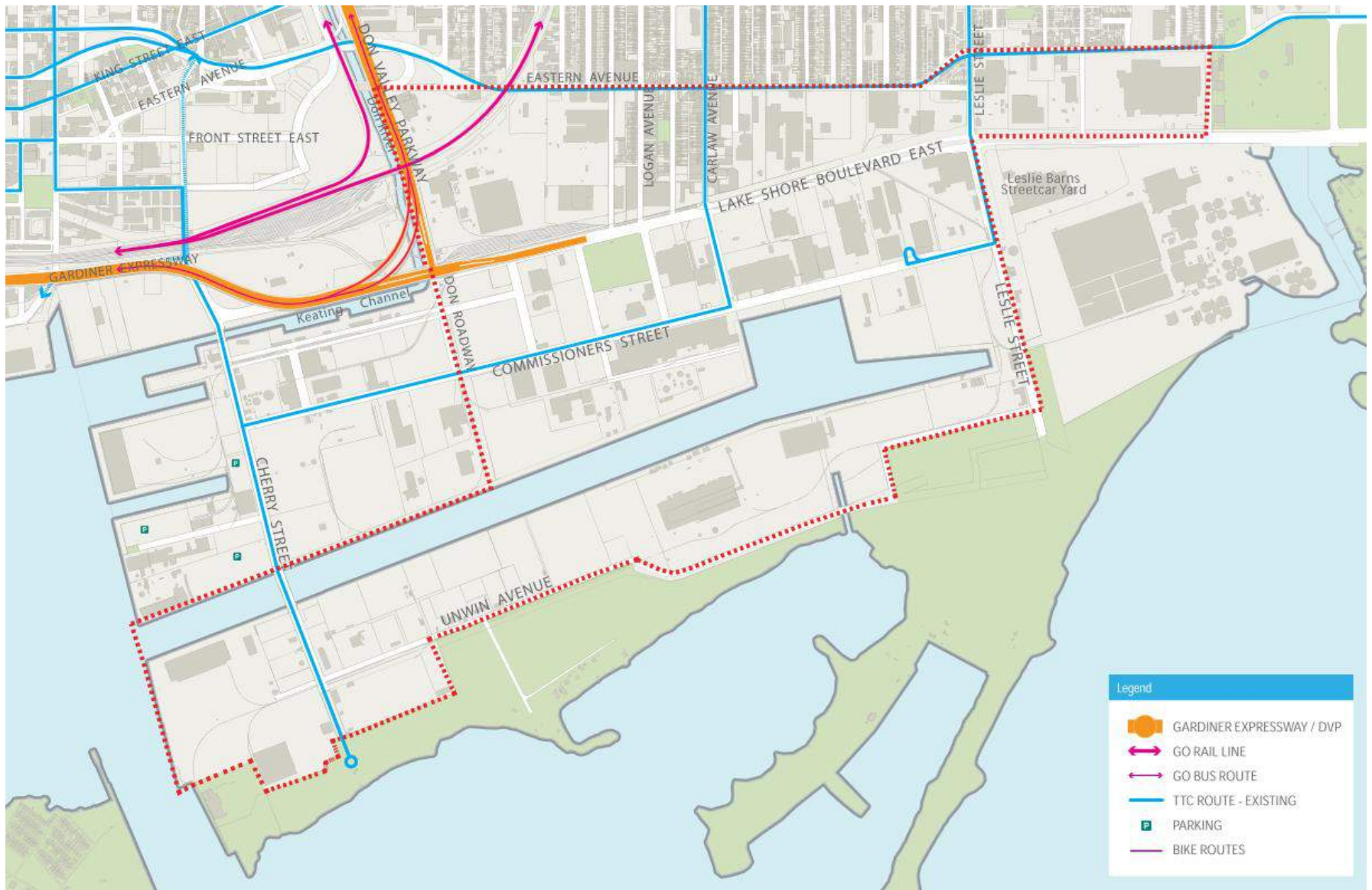
- River
- Railway
- Shoreline
- Trail
- Hydro Line
- Walkways
- Parks & Recreation Area

Port Lands and South of Eastern
Transportation and Servicing Master Plan

Figure 1

Existing Roadway Classifications

Source: City of Toronto Road Classification System, 2013



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Port Lands and South of Eastern
Transportation and Servicing Master Plan

Figure 2
Existing Transit Service
Source: City of Toronto, 2013

TABLE 1: SUMMARY OF EXISTING TRANSIT SERVICE SCHEDULE (2013)

Route	Route Type	Service Type	Peak Frequency	Peak Hour Capacity (passengers /hour)	Hours of Service
72 Pape Stn - Eastern	Local	Bus	13 minutes	460	Weekday: 5:32 AM – 1:17 AM Saturday: 5:28 AM – 1:33 AM Sunday: 7:48 AM – 1:06 AM
72A Pape Stn – Union Stn	Local	Bus	13 minutes	460	Weekday: 4:49 AM – 1:17 AM Saturday: 5:52 AM – 8:40 AM 6:45 AM – 1:06 AM Sunday: 8:12 AM – 8:36 AM 6:53 PM – 12:53 AM
83 Jones	Local	Bus	12 minutes	460	Weekday: 5:35 AM – 1:15 AM Saturday: 6:15 AM – 1:15 AM Sunday: 8:45 AM – 1:00 AM
143 Downtown / Beach Express	Express	Bus	6 Peak period trips	552	Weekday: 7:05AM – 8:25AM 4:41 PM – 6:18 PM
31/31B	Local	Bus	8 minutes	690	Weekdays: 8:00AM – 1:38AM Saturday: 8:10AM – 1:30AM Sunday: 8:50AM – 1:30AM
501 Queen	Local	Streetcar	5 minutes	1,860	Weekday: 4:57 AM – 12:58 AM Saturday: 4:57 AM – 1:00 AM Sunday: 4:57 AM – 12:52 AM
502	Local	Streetcar	12 minutes	775	Weekdays: 5:21AM – 6:25PM
503	Local	Streetcar	12 minutes	775	Weekdays: 6:25AM – 8:03AM 4:37PM – 6:13PM
505	Local	Streetcar	5 minutes	1,860	Weekdays: 5:20AM – 12:49AM Saturday: 5:27AM – 12:51AM Sunday: 5:30AM – 12:49AM

3.3

Pedestrians

The existing street and pathway network in the Port Lands area is generally not conducive to pedestrian travel, and pedestrian activity in most of this area is generally minimal due to the nature of the industrial land uses and the discontinuous nature of the sidewalks. The existing network was planned to serve industrial uses, and, as such, not all streets include sidewalks or they are only located on one side of the street. Recreational pedestrian activity however, can be significant along the Martin Goodman Trail and Cherry Street.

The sidewalk network in the Port Lands is incomplete. The block pattern is coarse, with limited walking route alternatives available. Protected crossings of Lake Shore Boulevard and Eastern Avenue are widely spaced at approximately 900 metres and 625 metres respectively, and therefore those streets act as barriers to north-south pedestrian activity (Logan Avenue and Carlaw Avenue are two exceptions where protected crossings provide north-south pedestrian routes that are continuous across those streets).

Eastern Avenue is not conducive to east-west pedestrian travel due to the limited crossing of the Don River and Don Valley Parkway on the south side of the Eastern Avenue diversion. Pedestrians must cross the free-flow on-ramp to the northbound Don Valley Parkway to access the downtown. East of the Don Valley Parkway free-flow ramp, Eastern Avenue has sidewalks on both sides of the street, however, the width of the sidewalk and the inclusion of utility infrastructure limit the walking environment.

Figure 3 displays the existing pedestrian network in the study area.

3.4 Cycling

The study area contains several designated bicycle and multi-use trails, as well as bicycle lanes and routes.

The primary bicycle facility within the study area is a multi-use trail (Lower Don Recreation Trail) along the north side of Lake Shore Boulevard, providing a direct east-west bicycle connection for Martin Goodman Trail users between Leslie Street and Cherry Street.

The Lake Shore North Trail runs along Lake Shore Boulevard and connects into the Port Lands to the Martin Goodman Trail (MGT) at two points – Cherry Street and Leslie Street – and back north to the city via the Don Valley Bike Trail. The Cherry Street portion of the trail (the Waterfront Trail) is located on the west side of Cherry Street north of Commissioners Street and then switches to the east side of the street south of Commissioners Street. The Cherry Street trail is generally substandard in width. The Leslie Street portion of the trail (the Waterfront Trail) located on the east side of Leslie Street is integrated into the Leslie Street Greening north of Commissioners Street. The trail connects between Cherry Street and Leslie Street through a predominantly off-street connection south of Unwin Avenue. There is a portion of the trail that is on-street between the channel outlet and Leslie Street, with no dedicated facilities, which can be problematic. This is a private street.

The MGT connects to the Lake Shore East Trail north of the Keating Channel. There are bicycle signals installed for east-west bicycle movements across the north leg of the Lake Shore Boulevard/Don Roadway intersection and north-south and east-west movements across the Lake Shore Boulevard and Leslie Street intersection.

There are also existing 1.5 metre wide bicycle lanes that extend east along Eastern Avenue from Logan Street to Leslie Street. West of Logan Street, however, dedicated bikes lanes are not provided.

Logan Avenue is a designated, signed bicycle route (Bike Route 49), north from Lake Shore Boulevard through to Riverdale Avenue. This includes a one-block contra-flow lane between Lake Shore Boulevard and Eastern Avenue designated as designated cycling facility, allows cyclists to travel northbound along a one-way southbound section.

An off-street path along the east side of the Don Roadway provides a connection to the Lake Shore Boulevard and Don River multi-use trails.

Figure 4 displays the existing cycling network in the study area.



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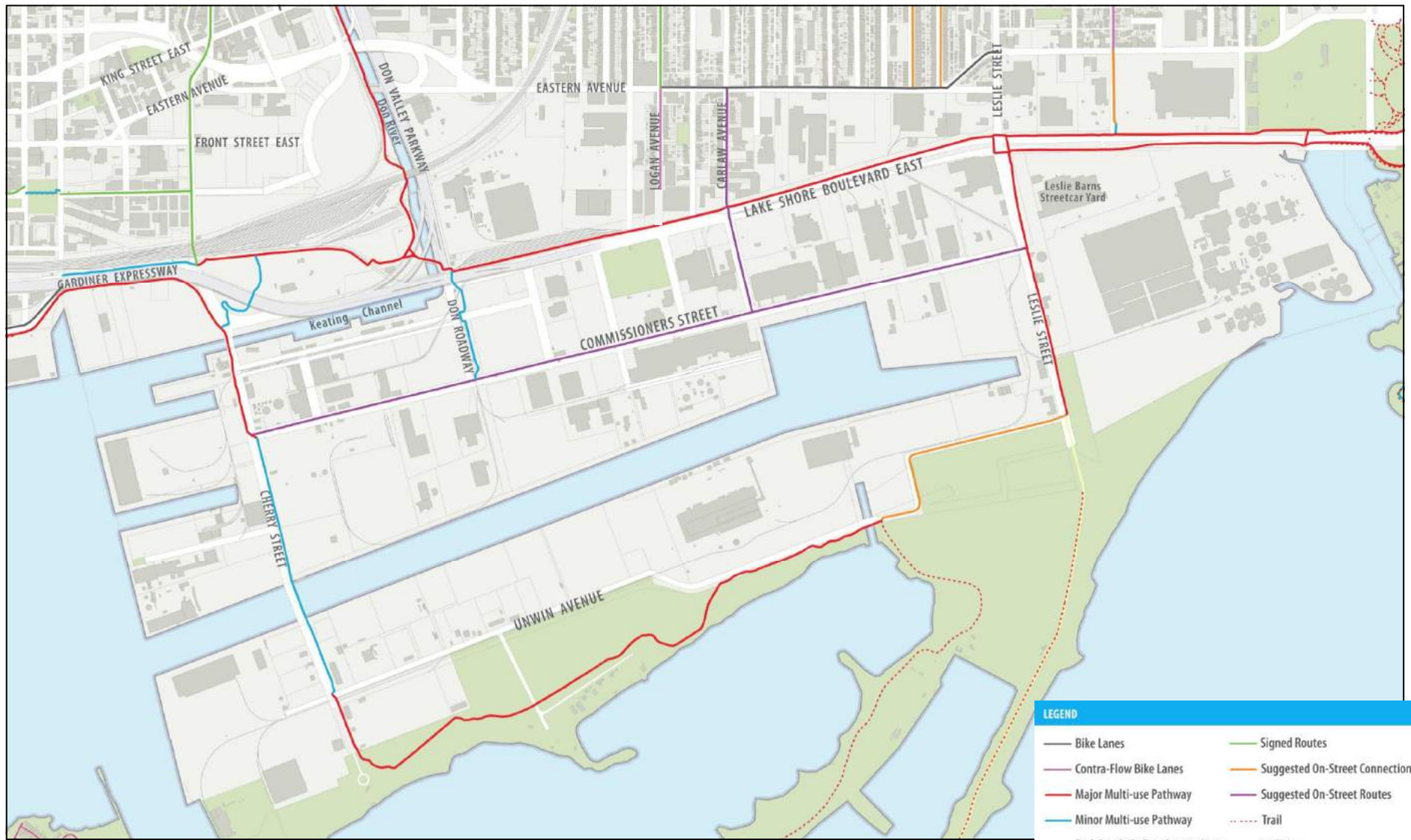


Legend:

- Sidewalk on both sides
- Sidewalk on one side only
- Multi-Use Trail

Port Lands and South of Eastern
Transportation and Servicing Master Plan

Figure 3
Existing Pedestrian Network



LEGEND	
— Bike Lanes	— Signed Routes
— Contra-Flow Bike Lanes	— Suggested On-Street Connections
— Major Multi-use Pathway	— Suggested On-Street Routes
— Minor Multi-use Pathway	— Trail
— Park Roads Cycling Connections	— Walkway

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Port Lands and South of Eastern
Transportation and Servicing Master Plan

Figure 4
Existing Cycling Network
Source: City of Toronto, 2013

3.5 Goods Movement

The Port Lands are a significant hub of industrial activity and goods movement, as they are still an active port. Lafarge Cement Inc., Essroc Italcementi Group, the Canadian Salt Company Limited (Windsor Salt), and three bulk storage organizations south of the Ship Channel are all frequent users of the Port. Redpath has historically stored its sugar over the winter months in ships moored in the Port, although in 2012, they stored their sugar in Marine Terminal 51. Windsor Salt ships some 300 to 400 tonnes of salt between the end of March and early December each year to their Port Lands site on the south side of the ship channel, storing this salt for use by, and delivery to, area municipalities during the winter season. The Toronto Port Authority also utilizes the International Marine Terminal Facility for cruise vessels. Most recent port data available is for 2013, which exhibits lower activity than 2012. In 2012 and 2013 there were 159 and 129 total ship calls respectively. The breakdown for 2012 was 122 "Laker" vessels and 27 "Ocean" ships. In addition, there were 30 cruise ship calls (carrying 690 passengers).

The primary focus for freight entering and leaving the study area is the port area. Goods arrive to the port by ship via the St. Lawrence Seaway and Lake Ontario, and from there are typically shipped out by truck.

According to the Toronto Port Authority, total port tonnage in 2012 and 2013 was 1,861,082 tonnes and 1,556,025 tonnes respectively. For the higher 2012 year, a majority of this tonnage is dry bulk (1,738,151 tonnes), with the remainder being containerized. The top three domestic cargoes were salt, cement and aggregate. The amount of cargo has increased since the most recent recession, but has not fully recovered from 2007 volumes of 2,068,665 tonnes (TPA, 2009), as is exhibited by the 2012 and 2013 activity levels (with 2013 being the lower activity year).

Ship access is provided through the Eastern Channel. From there, ships can access the ship channel by passing through the lift bridge along Cherry Street. The Toronto Port Authority owns the land south of the Ship Channel and west of Cherry Street. There are 8,670 metres of dock walls owned by the Toronto Port Lands Company along the Keating Channel, Cousins and Polson Quays, the Ship Channel, Turning Basin and the Leslie Street Slip.

The primary access for truck traffic to and from the port is:

- To/from the west:
 - Via Leslie Street and Cherry Street to Lake Shore Boulevard and further to the Gardiner Expressway; and
- To/from the north/east:
 - Via Leslie Street and the Don Roadway to the Don Valley Parkway.
 - Note that there access to/from south of the Ship Channel is limited to the Cherry Street bridge and Leslie Street.

Trucks form approximately 5-7% of the vehicular traffic in the overall study area during the peak hours, with the percentage varying on a corridor basis dependent on the proximity to industrial uses and the type of facility. Traffic counts for the area show that trucks can represent anywhere from 1% to 18% of total traffic using the roadway in the peak hour, depending on the road and road section. Peak activity for freight trucks will typically occur outside of the peak hours for the network to avoid unnecessary and potentially costly delays due to commuter traffic.

Salt, cement, stone, aggregate and asphalt is primarily moved from the Port Lands shipping receiving areas via truck. Truck sizes range from double-axle to triple-axle loads (32 to 52 tonne units), and could reflect

up to 30,000 trucks annually loaded. Daily profiles vary because of the salt activity which is confined to specific months, but on average this activity reflects approximately 150 1-way trucks per day.

Based on traffic data collected by the City of Toronto, there is a significant amount of heavy vehicle activity within the study area with some 15,000 vehicles (1-way) known to access the study area annually. This includes the aggregate and salt industry shipments from their respective sites to the area municipalities and construction projects and, to ongoing construction projects that is occurring within the study area (i.e., Leslie Barns Transit Facility).

There is a heavy rail yard and rail corridor located to the north of Port Lands (Don Yards). The rail yard is located north of Lake Shore Boulevard between Cherry Street and the Don Valley Parkway. The rail line is currently being used by GO Transit, CN and VIA Rail. There is also a small rail yard/marshalling area to the north of Lake Shore Boulevard just east of the Don Roadway (Keating Yard). This rail yard presents challenges for providing connections north of Lake Shore Boulevard. This yard is the main rail access into the Port Lands. It is being utilized by Toronto Water, CanRoof and the Toronto Port Authority (TPA). The TPA utilizes the corridor to bring in specialized bulk goods manufactured in Ontario to be loaded onto ships, including their property south of the ship channel at Cherry Street. Use of this rail connection along Unwin Avenue is infrequent.

There are also a number of at-grade rail crossings throughout the study area:

- Lake Shore Boulevard East, east of the Don Roadway;
- Lake Shore Boulevard East at Carlaw Avenue;
- Lake Shore Boulevard East approximately 300 metres west of Leslie Street;
- Commissioners Street and Leslie Street; and
- Near the Hearn site along Unwin Avenue.

3.6 Bridges (Strauss Trunnion Bascule Bridge + Bailey Bridge)

To provide access to the Port Lands west of the Don Roadway, travelers are required to cross the Keating Channel. There is a lift-bridge at Cherry Street allowing motorists and pedestrians to cross the channel. The Keating Channel lift bridge will be removed as part of the DMNP and the 2014 LDL EAMP Addendum and ESR implementation and replaced with a fixed bridge at the new Cherry Street alignment.

To access the area south of the Ship Channel, a second lift bridge on Cherry Street at the western end of the study area is provided, allowing Cherry Street to reach Cherry Beach and Unwin Avenue. This bridge is owned, operated and maintained by the Toronto Port Authority.

The area south of Ship Channel can also be accessed via Leslie Street (no bridge). However, there is a single lane bailey bridge along Unwin Avenue that allows motorists to cross the Hearn's discharge channel. A separate pedestrian/cycling bridge parallel to the Bailey bridge provides access across the discharge channel for these modes.

3.7 Traffic and Travel Data

Traffic data applied in the analysis was provided by City of Toronto and encompasses many different aspects to the performance, demand, and other characteristics that define the transportation infrastructure and its users.

3.7.1 Traffic Controls

Figure 5 provides a graphic of the existing intersection control for the study area. Traffic control in the area is predominantly signalized or unsignalized (stop or yield signage).

3.7.2 Existing Traffic Volumes

Traffic Data was provided by the City of Toronto Traffic Safety Unit. Data included intersection turning movement counts (for 8-hour period) with vehicle classification and 24-hour mid-block vehicle counts (with hourly breakdown). Table 2 and Table 3 list the survey locations and dates for the available turning movement counts and 24-hour mid-block traffic counts.

Detailed traffic data for both the turning movement and 24-hour mid-block counts can be found in Appendix T-1.

Figure 6 provides graphic of the existing balanced traffic condition for the study area.

While data older than 3 years is typically considered out-dated, the location and order of magnitude of volume was reviewed for these locations to confirm their validity. It was determined that in all cases the area was mature such that volumes have been stable for many years or that the volumes were relatively low and not expected to have changed significantly.

TABLE 2: STUDY AREA INTERSECTION TURNING MOVEMENT COUNTS (8-HOUR)

Road	Intersecting Roadways	Date
Commissioners	Leslie	April 22, 2013
	Saulter	May 6, 2008
	Cherry	October 19, 2009
Eastern	Knox	January 5, 2011
	Leslie	April 22, 2013
	Caroline & Larchmount	September 24, 1998
	Pape	September 15, 2005
	Carlaw	May 21, 2013
	Logan	November 25, 2008
	Booth	February 2, 1999
	Broadview	September 12, 2011
	Leslie	May 27, 2013
	Carlaw	October 15, 2012
Lake Shore	Logan	February 2, 1994
	Booth	April 27, 2004
	Don Roadway	May 27, 2013
	Cherry N	December 1, 2009
	Cherry S	November 30, 2009
Queen	Leslie	May 6, 2013
	Caroline	September 7, 2005
	Pape	August 27, 2009
	Carlaw	April 22, 2013
	Logan	February 24, 2010
	Booth	February 4, 1999
	Broadview	December 15, 2010

Source: City of Toronto – Traffic Safety Unit (December 10, 2013)

TABLE 3: STUDY AREA MID-BLOCK TRAFFIC VOLUMES (24-HOUR)

Road	Location	Date	Road	Location	Date
Broadview	S. of Eastern	Oct 8, 09	Eastern (cont'd)	W. of Logan	Feb 4, 10
	S. of Queen	Oct 8, 09		W. of Bayview	May 5, 05
Carlaw	N. of Dundas	Sep 13, 12		E. of Cherry	Feb 4, 10
	S. of Dundas	Sep 13, 12		W. of Cherry	Feb 4, 10
	N. of Queen	Sep 13, 12		E. of Sackville	Feb 4, 10
	S. of Queen	Apr 11, 13		E. of Woodfield	Feb 4, 10
	N. of Eastern	Apr 11, 13		W. of Leslie	Feb 4, 10
	S. of Eastern	Apr 11, 13		E. of Larchmount	Feb 4, 10
	N. of Lake Shore	Apr 11, 13		W. of Larchmount	Apr 11, 13
	S. of Lake Shore	Apr 10, 13		E. of Carlaw	Feb 4, 10
Cherry	N. of Commissioners	Apr 11, 13	Theatre Entrance	Feb 4, 10	
	Bascule Bridge	Jun 7, 09	W. of Coxwell	Jun 19, 08	
	N. of Adelaide	Sep 27, 09	W. of Northern Dancer	Apr 11, 13	
	N. of Front	Jun 16, 12	W. of Leslie	Jun 19, 08	
	N. of Eastern	Jun 16, 12	E. of Leslie	Dec 14, 01	
	S. of Eastern	Jun 16, 12	E. of Logan	May 28, 02	
	N. of Mill	Jun 16, 13	W. of Logan	Jun 19, 08	
	S. of Front	Jun 16, 13	W. of Booth	Jun 19, 08	
	S. of Mill	Jun 16, 13	E. of Bouchette	Jun 19, 08	
	N. of Lake Shore	Jun 16, 13	W. of Bouchette	Dec 4, 03	
	S. of Lake Shore	Jun 16, 13	E. of Don Roadway	Jun 19, 08	
	N. of Villiers	Jun 16, 13	W. of Don Roadway	Jun 19, 08	
	N. of Commissioners	Jun 16, 09	E. of Sherbourne	Apr 28, 05	
	S. of Commissioners	Jun 16, 07	W. of Sherbourne	May 23, 02	
	S. of Villiers	Jun 16, 11	E. of Yonge	Apr 28, 05	
	N. of Polsen	Jun 16, 11	E. of Lower Simcoe	Apr 28, 05	
	N. of Unwin	Jun 16, 11	W. of Lower Simcoe	Apr 28, 05	
	Commissioners	E. of Carlaw	Apr 11, 11	E. of Coxwell	Apr 11, 13
W. of Carlaw		Apr 11, 11	E. of Leslie	Apr 28, 05	
W. of Leslie		Apr 11, 11	W. of Leslie	Apr 28, 05	
W. of Logan		Apr 11, 11	N. of Eastern	Apr 11, 13	
E. of Bouchette		Jun 16, 11	S. of Eastern	Jun 23, 11	
W. of Bouchette		Jun 16, 11	S. of Mosley	Apr 11, 13	
E. of Don Roadway		Jun 16, 11	N. of Lake Shore	Jun 23, 11	
Coxwell	W. of Don Roadway	Jun 16, 11	S. of Lake Shore	Jun 23, 11	
	E. of Cherry	Jun 16, 11	N. of Commissioners	Apr 11, 13	
	N. of Lake Shore	Apr 11, 13	S. of Commissioners	Jun 23, 11	
	S. of Eastern	Apr 11, 13	N. of Unwin	Jun 23, 11	
Don Roadway	S. of Queen	Apr 11, 13	S. of Dundas	Jun 23, 11	
	S. of Queen	Apr 11, 13	S. of Queen	Apr 11, 13	
	N. of Villiers	Dec 14, 01	E. of Mosley	Apr 10, 11	
Eastern	S. of Villiers	Sep 24, 09	S. of Eastern	Nov 20, 13	
	N. of Commissioners	Sep 24, 09	N. of Lake Shore	Nov 20, 13	
	S. of Queen	Apr 11, 13	N. of Commissioners	Apr 29, 10	
	E. of Coxwell	Apr 11, 13	S. of Lake Shore	Apr 29, 10	
	W. of Coxwell	Feb 4, 10	N. of Queen	Apr 29, 10	
	W. of Woodfield	Feb 4, 10	S. of Queen	Nov 20, 13	
	E. of Knox	Feb 4, 10	N. of Eastern	Nov 20, 13	
	W. of Knox	Feb 4, 10	N. of Dundas	Apr 29, 10	
	E. of Leslie	Feb 4, 10	S. of Dundas	Apr 29, 10	
	W. of Carlaw	Apr 11, 13	W. of Leslie	Jun 16, 11	
E. of Logan	Feb 4, 10	E. of Cherry	Jun 16, 11		

Source: City of Toronto – Traffic Safety Unit (December 10, 2013)



NOT TO SCALE



Legend:

Signalized Intersection



All remaining at-grade intersections are stop-controlled where necessary

Port Lands and South of Eastern
Transportation and Servicing Master Plan

Figure 5
Study Area Existing Intersection Controls

		Parliament				
King		(30)	(275)	(44)	31	(376)
		68	276	28	361	(209)
			(0)	2	69	293
			(332)	220	(53)	(326)
			(47)	34		(82)

		Parliament			Sumach / Cherry						
Eastern		(43)	(234)	(37)	106	(100)	(125)	(93)	(28)	45	(54)
		38	220	36	1,178	(506)	314	200	48	1,051	(629)
			(90)	58	69	342	188	(196)	58	30	43
			(1,126)	292	(76)	(259)	(103)	(1,013)	428	(11)	(223)
			(50)	28				(116)	10		(34)

		Parliament			Cherry - N			Cherry - S			Don Roadway								
Lake Shore		(265)	(60)	(135)	143	(91)	(138)	--	(84)	98	(198)	--	--	(192)	(103)	(298)	241	(94)	
		164	122	47	589	(466)	187	--	94	932	(572)	--	--	870	(479)	599	(260)		
			(212)	136	2	138	58	--	--	--	--	--	--	160	--	47	74	97	
			(189)	187	(113)	(269)	(201)	(525)	292	--	--	--	(431)	142	(291)	--	(65)	(472)	178
			--	--	--	--	--	--	--	--	--	--	(178)	244	(24)	11	(27)	(103)	(1)

		Parliament			DVP Ramps													
Gardiner		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
					6,211	(3,445)								(2,448)	--	--	2,673	(997)
					--	--	--	--	--	--	--	--	--	3,538	--	--	--	--
					--	--	--	--	--	--	--	--	--	--	(2,450)	2,679	--	--
					(4,940)	3,729	--	--	--	--	--	--	--	--	(2,490)	1,050	--	--

SBR from DVP

DVP NB

NOT TO SCALE

Legend:
 1,234 AM Peak Hour Traffic Volume
 (1,234) PM Peak Hour Traffic Volume

Port Lands and South of Eastern
 Transportation and Servicing Master Plan
 Figure 6:
 2013 Existing Traffic Counts



		Broadview			Carlaw			Leslie			Coxwell									
Queen			52	(76)		42	(43)		16	(21)		77	(63)							
	(27)	(132)	(64)	645	(381)	(62)	(287)	(48)	574	(361)	(1)	(1)	(4)	412	(210)	(74)	(227)	(47)	410	(327)
	36	222	34	2	(14)	53	446	32	77	(32)	3	3	1	230	(127)	120	320	75	53	(72)
		(17)	6	68	124	26	(59)	22	38	276	24	(15)	8	98	71	70	(111)	74	16	130
	(637)	222	(70)	(175)	(57)	(554)	197	(40)	(541)	(45)	(481)	170	(182)	(123)	(242)	(519)	160	(67)	(376)	(80)
	(66)	63		(56)	51				(127)	112				(35)	32					
		Broadview			Carlaw			Leslie			Coxwell									
Eastern			87	(92)		32	(51)		30	(27)		12	(29)							
	(124)	(19)	(89)	868	(344)	(65)	(314)	(79)	591	(323)	(16)	(207)	(40)	640	(240)	(150)	(179)	(11)	732	(334)
	134	42	95	52	(14)	113	384	42	93	(47)	43	334	36	328	(97)	81	315	9	340	(109)
		(122)	86	34	16	40	(40)	33	131	328	90	(50)	16	29	179	78	(123)	41	32	112
	(1,042)	548	(71)	(59)	(0)	(691)	438	(143)	(467)	(220)	(730)	444	(38)	(513)	(224)	(904)	295	(8)	(371)	(323)
	(36)	14		(57)	59				(8)	11				(18)	19					
		Carlaw			Leslie			Coxwell												
Lake Shore			20	(17)		51	(39)		26	(65)										
	(179)	(178)	(49)	2,903	(1,011)	(189)	(189)	(30)	2,379	(690)	(271)	--	(35)	1,924	(555)					
	282	167	16	45	(25)	431	221	13	150	(97)	656	--	18	--	--					
		(687)	387	112	120	11	(332)	170	85	94	41	(637)	174	--	--	--				
	(2,541)	922	(106)	(180)	(23)	(2,252)	630	(169)	(357)	(361)	(2,006)	510	--	--	--					
	(49)	71		(29)	61				--	--										



Legend:
 1,234 AM Peak Hour Traffic Volume
 (1,234) PM Peak Hour Traffic Volume

		Cherry			Don Roadway					
Villiers			16	(94)			25	(12)		
	--	(133)	(45)	--	--	(30)	(68)	(29)	5	(0)
	--	192	52	16	(13)	7	44	17	5	(0)
		--	--	--	191	20	(27)	35	47	113
	--	--	--	(262)	(14)	(10)	10	(25)	(92)	(25)
	--	--				(10)	15			

		Cherry			Don Roadway			Carlaw			Leslie									
Commissioners			124	(60)			107	(76)			56	(44)		11	(37)					
	(24)	(84)	(64)	32	(22)	(102)	--	(36)	101	(117)	(109)	--	(36)	211	(117)	(127)	(72)	(1)	3	(18)
	20	94	49	60	(91)	18	--	46	--	--	99	--	50	--	--	295	94	18	4	(7)
		(20)	18	3	80	37	(66)	59	--	--	--	(137)	57	--	--	--	(526)	113	35	69
	(27)	20	(5)	(202)	(49)	(74)	52	--	--	--	(232)	93	--	--	--	(3)	7	(49)	(204)	--
	(4)	3				--	--				--	--				(97)	65			

		Cherry						Leslie						
Unwin			69	(99)						--	--			
	(30)	(99)	(78)	1	(1)					(67)	(104)	--	--	--
	29	39	66	2	(3)					68	7	--	--	--
		(23)	8	6	92	41					(213)	97	0	76
	(0)	1	(58)	(18)	(67)					--	--	(2)	(12)	--
	(1)	1								(4)	8			

NOT TO SCALE



Legend:
 1,234 AM Peak Hour Traffic Volume
 (1,234) PM Peak Hour Traffic Volume

Port Lands and South of Eastern
 Transportation and Servicing Master Plan
 Figure 6:
 2013 Existing Traffic Counts

3.8 Assessment of the Existing Network

3.8.1 Strategic Level

The existing transportation network was examined at a strategic level, using screenline analysis, to provide context for the future networks. A screenline is defined as an imaginary line that is crossed by a limited number of roadways and is therefore useful for determining current and future peak hour demands to and from a specific location on an aggregate basis. Screenlines typically follow a natural barrier to travel, such as a river or freeway, that has limited crossing opportunities. The individual facilities that cross this screenline have a specific demand flow and capacity that is used to assess the aggregate service provided by the facilities. The screenlines used in the analysis are shown in Figure 7.

Planning-level capacities are assigned to roadways that represent the general carrying capacity for specific functional classes for the purpose of strategic analysis. These are based on the theoretical maximum capacity of a freeflow section of freeway of 2000 vehicles per hour per lane. Capacity for other functional classes is reduced based on the friction caused by traffic controls, heavy vehicles, and the travel speed on the roadway. Table 4 shows the lane capacities applied in the screenline analysis.

TABLE 4 - PLANNING LEVEL CAPACITY BY FUNCTIONAL CLASS

Functional Class	Base (vphpl)	Adjustments (from base capacity)			Capacity (vphpl)
		Control	Heavy / Bus	Low Speed	
Freeway	2000	-	-	-	2000
Arterial	2000	-30%	-10%	-	1200
Collector	2000	-50%	-10%	-	800
Local	2000	-50%	-	-25%	500

Table 5 provides a summary of the screenline capacity assessment. Performance of the network is generally acceptable with a few locations in the eastbound direction approaching or exceeding capacity. This is generally in line with observations of existing operations in reality where the peak commuting traffic will be headed outbound - away from Downtown – in an easterly direction and issues are typically observed on major routes such as Eastern Avenue and Lake Shore Boulevard.

3.8.2 Operational Assessment

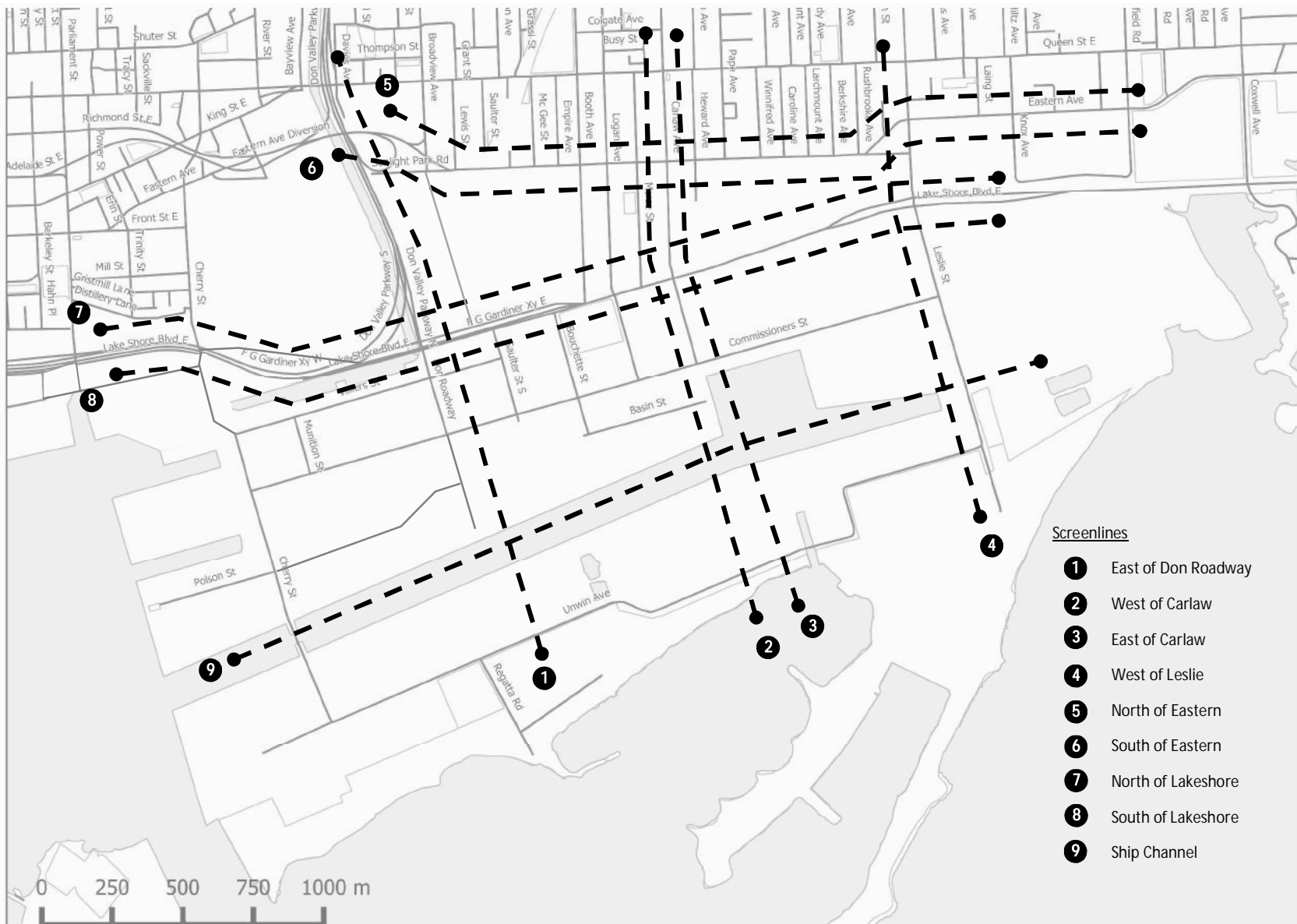
An operational assessment of the existing conditions was undertaken to establish baseline intersection operating conditions. The existing network performance is significantly different from the future base for two reasons:

- Within the Port Lands (south of Lake Shore), existing land use activity is limited and is generally focused on industrial, port, and warehousing uses. Future land uses and densities will be dramatically different in this area.
- Several major connections planned for the future are not yet constructed in the area – most notably the extension of Broadview Avenue from Eastern Avenue to Lake Shore Boulevard and further south.

Figure 8 and Figure 9 provide a summary of the existing a.m. and p.m. peak hour intersection levels of service.

Examination of the operational statistics presented in Appendix T-3 shows that the existing transportation network functions generally well for cars and trucks in the existing year. Major commuting routes such as Lake Shore Boulevard and Eastern Avenue do show some understandable congestion, but interior roads generally function well.

The Port Lands area, being south of Lake Shore Boulevard and bordered on the remaining three sides by Lake Ontario, serves no through-commuting purpose. Travellers not specifically destined to the area have little or no need to enter the Port Lands. As above, the area is focused on largely industrial uses, which have little attraction for general motorists. As such the areas roadways currently function very well for car and truck traffic.



- Screenlines**
- 1 East of Don Roadway
 - 2 West of Carlaw
 - 3 East of Carlaw
 - 4 West of Leslie
 - 5 North of Eastern
 - 6 South of Eastern
 - 7 North of Lakeshore
 - 8 South of Lakeshore
 - 9 Ship Channel

NOT TO SCALE

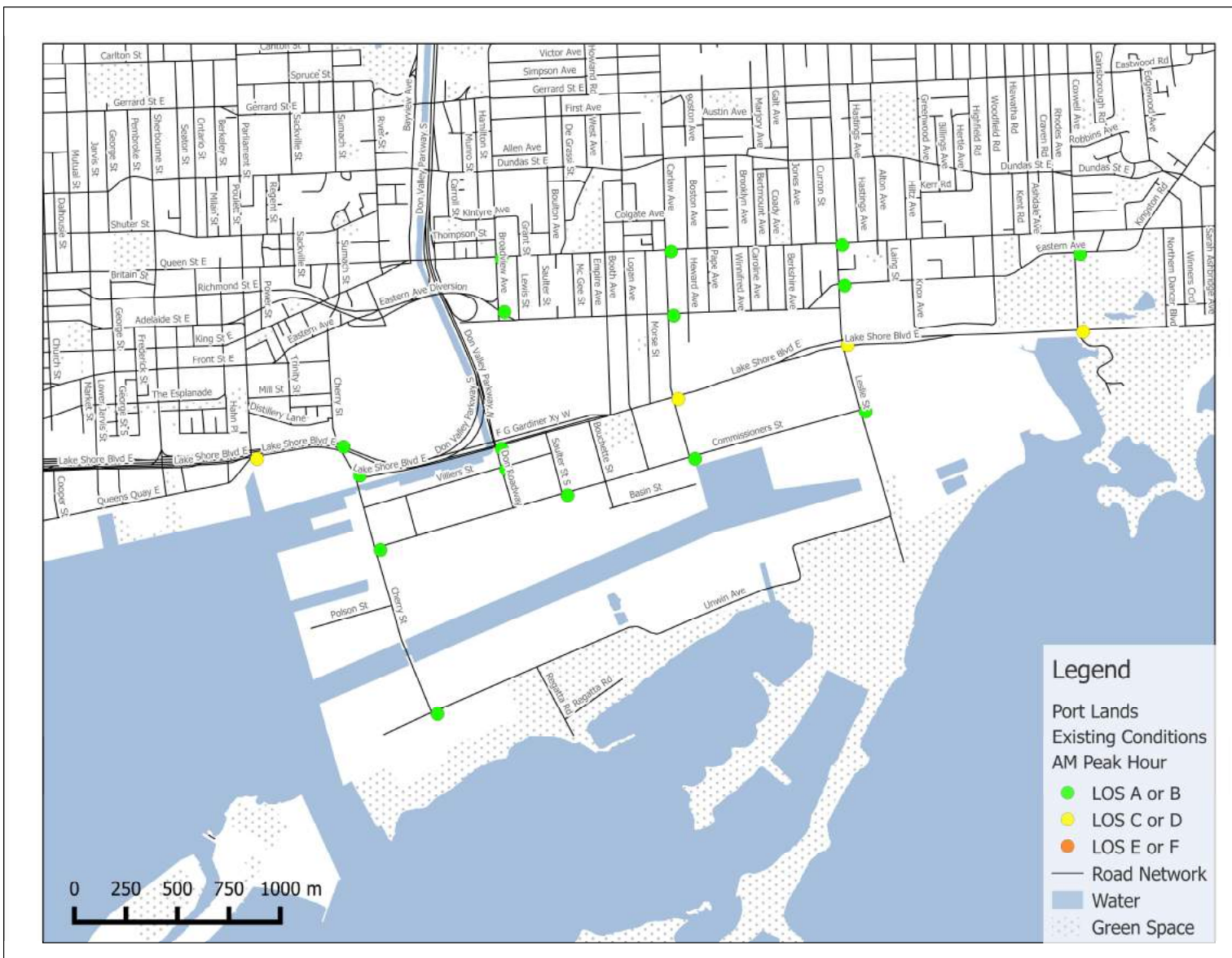


Port Lands and South of Eastern
Transportation and Servicing Master Plan

Figure 7
Study Area Screenlines

TABLE 5: EXISTING (2013) P.M. PEAK HOUR SCREENLING CAPACITY ASSESSMENT - EXISTING NETWORK

PORT LANDS AND SOUTH OF EASTERN EA - SCREENLINE ANALYSIS											
2013 EXISTING - PM PEAK HOUR											
Screenline	Road	Lanes	Capacity /Lane	Capacity	Volume	V/C	Lanes	Capacity /Lane	Capacity	Volume	V/C
<i>East-West Travel</i>		EASTBOUND					WESTBOUND				
East of Don Roadway	Eastern	2	800	1,600	1,621	1.01	2	800	1,600	579	0.36
	Gardiner	2	1,800	3,600	2,573	0.71	2	1,800	3,600	1,167	0.32
	Lake Shore	2	1,200	2,400	900	0.37	2	1,200	2,400	509	0.21
	Villiers	1	500	500	34	0.07	1	500	500	36	0.07
	Commissioners	1	800	800	108	0.07	1	800	800	178	0.11
	Unwin	1	800	800	130	0.16	1	800	800	67	0.08
	<i>Sub Total</i>			<i>11,300</i>	<i>5,366</i>	<i>0.51</i>			<i>11,300</i>	<i>2,536</i>	<i>0.24</i>
West of Carlaw	Eastern	1	800	800	967	1.21	1	800	800	600	0.75
	Lake Shore	3	1,200	3,600	3,456	0.96	3	1,200	3,600	1,428	0.40
	Commissioners	1	800	800	347	0.22	1	800	800	261	0.16
	Unwin	1	800	800	144	0.18	1	800	800	67	0.08
	<i>Sub Total</i>			<i>7,000</i>	<i>4,914</i>	<i>0.72</i>			<i>7,000</i>	<i>2,356</i>	<i>0.35</i>
East of Carlaw	Eastern	1	800	800	1,108	1.38	1	800	800	628	0.78
	Lake Shore	3	1,200	3,600	3,042	0.84	3	1,200	3,600	1,246	0.35
	Commissioners	1	800	800	251	0.16	1	800	800	341	0.21
	Unwin	1	800	800	166	0.21	1	800	800	67	0.08
	<i>Sub Total</i>			<i>6,000</i>	<i>4,567</i>	<i>0.67</i>			<i>6,000</i>	<i>2,281</i>	<i>0.34</i>
West of Leslie	Eastern	1	800	800	740	0.93	1	800	800	361	0.45
	Lake Shore	3	1,200	3,600	2,799	0.78	3	1,200	3,600	978	0.27
	Commissioners	1	800	800	610	0.38	1	800	800	211	0.13
	Unwin	1	800	800	152	0.19	1	800	800	52	0.07
	<i>Sub Total</i>			<i>6,000</i>	<i>4,302</i>	<i>0.63</i>			<i>6,000</i>	<i>1,602</i>	<i>0.24</i>
<i>North-South Travel</i>		NORTHBOUND					SOUTHBOUND				
North of Eastern	Broadview	2	800	1,600	384	0.24	2	800	1,600	228	0.14
	Carlaw	2	800	1,600	605	0.38	2	800	1,600	400	0.25
	Leslie	2	800	1,600	561	0.35	2	800	1,600	276	0.17
		<i>Sub Total</i>			<i>4,800</i>	<i>1,550</i>	<i>0.32</i>			<i>4,800</i>	<i>904</i>
South of Eastern	Booth	1	500	500	21	0.04	1	500	500	93	0.19
	Carlaw	2	800	1,600	882	0.55	2	800	1,600	454	0.28
	Leslie	2	800	1,600	647	0.40	2	800	1,600	356	0.22
	<i>Sub Total</i>			<i>6,100</i>	<i>1,550</i>	<i>0.42</i>			<i>6,100</i>	<i>904</i>	<i>0.24</i>
North of Lake Shore	Cherry	1	800	800	139	0.17	1	800	800	191	0.24
	Don Roadway	2	800	1,600	150	0.19	2	800	1,600	184	0.12
	Booth	1	500	500	37	0.07	1	500	500	62	0.12
	Carlaw	2	500	1,000	786	0.79	2	500	1,000	280	0.28
	Leslie	2	800	1,600	544	0.34	2	800	1,600	229	0.14
	<i>Sub Total</i>			<i>7,600</i>	<i>1,656</i>	<i>0.35</i>			<i>7,600</i>	<i>945</i>	<i>0.17</i>
South of Lake Shore	Cherry	1	800	800	320	0.40	1	800	800	193	0.24
	Don Roadway	2	800	1,600	146	0.09	2	800	1,600	110	0.07
	Saulter	1	800	800	23	0.05	1	800	800	24	0.05
	Bouchette	1	500	500	37	0.07	1	500	500	16	0.03
	Logan	1	500	500	40	0.08	1	500	500	43	0.09
	Carlaw	1	800	800	364	0.23	1	800	800	239	0.15
	Leslie	2	800	1,600	724	0.45	2	800	1,600	321	0.20
	<i>Sub Total</i>			<i>7,100</i>	<i>1,656</i>	<i>0.23</i>			<i>7,100</i>	<i>945</i>	<i>0.13</i>
South of Ship Channel	Cherry	1	800	800	143	0.18	1	800	800	158	0.20
	Leslie	1	800	800	149	0.19	1	800	800	141	0.18
		<i>Sub Total</i>			<i>2,400</i>	<i>292</i>	<i>0.18</i>			<i>2,400</i>	<i>299</i>



NOT TO SCALE



Port Lands and South of Eastern
Transportation and Servicing Master Plan

Figure 8
Study Area Existing Level of Service—AM Peak Hour



NOT TO SCALE



Port Lands and South of Eastern
Transportation and Servicing Master Plan

Figure 9
Study Area Existing Level of Service—PM Peak Hour

3.8.3

Conclusions

The following conclusions are reached related to the existing conditions:

- For the size of the area, the transportation network is limited and comprises primarily older infrastructure
- Capacity and operational issues exist:
 - Along Eastern Avenue, the road cross section is not consistent with its role and function in the network. Number and width of lanes varies across its length. The road acts more as a major arterial and relief road to Lake Shore, which it is not designed to do east of Carlaw.
 - Lake Shore is operating at capacity during peak hours
 - The Don Roadway / Lake Shore intersection is operating at above capacity conditions during peak hours, with delays on the approaches which create safety concerns for the DVP operations and for pedestrian and cycle activity along Lake Shore
- The road network within the Port Lands Study area is composed of older infrastructure that is not designed to accommodate the demands it currently faces
 - Lack of surface street connections internally and into the city
 - Long blocks and few options
- With the planned growth in the area, the network is not adequate to serve the future demands or accommodate the mixed activity desired
 - The area is auto dependent
 - There is a significant lack of connections to transit
- The existing transit service is limited to bus route only. Coverage does not adequately serve the area land uses. Opportunities for expanded service are limited by the roadway design, the current density and type of land use, and the operating environment.
- Separate and dedicated pedestrian and cycle space is provided only in the form of parts of the Waterfront trail. Continuous separate operating environments are not provided and create an unsafe and unfriendly user environment
 - Limited amenities for pedestrians and cyclists
 - Discontinuous or no sidewalks
 - Streets lack defined streetscapes
 - Streets are not desirable destinations
- Significant heavy truck activity is present related to industrial uses. The road network, designated as local streets, is open to truck traffic.
- Ship Channel crossings are limited and in need of repair
- Gardiner Expressway / Lake Shore Boulevard provides a barrier between South of Eastern and Port Lands areas with limited opportunities for connections

4.0

Future Travel Demands and Trip Generation

This section describes the various elements that establish the future demands for analysis. Each subsection provides a description of the individual elements – each element is layered on top of the other or woven together to create the fabric for the analysis. It is these elements that interact to demonstrate the reality for multi-modal transportation in the study area. The elements of travel demand are:

- **Future Land Use** – The proposed land uses are the largest determinant on the shape of the future transportation network. The future land uses were synthesized as part of this work by the City of Toronto and are the physical manifestation of the desires of the City for this area. These represent a wide range of land uses from residential to commercial to office space, film studios, and continuation of some existing industrial uses. It is these elements that define the character of the area and help seed the determination of transportation needs for those that need or want to be here.
- **Trip Generation** – The proposed land uses each have their own characteristics as to the number of transportation trips they will generate. Apartments generate travellers differently than a port facility, which generates trips differently than a film studio or office building. Understanding the behaviour of each of the unique land use types in the area - as well as their intensity and scale - allowed for the determination of the number of trips (by any travel mode) to and from the individual areas.
- **Trip Distribution** – With the number of trips for each land use generated, it was then possible to create relationships between the various uses to determine the distribution of those trips in the network. Certain land uses have relationships to each other (e.g., apartments send employees to office buildings in the morning) that allowed for the creation of patterns of travel for the new and existing land uses. As an area under significant redevelopment, the travel patterns in future years will be significantly different than today.
- **Modal Split** – The trips between each site can be accomplished via a variety of travel modes (car, truck, transit, walk, and bike) dependent on the presence and quality of the surrounding infrastructure and character of the area. Research into the available capacity (e.g., transit service capacity, road network capacity), the quality of the service provided, and the convenience and desirability of each was used to determine the proportions of users that will choose the various travel modes.
- **Goods Movement** – Special consideration was given to the movement of goods and freight into, out of, and within the study area. As an area of the city that provides important shipping connections and access for a number of industrial uses, it was important to examine the impacts on the industries that will remain in the future horizon. The unique operations of individual sites were investigated and impacts on them by the modified road network (or vice versa) were determined.
- **Trip Assignment** – Once the transportation network was defined and the number/type of trips with their destination was determined, it was possible to assign the trips via the various modes to the transportation network. Once assigned, the transportation network was analysed to determine how well it met the needs of its users.

4.1

Land Use Assumptions

Interim (20-25 years) and full build-out (50+ years) population and employment estimates were provided by the City of Toronto for the Study Area. The estimates were based on a conservative land use scenario using the 2014 Council adopted Land Direction as a basis. The scenario was used to generate person trips by mode for the transportation assessment. The scenario provided by the City also provides some flexibility in recognition that urban areas are dynamic. The City’s objective through the TSMP was to test for a range of scenarios and ensure a resilient and flexible network to accommodate a wide range of potential futures beyond the horizons of the TSMP. For the purpose of the transportation model, which is based on the City’s EMME2 model, the interim condition was inputted to the 2031 time-horizon. Table 6 and Table 7 summarize the population, employment and retail/commercial estimates for the interim and full build-out scenario.

TABLE 6: LAND USE ESTIMATES - INTERIM

Precinct/Area	Population (Persons)	Employment (Persons)	Retail Commercial (m2)
Lower Don Lands	7,071	6,750	38,559
South of Eastern	541	32,744	135,042
Port Lands	8,113	14,400	104,187
Total	15,725	53,894	277,788

TABLE 7: LAND USE ESTIMATES - BUILD OUT

Precinct/Area	Population (Persons)	Employment (Persons)	Retail Commercial (m2)
Lower Don Lands	15,198	8,824	62,255
South of Eastern	541	32,744	135,042
Port Lands	13,352	22,463	127,953
Total	29,091	64,031	325,250

The detailed assignment of land use to the study area traffic zones is summarized in Figure 10.



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4.2 Person Trips

4.2.1 Trip Generation

Trip generation is the first step in the conventional four-step transportation forecasting process. It is a prediction of the number of trips originating in or destined to specific land use types within a discrete area (traffic analysis zone – TAZ).

Industry standard trip rates are available to provide guidance in estimating trips by land use type (Institute of Transportation Engineers (ITE) Trip Generation Manual). ITE rates are based on North American case studies and reflect a wide range of rural, suburban, and urban conditions. In order to reflect more specific conditions relative to the study area, auto trip generation rates for the various land uses were taken or derived from previous work in the study area (LDL Master Plan) as a starting point for trip estimation.

Table 8 provides summary of the total auto trip rates (assuming mode split targets in place) used for the assessment of trips.

TABLE 8: AUTO TRIP GENERATION RATES

Land Use	AM			PM			Comments
	Inbound	Outbound	2-way	Inbound	Outbound	2-way	
Commercial*	0.29	0.03	0.32	0.11	0.14	0.25	/parking space
Commercial*	0.43	0.05	0.48	0.17	0.21	0.38	/1.5 spaces per 100m ²
Residential*	0.02	0.09	0.11	0.07	0.04	0.11	/residential unit
Hotel (**ITE)	0.18	0.13	0.31	0.19	0.19	0.38	/hotel unit

* Source LDL EA

** Not all PL&SE land uses types reflect in LDL EA. Where rates not available, information supplemented with ITE trip generation rate. (i.e. in the case of specific commercial activities).

4.2.2 Modal Split

As stated above, the auto based rates above are reflective of specific network and service parameters for the LDL study area. The PL&SE study area comprises different network connections (example Broadview Extension, Ship Channel Crossings) and a different land use mix to those assumed for the LDL study area (Higher density employment, higher density activity over a larger area). Based on this difference, the potential for alternative modes in the PL&SE study area required a more detailed examination.

Person Trips

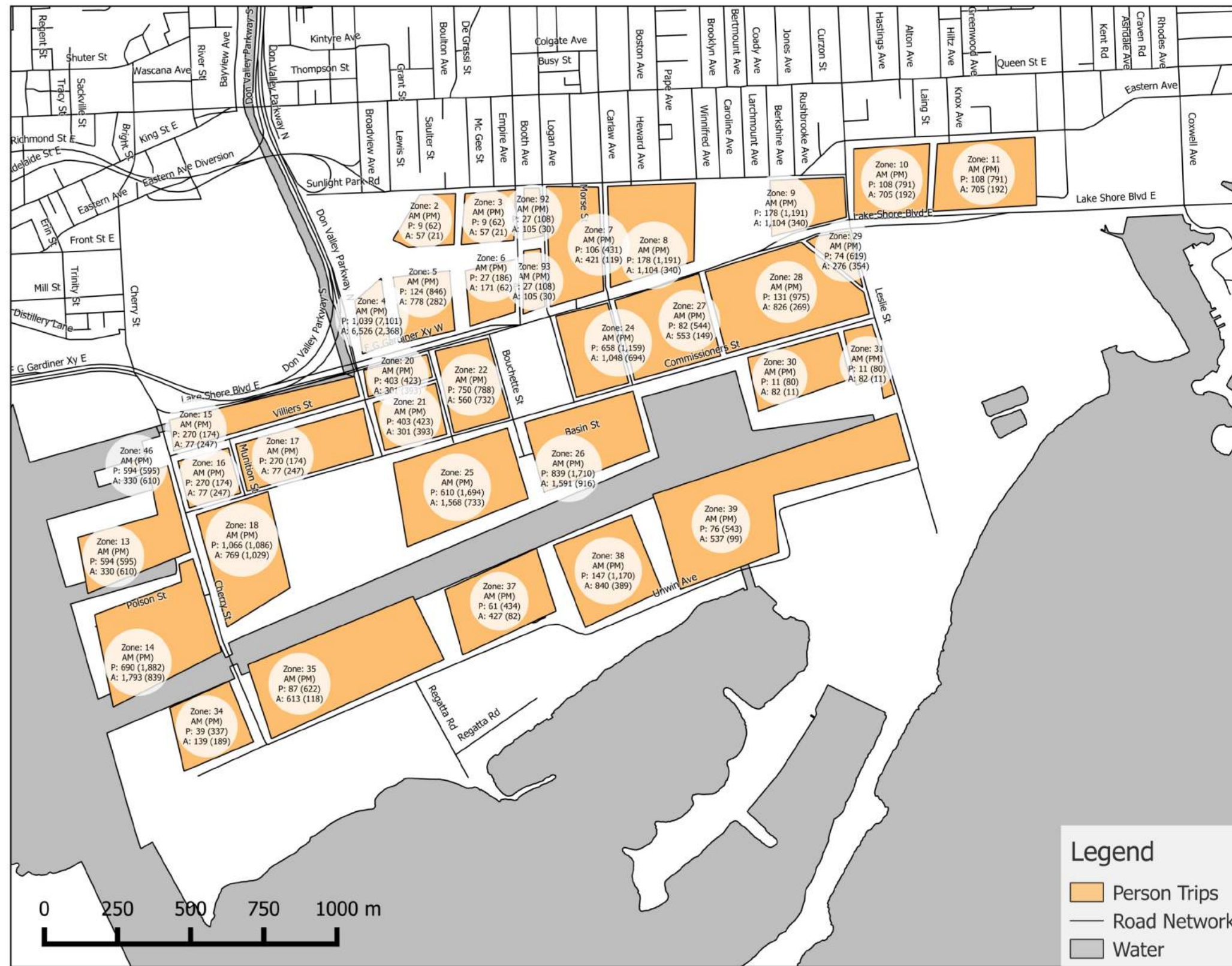
From a transportation perspective, land use related trip forecasts can manifest themselves in many ways in terms of magnitude of trip making and travel behaviour/patterns. In reviewing the potential for the different modes (auto, transit, or active modes), the person trip making and distribution of those trips must be accounted for in consideration of the prevailing area patterns, the capacity of available road and transit infrastructure and service. Once the overall trip making is quantified, an assessment can be made of the potential for each mode.

A bottom up approach to estimating the modal split was undertaken. The bottom up approach reflects an assessment of the capacity of the individual service opportunities and their connections to the area land uses

As a first step, the auto trip rates (Table 8:) were adjusted to reflect number and mode of person trips (70% transit and 10% active mode proportions and used to reverse calculate person trip rate. These mode shares were used as a starting point as they reflect the mode share targets from the past technical studies for the surrounding area LDL and Lower Young EA). The person trips then form the base for the next steps in quantifying alternative transit mode share on an area or zone specific basis. Table 9 provides a summary of the person trips by development area. These are broken down further into a traffic zone level for analysis and shown in Figure 11.

TABLE 9: AREA PERSON TRIPS - BUILD OUT

Precinct/Area	AM Inbound	AM Outbound	AM Total 2-Way	PM Inbound	PM Outbound	PM Total 2-Way
Lower Don Lands	3,967	3,191	7,158	3,954	5,450	9,404
South of Eastern	13,797	1,960	15,757	4,495	15,348	19,843
Balance of the Port Lands	10,514	3,803	14,317	5,840	12,991	18,831
Total	28,278	8,954	37,232	33,789	14,289	48,078



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Figure 11
Study Area Productions and Attractions (Total Person Trips) - by Traffic Zone

Transit Service

The assessment of transit persons as a subset of the person trips identified in Table 8 was undertaken assuming a future transit condition/scenario based on the service capacity of the transit network (Service Capacity Mode Share), where mode shares at zonal level result in passenger ridership that can be accommodated on the available transit service. This allowed for the calculation of an overall area mode split that can be achieved in the Study Area with the proposed base transit service.

The operating parameters for the future transit network were defined in consultation with TTC. Service parameters for each line were considered for each of the available services. These included: Frequency of vehicles (based on typical planning and crush headways); vehicle types and associated seated capacity and crush capacity. Crush refers to the limits of practical operation. For frequency this means the minimum allowable headway of 2 minutes and for vehicle capacity this maximum occupancy using seats and standing room. Details for each line are shown in Table 10.

The approach to defining the service opportunities and how transit demand was calculate is summarized as follows:

1. Port Lands and South of Eastern study area was grouped into 16 transit zones. These zone differ slightly from the traffic zones used for the network modelling as they are centered on intersecting transit service lines (access points to service for development). The transit zones can be described as:
 - o 10 zones within Port Lands/Lower Don Lands/South of Eastern
 - o 3 zones centered on Queen Street, between DVP and Coxwell
 - o 3 outside zones (West, North, East)
2. Origin-Destination (O-D) data for auto trips extracted from microsimulation (Paramics) model. Distribution of outgoing and incoming auto trips for each zone was calculated based on individual pairings and total person trip productions/attractions. The total number of person trips (productions and attractions) were then summed for the sub-zones
3. Once the total number of productions and attractions were established, the distribution (%) calculated from auto trips was applied to the total trip number (productions and attractions) for each zone, allowing a calculation of total trip demand for each O-D pair. This was done based both on attractions and productions.
4. With total travel demand between each zone pairing calculated, transit mode shares were assigned to each O-D pair. Higher mode shares were assigned to external (West, North, and East) to zone 1-13 O-D pairs (ranges from 60-85%) to account for close proximity to transit service and facilities. Lower mode shares were assigned to trips originating and destined to zones 1-13 (with significantly lower % for adjacent zones, and slightly lower % for the two zones along Unwin Avenue). Mode shares were adjusted for each O-D pair in order to obtain an overall weighted average of 70% for the trips ends in the Study Area
5. Links and nodes representing transit routes and route intersection points were defined, and paths were identified for each O-D combination specifying the route taken between the two nodes.
6. Transit demand for each O-D pairing was calculated and assigned to appropriate links on routes that serve the origin and destination patterns for that zone, allowing the calculation of cumulative link volumes to show overall loading on any given section of transit route. O-D Mode shares were then adjusted downward so that no given section of transit route exceeded its given crush capacity

TABLE 10: TRANSIT SERVICE PARAMETERS

Operator	Mode	Type	Line	Frequency (veh/hr)	Crush Frequency (veh/hr)	Cars per Service	Vehicle Capacity		Crush Load Capacity	Total Capacity	
							Seated	Planning		Planning	Crush
TTC	Streetcar	LFS	Queen Street 501 WB	20	30	1	70	130	155	2,600	4,650
TTC	Streetcar	LFS	Queen Street 501 EB	20	30	1	70	130	155	2,600	4,650
TTC	Streetcar	LFS	Queens Quay to Commissioners – EB	20	30	1	70	130	155	2,600	4,650
TTC	Streetcar	LFS	Commissioners to Queen Quay – WB	20	30	1	70	130	155	2,600	4,650
TTC	Streetcar	LFS	Broadview Extension – SB	20	30	1	70	130	155	2,600	4,650
TTC	Streetcar	LFS	Broadview Extension – NB	20	30	1	70	130	155	2,600	4,650
TTC	Streetcar	LFS	Leslie Street – SB	20	30	1	70	130	155	2,600	4,650
TTC	Streetcar	LFS	Leslie Street – NB	20	30	1	70	130	155	2,600	4,650
TTC	Bus	Articulated	Carlaw Ave – NB	20	30	1	46	77	92	1,540	2,760
TTC	Bus	Articulated	Carlaw Ave – SB	20	30	1	46	77	92	1,540	2,760
TTC	Bus	Articulated	Leslie St – NB	20	30	1	46	77	92	1,540	2,760
TTC	Bus	Articulated	Leslie St – SB	20	30	1	46	77	92	1,540	2,760
TTC	Bus	Articulated	Eastern Ave – EB	20	30	1	46	77	92	1,540	2,760
TTC	Bus	Articulated	Eastern Ave – WB	20	30	1	46	77	92	1,540	2,760
TTC	Bus	Articulated	Lakeshore – EB	20	30	1	46	77	92	1,540	2,760
TTC	Bus	Articulated	Lakeshore – WB	20	30	1	46	77	92	1,540	2,760
TTC	Bus	Articulated	Unwin – EB	20	30	1	46	77	92	1,540	2,760
TTC	Bus	Articulated	Unwin – WB	20	30	1	46	77	92	1,540	2,760
Streetcar / Bus Total										33,600	64,800

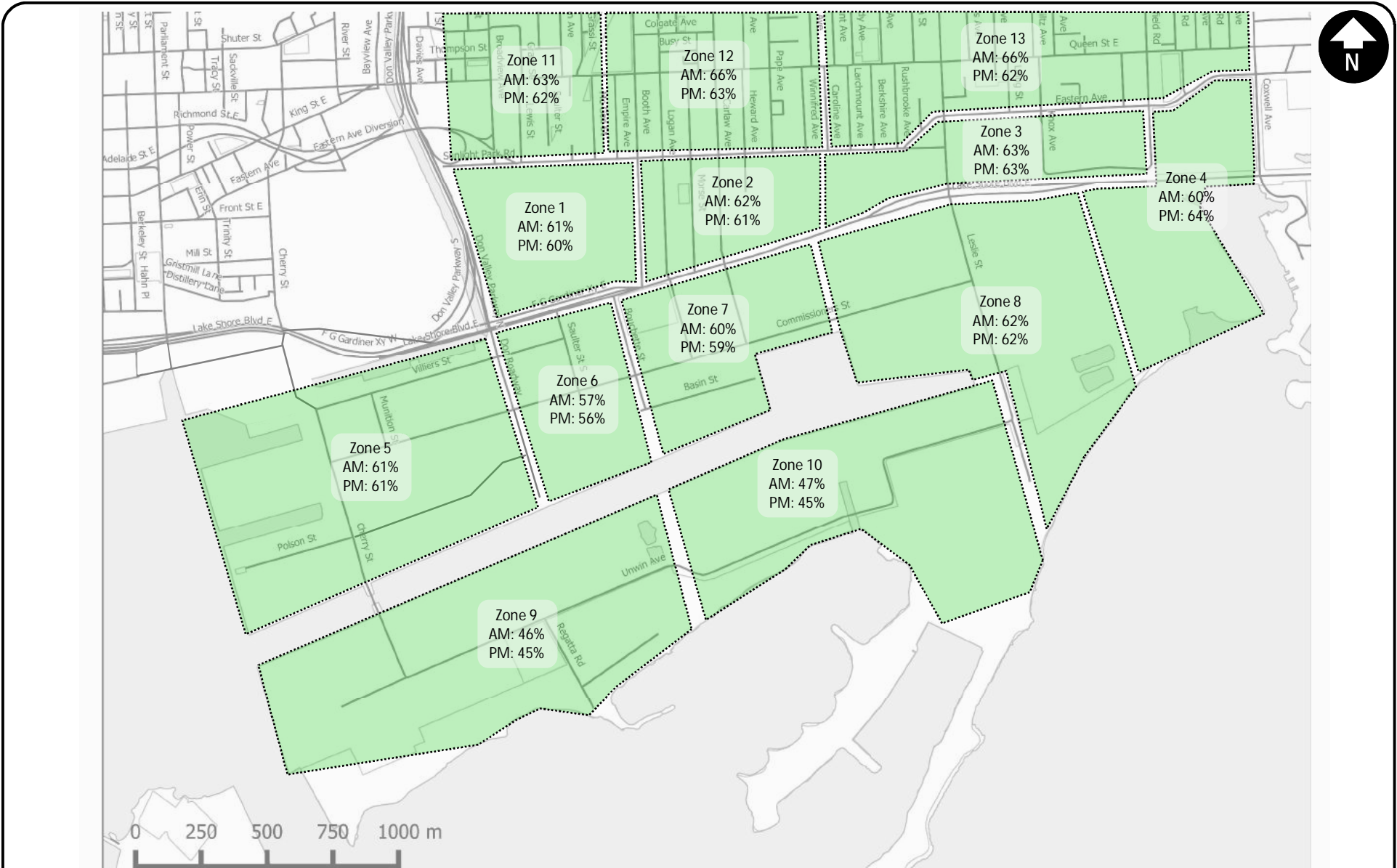
It is important to note that this approach does not consider other capacity constraints in the transit service network outside of the study area. Transit demands for each line are assessed assuming that the capacity within the study area is only being used by PL&SE based activity and that capacity conditions of service outside of the study area are not constrained, i.e. not impacted / affected by the following:

- Demand along Queen's Quay, between Union and Port Lands;
- Demand outside study area along Queen Streetcar; and
- Demand north of Queen on extended Broadview Streetcar, or possibility of Broadview Streetcar not running as frequently as proposed (3-minutes) due to bottlenecks upstream with King and Dundas streetcars.

Therefore, the forecast is conservatively high in terms of transit mode share. This approach allows the calculation of transit loadings on a link by link basis through the Study Area and was used to calculate the Service Capacity Mode Share scenario.

Figure 12, Figure 13, and Figure 14 provide the summary of the resultant modes shares for each transit zone and the transit network performance for the Service Capacity Mode Share.

This results in a demand flow for each transit line in the study area that is constrained by the capacity of the system. This demand was compared to the capacity of the line to show areas where capacity is reached or exceeded. All of the lines were shown to be working at or below capacity, but the result is an area wide mode split to transit of 62%. It is important to note that while this suggests a 62% mode share can be achieved with the base transit network, the transit service is being pushed to the limit of its practical capacity.

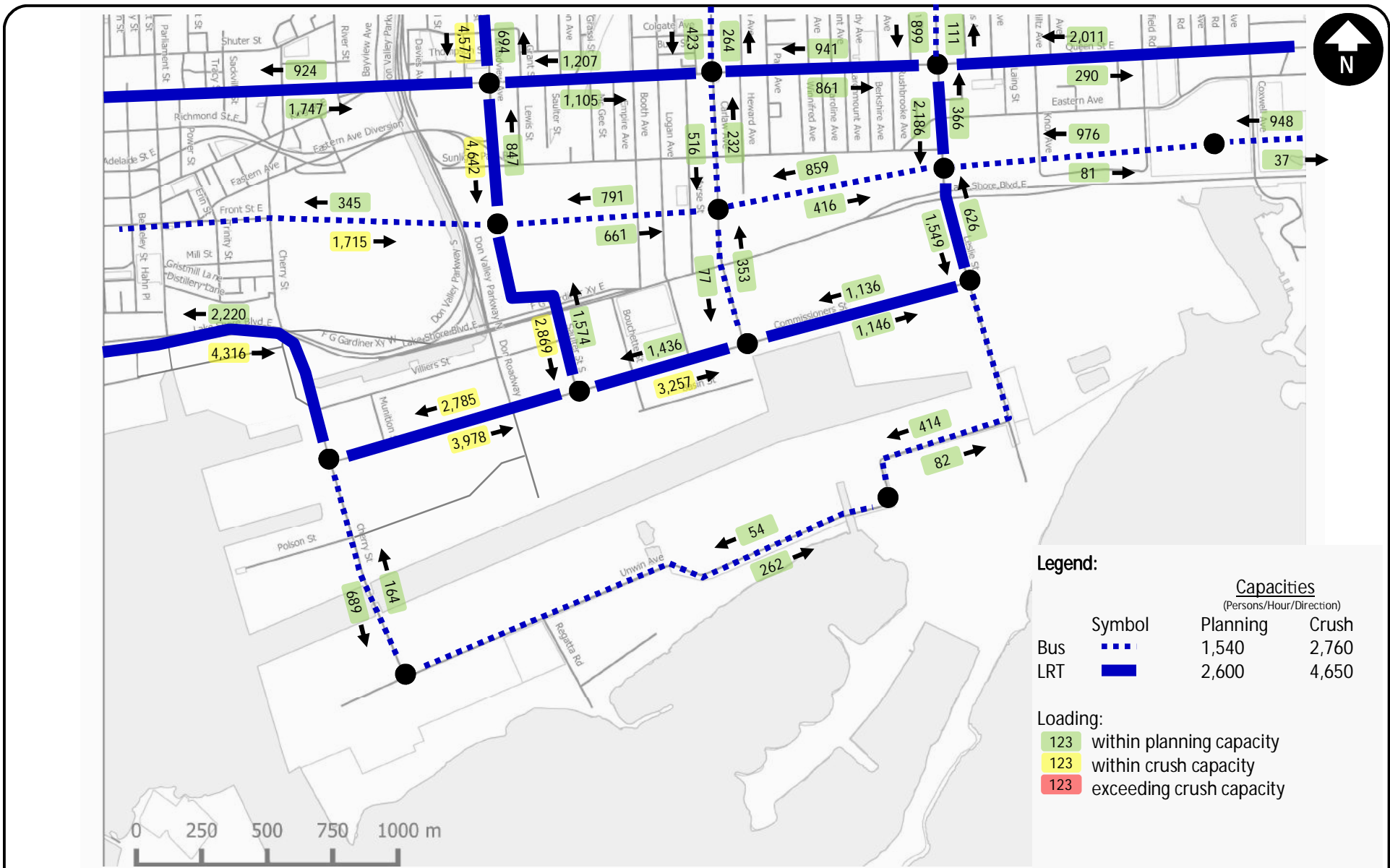


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Figure 12
Transit Network—Assessed Maximum Transit Mode Share
AM and PM Peak Hour

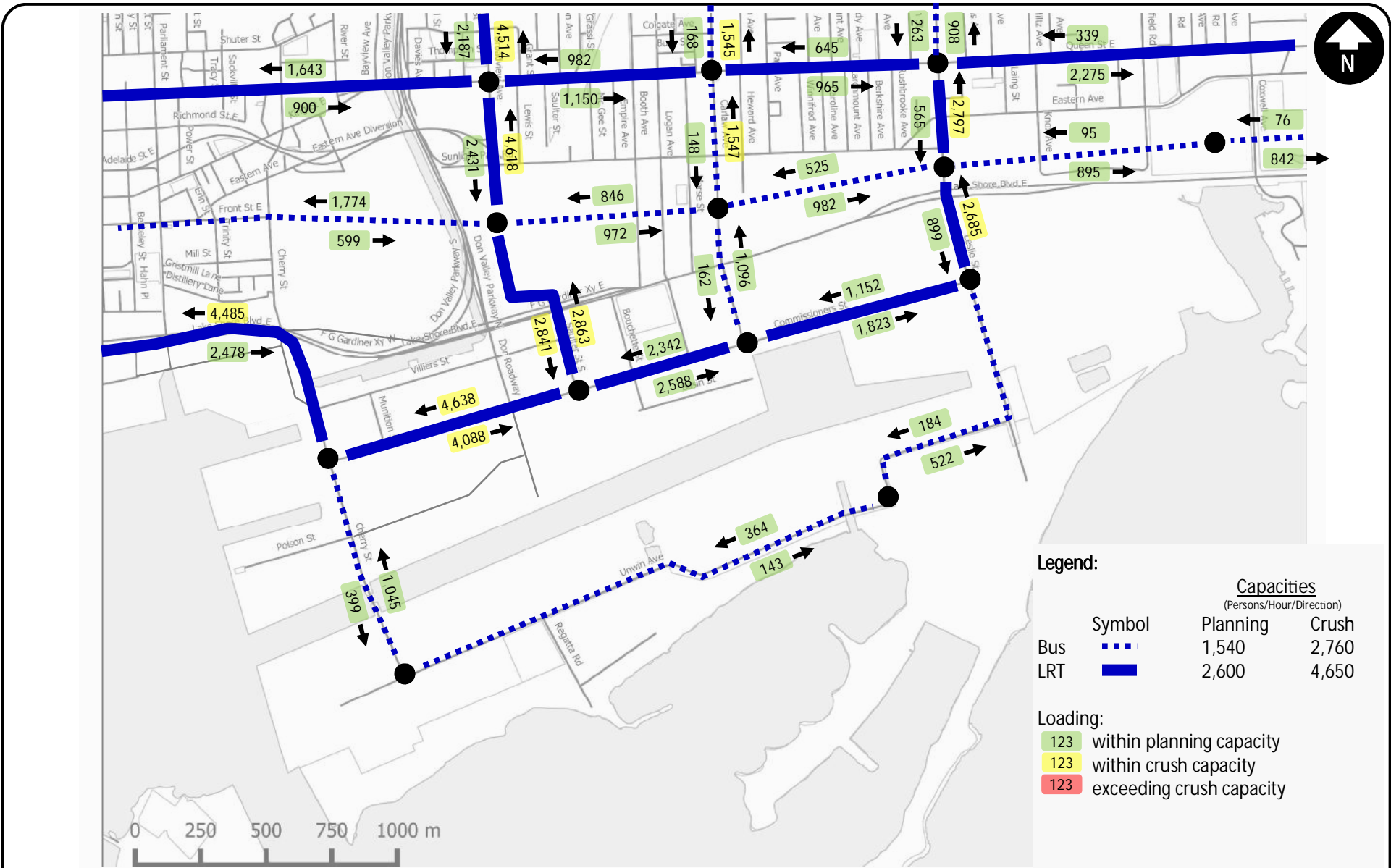


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Figure 13
Transit Network—Capacity and Projected Loading
Maximum Achievable Transit Mode Share Scenario—AM Peak Hour



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Port Lands and South of Eastern
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Figure 14
Transit Network—Capacity and Projected Loading
Maximum Achievable Transit Mode Share Scenario—PM Peak Hour

Active Mode

In addition to the transit activity, walking and cycling is planned to be a significant transportation mode in the PL&SE study area in the future. Ten percent (10%) active mode participation was applied consistent with other area studies. This reflects a significant contribution to the weekday morning and afternoon peak period activity. Although active transportation is assumed to be 10% of the total travel in the area, a higher participation is encouraged, and in fact would be supported through the land use and urban design features planned for the community.

Total Auto and Person Trips

The final auto and transit person trips produced and attracted to the model zones for motorised modes are shown in Figure 15 and Figure 16. The overall mode share breakdown for person trips in the area is 62% Transit, 28% Auto, and 10% Active (walk and bike).

4.2.3 Trip Distribution

With the number of trips for each land use parcel quantified and a mode share identified (62% transit, 10% active mode), the next step in the demand forecasting procedure was to distribute these trips to the future base roadway network. The strategic model was leveraged to estimate the distribution of auto trips to, from and through the study area. As the data from the Transportation Tomorrow Survey (TTS) is used as a foundation for the development of the strategic model demands, the TTS data related to origins and destinations for trips into and out of the study area and the adjacent neighbourhoods was reviewed for auto and transit person trips to help refine and confirm the trip distribution for the future proposed PL&SE developments.

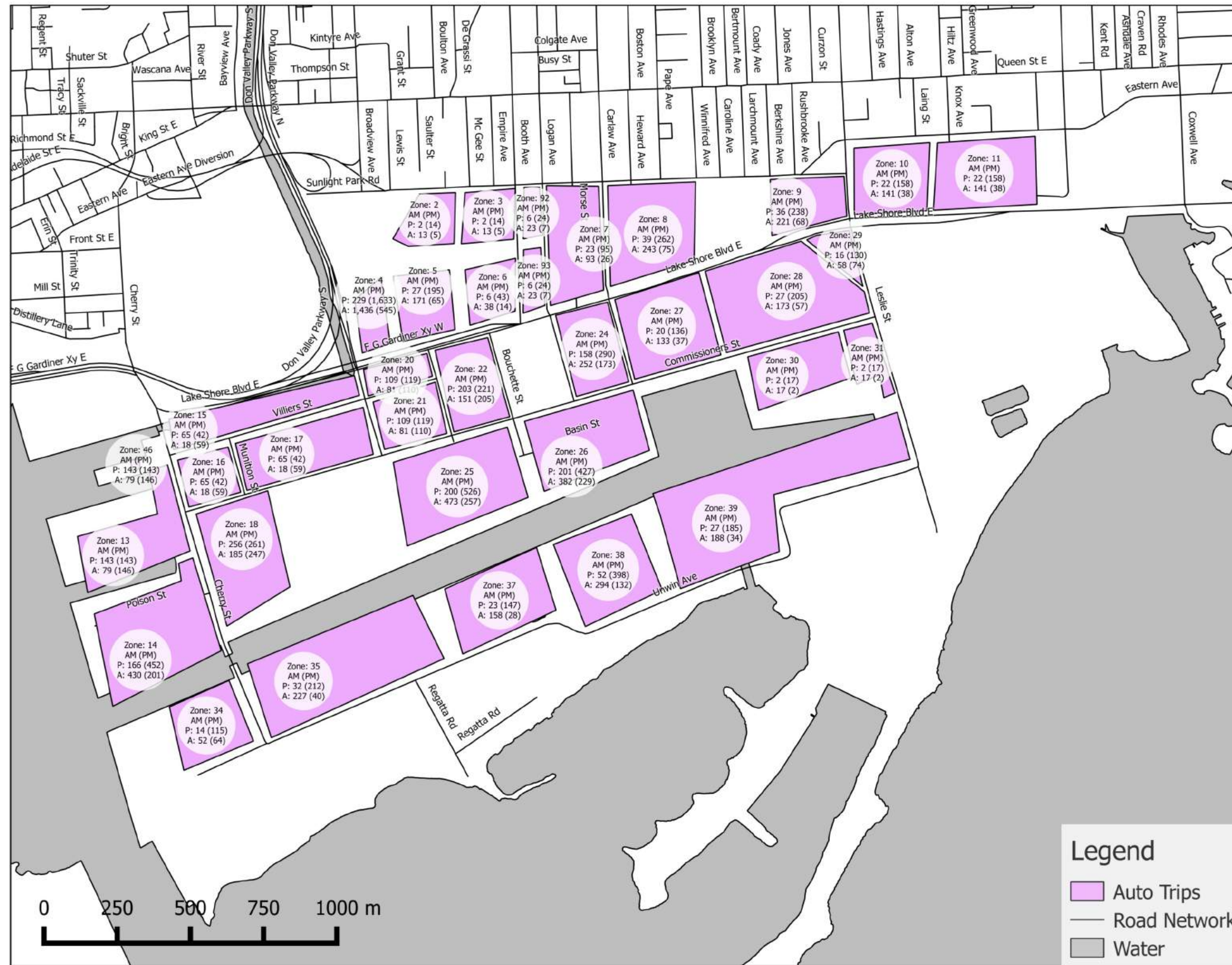
As the area is undergoing a transformation, travel patterns for zones in the Port Lands and within the study area can reasonably be expected to change. Increased development levels and competing needs for area capacity will result in a change of focus for the destination of trips. The strategic model was used to calculate travel times through the network and estimate the implications of increased congestion on how and where trips travel to/from in the network. The model allowed for a simplified assignment and calibration of the future travel patterns in the study area, which was used to estimate the study area trip distribution.

This strategic model process facilitated in the creation of final 2065 trip tables for the AM and PM peak hours for use in analysis of the future horizon. The final trip tables and figures showing model zones are provided in Appendix T-2.

4.3 Goods Movement (Trucks, Rail)

A key objective for planning underway in the Study Area is ensuring accounting for continued goods movement in and through the Study Area and compatibility with future mixed-use neighbourhoods. Currently, the Study Area has significant truck activity, is serviced by rail infrastructure (although is not heavily used) and is an active port, primarily utilized for shipping of bulk goods to support the maintenance and growth of the broader city and region.

The two that have direct bearing on the performance of the study area transportation network are rail and truck. Considerations for both truck and rail activity included:

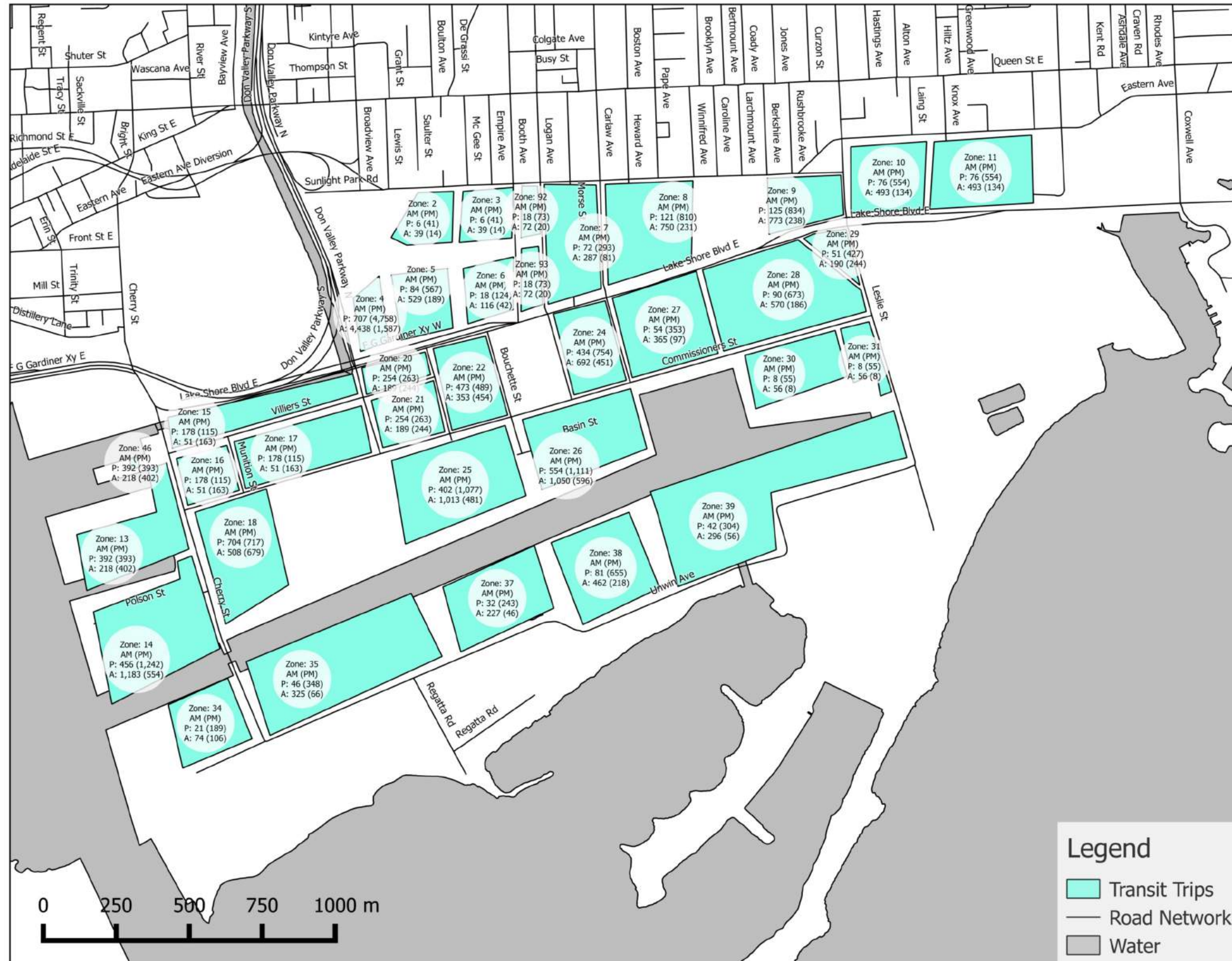


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Port Lands and South of Eastern
Transportation and Servicing Master Plan

Figure 15
Study Area Productions and Attractions (Auto Trips)
by Traffic Zone



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Port Lands and South of Eastern
Transportation and Servicing Master Plan

Figure 16
Study Area Productions and Attractions (Transit Trips)
by Traffic Zone

- Ensure the transportation system supports development and land use, while recognizing the need for effective movement and interaction of people and goods
- Plan for effective goods movement facilities and systems that minimize impacts and provide direct access, where routes avoid planned residential communities.
- Maintain transportation connections to the Don Valley Parkway and Gardiner Expressway to support future goods movement.
- Consider goods movement as a key performance indicator in assessing area transportation requirements
- Work with the City and industries to protect the goods movement network.

Trucking in and out of the Port Lands is significant and expected to continue into the future given that port and industrial uses are anticipated to remain and, in some instances, intensify in key locations. A more detailed assessment of potential truck volumes in the AM and PM peak periods was undertaken as a result. A primary source of truck activity results due to uses transporting bulk cargo to the Port Lands by ship and then cargo is distributed through the city by truck. Additionally, concrete batching activities and transporting construction debris and fill to the Leslie Spit also contributes significantly to truck activity in the area. There is some trucking activity that is anticipated to discontinue in the future such as transporting construction debris and fill to Tommy Thompson Park.

Heavy rail activity in the Study Area is anticipated to be limited to a few industrial operators. Toronto Water currently transports materials to the Ashbridges Bay Treatment Plant. This practice may be phased out in the future. Ports Toronto occasionally utilizes the rail line. Continued provision and access to the rail line into the Port Lands for Ports Toronto is required, including a minimum of two tracks in service in perpetuity within the Keating Yard unless there is change that can be negotiated with Ports Toronto. Nonetheless, rail activity is assumed to be limited and infrequent and will continue to be accommodated unless Toronto Water phases out rail transport and discussions advance with Ports Toronto in this regard.

The following sections described the separate trip generation, trip distribution, and assignment processes for the truck activity in the study area.

4.3.1 Truck Trip Generation

Truck traffic in the Port Lands area comprises two types: i) Port Lands Based - to/from area land uses (commercial and industrial); and ii) External Zones - external trucks. The following details how these truck movements were estimated for the 2065 horizon.

Port Lands-Based Trucks

The estimation of trucks in the Port Lands and south of Eastern area was calculated according to forecasted employment using the following data:

- Port Lands Population Employment and Floor Area projections (Port Lands Projections_Sep8.xls - City of Toronto, Sept 8, 2014)
- Daily truck trip generation rates provided via "Estimating Urban Commercial Vehicle Movements in the Greater Toronto-Hamilton Area (Metrolinx / McMaster, 2010)" – Exhibit 17
- Daily distribution of truck traffic also provided via "Estimating Urban Commercial Vehicle Movements in the Greater Toronto-Hamilton Area (Metrolinx / McMaster, 2010)" – Exhibit 41
- Information on the operation of existing land uses that are to remain in the area

- Existing year (2013) truck counts throughout the study area

Based on the available data, it was possible to estimate trucks in several different categories for several types of trucks, as follows:

- Categorised by generalized land use - Industrial, Wholesale, Retail, Services, Transportation
- Categorised by truck type – Light, Medium, Heavy

The method used to calculate goods movement for the Port Lands-based Approach was based on the following steps:

- Calibrate existing year model to match car and truck counts independently. This provided the base number of trucks within the study area and associated the trucks with specific zones and travel patterns. This allowed for direct control of the number of trucks in the future year based on knowledge of future land use changes in the area.
- Calculate AM and PM Peak Hour truck trip production and attraction rates per employee from daily rates and graphs showing the breakdown of typical trip movements throughout the GTHA, as provided in the Metrolinx/McMaster document.
- It was necessary to assume that the AM Peak Hour attraction rate is equivalent to PM Peak Hour production rate and vice versa. This means that the same number of vehicles that leave in the AM come back in the PM. This results in no net change in number of trucks in the area on a daily basis.
- Apply AM and PM Peak hour trip generation rates (production and attraction) to the employment estimates by Land Use type in Port Lands. These provided a generalized number of trucks for various zones in the area.
- An examination was made of the number of trucks produced by various known land uses. Information from these specific sites was used to override the generalised calculations where the specific information exists.
- For areas with existing land uses that are to be removed or reduced in size, the existing year produced and attracted trips were factored down based on existing gross floor area and “existing gross floor area to remain”. This takes the existing truck activity in the area and adjusts it to represent the continuation of certain land uses in Port Lands in the future.
- The trips produced through new trip generation with trips from remaining land uses was used to create the total 2065 truck demand for model zones within the Port Lands and South of Eastern Area.

Trucks Outside of Port Lands and South of Eastern

As the strategic and operational models represented a larger area than the focused study area, it was necessary to produce truck forecasts for areas outside of the Port Lands and South of Eastern areas for the 2065 horizon. The general approach was identical to that applied in calculating non-study-area 2065 auto trips and applied the following data:

- Calibrated 2013 truck travel demand matrix.
- EMME 2001 and 2031 auto trip matrices.

The method used to calculate goods movement for the External Zone Approach was based on the following steps:

- The Compound Annual Growth Rate (CAGR) was calculated for EMME model zones between the two model years (2001 and 2031). This provided a general growth rate for the various areas of the model outside of the focused study area.
- As the strategic and operational models created for this project have a finer zone structure than the regional EMME model, it was necessary to associate the Port Lands model “child” zones to larger EMME “parent” zones. This assigned the growth rate for the larger parent zone to the smaller child zone.
- The assigned CAGR for the associated EMME parent zone was applied to individual Port Lands child zones to calculate the growth in truck trips between 2013 and 2031.
- It was assumed that the areas outside of the Port Lands and South of Eastern focus area would reach “build out” by the year 2031. This means that no growth in trucks (or cars) was applied beyond the 2031 estimates for areas outside of the Port Lands and South of Eastern area. These truck trips represent 2065 truck trip activity outside of the study area.

Overall Truck Demands

The two sets of truck demands described above (study area and outside of study area) were combined together to form a consolidated set of truck demands for 2065. The final step in this process was to take the generalised truck values and distribute them to a more refined definition of truck type.

The overall truck trip table was refined based on two pieces of data:

- Exhibit 40 in “Estimating Urban Commercial Vehicle Movements in the Greater Toronto-Hamilton Area (Metrolinx / McMaster, 2010)” – Proportions of Commercial Vehicle trips made by Heavy, Medium, and Light Commercial Vehicles.
- Port Lands forecasted Land Uses (City of Toronto).

The difference between light and medium trucks was assumed to not be critical for this study. As a result, the truck trips were distributed to heavy trucks (tractor/trailer types and larger vehicles) and light/medium (cube vans, delivery trucks).

The method used to calculate the final distribution of truck trips for the combined areas was based on the following steps:

- The trip generation results for the study area with trips calculated for non-study area zones were combined into a single table. This created the overall truck trip productions and attractions for 2065.
- The proportions given in the Metrolinx/McMaster document were applied to break down the final truck trip matrix into heavy trucks and light/medium trucks. This was generally given as an overall split of 15% heavy vehicles and 85% medium/light vehicles.
- Individual land uses in the study area model zones were examined to determine the likely proportion of heavy or light/medium commercial vehicles for these uses where better information was available. This provided a more realistic estimate of the truck activity specific to the Port Lands and South of Eastern area than the generalised rates provided by the Metrolinx/McMaster document.
- Zones outside of the Port Lands and South of Eastern area were split directly into 15% heavy vehicle and 85% medium/light vehicle based on the information given in the Metrolinx/McMaster document.

The above processes resulted in two truck matrices for the year 2065: heavy vehicles and medium/light vehicles. The final truck trip tables are provided in Appendix T-2.

4.3.2 Trip Distribution

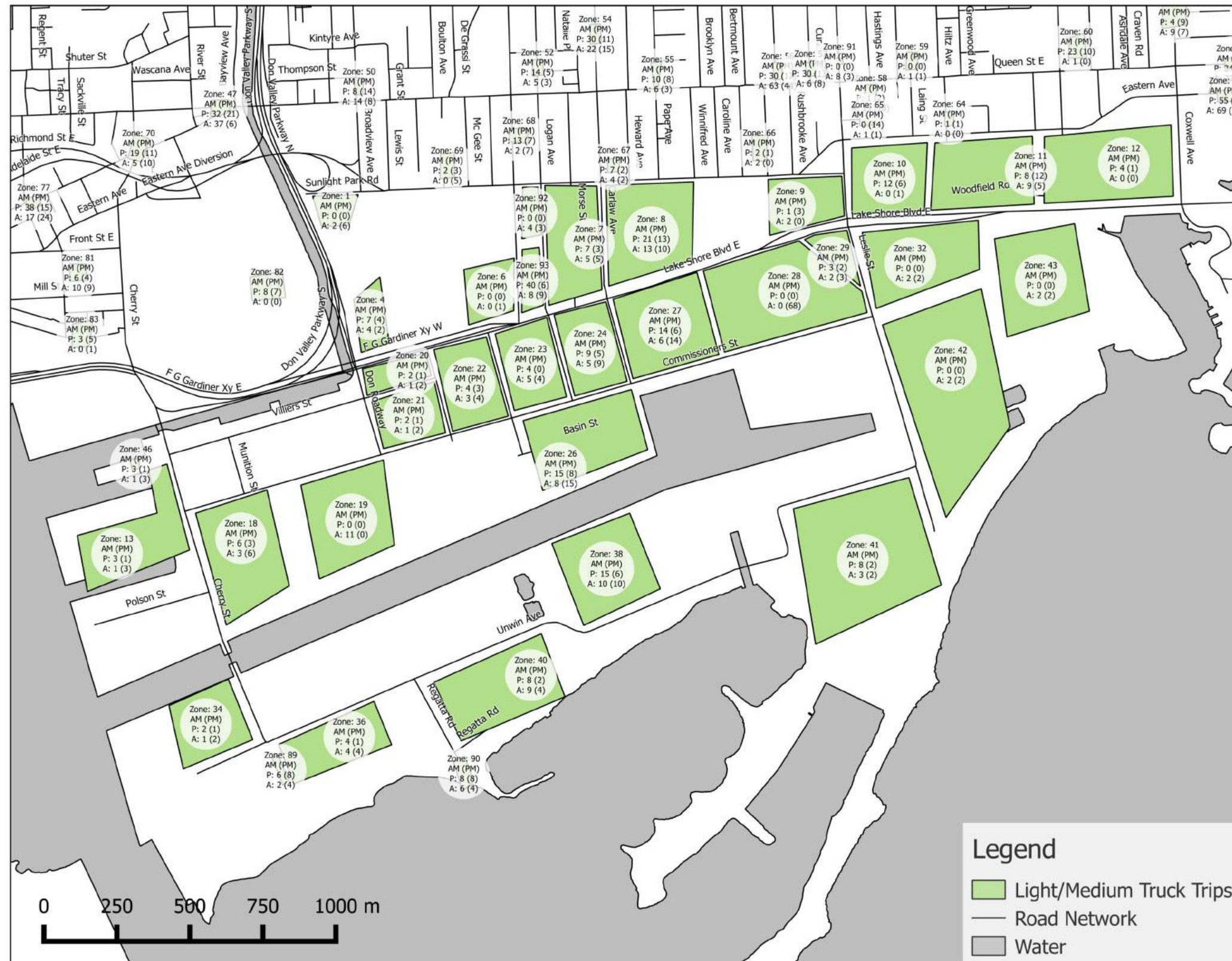
With the trips generation quantified, the next step was to distribute the volumes to study area zones and network. The following data was used:

- Classified vehicle turning counts along Lake Shore Boulevard: Cherry, Don, Booth, Logan, Carlaw, Leslie.
- Study area zone trip production and trip attraction totals.

The steps in the trip distribution process are described below:

- The collected counts define a screenline in and out of the Port Lands. The turning movements that trucks make as they leave or enter Port Lands define their approximate destination. Assuming that trucks are generally headed outside of or arriving from outside of the study area, there are three major origins / destinations:
 - North – leaving/arriving via DVP
 - West – leaving/arriving via FGE/LSB
 - East – leaving / arriving via LSB
- Combined turning movements headed from/towards the cardinal directions: i.e., NBL at Don Roadway is towards the west; NBR at Leslie is towards the east; NBT at Don Roadway is towards the north
- Calculated percentage that each cardinal direction makes up of total volume crossing screenline from the selected movements
- Distributed trips to and from the cardinal zones (DVP, FGE/LSB West, LSB East) and Port Lands zones
- Distributed truck trips are added to the existing year truck trip table to represent new truck activity in Port Lands

The final light/medium and heavy truck trips produced and attracted to the model zones are shown in Figure 17 and Figure 18.

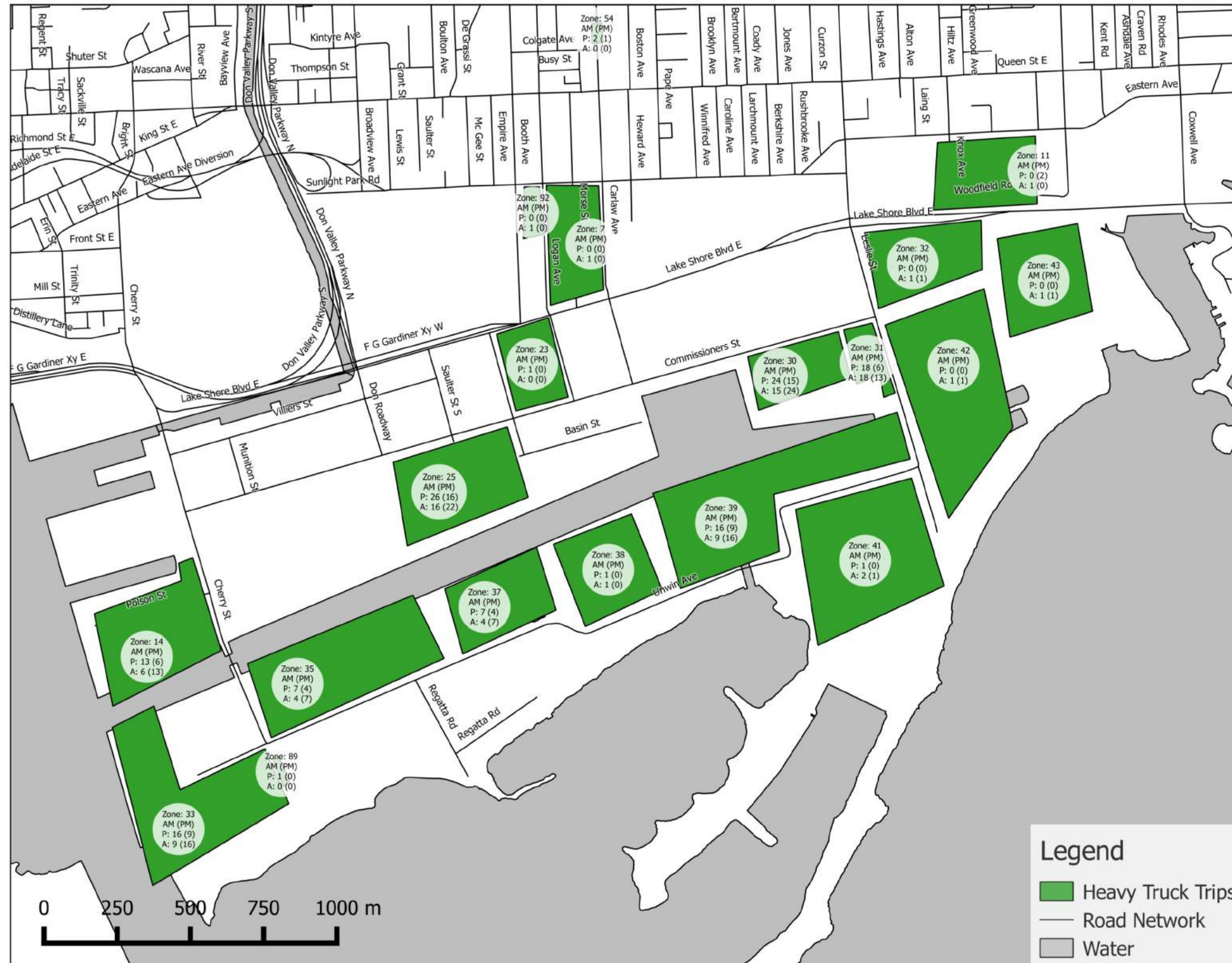


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Port Lands and South of Eastern
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Figure 17
Study Area Productions and Attractions (Light/Medium Truck Trips)
by Traffic Zone



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Port Lands and South of Eastern
Transportation and Servicing Master Plan

Figure 18
Study Area Productions and Attractions (Heavy Truck Trips)
by Traffic Zone

4.4

Trip Assignment

Once the trip generation, distribution, and mode choice decisions were complete for the various travel modes, it was then necessary to assign them to the transportation network.

For the purposes of this analysis, only the on-road motorised travel modes were assigned in the microsimulation model (i.e., Autos, Trucks, Transit). Transit person trips are also not directly assigned; instead, the transit vehicles are assigned in the model along their prescribed routes according to the existing schedule or estimated headways by route.

For truck activity, trucks currently have access to all roads in the study area. For the base condition it was assumed that this would continue in the future. However, it is noted that as the population and employment based land uses develop in the area, the character of the roadways will change. Truck traffic will not be compatible with many of the land use types and future roadway designs. Future policies will be required to restrict the operating conditions for trucks (i.e. route designations/restrictions; time restrictions; load restrictions, etc.).

5.0

Future Capacity Conditions

The future condition is an assessment of how growth in land use activity manifests itself on the transportation network. Forecasts are developed to reflect the change in the magnitude of person trip making (numbers of trips), the change in travel patterns through the network (distribution of trips to/from the study area), and the change in travel choice by users of the network (mode choice, route choice). The effects of these changes are measurable and are used to facilitate the identification of future deficiencies and the quantification of network performances associated with estimated forecast conditions.

The following sections identify the parameters and assumptions used in projecting demand and supply conditions for the future horizon.

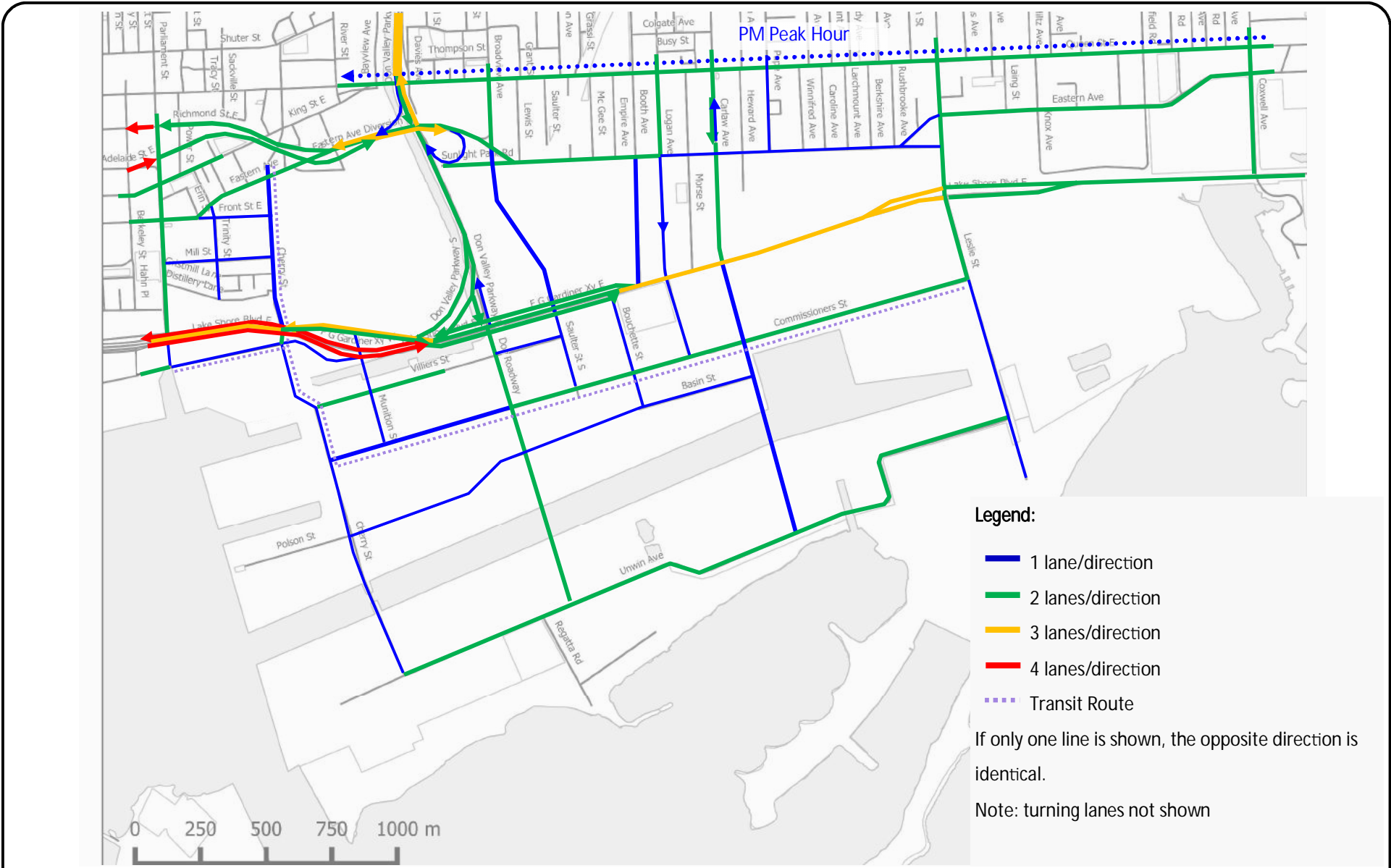
5.1

Base Network Assumptions

The transportation network is the skeleton upon which movement through the study area via any of the chosen modes (car, truck, transit, walk, and bike) occurs. The network is itself intimately tied to the proposed land use for the area. The future base network was composited from what is on the ground today and the recommendations of the area studies. It forms the basis for initial examination of 2065 future travel in the area. The future base case network takes elements of the Central Waterfront Secondary Plan (CWSP as amended by OPA 388 in 2010) and the Lowed Don Lands Environmental Assessment and adds them to the existing network. Notable additions/modifications to the network include:

- The extension Broadview Avenue from Eastern Avenue to Lake Shore Boulevard.
- Basin Street connection (1-lane in each direction) from Cherry Street to Carlaw Avenue.
- Commissioners Road reduced to 1-lane each direction for autos from Cherry Street to Don Road.
- Unwin Avenue improved to 2-lanes in each direction from Cherry Street to Leslie Street.
- Don Road 2-lanes in each direction extension across the Ship Channel to Unwin Avenue.
- Carlaw Avenue Road 1-lane in each direction extension across the Ship Channel to Unwin Avenue.
- Transit service extensions from the CWSP, with modification to support the land use direction for the south of the Ship Channel lands (bus service along Unwin Avenue connecting Cherry Street to Leslie Street).
- Improved GO service through study area (no station in the study area).
- Downtown Relief Line (Subway) to the north of the study area (no station in the study area).

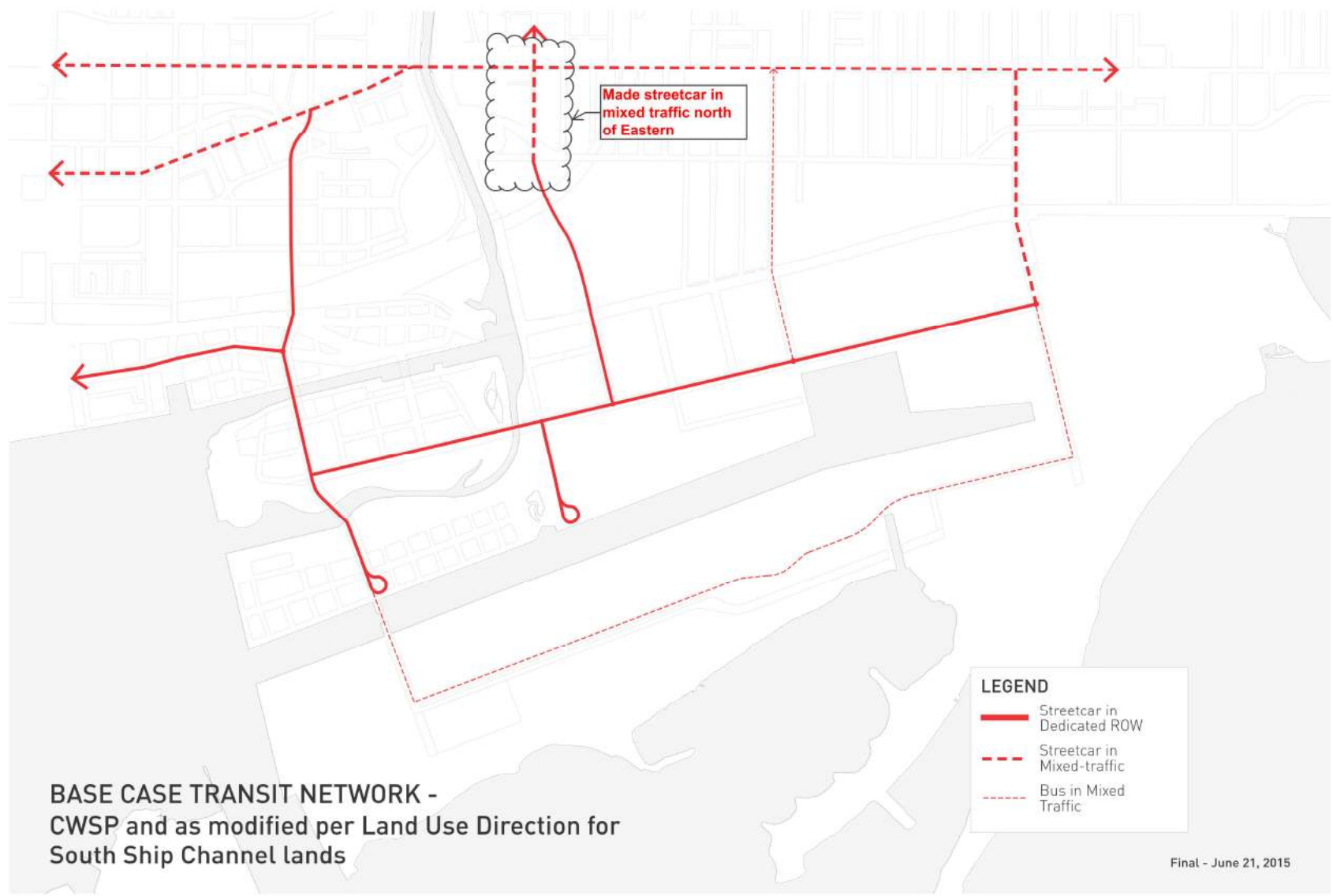
The future base condition networks for auto and transit are shown in Figure 19 and Figure 20.



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Figure 19
Future Road Network — Base





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Figure 20
Future Base Transit Network
(source: City of Toronto, 2015)

5.2 Future Base Network Assessment

The screenline assessment for the 2065 p.m. peak hour condition (on the future base network) is summarized in Table 11.

The screenline assessment shows that in the 2065 horizon for the Future Base Case Scenario for the critical p.m. peak hour condition the transportation infrastructure is showing signs of strain. Three of the north-south screenlines are operating at LOS D or worse. While the east-west screenlines are operating at LOS D or better from a complete corridor perspective, there are significant individual links that are operating at LOS E/F. These links indicate that the capacity needs in specific areas along the screenline are not being met.

Figure 21 provides a summary of the future base network deficiencies in the 2065 build-out condition for the Future Base Case Scenario.

The strategic assessment of network carrying capacity within the study area identified several long term lane deficiencies within the study area.

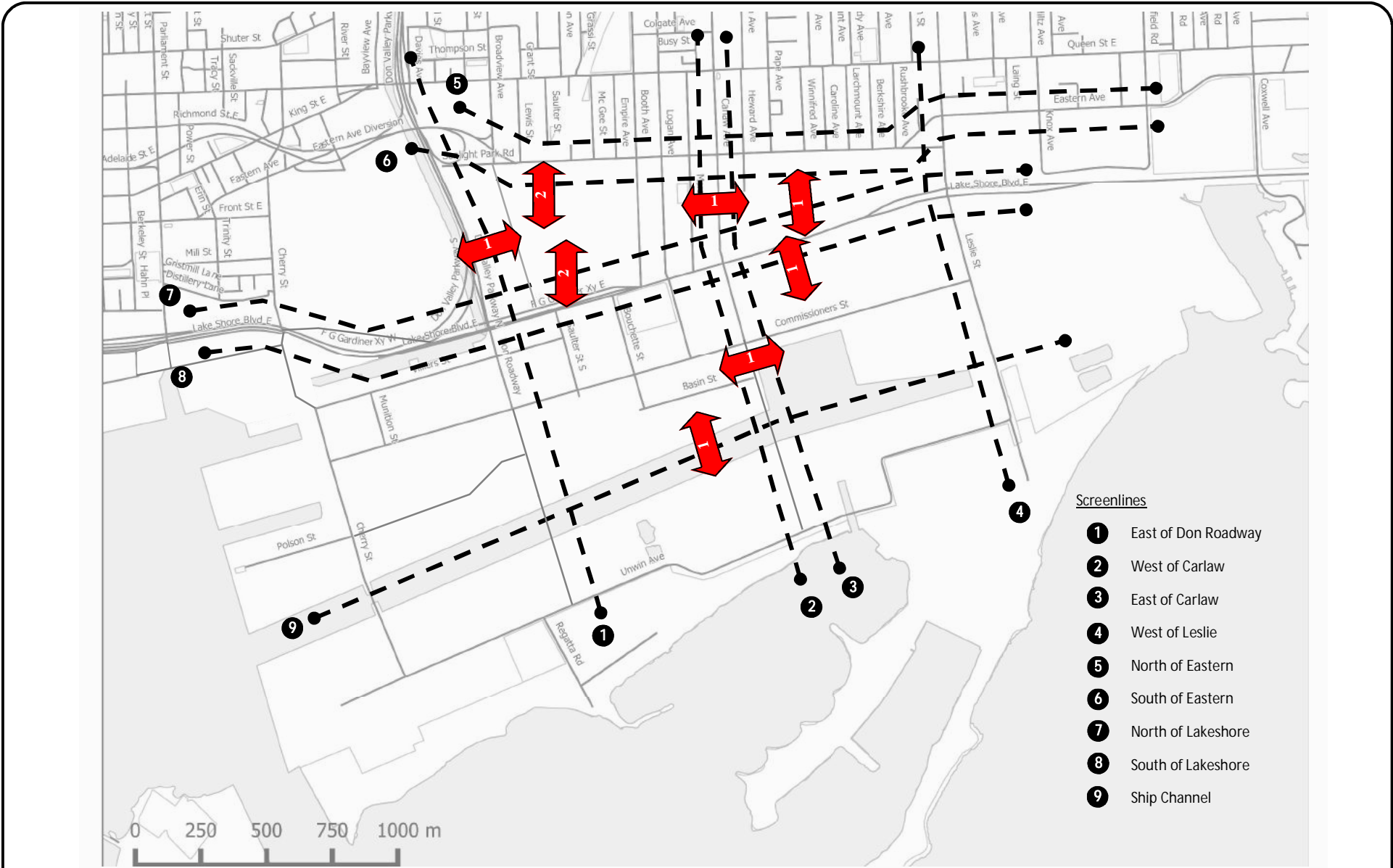
- North-South Travel
 - Between Don Roadway and Carlaw north of Lake Shore – 2 lanes deficiency
 - Between Carlaw and Leslie north of the Ship Channel – 1 lane deficiency
 - Crossing the Ship Channel between Cherry and Leslie – 1 lane deficiency
- East West
 - North of Lake Shore – 1 lane deficiency
 - South of Lake Shore, north of Ship Channel – 1 lane deficiency
 - South of Ship Channel – 1 lane deficiency

The identified deficiencies were used to define discrete sub-areas reflective of local capacity and operational needs to support travel. This was one consideration in the identification and evaluation of the transportation alternatives.

TABLE 11: 2065 P.M. PEAK HOUR SCREENLINE CAPACITY ASSESSMENT - FUTURE BASE NETWORK

PORT LANDS AND SOUTH OF EASTERN EA - SCREENLINE ANALYSIS											
2065 BASE - PM PEAK HOUR											
Screenline	Road	Lanes	Capacity /Lane	Capacity	Volume	V/C	Lanes	Capacity /Lane	Capacity	Volume	V/C
<i>East-West Travel</i>		EASTBOUND					WESTBOUND				
East of Don Roadway	Eastern	2	800	1,600	1,699	1.06	2	800	1,600	723	0.45
	Gardiner	2	1,800	3,600	1,781	0.49	2	1,800	3,600	1,955	0.54
	Lake Shore	2	1,200	2,400	1,553	0.65	2	1,200	2,400	1,936	0.81
	Commissioners	2	800	1,600	763	0.48	2	800	1,600	302	0.19
	Basin	1	800	800	121	0.15	1	800	800	473	0.59
	Unwin	2	800	1,600	536	0.33	2	800	1,600	606	0.38
	<i>Sub Total</i>				<i>11,600</i>	<i>6,453</i>	<i>0.56</i>			<i>11,600</i>	<i>5,995</i>
West of Carlaw	Eastern	1	800	800	588	0.73	1	800	800	683	0.85
	Lake Shore	3	1,200	3,600	3,329	0.92	3	1,200	3,600	2,353	0.65
	Commissioners	2	800	1,600	600	0.37	2	800	1,600	264	0.17
	Basin	1	800	800	310	0.39	1	500	500	120	0.24
	Unwin	2	800	1,600	853	0.53	2	800	1,600	312	0.19
	<i>Sub Total</i>				<i>8,400</i>	<i>5,679</i>	<i>0.68</i>			<i>8,100</i>	<i>3,732</i>
East of Carlaw	Eastern	1	800	800	752	0.94	1	800	800	916	1.14
	Lake Shore	3	1,200	3,600	3,056	0.85	3	1,200	3,600	2,095	0.58
	Commissioners	2	800	1,600	377	0.24	2	800	1,600	382	0.24
	Unwin	2	800	1,600	1,191	0.74	2	800	1,600	214	0.13
	<i>Sub Total</i>				<i>7,600</i>	<i>5,376</i>	<i>0.71</i>			<i>7,600</i>	<i>3,606</i>
West of Leslie	Eastern	1	800	800	731	0.91	1	800	800	319	0.40
	Lake Shore	3	1,200	3,600	2,716	0.75	3	1,200	3,600	1,469	0.41
	Commissioners	2	800	1,600	449	0.28	2	800	1,600	158	0.10
	Unwin	2	800	1,600	1,010	0.63	2	800	1,600	144	0.09
	<i>Sub Total</i>				<i>7,600</i>	<i>4,906</i>	<i>0.65</i>			<i>7,600</i>	<i>2,090</i>

<i>North-South Travel</i>		NORTHBOUND					SOUTHBOUND				
North of Eastern	Broadview	2	800	1,600	1,899	1.19	2	800	1,600	396	0.25
	Carlaw	2	800	1,600	736	0.46	2	800	1,600	516	0.32
	Leslie	2	800	1,600	660	0.41	2	800	1,600	434	0.27
	<i>Sub Total</i>				<i>4,800</i>	<i>3,294</i>	<i>0.69</i>			<i>4,800</i>	<i>1,346</i>
South of Eastern	Broadview	1	800	800	1,213	1.52	1	800	800	271	0.34
	Carlaw	2	800	1,600	1,099	0.69	2	800	1,600	586	0.37
	Leslie	2	800	1,600	983	0.61	2	800	1,600	489	0.31
	<i>Sub Total</i>				<i>4,000</i>	<i>3,294</i>	<i>0.82</i>			<i>4,000</i>	<i>1,346</i>
North of Lake Shore	Cherry	1	800	800	971	1.21	1	800	800	645	0.81
	Don Roadway	1	800	800	1,023	1.28	2	800	1,600	497	0.31
	Broadview	1	800	800	806	1.01	1	800	800	523	0.65
	Carlaw	2	500	1,000	1,590	1.59	2	500	1,000	1,074	1.07
	Leslie	2	800	1,600	1,405	0.88	2	800	1,600	873	0.55
	<i>Sub Total</i>				<i>5,000</i>	<i>5,795</i>	<i>1.16</i>			<i>5,800</i>	<i>3,613</i>
South of Lake Shore	Cherry	1	800	800	830	1.04	1	800	800	814	1.02
	Don Roadway	2	800	1,600	1,157	0.72	2	800	1,600	384	0.24
	Broadview	1	500	500	486	0.97	1	800	500	506	1.01
	Bouchette	1	500	500	157	0.31	1	500	500	121	0.24
	Logan	1	500	500	246	0.49	1	500	500	392	0.78
	Carlaw	1	800	800	953	1.19	1	800	500	660	1.32
	Leslie	2	800	1,600	1,767	1.10	2	800	1,600	661	0.41
	<i>Sub Total</i>				<i>6,300</i>	<i>5,595</i>	<i>0.89</i>			<i>6,000</i>	<i>3,537</i>
South of Ship Channel	Cherry	1	800	800	237	0.30	1	800	800	160	0.20
	Don Roadway	1	800	800	381	0.48	1	800	800	112	0.14
	Carlaw	1	800	800	72	0.09	1	800	800	193	0.24
	Leslie	1	800	800	519	0.65	1	800	800	166	0.21
	<i>Sub Total</i>				<i>3,200</i>	<i>1,210</i>	<i>0.38</i>			<i>3,200</i>	<i>632</i>



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Figure 21
Study Area Screenlines
Lane Deficiency Assessment - Future Base Network

Development of Preferred Network

The deficiencies identified in the future base network were used to generate alternative solutions within the study area. The alternatives were assessed through a multivariate criteria evaluation in order to identify preferred network elements required to address the deficiencies. Each alternative solution provided the necessary vehicular and transit capacity to support anticipated development. Part 3 of the Master Plan documents the identification and evaluation of transportation alternatives.

The resultant preferred street, transit, and active modes (pedestrian, cycling) networks are shown in Figure 22, Figure 23, and Figure 24, respectively.

Some of the details related to the alignment and design of the preferred network infrastructure improvements will require further analysis as part of Phase 3 of the EA process. Examples include: the nature of the connections of Bouchette Street in the area of the Broadview Avenue extension and Commissioners Street intersection, and the new east-west street that crosses the expanded McCleary Park. Considerations for such elements will include the potential to disconnect, design and consistent treatment across each street).



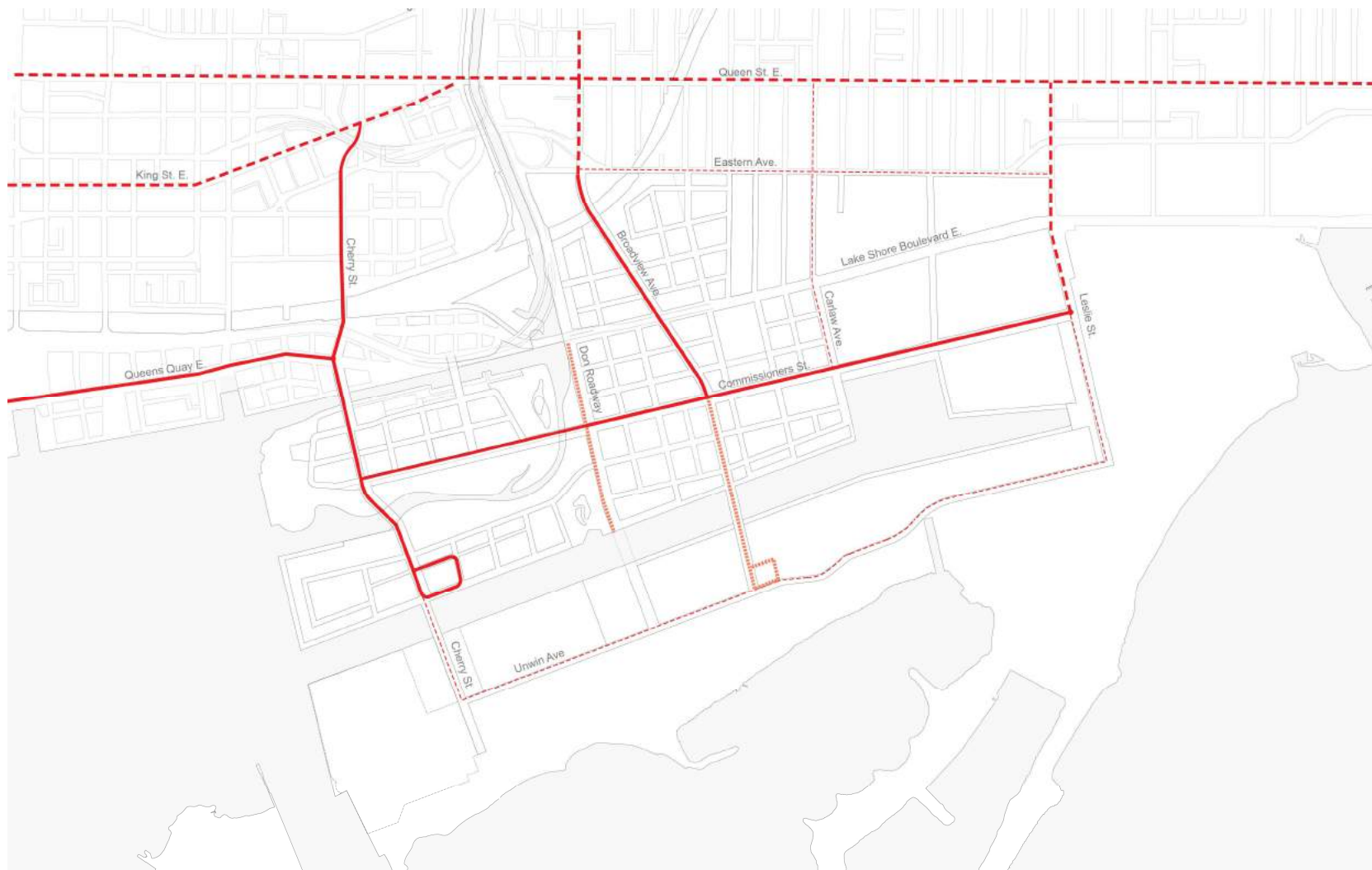
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- Major Streets
- Conceptual Local Streets
- Signal Control
- Conceptual Lanes
- Conceptual Midblock Connections
- Protected for Future Crossing
- Connection Under Assessment

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Figure 22
Future Preferred Network



- Streetcar in Dedicated ROW
- Protected for Future Streetcar in Dedicated ROW
- Streetcar in Mixed-Traffic
- Bus in Mixed Traffic

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Figure 23
Future Preferred Transit Network



Proposed/Planned

- ▬ Priority Raised Cycle Track
- ▬ Optional Raised Cycle Track
- ▬ Multi-use Trail
- ▬ Water's Edge Promenade
- ⋯ Trail

- ▬ Lane / Sharrows
- - - Protected for Future Cycling/ Pedestrian Connection

Existing

- ▬ Cycle Track
- ▬ Lanes / Sharrows
- ▬ Multi-use Trail
- ⋯ Trail
- ▬ Improved/Realigned Existing Multi-use Trail

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Transportation and Servicing Master Plan

Figure 24
Future Preferred Active Mode Network
Source: City of Toronto, 2016

7.0

Comparative Analysis of Future Networks

The Preferred street network and transit systems were tested at a strategic level to identify the performance for the overall network, confirming the adequacy of the preferred network elements to address the future needs of the network.

The strategic assessment defined the basic link carrying capacity needs of the network. Without this capacity the network will become dysfunctional in terms of delay and congestion. However, even with link capacity needs met, intersections can become the constraints in the processing capacity. Therefore, with the corridor carrying capacity needs confirmed, an operational level analysis was then undertaken to assess the operating needs of the preferred network and how the network would be implemented at a local intersection level. It is necessary to identify the intersection needs within a corridor to examine flow through the intersection and make best use of the network capacity.

As described in Section 2, the operational assessment was undertaken using a Paramics microsimulation model to assess operating gaps and the detailed performance of the preferred network. The assessment of intersection performance was based on the observed vehicle delays at the turning movement, link, and intersection level.

The performance of the preferred network has been compared to that of the future base network to show the benefit of the preferred network and service improvements.

7.1

Strategic Performance

The screenline assessment for the 2065 p.m. peak hour condition on the Future Preferred Network is summarized in Table 12.

The screenline assessment shows that in the 2065 horizon for the critical p.m. peak hour condition, is working within acceptable levels of service (LOS D or better). The Preferred Network shows no remaining carrying capacity issues, i.e. no additional lanes on the analysis screenlines required to achieve good corridor level performance.

TABLE 12: 2065 P.M. PEAK HOUR SCREENLINE CAPACITY ASSESSMENT - FUTURE PREFERRED NETWORK

2065 PRELIMINARY PREFERRED - PM PEAK HOUR											
Screenline	Road	Lanes	Capacity /Lane	Capacity	Volume	V/C	Lanes	Capacity /Lane	Capacity	Volume	V/C
<i>East-West Travel</i>		EASTBOUND					WESTBOUND				
East of Don Roadway	Eastern	2	800	1,600	1,206	0.75	2	800	1,600	813	0.51
	Unilever	1	800	800	163	0.20	1	800	800	445	0.56
	Gardiner	2	1,800	3,600	1,832	0.51	2	1,800	3,600	1,976	0.55
	Lake Shore	2	1,200	2,400	1,929	0.80	2	1,200	2,400	1,643	0.68
	New E-W Street	1	500	500	120	0.24	1	500	500	190	0.38
	Commissioners	1	800	800	584	0.73	1	800	800	301	0.38
	Basin	1	800	800	162	0.20	1	800	800	361	0.45
	Unwin	1	800	800	457	0.57	1	800	800	266	0.33
	<i>Sub Total</i>				<i>11,300</i>	<i>6,453</i>	<i>0.57</i>			<i>11,300</i>	<i>5,995</i>
West of Carlaw	Eastern	1	800	800	649	0.81	1	800	800	575	0.72
	Lake Shore	3	1,200	3,600	3,221	0.89	3	1,200	3,600	2,598	0.72
	New E-W Street	1	500	500	363	0.73	1	500	500	55	0.11
	Commissioners	1	800	800	627	0.78	1	800	800	174	0.22
	Basin	1	500	500	143	0.29	1	500	500	185	0.37
	Unwin	1	800	800	675	0.84	1	800	800	145	0.18
<i>Sub Total</i>				<i>7,000</i>	<i>5,679</i>	<i>0.81</i>			<i>7,000</i>	<i>3,732</i>	<i>0.53</i>
East of Carlaw	Eastern	1	800	800	804	1.00	1	800	800	742	0.93
	Lake Shore	3	1,200	3,600	3,168	0.88	3	1,200	3,600	2,397	0.67
	Commissioners	1	800	800	756	0.95	1	800	800	329	0.41
	Unwin	1	800	800	648	0.81	1	800	800	137	0.17
<i>Sub Total</i>				<i>6,000</i>	<i>5,376</i>	<i>0.90</i>			<i>6,000</i>	<i>3,606</i>	<i>0.60</i>
West of Leslie	Eastern	1	800	800	711	0.89	1	800	800	299	0.37
	Lake Shore	3	1,200	3,600	2,922	0.81	3	1,200	3,600	1,450	0.40
	Commissioners	1	800	800	677	0.85	1	800	800	245	0.31
	Unwin	1	800	800	596	0.75	1	800	800	96	0.12
<i>Sub Total</i>				<i>6,000</i>	<i>4,906</i>	<i>0.82</i>			<i>6,000</i>	<i>2,090</i>	<i>0.35</i>
<i>North-South Travel</i>		NORTHBOUND					SOUTHBOUND				
North of Eastern	Broadview	1	800	800	1,024	1.28	1	800	800	431	0.54
	Carlaw	2	800	1,600	1,272	0.79	2	800	1,600	509	0.32
	Leslie	2	800	1,600	999	0.62	2	800	1,600	406	0.25
	<i>Sub Total</i>				<i>4,000</i>	<i>3,294</i>	<i>0.82</i>			<i>4,000</i>	<i>1,346</i>
South of Eastern	Broadview	1	800	800	777	0.97	1	800	800	204	0.25
	Bouchette	1	800	800	104	0.13	1	800	800	113	0.14
	Carlaw	2	800	1,600	1,171	0.73	2	800	1,600	470	0.29
	Caroline	1	800	800	363	0.45	1	800	800	180	0.23
	Leslie	2	800	1,600	880	0.55	2	800	1,600	379	0.24
	<i>Sub Total</i>				<i>5,600</i>	<i>3,294</i>	<i>0.59</i>			<i>6,400</i>	<i>1,346</i>
North of Lake Shore	Cherry	1	800	800	772	0.97	1	800	800	431	0.54
	Don Roadway	2	800	1,600	1,039	0.65	2	800	1,600	515	0.32
	Broadview	1	800	800	737	0.92	1	800	800	522	0.65
	Bouchette	1	800	500	647	1.29	1	500	500	40	0.08
	Carlaw	2	800	1,600	1,236	0.77	2	800	1,600	1,077	0.67
	Caroline	1	500	500	406	0.81	1	500	500	322	0.64
	Leslie	2	800	1,600	959	0.60	2	800	1,600	707	0.44
	<i>Sub Total</i>				<i>7,400</i>	<i>5,795</i>	<i>0.78</i>			<i>7,400</i>	<i>3,613</i>
South of Lake Shore	Cherry	1	800	800	680	0.85	1	800	800	852	1.07
	Don Roadway	2	800	1,600	1,277	0.80	2	800	1,600	277	0.17
	Broadview	1	800	800	508	0.63	1	800	800	715	0.89
	Bouchette	1	500	500	335	0.67	1	500	500	79	0.16
	Logan	1	500	500	294	0.59	1	500	500	474	0.95
	Carlaw	1	800	800	677	0.85	1	800	800	408	0.51
	Caroline	1	500	500	597	1.19	1	500	500	226	0.45
	Leslie	2	800	1,600	1,228	0.77	2	800	1,600	582	0.36
<i>Sub Total</i>				<i>7,100</i>	<i>5,595</i>	<i>0.79</i>			<i>7,100</i>	<i>3,613</i>	<i>0.51</i>
South of Ship Channel	Cherry	1	800	800	362	0.45	1	800	800	228	0.28
	Channel Crossing	1	800	800	370	0.46	1	800	800	243	0.30
	Leslie	1	800	800	478	0.60	1	800	800	162	0.20
<i>Sub Total</i>				<i>2,400</i>	<i>1,210</i>	<i>0.50</i>			<i>2,400</i>	<i>632</i>	<i>0.26</i>

Note: Classification of Logan and Bouchette (south of Lake Shore) will be modified to 'local street' in the future network. Future precinct planning efforts will examine these streets in further detail.

7.2 Operational Performance

Where the strategic assessment provides assurance that the future transportation network will contain generally enough capacity to handle the forecasted demands in the appropriate areas, it is also necessary to assess the detailed operations of the network to examine the effects of any bottlenecks in the model caused by competing demands for limited capacity at intersections. The reality is that congestion that stems from spot issues can spread and create much larger issues in a network. This analysis provides further assurance and more detailed solutions that will be necessary to maintain appropriate flow for travellers in the study area. The operational analysis was accomplished via the creation and application of a transportation microsimulation model constructed in the Paramics software suite. This allowed for detailed analysis that examined the interaction of auto, truck, and transit vehicles with each other and the many traffic control elements in the study area.

Detailed statistics produced by the transportation microsimulation model are presented in Appendix T-3. Table 13 provides a summary of the LOS observed at the study area intersections for the Existing year, 2065 Future Base, 2065 Future Preferred, and 2065 Future Preferred Optimised to act as a guide to overall model performance for the discussion below.

7.2.1 Future Base Network

The Future Base network was shown to be a mixed bag when examining the outputs of the microsimulation model. The AM peak hour generally performed very well, with all study area intersections operating at LOS D or better in 2065, as shown in Table 13. This is opposed to the PM peak hour model, which shows significant issues at many intersections – approximately 35% of study area intersections were shown to operate at LOS E or F. The network shows some bottlenecks at key areas that cause a general degradation of operations throughout with some significant delays.

The corridor travel times in the Future Base models also illuminate the issues present in the PM peak hour for the Future Base model. The travel time along the vast majority of corridors was shown to increase by a factor of 3 to 5 times compared that in the existing model. For example, average eastbound travel time in the PM peak hour across the study area was shown to increase from 4.85 minutes to 14.25 minutes (Table T-3-5 in Appendix T-3) between the existing year and 2065 – an increase of approximately 3 times. This trend was observed in all of the cardinal directions in the study area, which indicates clear and striking mobility issues throughout the model during the 2065 PM peak hour. The AM peak hour also experiences an increase in travel times across the study area in all four cardinal directions, but not nearly to the extent of the PM peak hour.

The above observations apply equally to the travel speeds, delays, and processed volumes in the two models. The AM peak hour functions generally well, while the PM shows clearly that congestion is pervasive throughout the study area. Observations of the model in operation show that issues at key points have a cascading effect on the transportation network, causing significant delays throughout.

7.2.2 Future Preferred Network

The Future Preferred network brings together the City's preferred combination of projects and improvements as determined by the preceding holistic evaluation of the study area's various subarea options. As the goal of the evaluation process was not necessarily to arrive at the overall network that performs the best solely for motorised travel, but to provide the best balance of facilities for the future development of the area in

combination with ensuring that the transportation network serves the needs of all travellers, the Future Preferred network was not expected to perform perfectly for motorised vehicles.

TABLE 13: LEVEL OF SERVICE SUMMARY

Intersection	AM Peak Hour				PM Peak Hour			
	Existing AM	2065 Base AM	2065 Preferred	2065 Preferred Optimised	Existing PM	2065 Base PM	2065 Preferred	2065 Preferred Optimised
Queen @ Broadview	B	C	C	C	B	C	C	B
Queen @ Carlaw	B	B	B	B	B	C	C	B
Queen @ Leslie	A	B	B	B	B	C	C	C
Eastern Ave. @ Broadview	A	C	C	C	A	D	D	D
Eastern Ave. @ Carlaw	B	C	C	C	B	D	D	D
Eastern Ave. @ Leslie	B	C	C	C	B	D	C	C
Eastern Ave. @ Coxwell	B	C	C	C	B	B	C	B
Lake Shore @ Parliament	C	D	D	D	C	F	E	D
Lake Shore @ Cherry (North)	B	-	-	-	A	-	-	-
Lake Shore @ Cherry (South)	A	-	-	-	A	-	-	-
Lake Shore @ Cherry	-	C	C	C	-	E	D	D
Lake Shore @ Munitions	-	A	A	A	-	D	C	B
Lake Shore @ Don Roadway	B	D	C	C	B	E	D	C
Lake Shore @ Broadview	-	D	C	C	-	E	E	D
Lake Shore @ Carlaw	C	D	D	E	D	D	D	D
Lake Shore @ Leslie	C	D	C	D	C	D	D	D
Lake Shore @ Coxwell	D	B	B	B	B	C	C	B
Queen's Quay Extension @ Parliament	-	C	C	C	-	D	C	B
Queen's Quay Extension @ Cherry	-	D	E	C	-	F	F	D
Queen's Quay Extension @ Munitions	-	B	B	B	-	D	C	C
Commissioners @ Cherry	A	B	C	B	B	D	C	C
Commissioners @ Don Roadway	A	C	C	C	A	F	D	D
Commissioners @ Sauller	A	D	A	A	A	F	A	A
Commissioners @ Carlaw	A	D	C	C	A	F	E	D
Commissioners @ Leslie	B	B	B	B	B	D	C	B
Basin Extension @ Cherry	A	C	C	C	A	D	D	C
Basin Extension @ Don Roadway	-	C	B	B	-	F	C	B
Unwin @ Cherry	A	A	B	B	A	B	B	A
Don Roadway @ First Gulf	-	D	A	A	-	E	C	B

In comparison with the Future Base network, the Future Preferred network clearly performs as good or better in the AM peak hour. Table 13 shows clearly that there is an increase in the number of intersections operating at LOS C or better in the Preferred network (90% versus 67% in the Future Base). Though, there is a single intersection in the AM peak hour that now operates at LOS E in the Future Preferred, which operated at LOS D in the Future Base (Queen's Quay Extension / Cherry). And logically, there is also a sharp decrease in the number of intersections operating at LOS D – 9 intersections in the Future Base (33%) versus 2 in the Future Preferred (7%). Neither network shows any intersections operating at LOS F during the AM peak hour.

Based on the above improvements in LOS over the Future Base model, it is unsurprising to note that all other statistics (corridor travel times, average vehicle delays, and travel speeds) are as good or better on the whole in the Future Preferred network during the AM peak hour.

The performance of the Future Preferred network during the PM peak hour, however, exhibits some of the same issues that mar the overall performance of the study area. With that said, however, there is a clear improvement in the Future Preferred network in some areas. The number of intersections with LOS of E or F is clearly improved in the Future Preferred network (4 versus 10 in the Future Base) – a change to 15% of all study area intersections instead of 37%. Most importantly from this table, it can be seen that the delays between intersections along a specific corridors is much more controlled than in the Future Base; Commissioners Street, for example, shows clear issues along its length in the Future Base with all intersections operating at LOS D or F and the central intersections at Don, Saulter, and Carlaw all operating at LOS F – a clear indication of heavy delay and congestion in the core of the corridor. All intersections on Commissioners are shown to improve by at least one letter grade if not more in the future preferred network, with none of the evidence of delays between the core intersections. This same trend can be also observed along Lake Shore Boulevard – the main east-west artery in the study area.

Travel times along corridors in the PM peak hour model show a clear improvement over the Future Base model – ranging from 15 to 30% improvement (Table T-3-5 in Appendix T-3). This is generally an improvement of 1.5 to 4 minutes in travel time across the study area. This is not to say, however, that the network performs “well”, as the comparison to existing conditions is still fairly unfavourable, but there is a clear improvement versus the Future Base.

Investigation of turning movement level statistics also confirms the trends described above. There is a clear improvement in the average delay for vehicles on the whole in the Future Preferred network when compared to the Future Base. The difference is starker in the PM peak hour due to the extent of delays in the Future Base model that is greatly reduced in the Future Preferred network, but both the AM and PM peak hours show that operations will be improved in the Future Preferred network with overall delays showing a clear reduction. And commensurate to the reduced delay, the number of turning movements with LOS A, B, or C is clearly improved in both the AM and PM peak hours in the Future Preferred network. The Future Preferred network, for example, reduces the number of failing turning movements (i.e., LOS F) by half – from a total of 74 in the Future Base PM peak hour to 32 in the Future Preferred (Tables T-3-19 to T-3-23 in Appendix T-3).

In the Future Preferred Network, some operational issues remain at specific intersections with some movements operating at LOS E or F in one or both periods. These issues are addressed and corrected in the following section. Note that the listing below in no way indicates that each listed location requires modification to solve operational issues. Due to the nature of congestion in reality and in microsimulation models, there were a much smaller number of bottleneck points that were corrected to vastly improve operations throughout the study area due localised interactions that exacerbated smaller, more focused issues, as discussed in the following section. Turning movements experiencing LOS E or F in either or both the AM and PM peak hours for the Future Preferred network were (Tables T-3-19 to T-3-23 in Appendix T-3):

- Queen / Broadview – NBL
- Queen / Carlaw – WBL
- Eastern / Broadview – SBL, SBT
- Eastern / Broadview – SBR, WBL, WBT
- Eastern / Carlaw – NBL, SBL, SBT, SBR, WBL
- Eastern / Leslie – NBL, SBL
- Eastern / Coxwell – NBL, SBL, EBL, EBT, EBR

- Lake Shore / Parliament – NBL, NBT, SBL, WBT, WBR
- Lake Shore / Cherry – WBL, WBR, EBL
- Lake Shore / Munitions – NBL, NBR
- Lake Shore / Don – NBR, SBL, SBR, EBT, EBR
- Lake Shore / Broadview – NBL, NBT, WBL, WBR, EBL, EBT, EBR
- Lake Shore / Broadview – NBT, WBL, WBR, EBL, EBT, EBR
- Lake Shore / Carlaw – NBL, SBL, SBT, WBL
- Lake Shore / Leslie – NBL, SBL, EBL
- Lake Shore / Coxwell – SBL, EBL,
- Queen's Quay Extension / Cherry – NBL, NBT, NBR, WBL, WBT, WBR, EBL, EBT, EBR
- Commissioners / Cherry – WBT, WBR
- Commissioners / Don – NBL, NBT, NBR, SBL, SBT, SBR
- Commissioners / Saulter – SBL, SBR, WBT, WBR, EBL
- Commissioners / Carlaw – NBL, NBT, NBR, SBL, WBT, WBR
- Commissioners / Leslie – EBL
- Basin Extension / Cherry – EBL, EBT, EBR
- Don / Unilever Entrance - SBT

Optimization of the Preferred Network

The preferred network has been tested at both a strategic and operational level using current industry best practices and information readily available for future background growth in the broader city. There are many social, physical, and economic variables that may not hold true in the fullness of such a long planning horizon. Tests on various elements of the analysis have been undertaken to understand their significance to the finding of the assessment and, if possible, quantify their implications to the findings of the transportation assessment. Further, given that the TSMP was undertaken concurrently with other area initiatives, such as the Gardiner Expressway EA and Downtown Relief Line Assessment, further testing was needed to understand how potential decisions on these initiatives would influence the preferred network. Sensitivity testing was also used as basis for testing other potential connections raised during the public consultation, such as the Woodfield/Knox connection.

With the strategic assessment confirming the adequacy of the preferred network from a capacity perspective, an operational analysis was conducted using the microsimulation software to identify specific local areas that may experience congestion or delays. Intersection levels of service at an intersection level were reviewed for overall LOS and for specific critical movements. Where additional problems identified, tests were made of alternative modifications to the geometry or operating condition to assess the effect of the change on the performance.

Mitigation of operational issues in the network required the resolution of issues at key bottlenecks throughout the study area. Correction of issues at spot locations served to relieve upstream pressure at many locations due to delays and congestion. Several rounds of improvements were necessary to arrive at an adequate package of improvements that collectively serve to improve operation for the network. Note that some recommended mitigation measures might result in additional land required at the listed intersections beyond the typical ROW that is illustrated for each street. The subject intersections are identified below, along with the recommended mitigative needs:

- Eastern and Cherry/Sumach
 - Reconfigure northbound lane allocations to provide exclusive NBL and shared NBT / NBR
- Eastern and Broadview
 - Reconfigure northbound lane allocations to add extra NBT lane
 - Optimize signal phasing for split-phase operation north-south
- Eastern and Coxwell
 - Add exclusive EBL turning lane
- Lake Shore and Don Roadway
 - Reconfigure southbound lane allocations to double SBL and one shared SBT / SBR
 - Optimize signal phasing for new lane allocation to serve SBL volume in AM
- Lake Shore and Broadview
 - Prohibit WBL movement
 - Reconfigure northbound lane allocations to include two NB approach lanes from LSB to new cross-street north of Commissioners
 - Optimize signal phasing for new geometry
- Lake Shore and Gardiner Ramp Merge
 - Turn prohibitions for problem movements – no EBL from Gardiner lanes to Logan
- Lake Shore and Carlaw

- Add exclusive NBL turning lane in addition to shared NBL/NBT and NBT/NBR lanes
- Optimize signal phasing for split phase operation in all directions
- Queens Quay and Cherry
 - Add WBL exclusive turn lane
 - Optimise signal phasing / timing to accommodate streetcars

Where necessary, signals adjacent to the above modifications were also modified slightly to better accommodate coordinated flow along corridors or in conjunction with particular turning movements.

Referring to Table 13 in Section 7.2, the effects of the optimisation can be observed through the changes in LOS for the study area intersections. The AM peak hour shows improvement at many intersections; with 90% of intersections now operating at LOS C or better. Only two intersections were shown to operate at LOS D, and a single intersection at LOS E (Queen's Quay Extension / Cherry). The PM peak hour shows a dramatic improvement after optimisation – 85% of study area intersections were shown to operate at LOS D or better, a change from 63% prior to optimisation. Three intersections remain problematic at LOS E, and a single intersection was observed to operate at LOS F (Queen's Quay Extension / Cherry). This location is problematic in both peak hours due to heavy northbound left and eastbound left turns.

Travel times along study area corridors are improved across the board in the AM and PM peak hours after optimisation. The changes are more pronounced in the PM peak hour due to the significant improvement in intersection operations, which allow for more streamlined flow along the corridors. Transit vehicles in mixed traffic see a reduction in corridor travel times of approximately 12% (~1minute) in the PM peak hour when compared to the non-optimized condition; the AM peak hour performs identically to the non-optimised model for transit vehicles, which indicates that they are able to travel at acceptable speeds even prior to the optimisation. Transit vehicles in dedicated ROW continue to perform well and are immune to the changes.

As the intersection LOS has improved, it is logical that the underlying turning movements also show improvements through reduced delays and changes to the LOS. Approximately 90% of study area turning movements perform at LOS D or better in the AM peak hour and 85% during the PM peak hour. This is very good performance for a dense urban area and represents a significant improvement to the original Preferred model, especially in the PM peak hour.

The optimisation of the network revealed the following:

- The Preferred Network can be optimised to adequately serve 2065 travel demands;
- All study area intersections were found to be operating at LOS D or better (where LOS D is considered the minimal acceptable standard) in the AM peak hour;
- 85% of study area intersections were found to be operating at LOS D or better in the AM peak hour;
- Issues identified for specific isolated movements at intersections can be addressed by implementing minor localized improvements, i.e. additional auxiliary lanes, alternative geometric design, and/or adjustments to optimize signal phasing or timings, as identified above. Results are detailed in Appendix T-3.

9.0

Sensitivity Testing

The preferred network has been tested at both a strategic and operation level using current industry best practices and information readily available for future background growth in the broader city. There are many social, physical, and economic variables that may not hold true in the fullness of such a long planning horizon. Tests on various elements of the analysis have been undertaken to understand their significance to the finding of the assessment and, if possible, quantify their implications to the findings of the transportation assessment. Further, given that the TSMP was undertaken concurrently with other area initiatives, such as the Gardiner Expressway EA and Relief Line Assessment, further testing was needed to understand how potential decisions on these initiatives would influence the preferred network. Sensitivity testing was also used as basis for testing other potential connections raised during the public consultation, such as the Woodfield/Knox connection.

Sensitivity tests were broken down into two types:

- Corridor Level – reflecting local area impacts of a facility or service condition; and
- System Level – reflecting the study area wide impacts of foundation assumptions related to travel behaviour or a specific a facility or service condition for the general area.

The following sections provide a summary of the results of each of the tests undertaken.

9.1

Corridor Level

9.1.1

Extending Woodfield/Knox to Lake Shore Boulevard East

The objective of this sensitivity test was to assess the potential network benefits of reopening and extending Woodfield Avenue or Knox Avenue to Lake Shore Boulevard East. These existing public streets currently terminate 35 meters from Lake Shore Boulevard East.

The strategic screenline assessment undertaken to establish the vehicular capacity required in the Study Area to support the level of development proposed did not specifically identify the need for additional north-south capacity east of Leslie Street. Connecting Woodfield Avenue or Knox Avenue to Lake Shore Boulevard East was identified during the public consultation undertaken for the project. Additionally, it would have the following key benefits:

- It would provide an additional north-south connection in an area currently lacking connectivity;
- It would break up long blocks, providing additional/alternative signalized access to Lake Shore Boulevard East; and
- It would align with the City's 10 year cycling plan and provide improved pedestrian amenity.

Microsimulation analysis was undertaken to assess how the provision of the capacity might affect local area travel behaviour. The results of this analysis were as follows:

- Demand observed on the new link estimated at 200 vehicles in peak direction, during peak hour (approximately a ¼ lane of traffic or 1 vehicle every 3 mins).
- The vast majority of the 200 vehicles on the new facility are vehicles diverted from Coxwell, few from other roadways.
- No appreciable change in vehicle volumes was observed on Leslie Street.

- No effect on north-south volume flows observed west of Leslie Street during peak hour.
- Changes in P.M. peak hour volumes on Eastern were noted as follows:
 - East of Leslie: 10 % reduction in 2-way volume; 15% reduction in westbound volume
 - West of Leslie: 5% reduction in 2-way volume; 15% reduction in westbound volume

Based on the operational assessment of the area, the following conclusion was reached:

- While the Woodfield extension provides some enhancement to the operating condition along Eastern Avenue and Leslie Street, the capacity does not divert significant volumes away from other north-south corridors in the study area to negate the need for elements of the preferred network (i.e. urbanization of Eastern or the improvement and extension of Caroline Street.)

9.1.2

Carlaw Avenue

The objective of this sensitivity test was to assess network performance if Carlaw Avenue north of Lake Shore Boulevard East was upgraded to a complete street. Currently, this section of Carlaw Avenue is an 18.3 meter right-of-way with two vehicular lanes per direction, with substandard sidewalks and no cycling amenity. On-street parking is permitted in the off-peak direction which limits the off-peak direction to one lane (northbound in the AM, southbound in the PM). While the signage prohibits on street parking in the peak direction, in reality, parking by permit is allowed at any time, effectively also reducing the peak direction capacity to a single lane.

In the microsimulation model PM peak period, this segment of street has vehicular volumes in the 900-1,000 range, representing close to capacity conditions. The complete street scenario would reduce the carrying capacity per lane (potentially through narrower lanes) with additional left-turn lanes and mid-block on-street parking, separated cycling facilities and improved pedestrian amenities. The reduction in automobile carrying capacity associated with this scenario compared to existing conditions is not significant.

Based on this analysis the following conclusions were reached:

- Volumes on Carlaw under this complete street alternative in the peak direction for the 2065 p.m. peak condition range between 600-700 vehicles between Lake Shore and Eastern. While this reflects a diversion of approximately 200-300 vehicles from Carlaw, this still reflects an operating condition that is slightly over automobile capacity for the theoretical capacity of the street. This is not a significant amount of excess volume in the corridor.
- While the complete street design provides a more sustainable operating environment for all modes, it reduces the auto carrying capacity of Carlaw. This is a policy decision to provide improvements to travel modes outside of automobiles.
- In the critical p.m. peak hour condition, volumes on Carlaw are reduced but the street continues to operating at or over capacity.
- The resultant diversion of Carlaw trips, approximately 200-300 vehicles and reflective of ½ lane of capacity, will potentially add more pressure on adjacent north-south streets in the study area.

Conversion of Carlaw to a complete street would not result in a significant change in automobile carrying capacity for the facility and would allow the City to meet its policy goals without significant degradation of automobile travel times in the area.

9.1.3

Traffic Infiltration

The objective of this sensitivity test was to quantify the potential impact of north-south network improvements between Carlaw and Leslie on the local street network.

To assess the potential for neighbourhood traffic infiltration turning movement volumes at the four boundary intersections from the transportation microsimulation model for the 2065 Base model and the 2065 Preferred model (with final mitigation measures in place) for both the AM and PM peak hours were established. The four intersections were as follows:

- Lake Shore Boulevard / Carlaw Avenue
- Lake Shore Boulevard / Leslie Avenue
- Eastern Avenue / Carlaw Avenue
- Eastern Avenue / Leslie Avenue

The difference in turning volume between the two scenarios for any movement that moves from the major east/west facility (i.e., Lake Shore or Eastern) to the north / south facilities (i.e., Carlaw or Leslie) were calculated. The specific movements considered were:

- Eastbound Right and Westbound Left at Carlaw/Eastern and Leslie/Eastern
- Eastbound Left and Westbound Right at Carlaw/Lake Shore and Leslie/Lake Shore

The difference for the individual movements was tallied and a percent change at the major intersections was calculated. The resultant change at the major intersections was assumed to be the degree of infiltration.

The results of the analysis were as follows:

- It was found that infiltration in the AM peak hour would be reduced by 19%, whereas infiltration in the PM peak hour was shown to increase by 14%, when comparing the 2065 Preferred Network (with final mitigation measures) to the 2065 Base Condition.
- The increase in infiltration in the PM peak hour can likely be attributed to the additional congestion shown in that model when compared to the AM peak hour. With an increase in congestion throughout the network, the frequency of infiltration or "shortcutting" along lower travelled routes would have the potential to increase as motorists seek the path of least resistance to their destination.
- As a point of reference, the overall volume at the target intersections was shown to decrease overall by 4% in the AM peak hour and increase by 25% in the PM peak hour. It could be reasoned that the difference in the overall volume increase (25%) in the PM peak hour versus the infiltration increase (14%) indicates that the major routes will still carry the majority of the volume increase.

Based on the analysis undertaken in the microsimulation model, the following was observed:

- Volume increases associated with future growth and change in travel patterns will be realized in the sub-area.
- The local streets will see a smaller increase in volume than the major routes.
- It is estimated that as much as 14% of the volume on the local streets can be considered non-local traffic. This represents in the range of 40 and 60 vehicles in the worst case p.m. peak hour (less than 1 car per minute).

- Monitoring should be undertaken to confirm potential increases in street volumes over time. Mitigation measures should be considered to limit the potential for increase traffic level due to short cutting (i.e. peak hour turning prohibitions, alternative design considerations (road diet where curb lines and pavement markings are used to effectively/visually narrow the cross section)).

9.1.4

Dedicated Truck Routes

The Study Area will continue to have a range of port and industrial uses into the future, with truck traffic making up 5-6% of overall trips within the study area. The presence of trucks will naturally be higher on certain routes (e.g., Lake Shore Boulevard 6-9%, Commissioners 4-7%) dependent on land use and the connections available to trucks.

Currently, Commissioners Street is identified as a major truck route. In the future, Villiers Island and the McCleary District are proposed to redevelop into new mixed-use communities. Managing the interface between new communities and continued port/industrial areas is required to minimize potential negative impacts to both to ensure great places are created for living and the continued viability of industry. Other jurisdictions implement dedicated truck routes as a means of managing this interface.

Based on initial discussion with key industries on the potential for introducing dedicated truck routes in the Study Area, additional travel time could be considered, provided truck routes were reliable and there was redundancy in the network. The sensitivity test undertaken for dedicated trucks routes was undertaken to determine the potential increase in travel time in the AM and PM peak periods if a dedicated route was introduced on Cherry Street south of the river, Unwin Avenue, Leslie Street and Commissioners Street east of Carlaw Avenue. Trucks generally need to access the major arterial (Lake Shore) and freeways (Gardiner and Don Valley Parkway). It is recognized that there are origins/destinations within the Study Area itself, such as from the Lafarge Cement Terminal on Polson Quay to the East Port area. However, this was not specifically tested.

The results of the analysis were as follows:

- In the future, it is estimated that heavy truck traffic during the peak hour will be in the order of 190 vehicles.
- Currently there are no truck traffic routes defined in the network, meaning trucks can use the network at their discretion to minimize their travel times in and out of the study area.
- The nature and character of the Port Lands road network will change significantly over time as development occurs. The future roadway is being planned to support all modes of travel and the design of these roadways meant to support the public realm objectives. The use of these urban streets by heavy trucks is not consistent with the planned role of the streets.
- Trucks need access to the major arterial (Lake Shore) and freeway (Gardiner and Don Valley Parkway) system, but routes will have to be defined to limit the exposure to highly sensitive urban environments.
- Truck routes have been defined from Unwin and Commissioners that use Leslie to access Lake Shore.

More detailed analysis should be undertaken in Phase 3 of the Municipal Class EA process that includes completing cordon counts, establishing more detailed truck counts and origins/destinations at key times of the year, and testing a number of potential scenarios for establishing dedicated truck routes.

9.2 System Level

9.2.1 Gardiner Expressway

The objective of this sensitivity test was to assess the preferred network performance with the preferred Gardiner Expressway option (Hybrid 3). The current assumption in the 2065 Base Network was that the existing Gardiner Expressway remains unchanged (including landing area of the east end ramps) given that the Gardiner Expressway EA is being undertaken concurrently with the TSMP and a provincial decision on the Individual EA will not be issued prior to the completion of the TSMP. A modification of the Gardiner Expressway alignment and ramps locations/configurations resulted in changes to area travel demands as a result of reduced screenline auto capacity and new connection potentials. Modal split estimates for transit and active modes remained consistent with those described in Section 4.2.2.

The results of the analysis were as follows:

- The hybrid option results in a reduction in east-west carrying capacity between Cherry Street and Logan Avenue.
- Volumes in the Lake Shore corridor do not change significantly. They do increase, but the facility is at capacity, so the change is minor. This is partly due to the constrained capacity of Lake Shore east of the existing Gardiner Terminus.
- Vehicle-Hours of travel in the study area
 - Preferred – 4,562 vehicles per hour
 - Gardiner Hybrid – 4,548 vehicles per hour
- Constrained capacity results in diversion of demand from the area and/or from the peak hour (peak spreading).
- Intersection operational issues result at Lake Shore/Don Roadway, Lake Shore/Broadview; Lake Shore/Bouchette, Lake Shore/Carlaw.
- Volumes to and from Port Lands south of Lakeshore relatively unchanged.

Based on the preceding analysis the following conclusions were reached:

- Modification of the Gardiner Expressway limits results in significantly less east-west capacity in the network at the west end of study area.
- Capacity at the central section and east end of study area do not change.
- The Preferred Network provides adequate capacity to serve demands.
- Restructuring of the Gardiner Expressway (capacity and ramp connections) in the study area facilitates better access for intersection crossing Lake Shore between Don Roadway and Logan. With this potential comes increase turning movements, increased need for traffic control, and increased delays.
- Intersection mitigation (auxiliary lane provisions and signal timing optimization) will be required for intersections at Don Roadway and the Broadview Extension to optimize the performance and efficiency of the intersections with Lake Shore.

9.2.2 Increased Transit Service and Infrastructure

A sensitivity test was performed for the Port Lands and South of Eastern area relative to the transit mode share that is expected to occur in 2065. Baseline 2065 forecasts for transit use showed an approximate 62% transit mode share for the area, based on the capacity of the future planned transit service for the area. This original estimate assumed although the GO service improvement and the Downtown Relief Line (DRL) would be in place by 2065, stations for each within the Study Area would not be in place, making access for the PL&SE developments more difficult.

The purpose of the transit sensitivity test was twofold:

- Identify the order of magnitude impacts on travel of the increased transit infrastructure within study area (specifically DRL and Smart Track stations) above the base line assumptions; and,
- Assess the potential for additional development levels on the Unilever Precinct above the baseline assumption of 20,055 employees.

This test assumed that a multi-modal station would be provided in the vicinity of the intersecting point of the Broadview Extension / Rail Line, which would serve the future SmartTrack (ST) transit and that the Downtown Relief Line would be in place by 2065. This test also continued to assume a 10% mode share for active transportation, as in previous analyses.

These transit service expansions bring with them additional transit convenience and capacity, particularly for the Unilever site. An assessment of the capacity of the transit system within the area showed that the implementation of the DRL and ST results in an area transit mode share increase from 62% to 68%. This was the overall representative mode share, but the actual values were calculated differentially for various portions of the study area dependent on their proximity to quality transit service. For the Unilever Precinct, the mode share increased from 60% to 67%.

To represent this change in the model, the trip generation rates at the individual model zones were adjusted according to the representative mode share for that portion of the model. The adjust trip levels were then re-distributed in the model and the model was re-run to produce statistics and analysis.

The results of the analysis were as follows:

- The increase in transit mode share led directly to a reduction in the number of automobile trips in the model, which served to improve overall roadway operations. The overall number of vehicle trips in the model decreased by 2.1% in the AM peak hour and 2.8% in the PM peak hour. Average vehicle speed in the models was shown to increase by 7.3% in the AM peak hour and 7.2% in the PM peak hour. It can be seen by the increase in model speed versus the reduction in demand, that the network was relatively more congested and even small reductions in the number of vehicles on the road can have a large effect on delays.

Based on the analysis the following conclusions were reached:

- As indicated by the increase in overall travel speed, the operations of the study area are improved. Delays were generally seen to decrease and travel time along key routes was reduced. This was all logical and as expected with a reduction in demand for auto travel.
- The shift of some travellers from auto to transit due to the implementation of the DRL opened up an opportunity for additional employees for the Unilever site. It can be reasonably assumed that the capacity on the road network that has been "opened up" by the shift of some motorists to transit will naturally be filled again by an equivalent number of cars; this would result in similar operations to the future base condition with none of the improvements in operations suggested above. And

additionally, if the target mode share percentage of 67% specific to the Unilever site in the PM peak hour were maintained, this showed the potential for an additional 3,500 employees for this site.

- As development occurs, travel patterns and area volumes will need to be monitored to ensure the appropriate timing for the implementation of transit service improvements and other travel demand management programs necessary to achieve high non-auto based trips making to and from the area.
- To accommodate any additional significant intensification, fundamental changes in future travel patterns and demands that reflect walking and cycling as more dominant modes of movement will be needed. The preferred street network and proposed pedestrian and cycling environment would accommodate this.

9.2.3 Alternative 2065 Land Use

As the TSMP and transportation analysis was being undertaken concurrently with the City and Waterfront refining the 2014 Council endorsed Land Use Direction, the objective of this sensitivity test was to assess the preferred network with the preferred land use direction presented to the public in November 2015. The preferred land use direction resulted in two mixed-use communities in Villiers Island and the McCleary district with a total potential population of approximately 18,500 residents. Given the need to complete additional more detailed noise and air quality analysis for Polson Quay and South River during precinct planning, the preferred land use direction assumed for this sensitivity did not include any residential uses in these areas. The overall amount employment in the Port Lands in the preferred land use direction is relatively constant with the previous land use scenario assessed, as the earlier scenario assumed a certain amount of employment within potential mixed-use areas.

Using the strategic screenline assessment and the microsimulation tool, the revised travel demands associated with the land use scenario were developed and assigned to the Preferred Network. The screenline capacity assessment is summarized in Table 14.

TABLE 14: 2065 P.M. PEAK HOUR SCREENLINE CAPACITY ASSESSMENT - ALTERNATIVE LAND USE

PORT LANDS AND SOUTH OF EASTERN EA - SCREENLINE ANALYSIS												
2065 PREFERRED LAND USE - PM PEAK HOUR												
Screenline	Road	Lanes	Capacity /Lane	Capacity	Volume	W/C	Lanes	Capacity /Lane	Capacity	Volume	W/C	
<i>East-West Travel</i>		EASTBOUND						WESTBOUND				
East of Don Roadway	Eastern	2	800	1,600	1,203	0.75	2	800	1,600	1,024	0.64	
	Unilever	1	800	800	171	0.21	1	800	800	380	0.47	
	Gardiner	2	1,800	3,600	2,113	0.59	2	1,800	3,600	1,557	0.43	
	Lake Shore	2	1,200	2,400	1,913	0.80	2	1,200	2,400	1,656	0.69	
	New E-W Street	1	500	500	161	0.32	1	500	500	118	0.24	
	Commissioners	1	800	800	492	0.62	1	800	800	319	0.40	
	Basin	1	800	800	278	0.35	1	800	800	297	0.37	
	Unwin	1	800	800	377	0.47	1	800	800	159	0.20	
	<i>Sub Total</i>				11,300	6,707	0.59			11,300	5,510	0.49
West of Carlaw	Eastern	1	800	800	655	0.82	1	800	800	626	0.78	
	Lake Shore	3	1,200	3,600	3,560	0.99	3	1,200	3,600	2,427	0.67	
	New E-W Street	1	500	500	321	0.64	1	500	500	48	0.10	
	Commissioners	1	800	800	465	0.58	1	800	800	157	0.20	
	Basin	1	500	500	189	0.38	1	500	500	204	0.41	
	Unwin	1	800	800	474	0.59	1	800	800	104	0.13	
	<i>Sub Total</i>				7,000	5,664	0.81			7,000	3,565	0.51
East of Carlaw	Eastern	1	800	800	964	1.20	1	800	800	913	1.14	
	Lake Shore	3	1,200	3,600	3,394	0.94	3	1,200	3,600	1,844	0.51	
	Commissioners	1	800	800	604	0.76	1	800	800	532	0.67	
	Unwin	1	800	800	352	0.44	1	800	800	145	0.18	
	<i>Sub Total</i>				6,000	5,314	0.89			6,000	3,434	0.57
West of Leslie	Eastern	1	800	800	690	0.86	1	800	800	404	0.51	
	Lake Shore	3	1,200	3,600	3,001	0.83	3	1,200	3,600	1,196	0.33	
	Commissioners	1	800	800	812	1.01	1	800	800	220	0.27	
	Unwin	1	800	800	303	0.38	1	800	800	103	0.13	
	<i>Sub Total</i>				6,000	4,806	0.80			6,000	1,923	0.32
<i>North-South Travel</i>		NORTHBOUND						SOUTHBOUND				
North of Eastern	Broadview	2	800	1,600	575	0.36	2	800	1,600	426	0.27	
	Carlaw	2	800	1,600	1,208	0.76	2	800	1,600	397	0.25	
	Leslie	2	800	1,600	826	0.52	2	800	1,600	231	0.14	
	<i>Sub Total</i>				4,800	2,610	0.54			4,800	1,055	0.22
South of Eastern	Broadview	1	800	800	693	0.87	1	800	800	188	0.24	
	Bouchette	1	800	800	11	0.01	1	800	800	109	0.14	
	Carlaw	2	800	1,600	1,184	0.74	2	800	1,600	474	0.30	
	Caroline	1	800	800	197	0.25	1	800	800	81	0.10	
	Leslie	2	800	1,600	524	0.33	2	800	1,600	204	0.13	
	<i>Sub Total</i>				6,100	2,610	0.43			6,100	1,055	0.17
North of Lake Shore	Cherry	1	800	800	676	0.85	1	800	800	357	0.45	
	Don Roadway	2	800	1,600	645	0.40	2	800	1,600	669	0.42	
	Broadview	2	800	1,600	668	0.42	2	800	1,600	537	0.34	
	Bouchette	1	800	800	600	0.75	1	800	800	63	0.08	
	Carlaw	2	500	1,000	1,507	1.51	2	500	1,000	1,103	1.10	
	Caroline	1	500	500	293	0.59	1	500	500	148	0.30	
	Leslie	2	800	1,600	711	0.44	2	800	1,600	425	0.27	
	<i>Sub Total</i>				8,400	5,100	0.61			8,400	3,300	0.39
South of Lake Shore	Cherry	1	800	800	614	0.77	1	800	800	816	1.02	
	Don Roadway	2	800	1,600	835	0.52	2	800	1,600	230	0.14	
	Broadview	1	800	800	529	0.66	1	800	800	683	0.85	
	Bouchette	1	500	500	338	0.68	1	500	500	68	0.14	
	Logan	1	500	500	310	0.62	1	500	500	502	1.00	
	Carlaw	1	800	800	811	1.01	1	800	800	303	0.38	
	Caroline	1	500	500	333	0.67	1	500	500	172	0.34	
	Leslie	2	800	1,600	1,130	0.71	2	800	1,600	525	0.33	
	<i>Sub Total</i>				7,100	4,900	0.69			7,100	3,300	0.46
	South of Ship Channel	Cherry	1	800	800	156	0.20	1	800	800	164	0.20
Don Roadway												
Channel Crossing		1	800	800	147	0.18	1	800	800	215	0.27	
Carlaw												
Leslie		1	800	800	212	0.26	1	800	800	111	0.14	
<i>Sub Total</i>				2,400	515	0.21			2,400	490	0.20	

Note: Classification of Logan and Bouchette (south of Lake Shore) will be modified to 'local street' in the future network. Future precinct planning efforts will examine these streets in further detail.

The results of the analysis were as follows:

- Minimal change to strategic and operational assessments.
- Total Vehicle-Hours Travelled in the study area
 - Revised Land Use 2065 – 4,385 vehicles per hour
 - Original 2065 Land Use– 4,562 vehicles per hour
 - 5% reduction in vehicle activity
- The assessment was confined to the strategic analysis as the land use reflected a reduction in overall trips. An operational assessment was not conducted it is expected to yield similar or better results to the results of the gap analysis.

Based on the preceding analyses, the following conclusions were reached:

- The potential change in land use is not significant to alter the strategic needs assessment of the Preferred Network
- The Preferred Network recommendations remain valid.

Phasing and Implementation

The Preferred Network represents the street network required to support the transportation needs for the long-term (2065), full build-out land use scenario. The long term network will be phased in, subject to land use development and travel growth in specific areas over the course of the 50 year timeline. To assist in determining when particular street segments may be required from a phasing and implementation perspective, a screenline analysis was completed for an interim scenario that was based on a 20-25 year land use scenario provided by the City, and using the City's EMME 2 model 2031 time horizon.

The interim land use scenario assumed that the Unilever precinct would be fully developed, and infill employment in the balance of the South of Eastern area has been achieved. Portions of the Port Lands would undergo redevelopment within the interim time horizon. At the time of undertaking this assessment, phasing assumptions in the Port Lands was consistent with the first phase of the Port Lands Acceleration Initiative. The western portion of Villiers Island and Polson Quay are assumed to have developed, and likewise for the western portion of the Film Studio District. Some growth occurs on vacant or underutilized sites in the East Port and south of the Ship Channel areas. The Hearn is also assumed to be adaptively reused and major destination.

The objective for assessing the interim land use scenario was to identify from a vehicular capacity perspective where surplus capacity might exist, with the potential of deferring the implementation of particular street segments until required from a capacity perspective. Other factors, such as improving connectivity, providing street segments in tandem with development or in coordination with municipal servicing requirements, are other considerations for determining timing for implementation. Ongoing monitoring will be needed as development proceeds to ensure timely provision streets/transit.

Table 15 summarizes the interim land use scenario screenline analysis.

TABLE 15: 2031 P.M. PEAK HOUR SCREENLINE CAPACITY ASSESSMENT - PHASING AND IMPLEMENTATION

PORT LANDS AND SOUTH OF EASTERN EA - SCREENLINE ANALYSIS												
2031 PHASING AND IMPLEMENTATION - PM PEAK HOUR												
Screenline	Road	Lanes	Capacity /Lane	Capacity	Volume	W/C	Lanes	Capacity /Lane	Capacity	Volume	W/C	
<i>East-West Travel</i>			EASTBOUND				WESTBOUND					
East of Don Roadway	Eastern	2	800	1,600	1,253	0.78	2	800	1,600	604	0.38	
	Unilever	1	800	800	136	0.17	1	800	800	54	0.07	
	Gardiner	2	1,800	3,600	1,863	0.52	2	1,800	3,600	1,022	0.28	
	Lake Shore	2	1,200	2,400	1,331	0.55	2	1,200	2,400	741	0.31	
	New E-W Street	1	500	500	18	0.04	1	500	500	69	0.14	
	Commissioners	1	800	800	312	0.39	1	800	800	53	0.07	
	Basin	1	800	800	21	0.03	1	800	800	21	0.03	
	Unwin	1	800	800	172	0.21	1	800	800	66	0.08	
	<i>Sub Total</i>			<i>11,300</i>	<i>5,105</i>	<i>0.45</i>			<i>11,300</i>	<i>2,629</i>	<i>0.23</i>	
West of Carlaw	Eastern	1	800	800	570	0.71	1	800	800	419	0.52	
	Lake Shore	3	1,200	3,600	3,227	0.90	3	1,200	3,600	1,754	0.49	
	New E-W Street	1	500	500	272	0.54	1	500	500	110	0.22	
	Commissioners	1	800	800	183	0.23	1	800	800	58	0.07	
	Basin	1	500	500	51	0.10	1	500	500	30	0.06	
	Unwin	1	800	800	173	0.22	1	800	800	47	0.06	
	<i>Sub Total</i>			<i>7,000</i>	<i>4,476</i>	<i>0.64</i>			<i>7,000</i>	<i>2,417</i>	<i>0.35</i>	
East of Carlaw	Eastern	1	800	800	916	1.15	1	800	800	494	0.62	
	Lake Shore	3	1,200	3,600	2,974	0.83	3	1,200	3,600	1,587	0.44	
	Commissioners	1	800	800	180	0.23	1	800	800	265	0.33	
	Unwin	1	800	800	176	0.22	1	800	800	38	0.05	
		<i>Sub Total</i>			<i>6,000</i>	<i>4,246</i>	<i>0.71</i>			<i>6,000</i>	<i>2,384</i>	<i>0.40</i>
West of Leslie	Eastern	1	800	800	566	0.71	1	800	800	269	0.34	
	Lake Shore	3	1,200	3,600	3,127	0.87	3	1,200	3,600	1,070	0.30	
	Commissioners	1	800	800	305	0.38	1	800	800	154	0.19	
	Unwin	1	800	800	174	0.22	1	800	800	30	0.04	
		<i>Sub Total</i>			<i>6,000</i>	<i>4,172</i>	<i>0.70</i>			<i>6,000</i>	<i>1,523</i>	<i>0.25</i>
<i>North-South Travel</i>			NORTHBOUND				SOUTHBOUND					
North of Eastern	Broadview	2	800	1,600	703	0.44	2	800	1,600	322	0.20	
	Carlaw	2	800	1,600	443	0.28	2	800	1,600	347	0.22	
	Leslie	2	800	1,600	481	0.30	2	800	1,600	259	0.16	
		<i>Sub Total</i>			<i>4,800</i>	<i>1,627</i>	<i>0.34</i>			<i>4,800</i>	<i>927</i>	<i>0.19</i>
South of Eastern	Broadview	1	800	800	216	0.27	1	800	800	276	0.34	
	Bouchette	1	800	800	31	0.04	1	800	800	7	0.01	
	Carlaw	2	800	1,600	765	0.48	2	800	1,600	282	0.18	
	Caroline	1	800	800	206	0.26	1	800	800	127	0.16	
	Leslie	2	800	1,600	409	0.26	2	800	1,600	236	0.15	
		<i>Sub Total</i>			<i>6,100</i>	<i>1,627</i>	<i>0.27</i>			<i>6,100</i>	<i>927</i>	<i>0.15</i>
North of Lake Shore	Cherry	1	800	800	478	0.60	1	800	800	253	0.32	
	Don Roadway	2	800	1,600	268	0.17	2	800	1,600	353	0.22	
	Broadview	2	800	1,600	304	0.19	2	800	1,600	165	0.10	
	Bouchette	1	800	800	54	0.07	1	800	800	0	0.00	
	Carlaw	2	500	1,000	998	1.00	2	500	1,000	421	0.42	
	Caroline	1	500	500	284	0.57	1	500	500	177	0.35	
	Leslie	2	800	1,600	414	0.26	2	800	1,600	386	0.24	
		<i>Sub Total</i>			<i>8,400</i>	<i>2,800</i>	<i>0.33</i>			<i>8,400</i>	<i>1,800</i>	<i>0.21</i>
South of Lake Shore	Cherry	1	800	800	287	0.36	1	800	800	526	0.66	
	Don Roadway	2	800	1,600	189	0.12	2	800	1,600	75	0.05	
	Broadview	1	800	800	244	0.31	1	800	800	240	0.30	
	Bouchette	1	500	500	84	0.17	1	500	500	33	0.07	
	Logan	1	500	500	128	0.26	1	500	500	127	0.25	
	Carlaw	1	800	800	441	0.55	1	800	800	242	0.30	
	Caroline	1	500	500	588	1.18	1	500	500	161	0.32	
	Leslie	2	800	1,600	639	0.40	2	800	1,600	396	0.25	
		<i>Sub Total</i>			<i>7,100</i>	<i>2,600</i>	<i>0.37</i>			<i>7,100</i>	<i>1,800</i>	<i>0.25</i>
	South of Ship Channel	Cherry	1	800	800	97	0.12	1	800	800	125	0.16
Don Roadway												
Channel Crossing		1	800	800	104	0.13	1	800	800	103	0.13	
Carlaw												
Leslie		1	800	800	113	0.14	1	800	800	84	0.10	
	<i>Sub Total</i>			<i>2,400</i>	<i>314</i>	<i>0.13</i>			<i>2,400</i>	<i>312</i>	<i>0.13</i>	

Note: Classification of Logan and Bouchette (south of Lake Shore) will be modified to 'local street' in the future network. Future precinct planning efforts will examine these streets in further detail.

The results of the assessment of the interim land use revealed the following:

- Reduction in east-west travel of 1,500-2,000 vehicles (2-3 arterial lanes of capacity) in the peak hours
- Reduction in north-south travel of approximately 1,500 peak hour vehicles (1-2 arterial lanes of capacity)
- Total Vehicle-Hours Travelled are significantly reduced because of the reduced trip generation in the study area. Vehicle hours:
 - 2031 – 1,769
 - 2065 – 4,562
- East-West
 - Eastern Avenue continues to operate at conditions approaching capacity
 - Critical links on Lake Shore operating at LOS D
 - All links along Commissioners operating at better than LOS C
- North-South
 - Broadview corridor operating at 60% capacity (400-500 peak direction vehicles)
 - North-South corridor west of Carlaw operating at very good level of service LOS C or better.
 - Cherry Street, Leslie Street, and Ship Channel Crossing all operating at LOS A

The following conclusions are reached with respect to the phasing of the Preferred Network:

- East West
 - Urbanization and optimization of Eastern Avenue required for the interim time horizon
 - New East-West streets north and south of Commissioners Street are not technically required from a capacity perspective in the interim time horizon, but should be implemented in tandem with development
 - the preferred alternative for Commissioners Street consisting of a multi-modal corridor with one vehicular travel lane in each direction, transit in a dedicated right-of-way, enhanced pedestrian amenity and separated cycling facilities is required in the interim time horizon..
 - Unwin Avenue operating at a good level of service. While one lane in each direction adequate in the interim condition, the improvement If the baily bridge will be required to maximize the effectiveness of the 1- lane in each direction.
- North South
 - The Broadview extension from Eastern Avenue to Lake Shore is required in the interim horizon. The new north-south street is technically not required for the interim time horizon, however, it provides enhanced access and redundancy in the network
 - Caroline improvement is required in the interim. The extension however is not required from capacity perspective
 - The existing crossings of the Ship Channel at Cherry Street (subject to repairs being undertaken) and Leslie Street are sufficient to accommodate the interim scenario. The new Ship Channel crossing at the Broadview extension would not be immediately required from a capacity perspective. Other considerations, such as adaptive reuse of the Hearn, may warrant providing the extension across the Ship Channel in the interim time horizon.

11.0

Conclusions

Based on the preceding analysis the following conclusions were reached:

11.1

2065 Future Base Network

- Significant growth and redevelopment is anticipated.
 - Existing Land Use (2014) – Port Lands
 - Population – 0
 - Employees – 3,500 (includes Lower Don Lands, Film Precinct, East Port, Ship Channel)
 - 2031 Forecast
 - Population – 15,200 persons
 - Employment – 22,500 persons
 - Retail (GFA) – 142,750 m²
 - 2065 Forecast
 - Population - 29,100 persons
 - Employment - 62,700 persons
 - Retail (GFA) - 325,250 m²
- Future (2065) Base Network assumes currently planned/approved roadway and transit service from preceding area studies. Two special areas noted within the future base network:
 - Assumes future capacity of Broadview Extension. This is critical link required to support the planned level of development and distributing auto and transit person trips to the local area network.
 - Includes 2 new ship channel crossings.
- Objectives of future transportation network are as follows:
 - Increased role for active transportation modes (pedestrian and cycling)
 - Increased role of transit in the future is critical to serving the travel demands generated by the land use plans. Planned transit service improvements integral to achieving high mode share to transit (60%-70%).
 - Role of automobile significantly reduced
 - Maintain commercial vehicle activity
 - Accommodate Service / Delivery trucks associated with office, commercial, and warehouse activity, including film studio
 - Accommodate heavy trucks associated with industry, including aggregate and salt activity
 - Create a system that provides a safe and efficient environment for all modes

- Support aspirational street character identified as part of the identification and evaluation of alternatives and the Port Lands Planning Framework.
- The strategic assessment of network carrying capacity within the study area identified several long term lane deficiencies within the study area.
 - North-South Travel
 - Corridor between Don Roadway and Carlaw - 2 lanes deficiency
 - Corridor between Carlaw and Leslie – 1 lane deficiency
 - Crossing Ship Channel between Cherry and Leslie – 1 lane deficiency
 - East West
 - North of Lake Shore – 1 lane deficiency
 - South of Lake Shore, north of Ship Channel – 1 lane deficiency
 - South of Ship Channel – 1 lane deficiency
- The identified deficiencies were used to define discrete sub-areas reflective of local capacity and operational needs to support travel. This was one consideration in the identification and evaluation of transportation alternatives.
- In order to achieve the level of service identified for the future base network:
 - A significant investment transit is required. The mode split as assessed (62% to transit study area wide) is dependent on the provision of high order transit in separate ROW on Commissioners Street and on the Broadview extension.
 - local service in mixed traffic is required to make local connections and increase the accessibility of development areas across the study area
 - without significant transit use the identified deficiencies in the base network will increase substantially
- The future base network assessment assumes a significant contribution to area travel by active modes (pedestrian and cycling), reflective of 10% of area demands.
 - The future active network provides required connectivity through and within the study area with complete street character.

11.2 Preferred Network

- The preferred street network, transit network and cycling network are shown in Figures 20, 21 and 23
- The preferred network addresses strategic capacity deficiencies
- While operational issues remain at specific local intersections, minor operational improvements can be implemented to address
- The preferred network supports transit service required to serve demands

- Provisions for, and support of, active transportation modes will be critical to achieving study area objectives related to sustainability and dynamic community.
- The sensitivity tests assessed specific potential uncertainties within the future network for base assumptions. Analysis confirmed that the preferred network is robust and is capable of absorbing potential changes in the foundations assumptions without significant changes being required. The following additions/modifications to the preferred network were identified as enhancing the preferred network:
 - Extension of Woodfield Avenue to connect with Lake Shore Boulevard; and
 - The conversion of Carlaw Avenue to a complete street.

11.3 Future Considerations

- With respect to the Broadview Avenue Extension Alignment and Commissioners Street intersection and its interaction with and connectivity to Bouchette St, there is a need to consider the potential reconfiguration of Bouchette Street to fit and connect appropriately to the new Broadview Extension. As Bouchette is a local street, this is more appropriately to be completed via precinct plan
- While extension of streetcar service across the ship channel is not identified as required for the current 2065 plan, design of the Broadview Crossing should protect for this potential in the very long term
- The 2065 assessment identifies the need for one additional bridge crossing of the Ship Channel. A second crossing using the Don Roadway alignment should be protected for ultimate condition consideration and provided flexibility should development aspirations change
- The specific design of the future Gardiner Expressway condition is still under study. Hybrid options that effectively remove the capacity and the ramp structures in the PLSE study area provide opportunities to allow for additional street connections across Lake Shore. Protection of these potentials should be considered

Appendix T-1

Transportation Assessment – Field Data

The below lists turning movement counts and 24-hour automatic traffic recorder counts as received from City of Toronto at the outset of the Port Lands and South of Eastern project. The files were provided in secured PDF format. As such, they cannot be printed or digitally incorporated into the report appendix directly. The listing below provides the location and date of collection for the counts.

TURNING MOVEMENT COUNTS

Count Location	Date
Commissioners at Leslie	2013/04/22
Commissioners at Saulter	2008/05/01
Commissioners at Cherry	2009/10/19
Eastern at Knox	2011/01/05
Eastern at Leslie	2013/04/22
Eastern at Caroline/Larchmount	1998/09/24
Eastern at Pape	2005/09/15
Eastern at Carlaw	2013/05/21
Eastern at Logan	2008/11/25
Eastern at Booth	1999/02/02
Eastern at Broadview	2011/09/13
Lake Shore at Leslie	2013/05/27
Lake Shore at Carlaw	2012/10/15
Lake Shore at Logan	1994/02/02
Lake Shore at Booth	2004/04/27
Lake Shore at Don	2013/05/27
Lake Shore at Cherry	2009/12/01
Queen at Leslie	2013/05/06
Queen at Caroline	2005/09/07
Queen at Pape	2009/08/27
Queen at Carlaw	2013/04/22
Queen at Logan	2010/02/24
Queen at Booth	1999/02/04
Queen at Broadview	2010/12/15

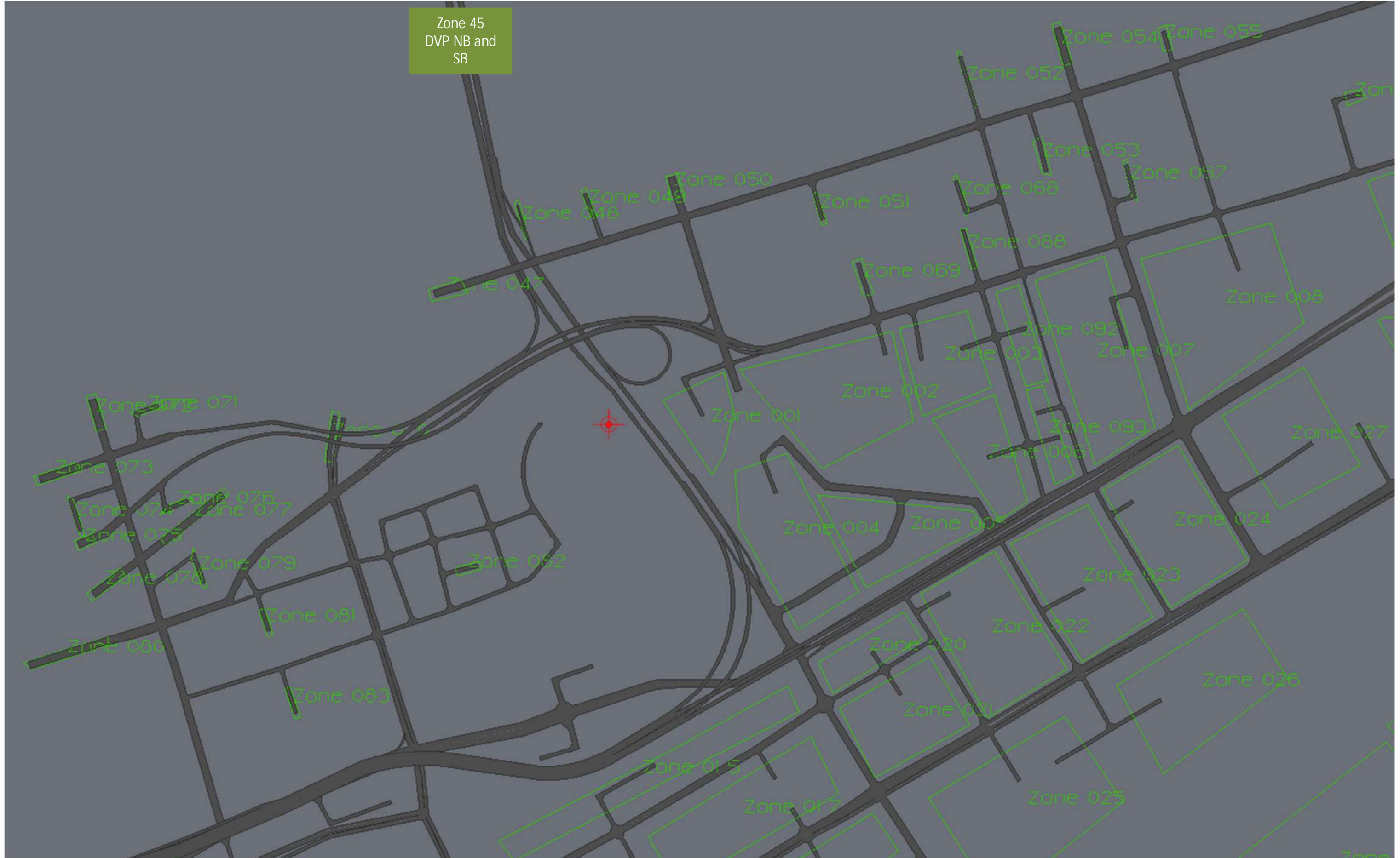
24HR AUTOMATED TRAFFIC RECORDER COUNTS

Count Location	Date
Bascule Bridge	2007/06/07
Broadview - North of Eastern	2009/10/08
Broadview - South of Queen	2009/10/08
Carlaw - North of Dundas	2012/09/13
Cherry - North of Adelaide	2007/09/27
Commissioners - East of Carlaw	2013/04/11
Coxwell - North of Lake Shore	2013/04/11
Don - North of Villiers	2001/12/14
Eastern - South of Queen	2010/02/04
Eastern - West of Theatre Entrance	2010/02/04
Lake Shore - East of Morse	2008/04/10
Lake Shore - West of Coxwell	2008/06/19
Leslie - North of Eastern	2013/04/11
Logan - South of Eastern	2013/11/20
Unwin - West of Leslie	2011/06/16

Appendix T-2

Transportation Assessment – Model Zones and Origin/Destination Tables

MODEL ZONES



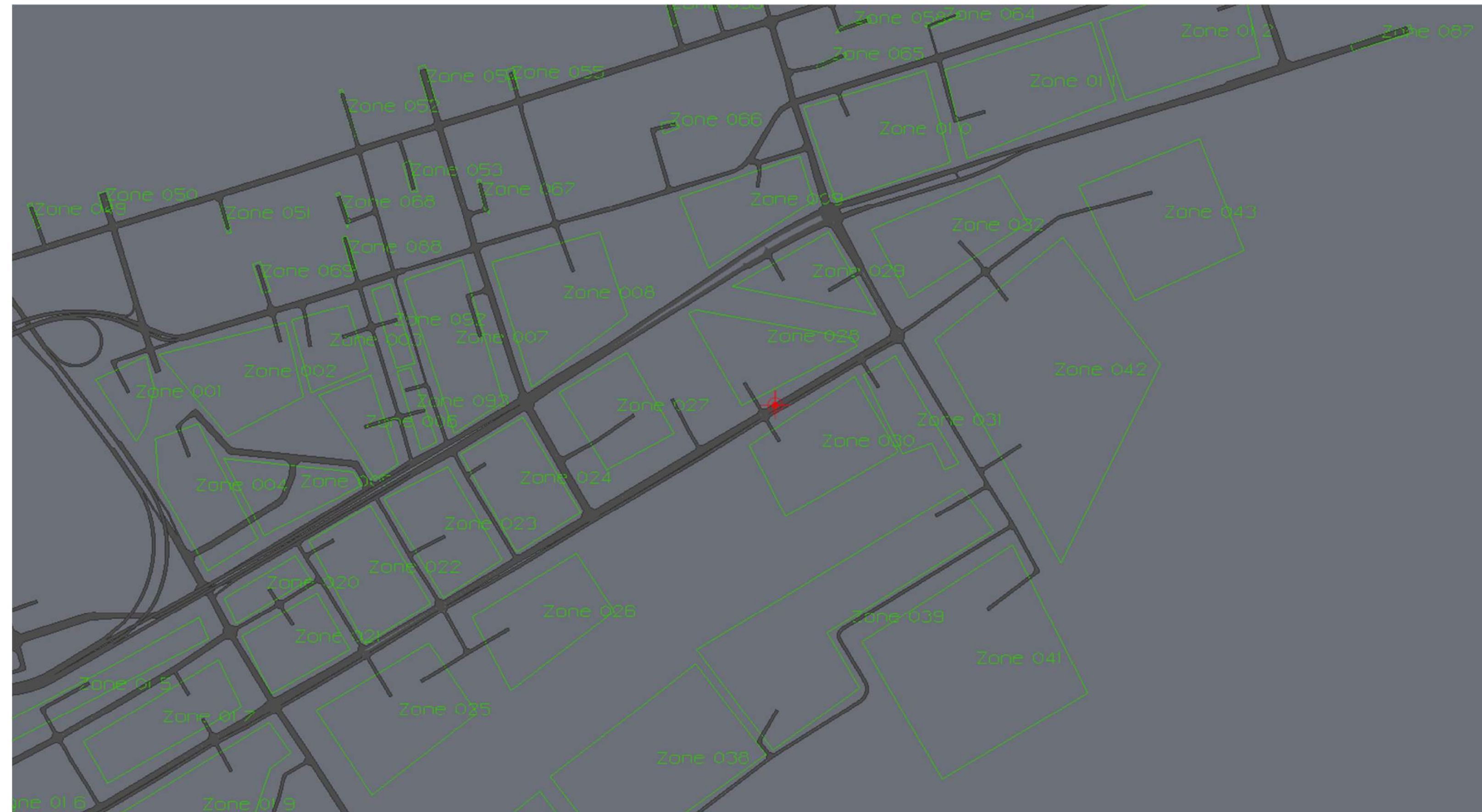
MODEL ZONES



MODEL ZONES



MODEL ZONES



MODEL ZONES



Appendix T-3

Transportation Assessment – Detailed Operational Model Statistics

**PORT LANDS AND
SOUTH OF EASTERN
MASTER PLAN**
OVERALL NETWORK
COMPARISON

Fri, Nov 13, 2015

T-3-1

Average Speed (km/h)											
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AM Peak Hour											
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PM Peak Hour											
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Model

Exist AM	2031 Prelim Pref. AM Phasing and Implementation	2065 Base AM	2065 Prelim Pref. AM	2065 Prelim Pref. AM Mitigated	2065 Prelim Pref. AM Woodfield Rd. Ext.	2065 Prelim Pref. AM Carlaw Complete Street	2065 Prelim Pref. AM Gardiner Hybrid Ramps	2065 Prelim Pref. AM Restricted Truck Routes	2065 Prelim Pref. AM Oct. 2015 Preferred Land Use	2065 Prelim Pref. AM Increased Transit Mode Share
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Exist PM	2031 Prelim Pref. PM Phasing and Implementation	2065 Base PM	2065 Prelim Pref. PM	2065 Prelim Pref. PM Mitigated	2065 Prelim Pref. PM Woodfield Rd. Ext.	2065 Prelim Pref. PM Carlaw Complete Street	2065 Prelim Pref. PM Gardiner Hybrid Ramps	2065 Prelim Pref. PM Restricted Truck Routes	2065 Prelim Pref. PM Oct. 2015 Preferred Land Use	2065 Prelim Pref. PM Increased Transit Mode Share
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Passenger Vehicles
Transit
Trucks
Total

60.0	53.7	28.3	37.9	36.9	37.4	37.5	36.8	37.9	41.1	40.7
13.9	16.5	13.2	14.1	14.1	14.1	13.8	14.6	14.0	15.1	14.9
57.6	51.5	37.0	49.3	45.4	48.7	49.2	45.5	49.9	53.6	52.3
59.5	53.1	28.6	38.2	37.2	37.8	37.9	37.0	38.3	41.5	41.0

56.8	44.7	12.0	15.1	22.0	15.7	14.9	15.5	16.1	15.8	16.1
13.3	15.3	9.1	11.0	11.4	11.3	10.5	10.5	11.0	10.0	10.6
58.3	47.8	16.0	20.5	32.1	20.7	20.0	20.5	21.8	22.5	22.4
56.6	44.5	12.1	15.2	22.4	15.8	15.0	15.7	16.2	16.0	16.3

**PORT LANDS AND
SOUTH OF EASTERN
MASTER PLAN**
OVERALL NETWORK
COMPARISON

T-3-2

Fri, Nov 13, 2015

Network Demand (vehicles)

Model

Exist AM	2031 Prelim Pref. AM Phasing and Implementation	2065 Base AM	2065 Prelim Pref. AM	2065 Prelim Pref. AM Mitigated	2065 Prelim Pref. AM Woodfield Rd. Ext.	2065 Prelim Pref. AM Carlaw Complete Street	2065 Prelim Pref. AM Gardiner Hybrid Ramps	2065 Prelim Pref. AM Restricted Truck Routes	2065 Prelim Pref. AM Oct. 2015 Preferred Land Use	2065 Prelim Pref. AM Increased Transit Mode Share
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Exist PM	2031 Prelim Pref. PM Phasing and Implementation	2065 Base PM	2065 Prelim Pref. PM	2065 Prelim Pref. PM Mitigated	2065 Prelim Pref. PM Woodfield Rd. Ext.	2065 Prelim Pref. PM Carlaw Complete Street	2065 Prelim Pref. PM Gardiner Hybrid Ramps	2065 Prelim Pref. PM Restricted Truck Routes	2065 Prelim Pref. PM Oct. 2015 Preferred Land Use	2065 Prelim Pref. PM Increased Transit Mode Share
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Passenger Vehicles
Transit
Trucks
Total

20,730	21,141				22,652				21,630	21,958
1,565	1,715				1,570				1,570	1,570
22,295	22,856				24,222				23,200	23,528

22,902	22,823				24,323				23,610	23,776
917	1,011				1,217				1,217	1,217
23,819	23,834				25,540				24,827	24,993

PORT LANDS AND SOUTH OF EASTERN MASTER PLAN CORRIDOR ANALYSIS ALL VEHICLE TYPES

Tue, Feb 2, 2016

Model	Volume (Average)																							
	AM Peak Hour												PM Peak Hour											
	Exist AM	2031 Prel Pref. AM Phasing and Implementation	2045 Base AM	2045 Prelim Pref. AM	2045 Prelim Pref. AM Mitigated	2045 Prelim Pref. AM Woodfield Ave. Ext	2045 Prelim Pref. AM Carlaw Complete Street	2045 Prelim Pref. AM Gardiner Sensitivity Test	2045 Prelim Pref. AM Resurfaced Truck Routes	2045 Prelim Pref. AM Oct. 2015 Pref. Land Use	2045 Prelim Pref. AM Increased Transit Mode Share	Exist PM	2031 Prel Pref. PM Phasing and Implementation	2045 Base PM	2045 Prelim Pref. PM	2045 Prelim Pref. PM Mitigated	2045 Prelim Pref. PM Woodfield Ave. Ext	2045 Prelim Pref. PM Carlaw Complete Street	2045 Prelim Pref. PM Gardiner Sensitivity Test	2045 Prelim Pref. PM Resurfaced Truck Routes	2045 Prelim Pref. PM Oct. 2015 Pref. Land Use	2045 Prelim Pref. PM Increased Transit Mode Share		
Eastbound	Queen St.	342	398	452	437	437	460	434	387	436	421	424	578	806	682	785	801	849	864	668	736	714	793	
Adelaide St. E	589	784	964	933	961	963	957	863	952	915	895	1,512	2,197	911	1,050	1,095	990	860	723	1,062	827	1,029		
Eastern Ave.	431	478	628	497	593	520	542	456	525	471	473	1,087	743	599	653	822	676	637	535	694	652	678		
First Gulf Rd.	--	76	--	292	289	298	307	336	293	263	249	--	48	--	189	225	210	212	220	219	228	180		
Lake Shore Blvd.	641	791	931	1,077	933	1,055	1,073	1,060	1,085	1,030	1,091	1,721	1,710	1,230	1,361	1,770	1,376	1,448	1,702	1,586	1,506	1,591		
New E-W Street	--	42	--	181	203	180	192	147	199	220	197	--	58	--	107	139	88	102	93	108	100	109		
Commissioners St.	106	59	226	171	179	168	168	133	168	111	136	221	116	307	314	250	297	313	217	301	254	264		
Basin St.	--	22	250	189	197	195	188	173	186	78	141	--	35	96	189	286	173	181	189	191	196	177		
Unwin Ave.	75	84	105	121	135	125	123	122	133	39	77	120	139	424	376	300	389	390	284	363	303	241		
Average	364	304	508	433	437	440	443	409	442	394	409	873	650	607	558	632	561	556	515	585	531	562		
Westbound	Queen St.	728	870	762	768	768	764	715	759	736	794	790	337	378	347	389	375	414	355	428	391	363	380	
Richmond St. E	1,564	1,528	1,070	1,298	1,297	1,307	1,296	1,271	1,297	1,410	1,455	1,045	1,220	383	593	817	587	589	609	671	736	740		
Eastern Ave.	904	872	864	986	946	984	948	972	960	1,047	1,065	610	545	469	501	559	505	519	543	487	573	581		
First Gulf Rd.	--	81	--	305	331	293	294	360	307	300	246	--	30	--	251	292	293	296	259	268	266	199		
Lake Shore Blvd.	1,967	1,746	1,663	1,749	1,673	1,744	1,734	2,071	1,765	1,826	1,786	841	933	1,229	1,302	1,355	1,392	1,363	1,409	1,294	1,204	1,222		
New E-W Street	--	169	--	239	212	234	229	196	252	244	225	--	96	--	129	185	126	132	73	140	113	189		
Commissioners St.	242	117	272	174	188	177	182	181	163	171	151	185	86	199	184	283	202	205	297	195	212	227		
Basin St.	--	22	281	200	205	204	201	173	195	184	161	--	37	157	198	193	194	203	195	199	176	195		
Unwin Ave.	55	56	161	169	171	167	168	160	172	72	121	68	56	238	189	202	206	196	204	223	122	193		
Average	910	607	725	654	643	653	641	683	650	672	667	514	376	431	415	473	436	429	446	430	418	436		
Northbound	Parliament St.	595	610	698	676	681	678	678	650	683	690	694	657	653	481	474	512	527	510	507	524	521	564	
Cherry St.	228	190	317	282	330	282	282	278	273	223	283	277	322	377	455	507	481	484	447	461	433	440		
Don Rdway.	276	280	396	523	464	513	524	527	513	417	467	125	141	420	721	653	693	715	601	733	511	604		
Broadview Ave.	180	162	367	305	380	306	302	277	311	282	288	296	189	304	344	550	353	363	346	369	338	384		
Bouchette St.	--	59	--	89	85	109	107	148	104	97	94	--	50	--	79	135	127	127	116	111	105	95		
Carlaw Ave.	434	240	303	367	409	366	364	318	362	296	341	650	384	346	433	741	452	452	484	496	514	544		
Caroline Ave.	--	97	--	144	159	118	138	124	133	108	133	--	248	--	284	212	253	279	222	216	192	162		
Leslie St.	192	180	289	284	266	267	273	262	276	254	262	391	251	398	471	380	448	453	367	398	345	300		
Woodfield Rd.	--	--	--	--	--	179	--	--	--	--	--	--	--	--	--	--	153	--	--	--	--	--		
Coxwell Ave.	315	291	457	457	434	452	448	451	450	478	518	635	665	535	553	623	558	570	716	707	671	746		
FGE-DVP	3,579	3,111	2,927	2,947	2,953	2,943	2,950	2,728	2,946	2,898	2,957	3,926	3,156	2,377	2,662	2,769	2,662	2,674	2,277	2,709	2,692	2,774		
Average	725	522	719	607	616	565	607	576	605	574	604	870	606	655	648	708	610	663	608	673	632	661		
Southbound	Parliament St.	461	498	730	716	698	732	743	740	710	748	748	473	619	465	486	507	482	447	398	489	421	494	
Cherry St.	224	271	442	480	506	487	486	497	487	468	435	245	181	277	307	309	297	298	339	308	246	261		
Don Rdway.	101	185	448	779	827	785	769	843	777	775	721	171	203	240	352	626	348	365	610	320	445	416		
Broadview Ave.	162	141	414	510	527	519	521	528	508	371	423	187	156	282	363	398	348	360	385	380	356	298		
Bouchette St.	--	8	--	134	122	110	117	196	135	96	71	--	8	--	74	104	77	102	107	66	90	0		
Carlaw Ave.	381	313	690	596	625	580	583	376	571	521	513	397	234	443	450	535	478	491	301	523	463	493		
Caroline Ave.	--	134	--	162	146	158	157	138	173	123	147	--	134	--	195	203	187	218	146	183	118	143		
Leslie St.	231	237	443	415	421	419	411	429	397	299	338	243	220	369	386	387	392	397	407	378	274	359		
Woodfield Rd.	--	--	--	--	--	446	--	--	--	--	--	--	--	--	--	--	446	--	--	--	--	--		
Coxwell Ave.	537	561	865	869	838	686	886	891	875	797	823	301	334	661	572	576	471	602	538	546	537	560		
DVP-FGE	4,983	4,559	3,501	4,515	4,524	4,508	4,503	3,927	4,521	4,405	4,428	3,563	3,529	1,731	2,081	2,892	2,106	2,065	1,869	2,048	2,187	2,061		
Average	885	691	942	918	923	857	918	856	915	860	864	697	562	558	527	654	512	534	510	524	514	509		

PORT LANDS AND SOUTH OF EASTERN MASTER PLAN CORRIDOR ANALYSIS ALL VEHICLE TYPES

Tue, Feb 2, 2016

Model		Delay (Average) (seconds)																				
		AM Peak Hour										PM Peak Hour										
		Exist AM	2031 Prel Pref AM Phasing and Implementation	2045 Base AM	2045 Prelim Pref AM	2045 Prelim Pref AM Mitigated	2045 Prelim Pref AM Woodfield Ave. Ext	2045 Prelim Pref AM Carlaw Complete Street	2045 Prelim Pref AM Gardiner Sensitivity Test	2045 Prelim Pref AM Resurfaced Truck Routes	2045 Prelim Pref AM Oct. 2015 Pref. Land Use	2045 Prelim Pref AM Increased Transit Mode Share	Exist PM	2031 Prel Pref PM Phasing and Implementation	2045 Base PM	2045 Prelim Pref PM	2045 Prelim Pref PM Mitigated	2045 Prelim Pref PM Woodfield Ave. Ext	2045 Prelim Pref PM Carlaw Complete Street	2045 Prelim Pref PM Gardiner Sensitivity Test	2045 Prelim Pref PM Resurfaced Truck Routes	2045 Prelim Pref PM Oct. 2015 Pref. Land Use
Eastbound																						
Queen St.	151	101	137	130	130	122	158	108	131	113	108	158	202	394	308	231	277	224	300	310	257	215
Adelaide St. E	10	11	13	28	20	13	13	25	17	14	20	13	17	387	378	306	389	509	570	361	518	424
Eastern Ave.	241	197	336	526	370	494	469	399	460	465	508	130	1,005	1,231	1,159	722	1,067	1,091	1,092	971	1,043	1,011
First Gulf Rd.	--	31	--	38	39	42	41	46	39	37	36	--	28	--	452	351	451	545	761	317	534	425
Lake Shore Blvd.	201	186	337	234	367	235	232	494	232	227	234	163	341	959	882	496	829	808	1,460	611	1,018	675
New E-W Street	--	22	--	294	383	345	216	47	242	94	165	--	17	--	485	338	425	946	720	512	711	356
Commissioners St.	87	216	243	210	237	217	218	241	214	203	204	51	214	820	518	486	666	731	423	478	731	507
Basin St.	--	11	25	16	17	16	15	17	15	11	14	--	10	700	173	73	196	607	173	132	131	112
Unwin Ave.	6	52	60	61	64	61	63	62	61	54	62	6	49	197	186	66	81	194	86	69	58	64
Average	116	92	164	171	181	172	158	160	157	135	150	87	209	670	505	341	487	628	621	418	556	421
Westbound																						
Queen St.	192	154	209	220	287	280	336	164	266	193	166	336	291	715	543	648	513	827	563	682	921	818
Richmond St. E	13	19	110	19	17	17	17	18	17	19	18	13	19	800	57	59	90	329	77	62	90	123
Eastern Ave.	139	224	654	385	445	394	433	406	398	400	362	123	320	1,567	1,271	975	1,237	1,224	1,299	1,281	1,358	1,360
First Gulf Rd.	--	36	--	45	45	46	46	88	45	42	44	--	42	--	172	180	167	160	200	172	151	130
Lake Shore Blvd.	177	340	594	438	506	514	481	432	451	416	412	173	166	823	736	569	643	717	792	782	900	869
New E-W Street	--	21	--	141	142	136	135	109	102	67	67	--	16	--	1,146	578	1,297	990	1,413	988	1,586	620
Commissioners St.	54	267	369	253	299	261	269	236	254	241	245	36	199	930	559	351	545	618	1,173	459	799	524
Basin St.	--	27	32	45	45	46	49	34	48	44	39	--	26	137	151	73	179	174	164	123	142	151
Unwin Ave.	8	53	32	37	37	39	38	40	39	36	36	8	47	55	66	42	48	106	50	40	40	49
Average	97	127	286	176	202	193	201	170	180	162	154	115	125	718	522	386	524	572	637	510	665	516
Northbound																						
Parliament St.	117	128	312	335	289	308	309	267	332	304	339	93	162	743	671	571	582	669	486	571	690	663
Cherry St.	76	162	288	402	214	364	413	612	407	274	303	75	215	945	738	508	601	712	838	617	732	687
Don Rdway.	40	84	117	106	148	109	107	189	105	137	99	40	73	673	269	285	264	218	506	242	409	198
Broadview Ave.	53	166	363	507	324	434	495	615	453	417	396	54	177	944	1,359	604	1,269	1,260	1,303	1,043	1,100	1,122
Bouchette St.	--	12	--	210	216	158	194	176	163	112	194	--	18	--	746	398	847	529	712	531	786	720
Carlaw Ave.	128	132	657	249	205	254	262	117	239	170	195	90	101	927	847	272	647	919	367	669	701	543
Caroline Ave.	--	60	--	96	189	95	122	100	138	92	88	--	77	--	220	137	207	148	174	210	405	277
Leslie St.	122	136	173	146	157	120	164	118	138	120	148	97	96	271	139	136	145	169	156	141	174	219
Woodfield Rd.	--	--	--	--	49	--	--	--	--	--	--	--	--	--	--	--	29	--	--	--	--	--
Coxwell Ave.	21	32	72	51	55	92	51	46	62	48	57	32	31	31	31	30	31	30	35	34	36	35
FGE-DVP	3	2	2	2	2	2	2	1	2	2	2	3	1	64	13	2	21	10	3	3	58	43
Average	70	92	248	210	180	180	212	224	204	168	182	61	95	575	503	295	422	467	458	406	509	451
Southbound																						
Parliament St.	111	135	320	300	274	262	255	402	304	252	271	112	168	1,067	954	831	938	1,064	1,366	955	1,096	935
Cherry St.	83	151	227	241	186	214	215	304	218	185	213	81	140	401	251	231	265	304	419	236	282	233
Don Rdway.	27	51	199	105	89	107	114	112	113	82	87	32	63	401	372	219	465	563	227	378	322	292
Broadview Ave.	49	129	369	278	205	264	262	308	277	196	213	48	152	1,425	699	662	670	749	563	639	562	675
Bouchette St.	--	8	--	10	10	11	10	92	12	20	10	--	4	--	415	86	213	274	507	169	127	0
Carlaw Ave.	81	120	250	194	211	245	196	155	216	162	166	143	155	537	362	290	321	346	410	268	267	270
Caroline Ave.	--	85	--	80	74	85	82	104	79	78	75	--	97	--	109	119	117	145	199	132	196	132
Leslie St.	88	118	188	157	158	155	183	136	192	122	125	114	129	322	220	254	179	221	228	265	248	219
Woodfield Rd.	--	--	--	--	19	--	--	--	--	--	--	--	--	--	--	--	26	--	--	--	--	--
Coxwell Ave.	38	33	43	44	45	50	47	41	45	44	45	28	61	78	109	56	60	107	62	65	76	66
DVP-FGE	1	1	284	4	2	5	5	2	3	2	1	1	0	1,279	974	209	1,025	1,085	550	1,069	553	756
Average	60	83	235	141	125	129	137	166	146	114	121	70	97	689	447	296	389	486	453	418	373	358

PORT LANDS AND SOUTH OF EASTERN MASTER PLAN CORRIDOR ANALYSIS ALL VEHICLE TYPES

Tue, Feb 2, 2016

Model		Travel Time (decimal minutes)																					
		AM Peak Hour									PM Peak Hour												
		Exist AM	2031 Prel Pref. AM Phasing and Implementation	2045 Base AM	2045 Prelim Pref. AM	2045 Prelim Pref. AM Mitigated	2045 Prelim Pref. AM Woodfield Ave. Ext	2045 Prelim Pref. AM Carlaw Complete Street	2045 Prelim Pref. AM Gardiner Sensitivity Test	2045 Prelim Pref. AM Reshuffled Truck Routes	2045 Prelim Pref. AM Oct. 2015 Pref. Land Use	2045 Prelim Pref. AM Increased Transit Mode Share	Exist PM	2031 Prel Pref. PM Phasing and Implementation	2045 Base PM	2045 Prelim Pref. PM	2045 Prelim Pref. PM Mitigated	2045 Prelim Pref. PM Woodfield Ave. Ext	2045 Prelim Pref. PM Carlaw Complete Street	2045 Prelim Pref. PM Gardiner Sensitivity Test	2045 Prelim Pref. PM Reshuffled Truck Routes	2045 Prelim Pref. PM Oct. 2015 Pref. Land Use	2045 Prelim Pref. PM Increased Transit Mode Share
Eastbound																							
Queen St.		6.93	6.10	6.69	6.57	6.57	6.44	7.04	6.22	6.60	6.29	6.21	7.05	7.77	10.98	9.54	8.26	9.03	8.13	9.41	9.58	8.69	7.99
Adelaide St. E		1.18	1.19	1.21	1.50	1.35	1.22	1.22	1.41	1.31	1.25	1.36	1.26	1.33	7.50	7.36	6.17	7.53	9.54	10.56	7.07	9.68	8.12
Eastern Ave.		9.11	8.43	10.74	13.96	11.37	13.43	12.99	11.82	12.85	12.94	13.66	7.29	21.93	25.73	24.56	17.25	23.04	23.43	23.44	21.43	22.61	22.09
First Gulf Rd.		--	0.97	--	1.09	1.10	1.16	1.15	1.25	1.11	1.07	1.06	--	0.92	--	8.00	6.31	7.98	9.53	13.16	5.74	9.36	7.54
Lake Shore Blvd.		7.17	6.87	9.35	7.67	9.87	7.70	7.64	11.78	7.64	7.55	7.67	6.58	9.52	19.78	18.53	12.09	17.65	17.30	27.94	14.00	20.78	15.07
New E-W Street		--	1.57	--	6.11	7.60	6.96	4.80	2.00	5.25	2.78	3.95	--	1.49	--	9.29	6.84	8.30	16.98	13.21	9.75	13.05	7.15
Commissioners St.		4.34	6.60	7.07	6.52	6.96	6.64	6.67	7.05	6.59	6.39	6.41	3.73	6.58	16.70	11.66	11.13	14.14	15.23	10.07	11.00	15.22	11.47
Basin St.		--	2.16	1.47	2.29	2.31	2.29	2.28	2.29	2.28	2.20	2.26	--	2.16	12.75	4.94	3.25	5.32	12.18	4.92	4.27	4.23	3.90
Unwin Ave.		3.15	3.86	3.97	4.03	4.07	4.03	4.05	4.04	4.02	3.89	4.04	3.17	3.79	6.28	6.11	4.11	4.36	6.25	4.43	4.16	3.96	4.07
Average		5.31	4.20	5.79	5.53	5.69	5.54	5.32	5.32	5.29	4.93	5.18	4.85	6.17	14.25	11.11	8.38	10.82	13.18	13.02	9.67	11.95	9.71
Westbound																							
Queen St.		7.61	6.97	7.88	8.07	9.18	9.08	10.01	7.14	8.84	7.61	7.17	10.01	9.25	16.32	13.45	15.22	12.97	18.20	13.80	15.77	19.77	18.05
Richmond St. E		1.02	1.12	2.70	1.12	1.08	1.09	1.09	1.11	1.08	1.13	1.12	1.01	1.12	14.19	1.77	1.82	2.34	6.32	2.11	1.86	2.34	2.90
Eastern Ave.		7.48	8.94	16.12	11.64	12.63	11.80	12.45	11.98	11.85	11.88	11.25	7.21	10.53	31.34	26.41	21.48	25.86	25.64	26.88	26.58	27.86	27.91
First Gulf Rd.		--	1.06	--	1.21	1.20	1.22	1.22	1.94	1.20	1.15	1.19	--	1.15	--	3.32	3.45	3.24	3.12	3.82	3.33	2.97	2.62
Lake Shore Blvd.		6.98	9.63	13.88	11.27	12.40	12.54	11.99	10.96	11.48	10.89	10.84	6.87	6.72	17.68	16.22	13.46	14.70	15.90	16.96	17.00	18.97	18.45
New E-W Street		--	1.56	--	3.55	3.58	3.48	3.47	3.03	2.91	2.32	2.33	--	1.47	--	20.32	10.84	22.83	17.71	24.76	17.67	27.64	11.54
Commissioners St.		3.84	7.60	9.30	7.36	8.12	7.50	7.62	7.09	7.37	7.16	7.23	3.57	6.45	18.65	12.46	9.02	12.25	13.46	22.71	10.81	16.48	11.89
Basin St.		--	2.49	1.59	2.78	2.79	2.81	2.86	2.59	2.84	2.78	2.68	--	2.47	3.34	4.56	3.26	5.03	4.95	4.76	4.09	4.41	4.55
Unwin Ave.		3.22	3.90	3.49	3.63	3.63	3.66	3.65	3.68	3.65	3.62	3.61	3.20	3.81	3.87	4.11	3.71	3.80	4.79	3.84	3.68	3.69	3.84
Average		5.03	4.81	7.85	5.63	6.07	5.91	6.04	5.50	5.69	5.39	5.27	5.31	4.77	15.06	11.40	9.14	11.45	12.23	13.29	11.20	13.79	11.31
Northbound																							
Parliament St.		3.06	3.26	6.32	6.70	5.93	6.26	6.26	5.56	6.66	6.18	6.78	2.66	3.82	13.50	12.30	10.64	10.82	12.27	9.20	10.63	12.61	12.17
Cherry St.		3.60	5.19	7.30	9.20	6.07	8.57	9.38	12.69	9.28	7.06	7.54	3.60	6.07	18.25	14.79	10.97	12.51	14.36	16.46	12.77	14.70	13.95
Don Rdway.		1.24	2.47	3.48	2.83	3.53	2.88	2.85	4.21	2.82	3.35	2.71	1.23	2.29	12.75	5.56	5.82	5.47	4.70	9.49	5.10	7.88	4.36
Broadview Ave.		1.31	5.06	7.54	10.80	7.74	9.59	10.60	12.60	9.91	9.29	8.95	1.32	5.24	17.24	25.03	12.46	23.54	23.39	24.10	19.76	20.72	21.07
Bouchette St.		--	0.76	--	4.06	4.16	3.19	3.79	3.52	3.29	2.43	3.80	--	0.86	--	13.01	7.20	14.77	9.39	12.44	9.42	13.66	12.57
Carlaw Ave.		3.52	3.91	13.10	5.87	5.13	5.95	6.02	3.67	5.70	4.56	4.98	2.89	3.39	18.05	15.84	6.26	12.51	16.97	7.85	12.88	13.41	10.78
Caroline Ave.		--	1.71	--	2.30	3.86	2.29	2.74	2.37	3.01	2.24	2.17	--	1.98	--	4.38	2.99	4.15	3.17	3.61	4.20	7.45	5.32
Leslie St.		3.93	4.07	4.77	4.24	4.43	3.81	4.54	3.78	4.12	3.81	4.27	3.51	3.41	6.41	4.13	4.09	4.22	4.63	4.41	4.16	4.71	5.46
Woodfield Rd.		--	--	--	--	1.15	--	--	--	--	--	--	--	--	--	--	--	0.82	--	--	--	--	--
Coxwell Ave.		0.99	1.19	1.85	1.50	1.56	2.18	1.49	1.42	1.68	1.44	1.60	1.18	1.16	1.16	1.16	1.15	1.16	1.15	1.22	1.22	1.24	1.23
FGE-DVP		3.64	3.65	3.63	3.62	3.63	3.62	3.62	3.67	3.62	3.63	3.63	3.66	3.61	4.69	3.82	3.62	3.95	3.76	3.68	3.64	4.57	4.35
Average		2.66	3.13	6.00	5.11	4.60	4.50	5.13	5.35	5.01	4.40	4.64	2.51	3.18	11.51	10.00	6.52	8.54	9.38	9.25	8.38	10.10	9.13
Southbound																							
Parliament St.		2.96	2.85	5.91	5.56	5.13	4.93	4.81	7.12	5.61	4.76	5.08	2.98	3.46	18.19	16.42	14.47	16.20	18.32	22.87	16.43	18.67	15.90
Cherry St.		3.69	5.01	6.28	6.51	5.56	6.06	6.07	7.56	6.12	5.57	6.03	3.65	4.83	9.17	6.68	6.32	6.91	7.55	9.48	6.42	7.19	6.38
Don Rdway.		1.02	1.93	4.86	2.83	2.56	2.85	2.98	2.95	2.96	2.45	2.53	1.10	2.11	8.23	7.27	4.74	8.83	10.47	4.86	7.38	6.45	5.94
Broadview Ave.		1.24	4.47	7.65	7.00	5.79	6.76	6.73	7.49	6.97	5.61	5.90	1.23	4.85	25.26	14.04	13.41	13.55	14.87	11.77	13.03	11.75	13.62
Bouchette St.		--	0.66	--	0.71	0.70	0.72	0.71	2.11	0.75	0.88	0.45	--	0.59	--	7.49	1.99	4.11	5.21	9.02	3.38	2.67	0.00
Carlaw Ave.		2.74	3.72	6.32	4.95	5.24	5.00	4.93	4.30	5.32	4.42	4.49	3.77	4.30	11.09	7.76	6.56	7.06	7.42	8.56	6.18	6.17	6.23
Caroline Ave.		--	2.12	--	2.03	1.94	2.12	2.06	2.36	2.01	2.00	1.96	--	2.32	--	2.52	2.68	2.65	3.12	3.94	2.91	3.98	2.90
Leslie St.		3.35	3.77	5.01	4.42	4.43	4.39	4.85	4.08	5.00	3.84	3.90	3.79	3.95	7.26	5.48	6.04	4.79	5.49	5.61	6.23	5.94	5.45
Woodfield Rd.		--	--	--	--	0.64	--	--	--	--	--	--	--	--	--	--	0.77	--	--	--	--	--	--
Coxwell Ave.		1.28	1.20	1.36	1.39	1.39	1.49	1.44	1.33	1.40	1.38	1.40	1.11	1.67	1.95	2.47	1.58	1.64	2.42	1.69	1.73	1.91	1.74
DVP-FGE		3.75	3.76	8.46	3.77	3.75	3.81	3.79	3.73	3.76	3.76	3.75	3.69	3.70	25.01	19.94	7.20	20.79	21.79	12.89	21.51	12.92	16.31
Average		2.50	2.95	5.73	3.92	3.65	3.60	3.84	4.30	3.99	3.47	3.55	2.67	3.18	13.27	9.01	6.50	7.94	9.67	9.07	8.52	7.76	7.45

PORT LANDS AND SOUTH OF EASTERN MASTER PLAN
CORRIDOR ANALYSIS
ALL VEHICLE TYPES

Tue, Feb 2, 2016

Model	Speed (Average) (km/h)																																																																																																																																													
	AM Peak Hour										PM Peak Hour																																																																																																																																			
	Exist AM	2031 Prel Pref. AM	Phasing and Implementation	2065 Base AM	2065 Prelim Pref. AM	2065 Prelim Pref. AM	Mitigated	2065 Prelim Pref. AM	Woodfield Ave. Ext	2065 Prelim Pref. AM	Carlaw Complete Street	2065 Prelim Pref. AM	Gardiner Sensitivity Test	Resitred Truck Routes	2065 Prelim Pref. AM	Oct. 2015 Pref. Land Use	2065 Prelim Pref. AM	Increased Transit Mode Share	Exist PM	2031 Prel Pref. PM	Phasing and Implementation	2065 Base PM	2065 Prelim Pref. PM	2065 Prelim Pref. PM	Mitigated	2065 Prelim Pref. PM	Woodfield Ave. Ext	2065 Prelim Pref. PM	Carlaw Complete Street	2065 Prelim Pref. PM	Gardiner Sensitivity Test	Resitred Truck Routes	2065 Prelim Pref. PM	Oct. 2015 Pref. Land Use	2065 Prelim Pref. PM	Increased Transit Mode Share																																																																																																										
	Eastbound																																																																																																																																													
Queen St.	30.9	33.5	30.9	31.8	31.8	32.1	30.2	33.0	31.5	32.6	32.9	29.7	30.8	21.7	25.4	26.6	26.5	27.0	26.2	24.8	27.0	27.7	45.1	43.5	8.3	8.5	10.2	9.0	6.7	5.9	8.9	6.6	7.6	39.8	26.4	18.7	16.2	24.1	17.6	17.6	19.0	18.0	18.4	17.8	--	27.2	--	7.2	12.7	5.6	3.9	2.0	8.7	3.9	7.1	44.7	37.9	25.8	21.3	29.6	23.9	22.4	26.4	28.0	23.2	27.5	--	38.9	--	16.7	17.4	17.8	13.1	17.9	16.7	16.7	18.6	33.4	32.8	18.4	21.9	24.8	18.8	18.8	28.0	24.5	20.5	26.5	--	44.7	5.3	25.5	32.7	23.5	18.3	24.1	26.3	28.8	33.7	47.1	42.2	37.9	38.2	40.5	39.4	37.4	39.9	40.3	41.4	40.8	40.5	38.6	19.5	20.1	24.3	20.2	18.3	21.0	21.8	20.7	23.0																					
Average	40.5	38.6	35.9	34.0	33.0	35.3	34.8	35.3	34.8	35.8	35.0	40.0	36.0	19.5	20.1	24.3	20.2	18.3	21.0	21.8	20.7	23.0	38.3	36.4	23.6	24.7	26.1	24.0	22.5	22.7	24.1	23.1	23.5	38.3	36.4	23.6	24.7	26.1	24.0	22.5	22.7	24.1	23.1	23.5																																																																																																		
Westbound																																																																																																																																														
Queen St.	28.6	31.0	28.4	28.2	26.3	26.1	25.2	31.3	27.0	29.7	30.8	23.8	26.1	19.2	20.6	19.2	20.4	18.4	19.8	18.3	16.6	17.8	45.2	41.8	19.5	42.0	43.2	43.1	43.0	41.6	43.2	41.7	42.0	38.5	31.6	18.8	18.9	19.8	18.5	18.6	17.4	18.3	16.1	15.5	--	24.3	--	22.0	22.2	22.1	21.6	15.3	21.5	22.1	22.4	40.4	46.9	27.1	26.8	30.6	30.8	27.0	26.4	25.7	24.8	25.7	--	38.6	--	6.8	11.5	5.8	8.4	7.1	7.6	6.2	9.6	34.3	30.2	18.6	25.3	25.7	22.8	22.8	16.5	24.6	19.7	22.7	--	43.2	25.4	34.6	37.8	33.2	33.9	33.3	34.8	35.3	35.6	46.9	42.1	42.6	41.1	42.5	41.6	38.4	41.4	42.5	42.4	41.2	38.5	35.6	28.9	32.4	31.8	32.4	31.8	31.3	32.4	33.1	33.5	38.3	36.4	23.6	24.7	26.1	24.0	22.5	22.7	24.1	23.1	23.5										
Average	38.5	35.6	28.9	32.4	31.8	32.4	31.8	31.3	32.4	33.1	33.5	38.3	36.4	23.6	24.7	26.1	24.0	22.5	22.7	24.1	23.1	23.5	38.3	36.4	23.6	24.7	26.1	24.0	22.5	22.7	24.1	23.1	23.5	38.3	36.4	23.6	24.7	26.1	24.0	22.5	22.7	24.1	23.1	23.5																																																																																																		
Northbound																																																																																																																																														
Parliament St.	21.5	23.2	12.6	12.5	13.8	13.6	13.6	14.6	12.9	13.5	12.5	23.2	20.0	7.9	8.9	10.0	9.3	9.0	9.9	9.8	8.8	9.0	30.5	28.7	24.0	23.3	27.2	24.3	23.6	21.1	24.0	26.2	25.6	19.1	32.4	15.3	23.8	24.2	23.5	24.7	21.0	24.0	22.8	25.3	3.5	31.9	11.6	19.4	22.6	21.0	18.9	18.3	20.6	22.3	22.2	--	32.8	--	19.6	11.7	19.7	16.7	11.9	19.6	23.5	17.6	18.0	24.1	21.1	18.9	19.7	18.1	17.1	24.7	18.9	21.2	20.4	--	27.3	--	13.6	22.9	15.6	20.5	21.2	16.3	9.1	16.8	32.2	27.9	23.5	25.1	25.3	24.9	23.8	23.6	24.7	23.2	21.9	--	--	--	--	--	28.8	--	--	--	--	30.5	30.5	31.2	31.1	31.4	31.1	31.2	30.5	30.6	30.4	30.5	97.8	105.5	90.4	100.1	105.2	98.2	102.0	103.5	104.5	95.6	93.8	31.9	35.4	24.6	24.0	27.5	24.9	24.8	24.6	25.3	22.8	23.9
Average	32.0	36.1	31.2	30.6	29.9	30.0	30.0	30.1	30.6	32.1	31.2	31.9	35.4	24.6	24.0	27.5	24.9	24.8	24.6	25.3	22.8	23.9	31.9	35.4	24.6	24.0	27.5	24.9	24.8	24.6	25.3	22.8	23.9	31.9	35.4	24.6	24.0	27.5	24.9	24.8	24.6	25.3	22.8	23.9																																																																																																		
Southbound																																																																																																																																														
Parliament St.	23.1	21.4	11.8	11.9	13.4	13.7	13.8	8.8	11.7	13.6	13.4	23.3	19.5	4.9	5.9	6.1	5.5	5.4	3.2	5.4	4.9	4.9	30.9	28.6	24.9	24.1	28.9	25.2	25.0	20.9	25.4	26.4	25.9	22.6	33.1	18.2	12.9	14.5	12.0	11.4	11.9	13.2	15.7	14.0	--	37.7	--	35.4	26.6	35.4	35.6	18.7	35.2	34.5	20.9	14.4	23.3	16.4	15.2	16.6	15.5	12.8	16.0	17.6	17.9	17.1	--	25.6	--	22.2	20.7	22.6	19.8	15.4	21.6	20.7	21.5	32.4	26.1	23.2	21.7	21.3	22.4	21.2	21.1	20.9	21.3	21.8	--	--	--	--	--	25.2	--	--	--	29.9	29.4	18.2	14.9	22.5	23.1	15.5	22.3	23.7	20.8	23.3	103.7	102.7	68.6	69.8	80.5	69.6	69.4	72.1	69.4	73.2	70.8	32.6	35.6	21.9	21.8	25.1	23.2	21.5	21.3	23.6	23.7	22.0												
Average	32.4	36.9	27.6	32.2	32.2	32.0	32.3	29.7	32.2	34.0	32.3	32.6	35.6	21.9	21.8	25.1	23.2	21.5	21.3	23.6	23.7	22.0	32.6	35.6	21.9	21.8	25.1	23.2	21.5	21.3	23.6	23.7	22.0	32.6	35.6	21.9	21.8	25.1	23.2	21.5	21.3	23.6	23.7	22.0																																																																																																		

PORT LANDS AND
SOUTH OF EASTERN
MASTER PLAN
CORRIDOR ANALYSIS
TRANSIT VEHICLES

Tue, Feb 2, 2016

T-3-7

Model		Corridor Travel Speed (average, km/h)																									
		AM Peak Hour										PM Peak Hour															
		Exist AM	2031 Prel Pref. AM Phasing and Implementation	2005 Base AM	2005 Prelim Pref. AM	2005 Prelim Pref. AM Mitigated	2005 Prelim Pref. AM Woodfield Ave. Ext	2005 Prelim Pref. AM Carlaw Complete Street	2005 Prelim Pref. AM Gardiner Sensitivity Test	2005 Prelim Pref. AM Restricted Truck Routes	2005 Prelim Pref. AM Oct. 2015 Pref. Land Use	2005 Prelim Pref. AM Transit	Exist PM	2031 Prel Pref. PM Phasing and Implementation	2005 Base PM	2005 Prelim Pref. PM	2005 Prelim Pref. PM Mitigated	2005 Prelim Pref. PM Woodfield Ave. Ext	2005 Prelim Pref. PM Carlaw Complete Street	2005 Prelim Pref. PM Gardiner Sensitivity Test	2005 Prelim Pref. PM Restricted Truck Routes	2005 Prelim Pref. PM Oct. 2015 Pref. Land Use	2005 Prelim Pref. PM Transit				
DEDICATED ROW (Right-of-Way)		Commissioners St. EB	--	34.6	36.3	34.7	35.1	34.8	34.7	34.4	34.7	34.8	34.7	34.9	34.6	34.8	--	34.5	35.1	34.6	34.4	34.5	34.5	33.9	34.6	34.5	34.6
Commissioners St. WB	--	34.6	37.6	34.8	34.8	34.8	34.8	34.7	34.9	34.6	34.8	--	34.7	35.0	34.6	34.7	34.7	34.5	34.3	34.9	34.7	34.8					
Cherry St. NB	--	31.1	30.8	31.2	30.8	31.1	31.2	30.5	31.2	31.2	31.1	--	36.2	37.4	36.3	37.8	36.4	35.2	36.4	36.4	36.4	36.3					
Cherry St. SB	--	31.1	30.3	31.0	30.7	31.1	30.9	31.2	31.3	31.2	31.0	--	31.5	31.0	31.3	31.5	31.4	30.5	31.3	31.6	31.5	31.7					
Broadview Ave. NB	--	37.8	33.6	37.6	41.0	37.2	37.5	39.7	37.7	37.4	37.3	--	37.8	31.9	37.9	41.3	37.8	37.3	36.4	37.7	38.0	37.7					
Broadview Ave. SB	--	35.6	26.3	35.8	32.3	34.1	34.8	32.7	35.3	35.2	35.3	--	32.9	30.9	32.8	32.4	32.7	32.9	32.7	32.7	32.9	32.6					
Average	--	34.1	32.5	34.2	34.1	33.9	34.0	33.9	34.2	34.1	34.1	--	34.6	33.6	34.6	35.4	34.6	34.3	34.0	34.6	34.7	34.6					
MIXED TRAFFIC		Queen St. EB	22.6	24.2	23.6	23.8	23.3	24.0	22.9	24.2	23.6	24.1	24.2	22.7	24.1	19.5	21.8	22.0	22.3	22.5	21.6	21.3	21.6	22.6			
Queen St. WB	21.3	23.1	21.2	20.5	19.7	18.7	17.6	23.0	19.5	21.9	22.8	20.6	23.1	16.1	17.6	16.3	17.9	15.0	17.4	14.7	13.8	14.9					
Commissioners St. EB	16.6	24.8	21.1	24.5	24.4	24.1	24.1	23.7	24.2	25.0	24.5	16.8	24.7	18.9	21.7	23.1	17.5	18.7	23.7	21.0	18.8	20.3					
Commissioners St. WB	18.1	23.1	16.9	23.2	22.6	23.4	23.4	22.8	23.6	23.2	23.1	18.6	24.4	14.3	22.1	21.8	20.6	20.5	17.1	20.9	19.7	18.9					
Unwin Ave. EB	--	37.4	40.6	36.7	36.9	36.1	37.2	39.4	37.2	38.8	37.6	--	39.4	36.2	36.5	36.3	35.8	34.8	39.6	36.5	37.9	37.5					
Unwin Ave. WB	--	37.3	37.0	37.4	37.5	36.7	37.3	40.0	36.9	37.1	37.0	--	37.5	37.1	35.6	36.3	36.4	34.0	37.8	36.5	37.0	36.4					
Cherry St. NB	18.1	17.8	15.5	14.7	19.0	15.6	14.9	20.3	14.8	16.6	16.5	15.5	18.8	10.8	12.8	12.9	12.0	10.6	10.6	11.5	10.6	12.9					
Cherry St. NB	16.8	27.1	24.5	25.1	29.0	26.0	24.9	22.9	25.8	26.1	25.9	18.9	30.9	24.8	28.5	29.4	29.8	24.3	24.1	27.5	27.8	26.6					
Broadview Ave. NB	--	13.2	12.8	11.6	10.9	10.9	11.3	15.1	11.7	11.3	10.4	--	12.2	11.9	11.3	13.6	11.1	10.8	10.8	11.3	13.2	11.7					
Broadview Ave. SB	--	14.3	12.7	13.3	13.2	13.7	12.8	13.2	12.8	13.1	12.9	--	13.8	6.0	6.3	7.1	6.8	6.2	6.3	8.3	8.4	7.0					
Carlaw Ave. NB	15.4	18.9	12.9	13.6	14.8	13.9	12.7	19.8	13.7	15.8	14.6	14.3	19.7	14.3	12.1	13.8	14.6	16.5	18.0	12.3	11.7	13.2					
Carlaw Ave. SB	11.8	20.5	15.2	16.1	16.2	14.3	15.8	18.5	15.9	17.5	17.1	10.2	19.8	12.7	11.2	13.4	12.2	10.8	13.3	14.7	15.5	13.9					
Leslie St. NB	13.2	21.2	16.8	19.5	18.1	20.4	18.1	19.5	18.9	20.5	18.8	12.6	22.0	16.9	20.2	19.5	19.5	18.2	18.6	18.9	17.9	18.1					
Leslie St. SB	12.7	21.8	19.3	20.3	20.3	20.8	19.5	19.8	19.7	21.2	21.3	12.5	21.4	16.4	18.8	18.8	19.6	18.6	17.7	18.2	18.9	18.9					
Average	16.7	23.2	20.7	21.4	21.8	21.3	20.9	23.0	21.3	22.3	21.9	16.3	23.7	18.3	19.7	20.3	19.7	18.7	19.7	19.6	19.5	19.5					

PORT LANDS AND
SOUTH OF EASTERN
MASTER PLAN
CORRIDOR ANALYSIS
TRANSIT VEHICLES

Tue, Feb 2, 2016

T-3-8

Model		Corridor Travel Time (total, h:mm:ss)																							
		AM Peak Hour												PM Peak Hour											
		Exist AM	2031 Prel Pref. AM Phasing and Implementation	2005 Base AM	2005 Prelim Pref. AM	2005 Prelim Pref. AM Mitigated	2005 Prelim Pref. AM Woodfield Ave. Ext	2005 Prelim Pref. AM Carlaw Complete Street	2005 Prelim Pref. AM Gardiner Sensitivity Test	2005 Prelim Pref. AM Restricted Truck Routes	2005 Prelim Pref. AM Oct. 2015 Pref. Land Use	2005 Prelim Pref. AM Transit	Exist PM	2031 Prel Pref. PM Phasing and Implementation	2005 Base PM	2005 Prelim Pref. PM	2005 Prelim Pref. PM Mitigated	2005 Prelim Pref. PM Woodfield Ave. Ext	2005 Prelim Pref. PM Carlaw Complete Street	2005 Prelim Pref. PM Gardiner Sensitivity Test	2005 Prelim Pref. PM Restricted Truck Routes	2005 Prelim Pref. PM Oct. 2015 Pref. Land Use	2005 Prelim Pref. PM Transit		
DEDICATED ROW (Right-of-Way)		--	0:09:04	0:09:02	0:09:08	0:08:43	0:09:07	0:09:07	0:08:45	0:09:07	0:09:07	0:09:07	--	0:09:20	0:08:34	0:09:18	0:09:19	0:09:22	0:09:26	0:09:27	0:09:24	0:09:25	0:09:21		
Commissioners St. EB	--	0:11:20	0:10:24	0:11:19	0:11:17	0:11:22	0:11:28	0:11:01	0:11:21	0:11:19	0:11:16	--	0:11:35	0:10:10	0:11:32	0:11:18	0:11:26	0:11:33	0:11:26	0:11:22	0:11:21	0:11:35			
Commissioners St. WB	--	0:06:32	0:06:20	0:06:30	0:06:42	0:06:32	0:06:28	0:06:30	0:06:29	0:06:31	0:06:32	--	0:07:16	0:07:00	0:07:06	0:07:06	0:07:18	0:07:04	0:07:20	0:07:21	0:07:22	0:07:18			
Cherry St. NB	--	0:07:39	0:08:07	0:07:35	0:08:07	0:07:35	0:07:37	0:08:11	0:07:37	0:07:37	0:07:36	--	0:08:45	0:08:36	0:08:54	0:08:48	0:08:40	0:09:14	0:09:20	0:08:32	0:08:39	0:08:38			
Cherry St. SB	--	0:05:40	0:04:10	0:05:56	0:04:42	0:05:48	0:06:03	0:03:20	0:05:47	0:05:50	0:05:45	--	0:04:47	0:04:58	0:04:42	0:04:43	0:04:38	0:04:41	0:04:40	0:04:38	0:04:42	0:04:38			
Broadview Ave. NB	--	0:03:57	0:05:50	0:03:54	0:04:18	0:04:11	0:04:01	0:05:54	0:03:58	0:03:58	0:03:58	--	0:03:50	0:03:43	0:03:54	0:05:05	0:04:02	0:03:50	0:04:02	0:03:54	0:03:55	0:04:02			
Broadview Ave. SB	--	0:07:22	0:07:19	0:07:24	0:07:18	0:07:26	0:07:27	0:07:17	0:07:23	0:07:24	0:07:22	--	0:07:36	0:07:10	0:07:34	0:07:43	0:07:34	0:07:38	0:07:43	0:07:32	0:07:34	0:07:35			
Average	--																								
MIXED TRAFFIC		0:14:02	0:11:27	0:11:40	0:11:48	0:11:58	0:11:32	0:12:05	0:11:31	0:11:47	0:11:35	0:11:24	0:13:36	0:12:04	0:14:22	0:12:58	0:12:17	0:12:20	0:12:04	0:13:00	0:13:18	0:13:16	0:12:04		
Queen St. EB	0:13:42	0:11:24	0:12:29	0:13:09	0:14:11	0:14:22	0:16:34	0:11:10	0:14:28	0:12:22	0:11:43	0:13:58	0:11:37	0:20:37	0:16:53	0:18:48	0:15:06	0:21:38	0:16:48	0:18:54	0:25:26	0:20:34			
Queen St. WB	0:07:40	0:09:17	0:11:28	0:09:38	0:09:44	0:09:47	0:09:59	0:09:54	0:09:46	0:09:11	0:09:29	0:07:08	0:09:24	0:13:43	0:15:02	0:12:40	0:18:00	0:19:59	0:12:18	0:14:59	0:21:11	0:21:29			
Commissioners St. EB	0:05:00	0:11:40	0:17:47	0:11:50	0:12:57	0:12:07	0:12:19	0:11:44	0:11:54	0:12:01	0:11:57	0:06:46	0:10:43	0:36:49	0:18:19	0:13:12	0:15:52	0:20:32	0:23:50	0:16:34	0:18:57	0:16:25			
Commissioners St. WB	--	0:04:36	0:04:17	0:04:39	0:04:38	0:04:44	0:04:37	0:04:39	0:04:38	0:04:30	0:04:36	--	0:04:32	0:05:26	0:05:50	0:04:45	0:04:53	0:07:20	0:05:06	0:04:45	0:04:36	0:04:38			
Unwin Ave. EB	--	0:04:38	0:04:38	0:04:41	0:04:37	0:04:47	0:04:38	0:04:42	0:04:44	0:04:41	0:04:44	--	0:04:40	0:04:54	0:05:13	0:04:48	0:04:47	0:05:52	0:05:03	0:04:44	0:04:45	0:04:48			
Unwin Ave. WB	0:02:58	0:04:50	0:06:11	0:07:59	0:05:23	0:07:47	0:08:09	0:11:32	0:08:28	0:06:08	0:06:40	0:04:07	0:04:41	0:13:14	0:12:29	0:10:46	0:11:07	0:12:29	0:16:12	0:10:25	0:12:18	0:11:24			
Cherry St. NB	0:03:05	0:04:14	0:05:30	0:05:01	0:04:45	0:04:47	0:04:55	0:05:55	0:04:46	0:04:34	0:04:51	0:02:41	0:04:02	0:06:37	0:04:50	0:04:48	0:04:33	0:05:20	0:06:36	0:04:38	0:04:50	0:04:39			
Cherry St. SB	--	0:03:17	0:02:37	0:04:04	0:04:11	0:04:45	0:04:15	0:02:08	0:03:58	0:04:20	0:04:37	--	0:02:58	0:03:00	0:03:35	0:03:10	0:03:37	0:03:54	0:04:08	0:03:26	0:02:33	0:03:06			
Broadview Ave. NB	--	0:02:30	0:02:33	0:02:35	0:02:28	0:02:29	0:02:30	0:02:28	0:02:31	0:02:29	0:02:35	--	0:02:49	0:04:20	0:04:20	0:03:43	0:03:27	0:03:38	0:03:36	0:03:21	0:03:17	0:03:47			
Broadview Ave. SB	0:04:55	0:04:20	0:10:48	0:05:55	0:05:42	0:05:43	0:05:47	0:04:05	0:05:50	0:04:52	0:05:09	0:05:13	0:04:16	0:12:15	0:08:58	0:05:18	0:05:55	0:07:36	0:05:09	0:08:22	0:08:12	0:07:14			
Carlaw Ave. NB	0:05:34	0:05:09	0:07:24	0:06:18	0:07:03	0:07:24	0:06:10	0:05:43	0:06:45	0:05:59	0:06:02	0:06:41	0:05:53	0:13:50	0:09:42	0:08:20	0:09:02	0:08:38	0:09:46	0:08:05	0:08:02	0:08:14			
Carlaw Ave. SB	0:04:23	0:05:18	0:07:25	0:05:46	0:06:30	0:05:34	0:06:41	0:05:50	0:06:15	0:05:28	0:06:27	0:04:31	0:05:10	0:09:19	0:06:08	0:06:31	0:06:26	0:07:48	0:06:34	0:06:25	0:08:05	0:08:15			
Leslie St. NB	0:05:12	0:05:56	0:07:10	0:06:39	0:06:34	0:06:32	0:06:59	0:06:19	0:07:04	0:06:06	0:06:08	0:05:30	0:06:00	0:08:53	0:07:24	0:07:33	0:06:50	0:07:16	0:07:22	0:07:57	0:07:50	0:07:22			
Leslie St. SB	Average	0:06:51	0:06:20	0:08:00	0:07:09	0:07:11	0:07:19	0:07:33	0:06:59	0:07:21	0:06:44	0:07:01	0:06:21	0:11:57	0:09:24	0:08:20	0:08:43	0:10:17	0:09:41	0:09:00	0:10:14	0:09:34			

PORT LANDS AND SOUTH OF EASTERN MASTER PLAN

INTERSECTION STATS Fri, Nov 13, 2015

Table with 12 columns for intersection scenarios and 1 row for 'Total Volume'.

Table for Queen @ Broadview intersection with 10 columns for volume categories.

Table for Queen @ Broadview AM Peak Hour with 10 columns for volume categories.

Table for Queen @ Broadview PM Peak Hour with 10 columns for volume categories.

Table for Queen @ Carlaw intersection with 10 columns for volume categories.

Table for Queen @ Carlaw AM Peak Hour with 10 columns for volume categories.

Table for Queen @ Carlaw PM Peak Hour with 10 columns for volume categories.

Table for Queen @ Leslie intersection with 10 columns for volume categories.

Table for Queen @ Leslie AM Peak Hour with 10 columns for volume categories.

Table for Queen @ Leslie PM Peak Hour with 10 columns for volume categories.

Table for Eastern Ave. @ Broadview intersection with 10 columns for volume categories.

Table for Eastern Ave. @ Broadview AM Peak Hour with 10 columns for volume categories.

Table for Eastern Ave. @ Broadview PM Peak Hour with 10 columns for volume categories.

Table for Eastern Ave. @ Carlaw intersection with 10 columns for volume categories.

Table for Eastern Ave. @ Carlaw AM Peak Hour with 10 columns for volume categories.

Table for Eastern Ave. @ Carlaw PM Peak Hour with 10 columns for volume categories.

Table for Eastern Ave. @ Leslie intersection with 10 columns for volume categories.

Table for Eastern Ave. @ Leslie AM Peak Hour with 10 columns for volume categories.

Table for Eastern Ave. @ Leslie PM Peak Hour with 10 columns for volume categories.

PORT LANDS AND SOUTH OF EASTERN MASTER PLAN

INTERSECTION STATS Fri, Nov 13, 2015

Table with columns for Model, Total Volume, AM Peak Hour, and PM Peak Hour. Rows represent various intersections like Lake Shore @ Don Roadway, Lake Shore @ Broadview, Lake Shore @ Carlaw, Lake Shore @ Leslie, Lake Shore @ Coxwell, and Queen's Quay Extension @ Parliament. Each intersection has a grid of values for different scenarios and modes.

**PORT LANDS AND
SOUTH OF EASTERN
MASTER PLAN**

INTERSECTION STATS
Fri, Nov 13, 2015

Model		Average Delay (seconds)																					
		AM Peak Hour							PM Peak Hour														
		Exist AM	2031 Prelim Pref. AM Phasing & Implementation	2065 Base AM	2065 Prelim Pref. AM	2065 Prelim Pref. AM Mitigated	2065 Prelim Pref. AM Woodfield Rd. Ext.	2065 Prelim Pref. AM Carlaw Ave	2065 Prelim Pref. AM Gardiner Sensitivity Test	2065 Prelim Pref. AM Restricted Truck Routes	2065 Prelim Pref. AM Oct. 2015 Pref. Land Use	2065 Prelim Pref. AM Increased Transit Mode Share	Exist PM	2031 Prelim Pref. PM Phasing & Implementation	2065 Base PM	2065 Prelim Pref. PM	2065 Prelim Pref. PM Mitigated	2065 Prelim Pref. PM Woodfield Rd. Ext.	2065 Prelim Pref. PM Carlaw Ave	2065 Prelim Pref. PM Gardiner Sensitivity Test	2065 Prelim Pref. PM Restricted Truck Routes	2065 Prelim Pref. PM Oct. 2015 Pref. Land Use	2065 Prelim Pref. PM Increased Transit Mode Share
Lake Shore @ Don Roadway		19.2	12.6	13.9	13.2	26.5	13.5	11.8	104.9	12.5	28.7	11.3	22.0	12.9	23.1	25.2	33.3	14.6	19.4	133.8	23.8	37.3	21.9
Lake Shore @ Broadview		--	29.4	53.5	67.9	45.8	69.2	70.6	78.6	65.2	45.7	46.4	--	28.4	39.5	59.5	0.0	64.1	65.4	72.6	66.0	54.1	21.5
Lake Shore @ Carlaw		103.4	61.2	163.4	76.5	81.4	75.5	73.8	41.9	74.4	58.8	65.4	60.2	28.0	78.9	76.8	40.9	65.2	68.8	112.4	59.3	57.9	56.4
Lake Shore @ Leslie		76.8	66.9	47.0	41.0	43.8	37.7	43.7	38.4	31.0	38.2	38.3	42.6	48.0	237.3	95.7	48.8	91.4	93.8	52.4	76.2	57.5	46.8
Lake Shore @ Coxwell		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Queen's Quay Extension @ Parliament		--	31.6	20.3	23.4	21.6	22.8	23.0	23.8	23.1	23.2	23.7	--	24.2	29.4	27.9	22.6	24.1	22.6	40.5	27.0	36.1	38.8

PORT LANDS AND SOUTH OF EASTERN MASTER PLAN

INTERSECTION STATS
Fri, Nov 13, 2015

Model	Average Delay (seconds)																					
	AM Peak Hour						PM Peak Hour															
	EXIST AM	2031 Prelim Pref. AM Phasing & Implementation	2065 Base AM	2065 Prelim Pref. AM	2065 Prelim Pref. AM Mitigated	2065 Prelim Pref. AM Woodfield Rd. Ext.	2065 Prelim Pref. AM Carlaw Ave	2065 Prelim Pref. AM Gardiner Sensitivity Test	2065 Prelim Pref. AM Restricted Truck Routes	2065 Prelim Pref. AM Oct. 2015 Prof. Land Use	2065 Prelim Pref. AM Increased Transit Mode Share	EXIST PM	2031 Prelim Pref. PM Phasing & Implementation	2065 Base PM	2065 Prelim Pref. PM	2065 Prelim Pref. PM Mitigated	2065 Prelim Pref. PM Woodfield Rd. Ext.	2065 Prelim Pref. PM Carlaw Ave	2065 Prelim Pref. PM Gardiner Sensitivity Test	2065 Prelim Pref. PM Restricted Truck Routes	2065 Prelim Pref. PM Oct. 2015 Prof. Land Use	2065 Prelim Pref. PM Increased Transit Mode Share
Commissioners @ Leslie																						
NBL	7.5	18.7	39.1	21.5	26.0	21.6	23.2	22.3	23.2	17.2	19.2	13.7	16.2	38.7	22.9	21.5	35.2	34.0	29.9	24.4	21.6	19.6
NBT	4.5	11.9	14.7	14.1	16.0	13.7	14.1	14.6	15.1	12.9	11.5	12.1	11.8	29.9	17.8	16.8	25.8	23.5	22.3	21.7	14.2	15.0
NBR	0.0	12.4	15.2	14.8	8.5	0.0	15.4	3.1	9.6	2.0	14.4	6.4	6.3	22.8	5.1	14.1	16.7	16.2	28.7	21.5	13.7	0.0
SBL	5.4	10.9	15.3	16.8	15.7	16.5	19.3	16.7	16.5	16.1	11.7	14.8	12.5	27.6	20.6	19.8	28.5	23.3	12.0	15.9	20.9	17.5
SBT	3.9	12.2	14.7	14.1	13.9	13.7	13.2	14.2	14.0	12.6	12.7	12.4	11.9	8.1	12.9	14.5	12.8	14.4	15.9	13.6	12.8	11.8
SBR	1.8	5.8	7.1	5.9	6.5	6.2	5.8	5.8	5.4	5.1	5.4	1.9	5.5	4.7	5.0	6.4	4.9	5.9	18.9	11.8	14.0	6.3
WBL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	32.1	40.3
WBT	32.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12.0	37.8	42.8	48.2	40.8	49.5	41.3	49.3	41.3	36.3	37.0
WBR	33.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.9	33.5	42.4	37.7	43.1	39.3	42.2	37.4	42.8	38.3	33.8
EBL	46.9	39.4	39.0	38.6	42.8	36.3	35.6	43.9	40.8	39.8	38.6	23.6	96.9	99.3	72.8	49.6	61.0	87.4	56.0	76.3	98.6	53.5
EBT	37.8	38.7	34.3	27.6	32.0	42.4	28.5	36.0	34.6	43.5	38.0	22.0	50.9	0.0	37.0	42.8	34.2	39.3	41.5	38.6	41.6	34.0
EBR	1.6	34.6	32.5	42.3	36.8	41.4	39.4	31.5	30.8	39.5	38.0	1.2	43.1	36.6	39.1	38.2	41.7	44.5	36.7	43.4	42.3	39.9
Basin Extension @ Cherry																						
NBL	--	0.0	22.7	17.1	18.4	18.4	15.1	25.3	18.1	25.8	18.2	--	0.0	62.5	40.0	24.3	29.8	44.8	46.2	39.0	0.0	49.8
NBT	0.0	11.8	19.1	18.0	17.7	17.2	17.3	20.0	17.3	13.3	15.4	0.0	14.4	55.0	27.6	18.6	23.3	30.3	54.0	24.2	33.5	27.4
NBR	--	16.0	19.6	19.4	18.3	18.3	18.6	20.3	18.8	13.9	16.5	--	17.1	30.9	34.7	20.6	26.4	23.0	44.3	24.6	29.5	32.7
SBL	--	24.2	33.9	25.2	26.5	24.0	26.7	50.1	20.1	18.0	19.2	--	18.3	38.6	41.5	27.5	58.7	37.6	89.2	33.9	39.7	25.4
SBT	0.0	9.9	29.1	17.5	19.4	17.0	19.6	33.7	16.3	14.6	15.1	0.0	11.2	24.3	22.3	18.9	21.5	21.4	51.8	18.2	26.0	18.0
SBR	--	11.2	33.6	19.5	21.5	19.4	20.6	35.9	18.0	15.9	15.6	--	11.2	22.5	26.3	19.5	17.3	21.9	49.7	17.4	22.0	18.3
WBL	--	15.1	19.2	28.6	27.5	29.1	30.6	23.1	32.9	33.6	26.3	--	15.7	26.8	33.5	38.8	47.4	42.7	85.8	46.6	70.5	32.0
WBT	--	19.8	18.1	27.9	26.5	30.3	29.7	20.7	31.0	32.1	25.8	--	13.8	27.7	33.7	34.0	43.6	37.5	97.3	43.2	72.6	36.7
WBR	--	16.3	19.6	36.8	29.2	35.3	48.4	15.1	40.1	31.9	29.6	--	20.0	23.3	28.1	34.8	60.2	61.1	78.7	53.0	91.9	55.0
EBL	--	20.7	24.3	27.6	36.4	28.8	27.5	20.9	27.7	22.1	26.4	--	20.0	80.3	68.2	61.0	70.2	72.8	72.4	66.9	64.1	48.4
EBT	--	0.0	21.7	25.4	30.1	26.9	25.2	18.5	25.8	15.4	24.0	--	21.8	70.5	70.3	59.1	65.4	66.0	66.2	61.1	48.5	46.8
EBR	--	0.0	19.7	28.1	33.2	30.8	26.4	17.2	27.9	0.0	29.3	--	0.0	102.4	71.7	60.1	68.7	75.1	100.5	69.1	72.7	64.6
Basin Extension @ Don Roadway																						
NBL	--	11.8	16.1	19.7	20.5	21.3	20.4	20.8	18.5	18.8	17.5	--	11.1	202.5	39.7	19.2	48.2	48.5	68.5	35.8	59.3	74.8
NBT	--	15.4	9.7	15.7	15.2	15.3	15.7	18.3	15.3	13.6	15.9	--	11.2	194.1	46.0	17.9	53.6	27.9	82.0	33.6	58.6	22.9
NBR	--	0.0	13.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	--	0.0	223.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SBL	--	10.9	44.7	17.7	19.4	20.3	21.2	22.5	19.8	20.5	16.0	--	11.4	103.2	42.2	14.9	23.9	35.5	24.8	25.9	25.0	20.6
SBT	--	0.0	15.3	14.8	14.4	15.8	14.7	15.2	15.8	22.0	14.4	--	11.6	16.9	20.7	12.0	16.4	27.3	14.8	17.9	17.2	18.0
SBR	--	14.1	13.6	15.6	14.7	15.3	15.0	16.1	14.9	15.7	14.9	--	12.1	18.6	14.5	13.9	13.1	22.9	14.6	13.9	14.2	14.2
WBL	--	2.8	9.7	9.1	8.2	7.9	8.2	4.8	8.5	7.6	4.7	--	3.5	121.6	32.7	11.2	50.2	22.6	39.6	67.1	23.1	9.3
WBT	--	0.0	10.4	10.3	8.4	10.4	10.8	5.2	9.4	4.9	3.3	--	0.0	104.4	18.0	9.6	30.8	19.3	12.0	21.2	11.4	8.3
WBR	--	8.3	12.2	8.3	8.1	8.5	8.7	8.4	8.8	7.4	8.4	--	6.6	109.5	26.2	10.6	26.3	25.1	26.8	30.7	23.8	12.5
EBL	--	8.1	22.4	10.3	10.1	10.0	10.1	10.1	10.5	8.2	10.2	--	6.9	142.0	29.3	17.9	34.6	38.9	33.7	30.8	25.6	16.2
EBT	--	0.0	17.6	9.2	8.4	7.5	7.4	7.9	9.3	8.4	8.1	--	0.0	104.9	39.2	11.9	23.1	27.7	27.7	26.7	11.0	12.5
EBR	--	4.6	16.6	9.7	9.2	9.1	9.5	9.8	9.5	9.2	--	7.5	0.0	30.5	14.0	24.7	23.8	25.2	26.1	17.4	14.8	
Unwin @ Cherry																						
NBL	2.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7	9.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NBT	0.0	6.6	6.8	7.2	7.4	7.5	7.2	7.3	7.2	7.1	8.1	0.0	8.0	7.6	8.1	7.7	7.7	13.2	7.8	7.8	7.0	7.1
NBR	0.0	7.4	7.2	7.1	7.1	6.8	7.2	7.0	7.3	7.4	8.3	0.1	7.3	8.5	8.1	7.9	8.4	9.9	8.2	8.2	8.3	7.5
SBL	0.2	11.5	13.1	15.8	16.1	16.6	14.7	15.2	15.3	10.3	13.8	0.2	7.8	26.1	23.2	11.2	33.3	35.9	10.4	21.2	13.6	11.2
SBT	0.0	10.1	12.7	15.4	13.1	16.1	13.4	14.7	15.4	10.9	12.9	0.0	7.7	18.9	13.5	10.2	17.5	13.5	9.6	10.5	9.9	9.8
SBR	0.0	9.6	12.8	14.5	13.7	17.7	16.7	16.5	14.6	10.5	11.3	0.0	7.6	22.2	12.2	10.7	15.5	20.7	10.3	9.9	10.8	9.5
WBL	0.0	0.0	5.3	4.2	4.6	5.1	4.3	6.8	4.8	6.0	4.6	3.2	5.8	6.4	6.5	7.2	7.3	8.8	8.2	6.5	5.6	7.4
WBT	0.0	0.0	6.1	2.3	3.4	4.5	3.6	4.9	4.3	5.2	3.2	0.0	6.5	7.0	5.6	5.3	5.2	7.3	7.2	4.7	5.1	5.8
WBR	2.9	13.9	7.5	9.0	8.5	9.9	9.5	9.4	9.0	8.2	7.2	2.2	9.8	11.7	8.3	8.5	7.9	15.0	9.8	8.1	9.0	9.9
EBL	4.2	0.0	6.6	8.8	9.7	8.9	9.5	7.7	8.9	7.5	7.8	4.5	7.6	24.9	14.1	13.2	13.0	19.3	14.9	12.0	9.8	13.2
EBT	0.0	0.0	5.8	2.8	6.6	3.7	3.0	0.0	3.2	0.0	0.0	0.0	0.0	19.4	9.6	9.9	10.4	11.2	10.3	10.0	10.1	10.6
EBR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Don Roadway @ First Gulf																						
NBL	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
NBT	--	1.7	2.3	1.1	1.4	1.1	1.2	1.4	1.1	1.3	1.2	--	1.4	2.2	1.1	1.5	1.2	1.1	2.0	1.1	1.2	1.1
NBR	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SBL	--	4.9	--	11.8	12.5	10.7	12.6	13.2	10.9	9.3	9.0	--	4.4	--	21.1	14.1	40.7	76.7	68.7	16.6	84.7	7.8
SBT	--	0.0	59.8	10.6	3.6	9.7	10.1	8.6	8.2	2.7	4.7	--	0.0	123.1	72.5	31.1	68.6	71.2	40.5	72.4	56.3	54.5
SBR	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WBL	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WBT	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
WBR	--	3.8	--	3.7	3.6	3.5	3.8	9.8	4.8	3.4	3.6	--	2.0	--	14.3	19.3	13.6	14.9	12.8	14.3	8.0	8.5
EBL	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
EBT	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
EBR	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

PORT LANDS AND SOUTH OF EASTERN MASTER PLAN

INTERSECTION STATS
Fri, Nov 13, 2015

Movement LOS

AM Peak Hour PM Peak Hour

Model	AM Peak Hour										PM Peak Hour												
	Exist AM	2031 Prelim Pref. AM Phasing & Implementation	2065 Base AM	2065 Prelim Pref. AM	2065 Prelim Pref. AM Mitigated	2065 Prelim Pref. AM Woodfield Rd. Ext.	2065 Prelim Pref. AM Carlaw Ave	2065 Prelim Pref. AM Gardiner Sensitivity Test	2065 Prelim Pref. AM Restricted Truck Routes	2065 Prelim Pref. AM Oct. 2015 Pref. Land Use	2065 Prelim Pref. AM Increased Transit Mode Share	Exist PM	2031 Prelim Pref. PM Phasing & Implementation	2065 Base PM	2065 Prelim Pref. PM	2065 Prelim Pref. PM Mitigated	2065 Prelim Pref. PM Woodfield Rd. Ext.	2065 Prelim Pref. PM Carlaw Ave	2065 Prelim Pref. PM Gardiner Sensitivity Test	2065 Prelim Pref. PM Restricted Truck Routes	2065 Prelim Pref. PM Oct. 2015 Pref. Land Use	2065 Prelim Pref. PM Increased Transit Mode Share	
Queen @ Broadview	NBL B C	NBL B C	NBL B C	NBL B C	NBL B C	NBL B C	NBL B C	NBL B C	NBL B C	NBL B C	NBL B C	NBL B C	NBL B C	NBL B C	NBL B C	NBL B C	NBL B C	NBL B C	NBL B C	NBL B C	NBL B C	NBL B C	NBL B C
Queen @ Carlaw	NBL B C	NBL B C	NBL B C	NBL B C	NBL B C	NBL B C	NBL B C	NBL B C	NBL B C	NBL B C	NBL B C	NBL B C	NBL B C	NBL B C	NBL B C	NBL B C	NBL B C	NBL B C	NBL B C	NBL B C	NBL B C	NBL B C	NBL B C
Queen @ Leslie	NBL B C	NBL B C	NBL B C	NBL B C	NBL B C	NBL B C	NBL B C	NBL B C	NBL B C	NBL B C	NBL B C	NBL B C	NBL B C	NBL B C	NBL B C	NBL B C	NBL B C	NBL B C	NBL B C	NBL B C	NBL B C	NBL B C	NBL B C
Eastern Ave. @ Broadview	NBL B C	NBL B C	NBL B C	NBL B C	NBL B C	NBL B C	NBL B C	NBL B C	NBL B C	NBL B C	NBL B C	NBL B C	NBL B C	NBL B C	NBL B C	NBL B C	NBL B C	NBL B C	NBL B C	NBL B C	NBL B C	NBL B C	NBL B C
Eastern Ave. @ Carlaw	NBL B C	NBL B C	NBL B C	NBL B C	NBL B C	NBL B C	NBL B C	NBL B C	NBL B C	NBL B C	NBL B C	NBL B C	NBL B C	NBL B C	NBL B C	NBL B C	NBL B C	NBL B C	NBL B C	NBL B C	NBL B C	NBL B C	NBL B C
Eastern Ave. @ Leslie	NBL B C	NBL B C	NBL B C	NBL B C	NBL B C	NBL B C	NBL B C	NBL B C	NBL B C	NBL B C	NBL B C	NBL B C	NBL B C	NBL B C	NBL B C	NBL B C	NBL B C	NBL B C	NBL B C	NBL B C	NBL B C	NBL B C	NBL B C

PORT LANDS AND SOUTH OF EASTERN MASTER PLAN

INTERSECTION STATS
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Eastern Ave. @ Coxwell	NBL A	C	F	F	F	F	F	E	F	E	F	NBL B	C	D	C	D	C	C	C	C	D	D
Lake Shore @ Parliament	NBL B	E	E	E	E	E	D	E	E	E	NBL C	D	D	D	D	D	D	C	E	D	D	
Lake Shore @ Cherry (North)	NBL --	--	--	--	--	--	--	--	--	--	NBL --	--	--	--	--	--	--	--	--	--	--	--
Lake Shore @ Cherry (South)	NBL C	--	--	--	--	--	--	--	--	--	NBL C	--	--	--	--	--	--	--	--	--	--	--
Lake Shore @ Cherry	NBL --	D	D	D	D	D	F	D	D	D	NBL --	B	D	D	D	D	D	F	D	D	D	C
Lake Shore @ Munitions	NBL --	D	D	D	D	D	D	D	D	D	NBL --	D	E	E	D	D	E	E	D	E	E	

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Lake Shore @ Don Roadway	NBL B	B	B	B	C	B	B	F	B	C	B	C	B	C	C	B	B	F	C	D	C	C	NBL C	B	C	C	C	C	B	B	F	C	D	C	B	C	C	B	B	F	C	D	C	C	
Lake Shore @ Broadview	NBL --	C	D	E	D	E	E	F	E	D	D	--	C	D	E	A	E	F	F	E	D	C	NBT --	C	D	E	A	E	F	F	E	D	C	--	C	D	E	A	E	F	F	E	D	C	C
Lake Shore @ Carlaw	NBL F	E	F	E	F	E	E	D	E	E	E	F	C	C	E	D	E	E	F	E	E	E	NBT C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
Lake Shore @ Leslie	NBL E	E	D	D	D	D	D	D	C	C	D	D	D	D	F	D	F	F	D	E	E	D	NBT D	D	D	F	F	D	D	F	F	D	D	D	D	D	F	D	F	F	D	E	E	D	D
Lake Shore @ Coxwell	NBL --	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	NBT --	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Queen's Quay Extension @ Parliament	NBL --	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	NBT --	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

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Queen's Quay Extension @ Cherry	NBL	D	D	F	D	F	F	F	F	F	F	D	F	F	C	F	F	F	F	F	F	F	F	Queen's Quay Extension @ Munitions	NBL	B	B	B	B	B	B	B	B	B	B	B	F	D	E	E	E	B	E	F	E	E	E	Commissioners @ Cherry	NBL	A	A	B	B	C	C	C	C	B	C	B	B	B	C	C	C	D	C	C	C	C	C	Commissioners @ Don Roadway	NBL	A	C	D	D	E	D	D	F	D	E	D	A	D	F	E	F	F	F	F	F	F	F	Commissioners @ Saulter	NBL	A	--	--	--	--	--	--	--	--	--	A	--	--	--	--	--	--	--	--	--	--	--	Commissioners @ Carlaw	NBL	--	C	E	C	D	C	D	B	C	A	D	D	F	F	F	F	E	F	F	F	F	D
Queen's Quay Extension @ Munitions	NBL	B	B	B	B	B	B	B	B	B	B	B	F	D	E	E	E	B	E	F	E	E	E	Commissioners @ Cherry	NBL	A	A	B	B	C	C	C	C	B	C	B	B	B	C	C	C	D	C	C	C	C	C	Commissioners @ Don Roadway	NBL	A	C	D	D	E	D	D	F	D	E	D	A	D	F	E	F	F	F	F	F	F	F	Commissioners @ Saulter	NBL	A	--	--	--	--	--	--	--	--	--	A	--	--	--	--	--	--	--	--	--	--	--	Commissioners @ Carlaw	NBL	--	C	E	C	D	C	D	B	C	A	D	D	F	F	F	F	E	F	F	F	F	D																								
Commissioners @ Cherry	NBL	A	A	B	B	C	C	C	C	B	C	B	B	B	C	C	C	D	C	C	C	C	C	Commissioners @ Don Roadway	NBL	A	C	D	D	E	D	D	F	D	E	D	A	D	F	E	F	F	F	F	F	F	F	Commissioners @ Saulter	NBL	A	--	--	--	--	--	--	--	--	--	A	--	--	--	--	--	--	--	--	--	--	--	Commissioners @ Carlaw	NBL	--	C	E	C	D	C	D	B	C	A	D	D	F	F	F	F	E	F	F	F	F	D																																																
Commissioners @ Don Roadway	NBL	A	C	D	D	E	D	D	F	D	E	D	A	D	F	E	F	F	F	F	F	F	F	Commissioners @ Saulter	NBL	A	--	--	--	--	--	--	--	--	--	A	--	--	--	--	--	--	--	--	--	--	--	Commissioners @ Carlaw	NBL	--	C	E	C	D	C	D	B	C	A	D	D	F	F	F	F	E	F	F	F	F	D																																																																								
Commissioners @ Saulter	NBL	A	--	--	--	--	--	--	--	--	--	A	--	--	--	--	--	--	--	--	--	--	--	Commissioners @ Carlaw	NBL	--	C	E	C	D	C	D	B	C	A	D	D	F	F	F	F	E	F	F	F	F	D																																																																																																
Commissioners @ Carlaw	NBL	--	C	E	C	D	C	D	B	C	A	D	D	F	F	F	F	E	F	F	F	F	D																																																																																																																								

PORT LANDS AND SOUTH OF EASTERN MASTER PLAN

INTERSECTION STATS
 Fri, Nov 13, 2015

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Commissioners @ Leslie		NBL	A	B	D	C	C	C	C	C	C	B	B	B	B	D	C	C	D	C	C	C	C	B	B
		NBT	A	B	B	B	B	B	B	B	B	B	B	A	A	B	B	C	C	C	C	C	C	B	B
		NBR	A	B	B	B	B	B	B	B	B	B	A	A	B	B	B	B	B	B	B	B	B	A	A
		SBL	A	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
		SBT	A	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
		SBR	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
		WBL	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	D
		WBT	C	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	D
		WBR	C	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	D
		EBL	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D
		EBT	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D
		EBR	A	C	C	D	D	D	D	D	D	D	A	D	D	D	D	D	D	D	D	D	D	D	D
Basin Extension @ Cherry		NBL	--	A	C	B	B	B	C	B	C	B	--	A	E	D	C	C	D	D	D	D	A	D	
		NBT	A	B	B	B	B	B	C	B	B	B	A	B	C	C	C	C	D	D	D	C	C	C	
		NBR	--	B	B	B	B	B	C	B	B	B	--	B	C	C	C	C	C	D	D	C	C	C	
		SBL	--	C	C	C	C	C	C	D	C	B	--	B	D	D	C	E	D	F	D	C	D	C	
		SBT	A	A	C	B	B	B	C	B	B	B	A	A	C	C	B	C	C	D	F	C	C	C	
		SBR	--	B	C	B	C	B	C	D	B	B	--	B	C	C	B	C	D	F	D	C	C	B	
		WBL	--	B	B	C	C	C	C	C	C	C	--	B	C	C	C	D	D	F	D	E	C	D	
		WBT	--	B	B	C	C	C	C	C	C	C	--	B	C	C	C	D	D	F	D	E	C	D	
		WBR	--	B	B	D	C	C	D	B	D	C	--	B	C	C	C	E	F	E	D	F	F	E	
		EBL	--	C	C	C	D	C	C	C	C	B	--	C	F	F	F	F	F	F	F	D	D	D	
		EBT	--	A	C	C	C	C	C	C	C	A	--	A	F	F	F	F	F	F	F	E	D	D	
		EBR	--	A	B	C	C	C	C	C	C	A	--	A	A	C	C	C	C	C	C	E	D	E	
Basin Extension @ Don Roadway		NBL	--	B	B	B	C	C	C	C	B	B	--	B	F	D	B	D	D	F	D	E	E	E	
		NBT	--	A	A	A	B	B	B	B	B	A	A	A	F	D	A	A	A	A	A	A	E	C	
		NBR	--	A	A	A	A	A	A	A	A	A	A	A	F	D	A	A	A	A	A	A	E	C	
		SBL	--	B	D	B	B	B	C	C	B	C	--	B	F	C	B	B	C	D	C	C	C	C	
		SBT	--	B	B	B	B	B	C	B	B	B	--	B	B	B	B	B	C	C	C	C	C	C	
		SBR	--	B	B	B	B	B	B	B	B	B	--	B	B	B	B	B	C	C	C	C	C	C	
		WBL	--	A	A	A	A	A	A	A	A	A	--	A	F	C	B	E	C	D	E	C	A	A	
		WBT	--	A	A	A	A	A	A	A	A	A	--	A	F	C	B	A	C	B	C	C	C	A	
		WBR	--	A	A	A	A	A	A	A	A	A	--	A	F	C	B	C	C	C	C	C	C	B	
		EBL	--	A	C	B	B	B	B	B	A	B	--	A	F	C	B	C	D	C	C	C	C	B	
		EBT	--	A	B	A	A	A	A	A	A	A	--	A	F	D	B	C	C	C	C	C	C	B	
		EBR	--	A	A	A	A	A	A	A	A	A	--	A	A	C	B	C	C	C	C	C	C	B	
Unwin @ Cherry		NBL	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	
		NBT	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	
		NBR	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	
		SBL	A	B	B	B	B	B	B	B	B	B	A	A	C	B	B	C	D	B	C	B	A	A	
		SBT	A	B	B	B	B	B	B	B	B	B	A	A	B	B	B	B	C	D	B	C	B	A	
		SBR	A	A	B	B	B	B	B	B	B	B	A	A	C	B	B	B	C	B	A	B	A	A	
		WBL	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	
		WBT	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	
		WBR	A	B	A	A	A	A	A	A	A	A	A	A	B	A	A	A	B	A	B	A	A	A	
		EBL	A	A	A	A	A	A	A	A	A	A	A	A	C	B	B	B	B	B	B	B	A	B	
		EBT	A	A	A	A	A	A	A	A	A	A	A	A	B	A	A	B	B	B	B	A	B	B	
		EBR	A	A	A	A	A	A	A	A	A	A	A	A	A	C	B	C	C	C	C	C	B	A	
Don Roadway @ First Gulf		NBL	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
		NBT	--	A	A	A	A	A	A	A	A	A	--	--	--	--	--	--	--	--	--	--	--	--	
		NBR	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
		SBL	--	A	--	B	B	B	B	B	B	A	A	--	A	C	B	D	E	E	E	B	F	A	
		SBT	--	A	E	B	A	A	B	A	A	A	A	--	A	F	E	C	E	E	E	D	E	D	
		SBR	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
		WBL	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
		WBT	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
		WBR	--	A	--	A	A	A	A	A	A	A	A	--	A	--	B	B	B	B	B	B	A	A	
		EBL	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
		EBT	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
		EBR	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	

PORT LANDS AND SOUTH OF EASTERN MASTER PLAN
INTERSECTION STATS
Fri, Nov 13, 2015

		Intersection LOS & Delay (seconds)																					
		AM Peak Hour										PM Peak Hour											
Model		Exist AM	2031 Prelim Pref. AM Phasing & Implementation	2065 Base AM	2065 Prelim Pref. AM	2065 Prelim Pref. AM Mitigated	2065 Prelim Pref. AM Woodfield Rd. Ext.	2065 Prelim Pref. AM Carlaw Ave	2065 Prelim Pref. AM Gardiner Sensitivity Test	2065 Prelim Pref. AM Restricted Truck Routes	2065 Prelim Pref. AM Oct. 2015 Pref. Land Use	2065 Prelim Pref. AM Increased Transit Mode Share	Exist PM	2031 Prelim Pref. PM Phasing & Implementation	2065 Base PM	2065 Prelim Pref. PM	2065 Prelim Pref. PM Mitigated	2065 Prelim Pref. PM Woodfield Rd. Ext.	2065 Prelim Pref. PM Carlaw Ave	2065 Prelim Pref. PM Gardiner Sensitivity Test	2065 Prelim Pref. PM Restricted Truck Routes	2065 Prelim Pref. PM Oct. 2015 Pref. Land Use	2065 Prelim Pref. PM Increased Transit Mode Share
Queen @ Broadview		NBL																					
	NBT																						
	NBR																						
	SBL																						
	SBT	B	B	C	C	C	C	C	C	C	C	B	B	C	C	B	C	C	D	C	C	C	C
	SBR																						
	WBL	14	13	21	21	22	26	22	21	21	24	26	15	16	32	26	18	30	27	36	26	24	21
	WBT																						
	WBR																						
	EBL																						
	EBT																						
	EBR																						
Queen @ Carlaw		NBL																					
	NBT																						
	NBR																						
	SBL	B	B	B	B	B	B	B	B	B	B	B	B	C	C	B	C	C	C	C	C	C	B
	SBT																						
	SBR																						
	WBL	12	14	18	18	12	17	15	14	19	12	13	16	14	34	27	19	20	24	24	24	22	19
	WBT																						
	WBR																						
	EBL																						
	EBT																						
	EBR																						
Queen @ Leslie		NBL																					
	NBT																						
	NBR																						
	SBL	A	A	B	B	B	B	B	B	B	B	B	B	C	C	C	B	C	C	C	C	C	C
	SBT																						
	SBR																						
	WBL	10	8	15	14	15	14	20	11	14	11	11	12	10	30	21	25	19	22	22	27	28	26
	WBT																						
	WBR																						
	EBL																						
	EBT																						
	EBR																						
Eastern Ave. @ Broadview		NBL																					
	NBT																						
	NBR																						
	SBL	A	C	C	C	C	C	C	C	C	C	A	C	D	D	D	D	D	D	D	D	D	D
	SBT																						
	SBR																						
	WBL	3	25	29	30	27	29	29	26	29	30	31	5	22	48	47	36	48	46	49	43	38	39
	WBT																						
	WBR																						
	EBL																						
	EBT																						
	EBR																						
Eastern Ave. @ Carlaw		NBL																					
	NBT																						
	NBR																						
	SBL	B	C	C	C	C	C	C	C	C	C	B	B	D	D	D	D	C	D	D	D	D	D
	SBT																						
	SBR																						
	WBL	12	21	34	27	33	30	23	23	28	26	25	13	19	50	42	42	37	34	42	39	42	42
	WBT																						
	WBR																						
	EBL																						
	EBT																						
	EBR																						
Eastern Ave. @ Leslie		NBL																					
	NBT																						
	NBR																						
	SBL	B	B	C	C	C	C	C	B	C	B	B	B	B	D	C	C	C	C	C	C	C	D
	SBT																						
	SBR																						
	WBL	15	14	26	23	26	21	26	19	25	18	19	16	17	42	27	31	24	29	30	31	34	42
	WBT																						
	WBR																						
	EBL																						
	EBT																						
	EBR																						

PORT LANDS AND SOUTH OF EASTERN MASTER PLAN

INTERSECTION STATS
Fri, Nov 13, 2015

Intersection LOS & Delay (seconds)

AM Peak Hour PM Peak Hour

Main data table with columns for Model, Intersection Name, Approach, AM Peak Hour (11 scenarios), and PM Peak Hour (11 scenarios). Rows include Eastern Ave. @ Coxwell, Lake Shore @ Parliament, Lake Shore @ Cherry (North/South), Lake Shore @ Cherry, and Lake Shore @ Munitions.

PORT LANDS AND SOUTH OF EASTERN MASTER PLAN

INTERSECTION STATS
Fri, Nov 13, 2015

Intersection LOS & Delay (seconds)

Model	AM Peak Hour											PM Peak Hour											
	Exist AM	2031 Prelim Pref. AM Phasing & Implementation	2065 Base AM	2065 Prelim Pref. AM	2065 Prelim Pref. AM Mitigated	2065 Prelim Pref. AM Woodfield Rd. Ext.	2065 Prelim Pref. AM Carlaw Ave	2065 Prelim Pref. AM Gardiner Sensitivity Test	2065 Prelim Pref. AM Restricted Truck Routes	2065 Prelim Pref. AM Oct. 2015 Pref. Land Use	2065 Prelim Pref. AM Increased Transit Mode Share	Exist PM	2031 Prelim Pref. PM Phasing & Implementation	2065 Base PM	2065 Prelim Pref. PM	2065 Prelim Pref. PM Mitigated	2065 Prelim Pref. PM Woodfield Rd. Ext.	2065 Prelim Pref. PM Carlaw Ave	2065 Prelim Pref. PM Gardiner Sensitivity Test	2065 Prelim Pref. PM Restricted Truck Routes	2065 Prelim Pref. PM Oct. 2015 Pref. Land Use	2065 Prelim Pref. PM Increased Transit Mode Share	
Lake Shore @ Don Roadway	NBL											NBL											
NBT												NBT											
NBR												NBR											
SBL												SBL											
SBT												SBT											
SBR												SBR											
WBL	B	C	D	C	C	C	C	D	C	C	WBL	B	B	E	D	C	D	D	E	D	E	D	
WBT	15	28	46	30	34	29	30	47	29	31	WBT	17	11	64	45	32	41	45	60	43	58	38	
WBR											WBR												
EBL											EBL												
EBT											EBT												
EBR											EBR												
Lake Shore @ Broadview	NBL										NBL												
NBT											NBT												
NBR											NBR												
SBL											SBL												
SBT											SBT												
SBR											SBR												
WBL	-	B	D	C	C	C	C	C	C	C	WBL	-	B	E	E	D	E	E	D	E	F	E	
WBT		14	52	26	27	27	26	25	27	24	WBT		16	71	76	49	70	71	43	65	83	65	
WBR											WBR												
EBL											EBL												
EBT											EBT												
EBR											EBR												
Lake Shore @ Carlaw	NBL										NBL												
NBT											NBT												
NBR											NBR												
SBL											SBL												
SBT											SBT												
SBR											SBR												
WBL	C	C	D	D	E	D	D	C	D	C	WBL	D	C	D	D	D	D	D	D	D	D	D	
WBT	30	31	37	39	60	39	39	29	38	34	WBT	38	27	51	49	48	44	49	38	44	47	46	
WBR											WBR												
EBL											EBL												
EBT											EBT												
EBR											EBR												
Lake Shore @ Leslie	NBL										NBL												
NBT											NBT												
NBR											NBR												
SBL											SBL												
SBT											SBT												
SBR											SBR												
WBL	C	C	D	C	D	D	D	C	D	C	WBL	C	D	D	D	D	D	D	D	D	D	D	
WBT	31	31	40	33	37	37	37	31	40	31	WBT	30	49	50	43	36	38	45	39	40	49	43	
WBR											WBR												
EBL											EBL												
EBT											EBT												
EBR											EBR												
Lake Shore @ Coxwell	NBL										NBL												
NBT											NBT												
NBR											NBR												
SBL											SBL												
SBT											SBT												
SBR											SBR												
WBL	D	B	B	B	B	B	B	B	B	B	WBL	B	B	C	C	B	B	C	C	B	B	B	
WBT	38	15	15	17	16	18	16	16	16	17	WBT	13	15	23	22	17	17	23	20	19	19	18	
WBR											WBR												
EBL											EBL												
EBT											EBT												
EBR											EBR												
Queen's Quay Extension @ Parliament	NBL										NBL												
NBT											NBT												
NBR											NBR												
SBL											SBL												
SBT											SBT												
SBR											SBR												
WBL	-	C	C	C	C	C	C	C	C	C	WBL	-	C	D	C	B	C	C	D	C	D	D	
WBT		22	21	21	22	21	21	23	21	20	WBT		26	43	24	18	25	21	47	23	36	38	
WBR											WBR												
EBL											EBL												
EBT											EBT												
EBR											EBR												

PORT LANDS AND SOUTH OF EASTERN MASTER PLAN

INTERSECTION STATS
Fri, Nov 13, 2015

Intersection LOS & Delay (seconds)

Model	AM Peak Hour										PM Peak Hour												
	Exist AM	2031 Prelim Pref. AM Phasing & Implementation	2065 Base AM	2065 Prelim Pref. AM	2065 Prelim Pref. AM Mitigated	2065 Prelim Pref. AM Woodfield Rd. Ext.	2065 Prelim Pref. AM Carlaw Ave	2065 Prelim Pref. AM Gardiner Sensitivity Test	2065 Prelim Pref. AM Restricted Truck Routes	2065 Prelim Pref. AM Oct. 2015 Pref. Land Use	2065 Prelim Pref. AM Increased Transit Mode Share	Exist PM	2031 Prelim Pref. PM Phasing & Implementation	2065 Base PM	2065 Prelim Pref. PM	2065 Prelim Pref. PM Mitigated	2065 Prelim Pref. PM Woodfield Rd. Ext.	2065 Prelim Pref. PM Carlaw Ave	2065 Prelim Pref. PM Gardiner Sensitivity Test	2065 Prelim Pref. PM Restricted Truck Routes	2065 Prelim Pref. PM Oct. 2015 Pref. Land Use	2065 Prelim Pref. PM Increased Transit Mode Share	
Queen's Quay Extension @ Cherry																							
NBL																							
NBT																							
NBR																							
SBL																							
SBT																							
SBR																							
WBL	-	C	D	E	C	E	E	F	E	D	-	C	F	F	D	F	F	F	F	F	F	F	
WBT		23	39	59	27	62	69	90	59	37		34	110	98	48	98	106	138	92	117	107		
WBR																							
EBL																							
EBT																							
EBR																							
Queen's Quay Extension @ Munitions																							
NBL																							
NBT																							
NBR																							
SBL																							
SBT																							
SBR																							
WBL	-	A	B	B	B	B	B	C	B	B	-	A	D	C	C	C	C	C	C	D	D		
WBT		9	10	12	11	11	11	20	12	10		10	48	24	22	29	34	30	20	51	40		
WBR																							
EBL																							
EBT																							
EBR																							
Commissioners @ Cherry																							
NBL																							
NBT																							
NBR																							
SBL																							
SBT																							
SBR																							
WBL	A	B	B	C	B	C	C	C	C	B	B	B	D	C	C	C	D	D	C	D	C		
WBT	10	19	18	22	19	21	22	23	21	18	10	17	54	29	24	29	36	45	24	37	26		
WBR																							
EBL																							
EBT																							
EBR																							
Commissioners @ Don Roadway																							
NBL																							
NBT																							
NBR																							
SBL																							
SBT																							
SBR																							
WBL	A	B	C	C	C	C	C	C	C	C	A	C	F	D	D	E	E	E	D	D	D		
WBT	7	19	34	29	27	30	32	31	33	22	7	21	91	52	35	67	57	57	53	48	42		
WBR																							
EBL																							
EBT																							
EBR																							
Commissioners @ Saulter																							
NBL																							
NBT																							
NBR																							
SBL																							
SBT																							
SBR																							
WBL	A	B	D	A	A	A	A	A	A	A	A	A	F	A	A	B	B	A	A	B	A		
WBT	3	14	51	5	5	5	5	4	5	6	2	5	99	8	7	14	17	6	7	14	6		
WBR																							
EBL																							
EBT																							
EBR																							
Commissioners @ Carlaw																							
NBL																							
NBT																							
NBR																							
SBL																							
SBT																							
SBR																							
WBL	A	C	D	C	C	C	C	C	C	C	A	B	F	E	D	E	E	D	E	E	E		
WBT	6	30	50	25	26	24	24	23	23	24	5	19	160	69	44	63	68	45	65	70	60		
WBR																							
EBL																							
EBT																							
EBR																							

PORT LANDS AND SOUTH OF EASTERN MASTER PLAN

INTERSECTION STATS
Fri, Nov 13, 2015

		Intersection LOS & Delay (seconds)																							
		AM Peak Hour							PM Peak Hour																
Model		Exist AM	2031 Prelim Pref. AM Phasing & Implementation	2065 Base AM	2065 Prelim Pref. AM	2065 Prelim Pref. AM Mitigated	2065 Prelim Pref. AM Woodfield Rd. Ext.	2065 Prelim Pref. AM Carlaw Ave	2065 Prelim Pref. AM Gardiner Sensitivity Test	2065 Prelim Pref. AM Restricted Truck Routes	2065 Prelim Pref. AM Oct. 2015 Pref. Land Use	2065 Prelim Pref. AM Increased Transit Mode Share	Exist PM	2031 Prelim Pref. PM Phasing & Implementation	2065 Base PM	2065 Prelim Pref. PM	2065 Prelim Pref. PM Mitigated	2065 Prelim Pref. PM Woodfield Rd. Ext.	2065 Prelim Pref. PM Carlaw Ave	2065 Prelim Pref. PM Gardiner Sensitivity Test	2065 Prelim Pref. PM Restricted Truck Routes	2065 Prelim Pref. PM Oct. 2015 Pref. Land Use	2065 Prelim Pref. PM Increased Transit Mode Share		
Commissioners @ Leslie		NBL											NBL												
		NBT											NBT												
		NBR											NBR												
		SBL											SBL												
		SBT	B	B	B	B	B	B	B	B	B	B	SBT	B	D	D	C	B	C	C	C	C	C	C	
		SBR											SBR												
		WBL	13	13	12	13	14	13	12	13	13	11	11	WBL	15	42	37	23	18	25	28	27	25	34	20
		WBT											WBT												
		WBR											WBR												
		EBL											EBL												
		EBT											EBT												
		EBR											EBR												
Basin Extension @ Cherry		NBL											NBL												
		NBT											NBT												
		NBR											NBR												
		SBL	A	B	C	C	C	C	C	C	C	B	SBL	A	B	D	D	C	D	D	E	D	D	C	
		SBT											SBT												
		SBR											SBR												
		WBL	0	12	24	22	23	22	22	26	22	20	19	WBL	0	15	50	39	32	38	40	63	37	44	33
		WBT											WBT												
		WBR											WBR												
		EBL											EBL												
		EBT											EBT												
		EBR											EBR												
Basin Extension @ Don Roadway		NBL											NBL												
		NBT											NBT												
		NBR											NBR												
		SBL											SBL												
		SBT		B	C	B	B	B	B	B	B	B	SBT		A	F	C	B	D	C	D	C	C	C	
		SBR											SBR												
		WBL	--	10	20	14	14	15	14	16	14	16	13	WBL	--	10	127	32	15	35	31	39	30	31	23
		WBT											WBT												
		WBR											WBR												
		EBL											EBL												
		EBT											EBT												
		EBR											EBR												
Unwin @ Cherry		NBL											NBL												
		NBT											NBT												
		NBR											NBR												
		SBL	A	A	A	B	B	B	B	B	A	B	SBL	A	A	B	B	A	B	A	B	A	A	A	
		SBT											SBT												
		SBR											SBR												
		WBL	1	9	9	11	11	12	11	12	11	8	10	WBL	1	8	16	12	9	14	18	10	11	10	9
		WBT											WBT												
		WBR											WBR												
		EBL											EBL												
		EBT											EBT												
		EBR											EBR												
Don Roadway @ First Gulf		NBL											NBL												
		NBT											NBT												
		NBR											NBR												
		SBL		A	D	A	A	A	A	A	A	A	SBL		A	E	C	B	C	C	C	C	C	C	
		SBT											SBT												
		SBR											SBR												
		WBL	--	2	38	8	5	8	8	8	7	4	5	WBL	--	1	63	29	20	28	31	24	28	32	27
		WBT											WBT												
		WBR											WBR												
		EBL											EBL												
		EBT											EBT												
		EBR											EBR												

APPENDIX E:
**WATER AND
WASTEWATER
FUNCTIONAL SERVICING
REPORT**

Port Lands and South of Eastern Water and Wastewater Functional Servicing Report

PREPARED FOR: Ann Joyner
PREPARED BY: Lee Anne Jones
DATE: August 15, 2016
PROJECT NUMBER: 480252
REVISION NO.: 3

1.0 Introduction

The City of Toronto has initiated a Transportation and Servicing Master Plan (TSMP) to identify infrastructure needs to support future growth and redevelopment in the Port Lands and South of Eastern Study Area.

This Technical Memo has been prepared to provide details for the recommended preferred servicing alternatives identified in the Master Plan for water and wastewater for the Study Area as defined in Figure 1: Port Lands and South of Eastern Sub-Areas (City of Toronto) and summarized below.

2.0 Existing Conditions Summary

2.1 Existing Water Supply Network

The existing Water Supply Network consists of a network of distribution water mains ranges in size from 150-300mm diameter supplied from Pressure Zone 1 of the City's water supply network.

The City of Toronto's existing InfoWater Hydraulic Model was updated for the Study Area as detailed in *Technical Memo #1 – Background and Existing Conditions Water and Wastewater Servicing Infrastructure, January 2015* and used to assess performance of the existing system that could contribute constraints to system expansion.

As summarized in the above-noted Technical Memorandum, the model identified that the system operates within a pressure range of 88 psi to 94 psi, in compliance with the *City of Toronto Design Criteria for Sewers and Watermains (2009)*. It was noted that the maximum pressure reading of 94 psi could result in an internal building pressure exceeding the 2012 Ontario Building Code (OBC) maximum static pressure of 550 kPa (79.8 psi). The high pressures are likely due to the lower elevation of the Study Area, closer to the lake. Individual pressure reducing valves installed on the building-side of any developments with pressure that exceed the OBC maximum pressure can provide protection against building plumbing over-pressurization.

The model also identified that fire flows are sufficient throughout the majority of the Study Area; however, some isolated areas, as identified in the table excerpt from Technical Memo #1 below, struggle to meet the target fire flows due to small diameter piping or lack of looping in the system.

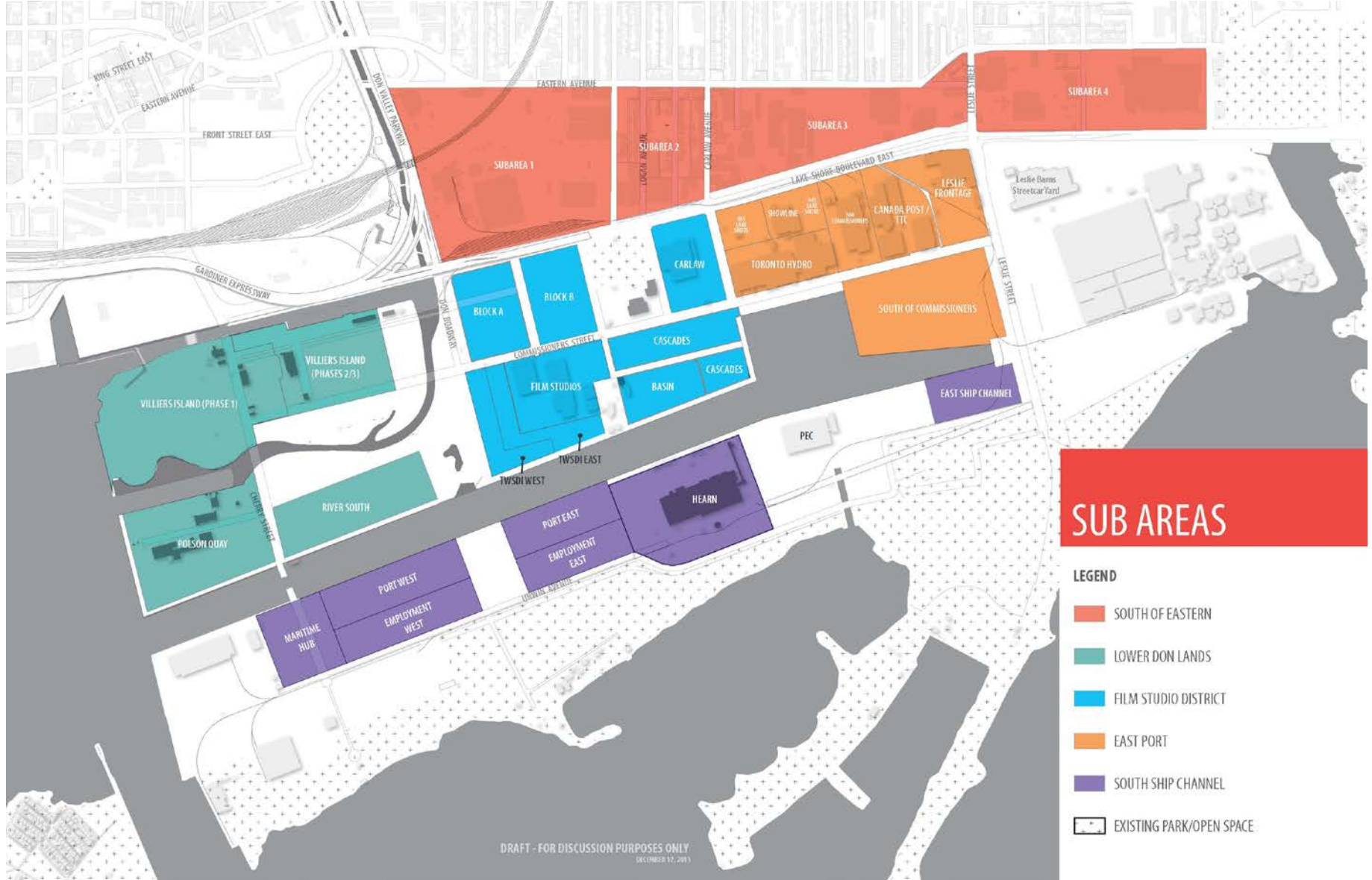


Figure 1. Port Lands and Sputh of Eastern Sub Areas (City of Toronto)

Table 1. Locations Predicted to Have Low Available Fire Flow

Location Within Study Area	Land Use Category ¹	Target Fire Flow (L/s)	Available Fire Flow (L/s)
Unwin Ave (Cherry St to Leslie St)	COM, IND	189.3, 316.7	24.6 – 129.6
Leslie St (Commissioners St to Unwin Ave)	COM	189.3	160.7 – 330.1
Basin St (East of Bouchette St)	COM, IND	189.3, 316.7	193.0 – 462.4
Morse St (Eastern Ave to Lake Shore Blvd E)	RES, COM	126.2, 189.3	78.6
Carlaw Ave (Eastern Ave to Lake Shore Blvd E)	RES, COM, IND	126.2, 189.3, 316.7	81.1
Heward Ave (South of Eastern Ave)	COM, IND	189.3, 316.7	47.2
Knox Ave	COM	189.3	157.1
Woodfield Rd	COM	189.3	63.3

Note 1: RES = Residential, COM = Commercial, IND = Industrial

Ref: Technical Memo #1 – Background and Existing Conditions Water and Wastewater Servicing Infrastructure, January 2015

2.2 Existing Wastewater Collection Network

The wastewater collection system in the study area is a separated system of pipes ranging in diameter from 200 mm to 675 mm. The Port Lands Study Area north of the ship channel connects by gravity at Logan Avenue/ Eastern Avenue into a large diameter interceptor sewer, termed the Low Level Interceptor (LLI) that collects and conveys flow to the Ashbridges Bay Sewage Treatment Plant (ABTP). The section of the Port Lands to the east and south-east connects to the LLI via Leslie Street. Facilities along the east side of the ship channel are serviced through an extension of the Leslie Street sewer along Unwin Avenue that terminates west of the Portlands Energy Centre. The remainder of the southern part of the Port Lands, south of the Ship Channel, is currently not connected to a sanitary sewer system. Small businesses and washroom facilities for the recreational fields in this area use septic tanks or other waste treatment/storage systems.

Properties in the South of Eastern portion of the Study Area drain via sanitary sewers that run north to the LLI. The sewer size is mainly 300 mm diameter with a maximum of 450 mm diameter.

A Study Area-specific InfoWorks model was created for the Study Area as detailed in the above-noted Technical Memorandum. Model analysis indicated that at the current low rate of development in the Study Area, sewers are generally underutilized with sanitary peak flows well below the sewer capacities, functioning well during dry weather flow conditions.

As detailed in *Waterfront Sanitary Master Servicing Plan Class EA - Project Report (XCG Consultants Ltd. October 2012)* operational and design challenges within the LLI, including capacity limitations and back-ups from M Building pumping station at ABTP, result in the 675 mm Logan Avenue/600 mm Lakeshore Boulevard sewer and its tributary sewers within Port Lands and Lower Don Lands surcharge under relatively moderate wet-weather events, backing up into the Study Area.

3.0 Design Assumptions and Parameters

3.1 Future Proposed Land Use

The following population and employment estimates were provided by the City for the purposes of identifying potential future servicing needs. The estimates consist of a potential land use scenario for the Study Area development blocks as presented in *Figure 1 – Port Lands and South of Eastern Sub Areas*

based on the 2014 Council adopted Port Lands Planning Framework: Land Use Direction. This scenario assumed a higher proportion of residential in the Lower Don Lands and Film Studio District. An interim scenario was also provided by the City in recognition that the Study Area would develop over an extended time horizon where existing and/or intensified commercial/industrial development would occur in portions of the Lower Don Lands and Film Studio District.

While it not practically feasible to stage linear infrastructure capacity, hydraulic models have been developed to consider interim development conditions as a means to assist in identification of phasing of financing requirements.

Although the adjacent Lower Don Lands is outside the defined Study Area, population and employment projection information has been included, for reference, as servicing solutions for the Study Area are somewhat dependent upon, and should be coordinated with the proposed redevelopment of the Lower Don Lands, as defined in the *Waterfront Toronto Lower Don Lands Class Environmental Assessment Master Plan (2010)*.

Table 2. Population and Employment Projections – September 8, 2014

	Residential Units		Res. Pop		Sub Total Employment GFA		Sub Total Employment	
	<i>Interim</i>	<i>Full Build Out</i>	<i>Interim</i>	<i>Full Build Out</i>	<i>Interim</i>	<i>Full Build Out</i>	<i>Interim</i>	<i>Full Build Out</i>
<i>Lower Don Lands</i>								
Villiers Island (Phase 1)	2,980	2,980	5,067	5,067	56,788	56,788	1,574	1,574
Villiers Island (Phases 2 and 3)	0	2,145	0	3,646	24,879	15,437	274	363
Polson Quay	1,179	1,179	2,005	2,005	145,281	145,281	4,936	4,936
River South	0	2,636	0	4,481	30,959	57,335	82	1,951
Total Lower Don Lands	4,159	8,940	7,072	15,199	257,907	274,841	6,866	8,824
<i>Balance of Port Lands</i>								
Film Studio Precinct	4,772	7,855	8,113	13,354	288,479	442,230	7,510	14,293
East Port	0	0	0	0	183,232	183,232	4,355	4,355
Ship Channel	0	0	0	0		256,893	3,812	3,812
	4,772	7,855	8,113	13,354	471,711	882,355	15,677	22,460
Total Port Lands	8,931	16,795	15,185	28,553	729,618	1,157,196	22,543	31,284
<i>South of Eastern</i>	<i>Existing</i>		<i>Existing</i>		<i>Interim</i>	<i>Full Build Out</i>	<i>Interim</i>	<i>Full Build Out</i>
Sub-Area 1	0		0		675,204	675,204	23,342	23,342
Sub-Area 2	195		429		54,651	54,651	952	952
Sub-Area 3	47		103		199,630	199,630	5,295	5,295
Sub-Area 4	4		9		134,697	134,697	3,155	3,155
Total South of Eastern	246		541		1,064,182	1,064,182	32,744	32,744
TOTAL	9,177	17,041	15,726	29,094	1,793,800	2,221,378	55,287	64,028

3.2 Recommended Preferred Water and Wastewater Servicing Solutions

3.2.1 Preferred Water Supply Solution

The preferred water supply alternative identified through the Master Plan is to Reduce Water Usage by Users and Enlarge/Extend Network to serve new employment/population numbers, realign the network to new roads and to provide for looping and redundancy of supply to improve fireflows and maintain water quality.

3.2.2 Preferred Wastewater Solution

The preferred wastewater servicing solution identified through the Master Plan is to **Reduce Waste Water Flows & Enlarge/Extend Collection – Convey flow from Port Lands via Carlaw Avenue inter-connecting sewer at Eastern Avenue to Treatment Plant**. The solution includes disconnection of the Port Lands from the Low Level Interceptor and new and upsized sewers to service new employment / population growth and to realign the sewer network to new roads. Smaller diameter pipes and branches of existing network are reused where feasible.

The sections below detail the assumptions and criteria used to identify the size and location of new and replacement infrastructure required to implement the preferred solutions. It is noted that further refinements are being considered to the road network and population forecasts and distribution. At this time, it is not anticipated that these modifications will materially impact the proposed water and wastewater networks; however, it is recommended that as these issues are finalized in the future, the model results are reviewed for compatibility with the base network.

3.3 Design Criteria

3.3.1 Water Supply

The hydraulic model was updated using the preferred road network developed under the transportation component of the master plan and future populations/land use were distributed along the new network. Water demand for future populations have been developed applying per capita demand factors for each land use type as noted below, assuming implementation of full Water Conservation programs, in accordance with the City of Toronto/Region of York Joint Optimization Study.

- Residential: 255.3 L/person/d
- Retail: 229.6 L/employee/d
- Office: 239.2 L/employee/d
- Light Industrial: 267.8 L/employee/d
- Hotel: 464.6 L/employee/d
- Other Commercial: 464.6 L/employee/d

Maximum day and peak hour multipliers of 1.88 and 2.48 respectively were then applied to the Average Day Demands

3.3.2 Wastewater Collection

The wastewater hydraulic model was updated similarly based on the preferred road network. Future population projections were distributed across the Study Area, creating subcatchments assigned to the network of piping aligned with the preferred road network as demonstrated in the table below.

Table 3. Port Lands and South of Eastern Study Area Sub-catchment Summary Table

Sub-catchment name in Infoworks	Employment Population	Residential Population	Sub-catchment Area [ha]	Harmon Peak Factor	Residential peak flow [L/s]	Employment flow [L/s]	Wastewater Peak Flow [L/s]	I&I [L/s]	Total Wastewater Peak Flow [L/s]
Villiers Island(Phase1)	1574	5067	19.66	2.77	39.02	4.55	43.58	48.69	23.74
Villiers Island(Phase2_3)	363	3646	10.07	2.77	28.08	1.05	29.13	31.75	13.8
Polson Quay	4936	2005	12.81	2.77	15.44	14.28	29.72	33.05	23.18
River South	1951	4481	8.12	2.77	34.51	5.65	40.15	42.26	20.2
Block A	1545	3371	5.82	2.85	26.64	4.47	31.11	32.62	15.35
Block B_1	351	720	1.58	2.85	5.69	1.02	6.71	7.12	3.43
Block B_2	568	1167	2.56	2.85	9.22	1.64	10.87	11.54	5.55
Block B_3	519	1066	2.34	2.85	8.43	1.50	9.93	10.54	5.07
Film Studios	892	0	6.31	2.85	0.00	2.58	2.58	4.22	4.22
TWSDI-west	986	1604	2.37	2.85	12.68	2.85	15.53	16.15	7.92
TWSDI-East	2149	0	3.2	2.85	0.00	6.22	6.22	7.05	7.05
Cascades (475Commissioners)	2522	1957	4.38	2.85	15.47	7.30	22.77	23.91	13.87
Cascades (75 BasinSt)	947	735	1.59	2.85	5.81	2.74	8.55	8.96	5.2
Basin	929	0	3.96	2.85	0.00	2.69	2.69	3.72	3.72
Carlaw_1	1454	1129	2.6	2.85	8.92	4.21	13.13	13.81	8.02
Carlaw_2	638	495	1.14	2.85	3.91	1.85	5.76	6.06	3.52
Carlaw_3	794	617	1.42	2.85	4.88	2.30	7.17	7.54	4.38
Toronto Hydro	475	0	5.01	4.50	0.00	1.37	1.37	2.67	2.68
Canada Post_TTC	807	0	4.82	4.50	0.00	2.34	2.34	3.59	3.59

Table 3. Port Lands and South of Eastern Study Area Sub-catchment Summary Table

Sub-catchment name in Infoworks	Employment Population	Residential Population	Sub-catchment Area [ha]	Harmon Peak Factor	Residential peak flow [L/s]	Employment flow [L/s]	Wastewater Peak Flow [L/s]	I&I [L/s]	Total Wastewater Peak Flow [L/s]
Leslie Frontage_1	864	0	3.56	4.50	0.00	2.50	2.50	3.43	3.42
Leslie Frontage_2	412	0	1.7	4.50	0.00	1.19	1.19	1.63	1.64
Showline	275	0	1.62	4.50	0.00	0.80	0.80	1.22	1.22
885 LSBLVD_TorontoHydro	381	0	1.97	4.50	0.00	1.10	1.10	1.61	1.61
945 Lake Shore (showline)	161	0	1.01	4.50	0.00	0.47	0.47	0.73	0.73
560 Commissioners (canroof)	821	0	4.22	4.50	0.00	2.38	2.38	3.48	3.47
SOC_Essroc & St Mary Cement	58	0	4.69	4.50	0.00	0.17	0.17	1.39	1.39
SOC_City Works545&595	44	0	3.59	4.50	0.00	0.13	0.13	1.06	1.06
SOC_LaFarge Canada	59	0	4.74	4.50	0.00	0.17	0.17	1.40	1.4
Maritime Hub	550	0	5.23	4.50	0.00	1.59	1.59	2.95	2.95
Port West	135	0	6.03	4.50	0.00	0.39	0.39	1.96	1.96
Employment West	728	0	5.26	4.50	0.00	2.11	2.11	3.48	3.47
Port East	96	0	4.71	4.50	0.00	0.28	0.28	1.50	1.5
Employment East	505	0	4.02	4.50	0.00	1.46	1.46	2.51	2.51
Hearn	1208	0	13.67	4.50	0.00	3.50	3.50	7.05	7.05
PEC/HONI	30	0	14.72	4.50	0.00	0.09	0.09	3.92	3.91
East Ship Channel	560	0	4.13	4.50	0.00	1.62	1.62	2.69	2.69
Subarea1_1	4286	0	5.67	4.50	0.00	12.40	12.40	13.87	13.88

Table 3. Port Lands and South of Eastern Study Area Sub-catchment Summary Table

Sub-catchment name in Infoworks	Employment Population	Residential Population	Sub-catchment Area [ha]	Harmon Peak Factor	Residential peak flow [L/s]	Employment flow [L/s]	Wastewater Peak Flow [L/s]	I&I [L/s]	Total Wastewater Peak Flow [L/s]
Subarea1_2	6387	0	8.45	4.50	0.00	18.48	18.48	20.68	20.68
Subarea1_3	2767	0	3.66	4.50	0.00	8.01	8.01	8.96	8.96
Subarea1_4	6176	0	8.17	4.50	0.00	17.87	17.87	19.99	19.99
Subarea1_5	990	0	1.31	4.50	0.00	2.86	2.86	3.20	3.21
Subarea1_6	2736	0	3.62	4.50	0.00	7.92	7.92	8.86	8.86
Subarea2_1	313	141	3.16	4.20	1.64	0.91	2.55	3.37	2.12
Subarea2_2	328	148	3.31	4.19	1.72	0.95	2.67	3.53	2.22
Subarea2_3	312	140	3.15	4.20	1.63	0.90	2.54	3.36	2.11
Subarea3_1	1613	31	6.251	4.35	0.37	4.67	5.04	6.67	6.38
Subarea3_2	2232	43	8.65	4.33	0.52	6.46	6.98	9.23	8.83
Subarea3_3	1282	25	4.97	4.36	0.30	3.71	4.01	5.30	5.07
Subarea3_4	168	3	0.65	4.36	0.04	0.49	0.52	0.69	0.66
Subarea4_1	1448	4	8.58	4.45	0.05	4.19	4.24	6.47	6.43
Subarea4_2	653	2	3.87	4.46	0.02	1.89	1.91	2.92	2.9
Subarea4_3	1055	3	6.25	4.45	0.04	3.05	3.09	4.72	4.69

The wastewater generation rates have been developed based on a non-residential flow rate of 250 L/employee/day. Residential wastewater flow rates for network analysis have been based on 240 L/person/day, in-line with the reduced water demand realized through implementation of water conservation programs. Pipe sizing for the proposed wastewater collection system has been based on a supplemental analysis at the request of the City using the City Design Standard for new development of 450 L/person/day. It is cautioned that the difference in design criteria for water and wastewater systems could result in a sewer network that is oversized for flows experienced well in to the life of the network. Additional monitoring and maintenance would be recommended for those areas of the network where flows do not result in sufficient velocity for self-cleaning.

The design standard infiltration/inflow allowance of 0.26L/s/ha has been applied to the Study Area which may be considered conservative for a predominantly new system, however, the impact of the high groundwater table throughout the Study Area supports this approach. Peaking factors for residential flow were calculated using the Harmon Peaking factor methodology

4.0 Proposed Water Supply

Hydraulic model documentation is included in Appendix A, providing details on watermain sizing for new and replacement watermains, including operational pressures under various flow conditions. The modelling demonstrates the following:

- Minimum pressures during peak hour demands are predicted to be above 40 psi
- Maximum pressures during average day demands are predicted to be below 100 psi
- Available fire flows are predicted to exceed the target fire flows for the proposed land uses assuming that the planned 400 mm watermain on Cherry Street in the Lower Don Lands implemented to complete looping

It is noted that existing pipes that achieve acceptable pressures and fire flows under future conditions are assumed to remain in place; however, many of these pipes are cast iron and ductile iron pipes dating from 1890s to 1920s. Replacement of existing pipes may therefore be required during the lifespan of the development for State of Good Repair purposes. Further, it is noted that the timing of initiation of redevelopment of the Study Area is dependent on the progress of developments elsewhere in the Waterfront and the design of infrastructure being replaced for state of good repair reasons, in the interim, should factor in future flows as identified herein and updated for current conditions.

Major features of the network include the following:

- Connection to the planned 400 mm through the Lower Don Lands and upsizing of the existing watermains along Leslie and Unwin to provide for looping and redundancy of supply to south of the Ship Channel
- New 300 mm watermain on Unwin Avenue to connect the western section to the network
- New 250/200 mm watermains on new streets in Subarea 1 in the north-west corner of South of Eastern and Film Studio District to accommodate infill development and employment intensification
- Upsizing of the Commissioners Street watermain to 250 mm to support East Port redevelopment

Areas identified previously with low fire flows have been upgraded as summarized in the following table:

Table 4: Summarized Upgraded Low Fire Flows

Location Within Study Area	Target Fire Flow (L/s)	Existing Available Fire Flow (L/s)	Recommended Upgrade	Predicted Fire Flow (L/s)
Unwin Ave (Cherry St to Leslie St)	189.3, 316.7	24.6 – 129.6	<ul style="list-style-type: none"> Replacement of Unwin WM segments with new 300/400 mm WM Connection of segments with new 300 mm WM 	312.0-544.2
Leslie St (Commissioners St to Unwin Ave)	189.3	160.7 – 330.1	<ul style="list-style-type: none"> Replacement of Leslie St. WM from Unwin - Eastern 	581.7-922.4
Basin St (East of Bouchette St)	189.3, 316.7	193.0 – 462.4	<ul style="list-style-type: none"> None required. Adjacent upgrades have resulted in increased flow 	397.5-962.6
Morse St (Eastern Ave to Lake Shore Blvd E)	126.2, 189.3	78.6	<ul style="list-style-type: none"> Replacement of Morse St WM with new 200 mm WM 	267.8
Carlaw Ave (Eastern Ave to Lake Shore Blvd E)	126.2, 189.3, 316.7	81.1	<ul style="list-style-type: none"> Replacement of Carlaw Av WM with new 200 mm WM 	297.4
Heward Ave (South of Eastern Ave)	189.3, 316.7	47.2	<ul style="list-style-type: none"> Replacement of Heward Ave. WM with new 300 mm WM 	353.4
Knox Ave	189.3	157.1	<ul style="list-style-type: none"> Replacement of Knox Ave WM with new 200 mm WM New 200/250 mm WM on Woodfield Rd 	279.8
Woodfield Rd	189.3	63.3	<ul style="list-style-type: none"> New 200/250 mm WM on Woodfield Rd 	255.4

Although the upgrades noted above provide the necessary looping to achieve required fireflows, an additional crossing has been requested under the Ship Channel at the Broadview Extension for operational redundancy. Detailed geotechnical information collected during subsequent design phases will inform the feasible construction methodology available for the channel crossing and resulting diameter and alignment.

Further, the segment along the new east-west street, in Sub-Area 1 of the network has been upsized from the 250 mm sizing determined through modelling to 300 mm in order to connect to a 300 mm diameter segment in the north-west quadrant. The larger diameter on this dead-ended segment was required to achieve required fire flows.

The hydraulic model has not been updated to include these modifications, at this time, and sizing and alignment shown in Appendix A are for representational purposes only.

Construction of new and replacement watermains throughout the Study Area will be coordinated with other major infrastructure construction including new road and transit and sewer networks.

In general, open cut construction will be preferred for construction of new watermains due to its lower cost and its viability under a wider range of soils conditions; however, trenchless methodologies may be required in certain applications to avoid interference with existing utility infrastructure, minimize traffic disruption, where watermain installation is carried out separately from road reconstruction and to provide a crossing of the Ship Channel. Detailed hydrogeological and geotechnical investigations will be required during design of new watermains to confirm the nature of soils and groundwater in the area to provide recommendation on the preferred construction methodology and construction dewatering requirements.

Given the heavy industrial nature of the Study Area, it is anticipated that both soil and groundwater contain some level of contamination and therefore additional analysis will be required in the above-noted investigations to determine the appropriate treatment or disposal requirements of excavated materials and groundwater discharge.

Subsurface utility engineering investigations will be required to confirm the location of existing utilities, in particular the high pressure gas main that traverses the Study Area to the Port lands Energy Centre. Construction of connections to the Lower Don Lands network upgrades will require crossing of the Valley Wall Feature (VWF) proposed under the *Don Mouth Naturalization and Port Lands Flood Protection Project*. Coordinating the timing of that connection will allow for appropriate utility corridors to be considered in the VWF design so that appropriate cover is provided over the watermain without impacting the core of the VWF.

5.0 Proposed Wastewater Collection Network

Major features of the network as shown in Appendix B, Full build-out – Wastewater Status and Diameters, which include the following:

- New 675/825 mm diameter sewer along Commissioners Street and Carlaw Avenue to support disconnection of the Port Lands from the Low Level Interceptor at Leslie Street and Logan Street and re-directing flows by gravity to Carlaw Interconnecting Sewer connection at Eastern Avenue.
- The alignment of the Commissioners Street sewer allows for gravity flow from Lower Don Lands, however, it is understood that interim measures being considered in the adjacent Lower Don lands (including the provision of a temporary pumping station) may allow for the Lower Don Lands redevelopment to proceed in advance of this construction. Construction of the arterial sewer on Commissioners Street will then allow the pumping station to be abandoned and further development in the Film Studio area to proceed. The sizing of the connection to the Lower Don Lands has been undertaken using the unit rates identified above and will be confirmed during detail design to ensure consistency between the two development areas.
- New 300 mm diameter sewer on Leslie Street from Lakeshore Blvd, flowing south to Commissioners and north from the 250/300 mm diameter Unwin Street sewer, providing servicing to previously unserviced area South of the Ship Channel. Note that servicing the relatively flat topography of the Study Area while tying into fixed connection points for the Lower Don Lands and the Carlaw Interconnecting Sewer connection result in significantly deep sewer connections. The sewer at Leslie Street and Unwin Street is at 7.5 m depth to support gravity flow from the western extremity. Service connections directly to the sewer at this depth are not feasible and during detailed design, when the nature of future development is known, connections can be provided to the sanitary manholes, as per City design criteria.
- Subareas 2-4 in South of Eastern continue to discharge to the Low Level Interceptor as the difference in topography allows for continued connection to the LLI without the surcharge issues currently experienced south of Lakeshore
- Redevelopment of Subarea 1 in South of Eastern is supported by a network with four main components, aligned with the proposed site grading and proposed road network:
 - North west corner bound by CNR will connect at Broadview/Eastern to the LLI.
 - South west corner will connect south to existing Lakeshore sanitary sewers for conveyance to Carlaw MTI connection. The Lakeshore Sewer west of Broadview extension has been retained for flexibility; however, may not be necessary depending on final development decisions.
 - Center and north areas will drain north via new connection into LLI
 - Areas in the east of the site will connect to the existing Booth Avenue sewer

Hydraulic model documentation is included in Appendix B, providing details on sanitary sewer sizing for new and replacement sewers, including operational surcharge depths in plan and profile.

The modelling demonstrates that the sewer sizing proposed provides for surcharge depths that do not exceed 80% of pipe depth, as requested by Toronto Water and an operational velocity of greater than 0.6 m/s and less than 3 m/s. It is noted that in some areas of the Study Area the relatively low forecast for future population results in operational velocities lower than the design standard when the design minimum sewer diameter of 250 mm is applied. These areas are noted below and will require more frequent monitoring/flushing to prevent solids deposition and potential odour/corrosion issues.

Unwin Sewer (Profile 1): Using the design minimum sewer diameter of 250 mm results in operational velocities of less than design standard due to the limited development anticipated in this area. The westerly 2.2 km of the Unwin sewer will have velocities of less than the operational minimum velocity of 0.6 m/s up to MH Unwin-010.

Leslie Sewer (Profile 6): The design minimum sewer diameter of 250 mm results in operational velocities of 0.49 m/s for the section of the Leslie Street sewer between Lakeshore and Commissioners due to the limited development anticipated in this area.

A similar scenario will occur in a number of the existing smaller contributing sewers running along-side streets to connect to the main sewers.

It is also noted that the high water table creates a potential for higher than anticipated infiltration rates to the sewer through leaking manholes or pipe joints. This can be minimized by employing advanced construction techniques to seal manholes and use watermain grade pipe to prevent infiltration in those areas identified through geotechnical/hydrogeotechnical investigations during detailed design as a particular risk.

Construction of new and replacement sewers throughout the Study Area will be coordinated with other major infrastructure construction including new road and transit and watermain and storm sewer networks.

In general, open cut construction will be preferred for construction of new sewers due to its lower cost and its viability under a wider range of soils conditions; however, trenchless methodologies may be required in certain applications due to the significant depth of the sewer, or to avoid interference with existing utility infrastructure, minimize traffic disruption, or where the sewer installation is carried out separately from road reconstruction. Detailed hydrogeological and geotechnical investigations will be required during design of new sewers to confirm the nature of soils and groundwater in the area to provide recommendation on the preferred construction methodology and construction dewatering requirements.

Given the heavy industrial nature of the Study Area, it is anticipated that both soil and groundwater contain some level of contamination and therefore additional analysis will be required in the above-noted investigations to determine the appropriate treatment or disposal requirements of excavated materials and groundwater discharge.

Subsurface utility engineering investigations will be required to confirm the location of existing utilities, in particular the high pressure gas main that traverses the Study Area to the Port Lands Energy Centre.

It is noted that analysis of the results of these design investigations could identify additional factors impacting the feasibility of the proposed alignment, and at that time, based on decisions made with respect to the nature and phasing of development, alternative approaches to servicing may be considered for evaluation.

6.0 Phasing of Construction

Construction timing of infrastructure will be required to match final decisions with respect to phasing of development with the following observations:

- In order for the Port Lands to develop, as identified in population forecasts, disconnection from the Low level Interceptor will be required and reconnection of the Port Lands wastewater network to the Mid-Toronto Interceptor. This will require construction of the approximately 750 m of 825 mm diameter sewer on Carlaw Avenue between Commissioners Street and Eastern Avenue. The watermain replacement (150-300 mm) identified for this stretch could be constructed at the same time.
- The upsized arterial sewer identified on Commissioner Street would need to be constructed (approximately 1,710 m of sewer ranging from 375-825 mm diameter) to enable further developments in the Film Studio district as well as support gravity servicing of the adjacent Lower Don Lands development. Upsized watermains along the easterly section of Commissioners between Carlaw and Avenue and Leslie Street would be constructed at the same time.
- The construction of the Commissioner Street sewer would then permit connection of the Leslie Street upgrade, allowing the new Unwin Sewer to be constructed to drain by gravity to Leslie Street (approximately 3,300 m of 250-300 mm diameter). The Unwin WM would be upsized at the same time and the construction of the 400 mm watermain connection of the new Lower Don Lands network would complete looping through the Port Lands development.

7.0 Financial Implications of Infrastructure Expansion and Upgrades.

Order of magnitude costs for new and replacement infrastructure proposed throughout the Study Area have been developed using the unit rates summarized below in Tables 5 and 6.

Unit rates are based on current tenders throughout the City with cost factors added to reflect the challenges of constructing in an area with a high groundwater table and contaminated soils.

A design contingency factor of 30% has been included to reflect additional items that may be identified following completion of investigations during detailed design, including final decisions on construction methodology, potential utility relocation, hydrants and valving, restrained pipe design, or additional measures for groundwater control. A further 30% contingency factor has been added for engineering and unanticipated construction costs.

The costs are presented in Table 7 aligned with the potential development precincts presented in Figure 2. The servicing costs reflect the major servicing pieces as detailed above and in the accompanying Appendices and do not account for complete servicing to minor streets.

Table 5a: Sanitary Sewer Infrastructure Unit Costs

<i>Unit Rate for pipe installation (\$/m) including excavation, bedding, backfill and disposal of contaminated soils</i>						
Depth	Pipe diameter					
	250 mm	300 mm	375 mm	675 mm	750mm	825 mm
Up to 4m	\$2,540				\$7,610	
Up to 7m	\$3,300	\$3,550				
Up to 8m		\$3,800				
Up to 9m			\$4,820	\$6,340		\$8,110
Up to 12m						\$10,140

Table 6b: Sanitary Manholes Unit Costs

<i>Unit Rate for manhole installation including excavation, backfill and disposal of contaminated soils</i>		
Depth	Manhole chamber diameter	
	1200 mm	1500 mm
Up to 3m	\$21,247	
Up to 4m	\$26,392	
Up to 6m	\$36,680	
Up to 8m		\$58,376
Up to 10m	\$79,878	\$95,855
Up to 12m		\$102,245

Table 7: Water Servicing Infrastructure Unit Costs

Unit Rate for pipe installation (\$/m) including excavation, bedding, backfill and disposal of contaminated soils

	Pipe diameter				
	200 mm	250 mm	300 mm	400 mm	600 mm
Cost per meter	\$1,690	\$1,860	\$2,030	\$2,200	\$2,700

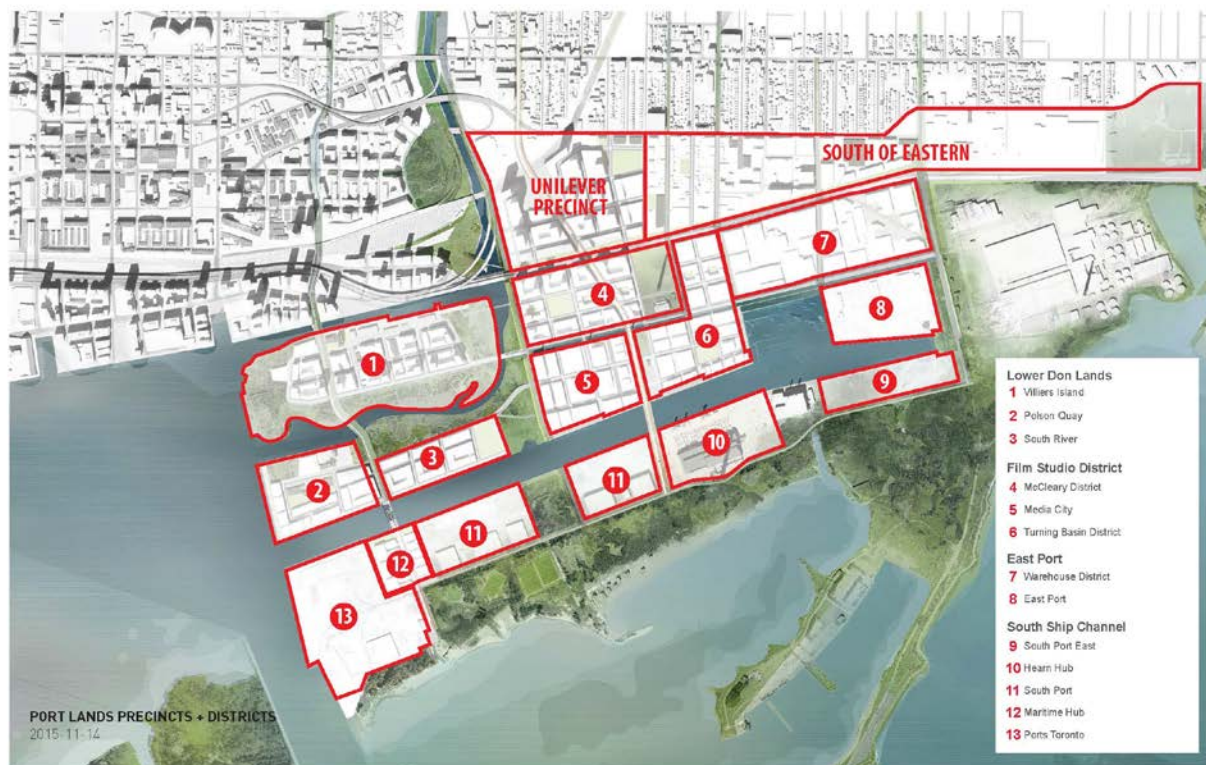
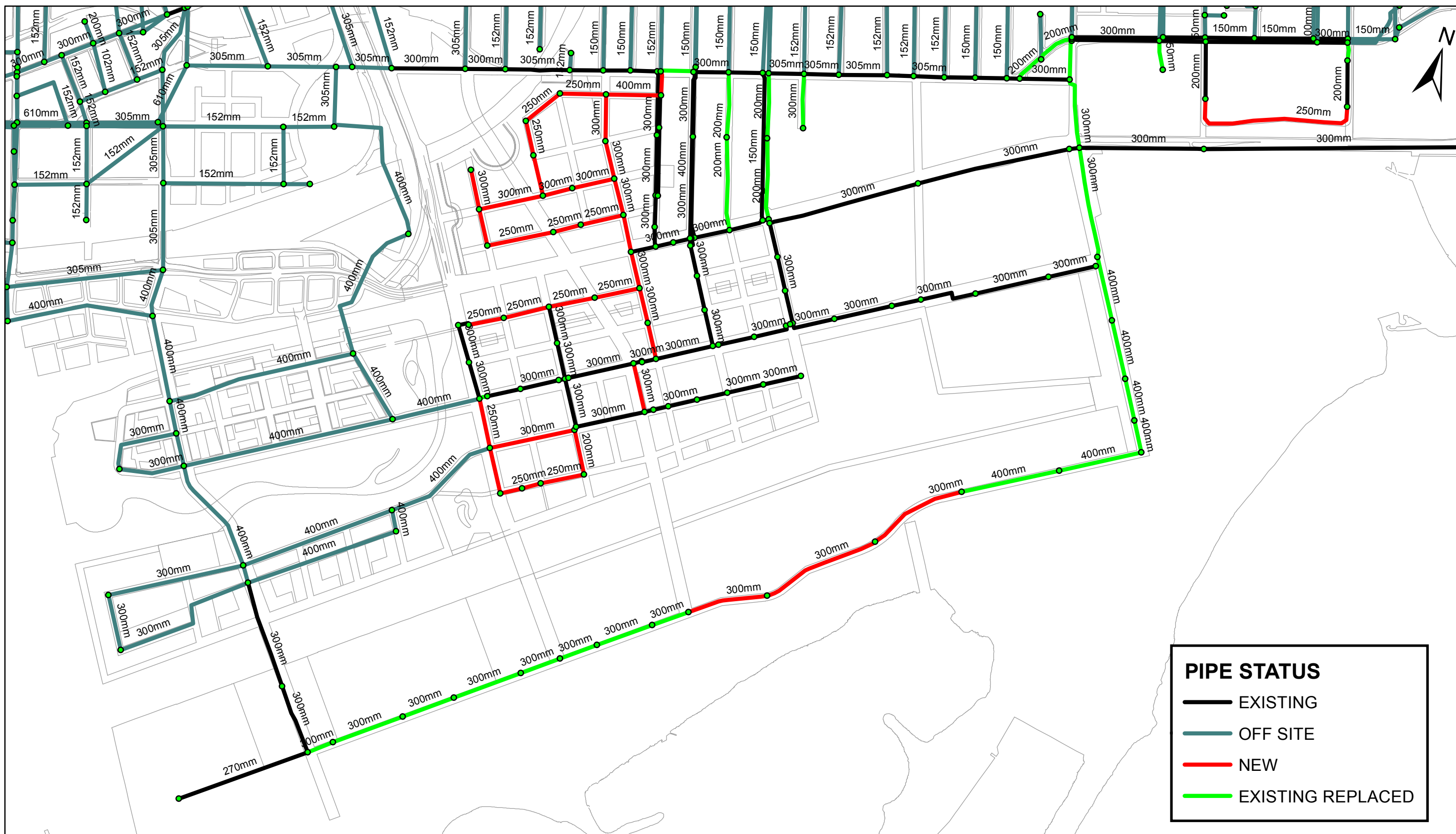


Figure 2: Port Lands Precincts and Districts (City of Toronto)

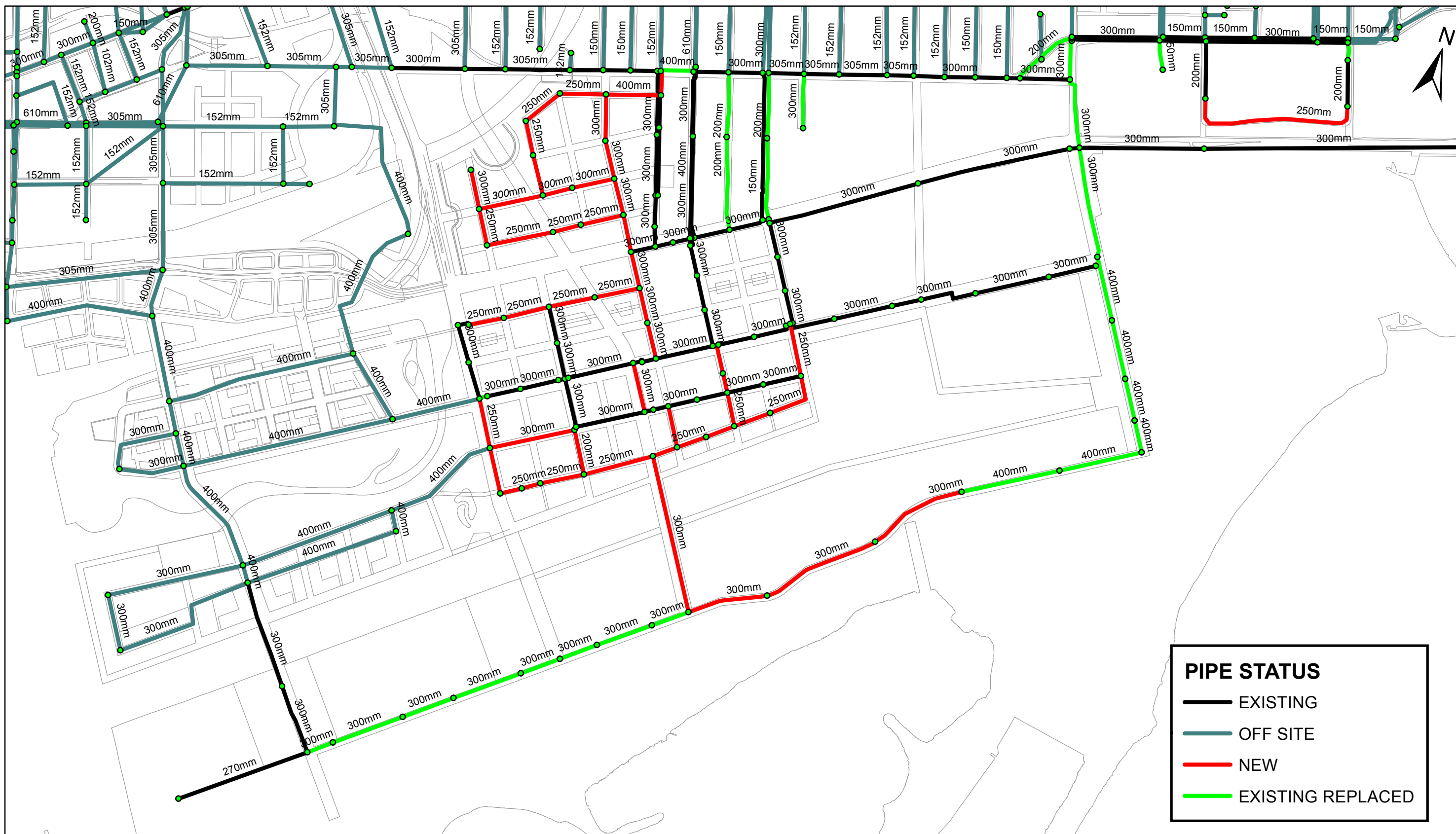
Table 8: Water and Wastewater Servicing Costs by Precinct

Precinct	Infrastructure Description	Base Installation Cost	Design Contingency for Additional Works 30%	Engineering & Construction Contingency 30%	Total	Precinct Total
Carlaw Servicing	• 400 m of 200 mm WM	\$676,000	\$202,800	\$263,640	\$1,142,440	\$12,832,170
	• 810 m of 300/828mm Sewer	\$6,917,000	\$2,075,100	\$2,697,630	\$11,689,730	
Commissioners	• 933 m of 250/300 mm WM	\$1,749,000	\$524,700	\$682,110	\$2,955,810	\$18,909,410
	• 1933 m of 300/375/675 mm Sewer	\$9,440,000	\$2,832,000	\$3,681,600	\$15,953,600	
Unwin/Leslie	• 2995 m of 300/400 mm WM	\$6,213,000	\$1,863,900	\$2,423,070	\$10,499,970	\$31,445,830
	• 3305 m of 250/300/375 mm Sewer	\$12,394,000	\$3,718,200	\$4,833,660	\$20,945,860	
Unilever Precinct	• 2096 m of 250/300/400/600 mm WM	\$4,163,000	\$1,248,900	\$1,623,570	\$7,035,470	\$12,637,820
	• 1092 m of 250/300 mm Sewer	\$3,315,000	\$994,500	\$1,292,850	\$5,602,350	
South of Eastern	• 1698 m of 200/250/300/400 mm WM	\$3,186,000	\$955,800	\$1,242,540	\$5,384,340	\$7,092,930
	• 259 m of 300 mm Sewer	\$1,011,000	\$303,300	\$394,290	\$1,708,590	
McCleary & Media City District	• 2573 m of 200/250/300 mm WM	\$5,376,000	\$1,612,800	\$2,096,640	\$9,085,440	\$15,243,800
	• 905 m of 250/300 mm Sewer	\$3,644,000	\$1,093,200	\$1,421,160	\$6,158,360	
Turning Basin District	• 1387 m of 250/300 mm WM	\$2,817,000	\$845,100	\$1,098,630	\$4,760,730	\$6,104,280
	• 210 m of 250 mm Sewer	\$795,000	\$238,500	\$310,050	\$1,343,550	
East Port Warehouse District	• 304 m of 400 mm WM	\$822,000	\$246,600	\$320,580	\$1,389,180	\$3,657,160
	• 321 m of 300 mm Sewer	\$1,342,000	\$402,600	\$523,380	\$2,267,980	
Additional Ship Channel Crossing	• 430 m of 300 mm WM	\$1,978,000	\$593,400	\$771,420	\$3,342,820	\$3,342,820

Appendix A
Water Distribution Model
Documentation



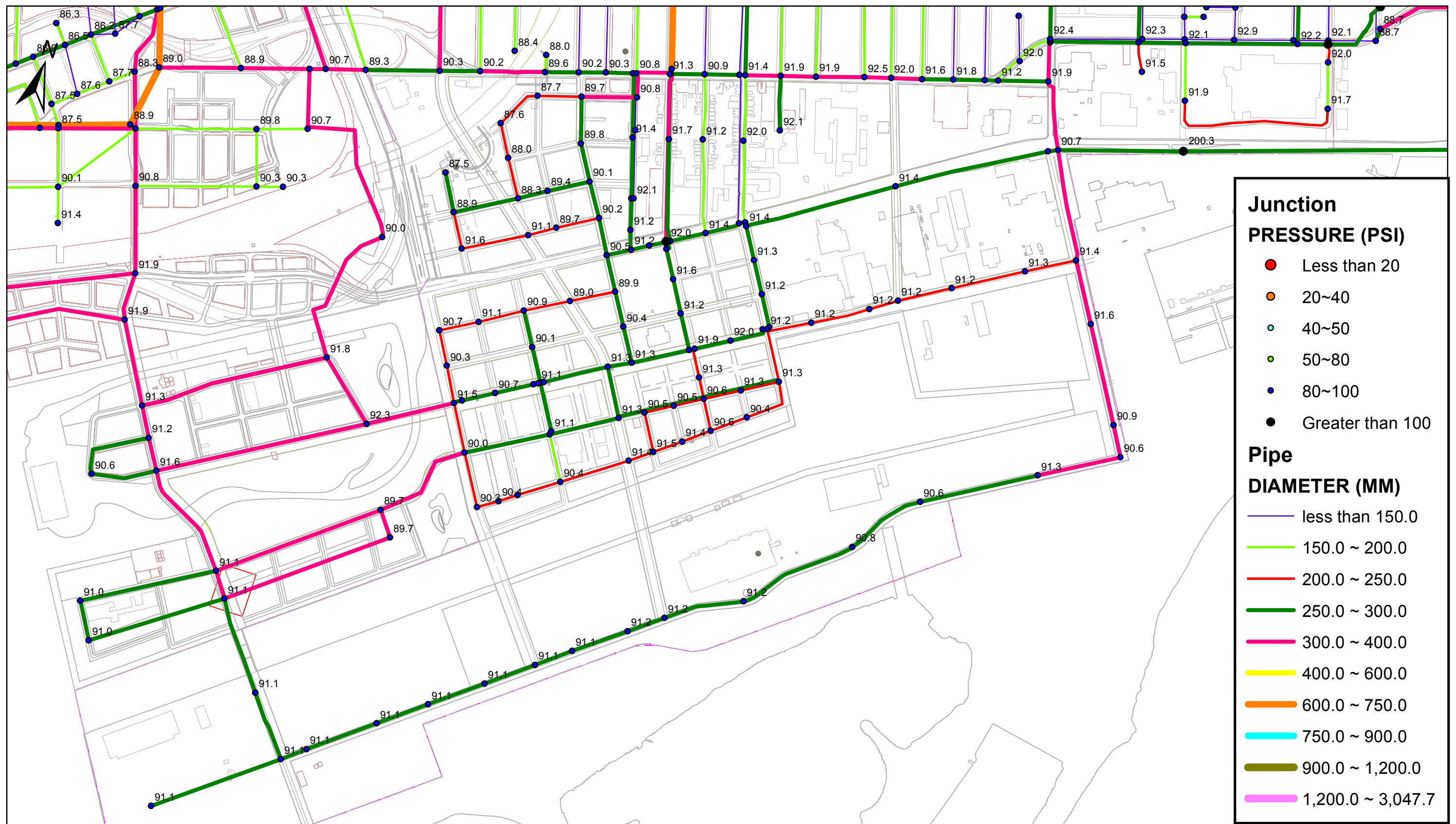
INTERIM BUILD-OUT - WATERMAIN STATUS AND DIAMETERS
Port Lands and South of Eastern Transportation and Servicing Master Plan



Notes:
 Pipe diameters indicated in millimetres.
 Revision Date: May 26, 2016



FULL BUILD-OUT - WATERMAIN STATUS AND DIAMETERS
Port Lands and South of Eastern Transportation and Servicing Master Plan

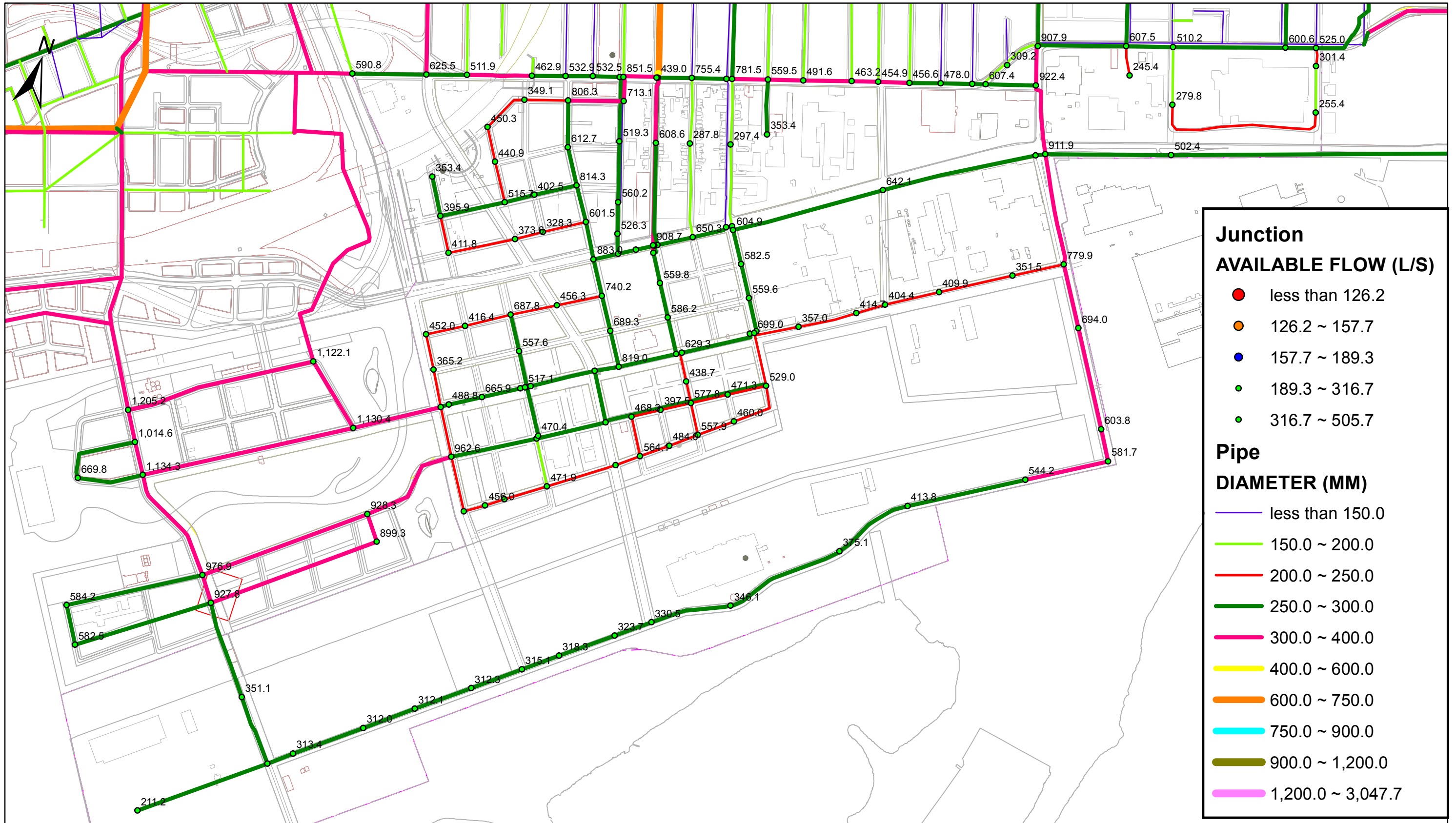


Notes:

Revision Date: September 17, 2015



FULL BUILD-OUT - AVERAGE DAY - MAXIMUM PRESSURE
 Port Lands and South of Eastern Transportation and Servicing Master Plan

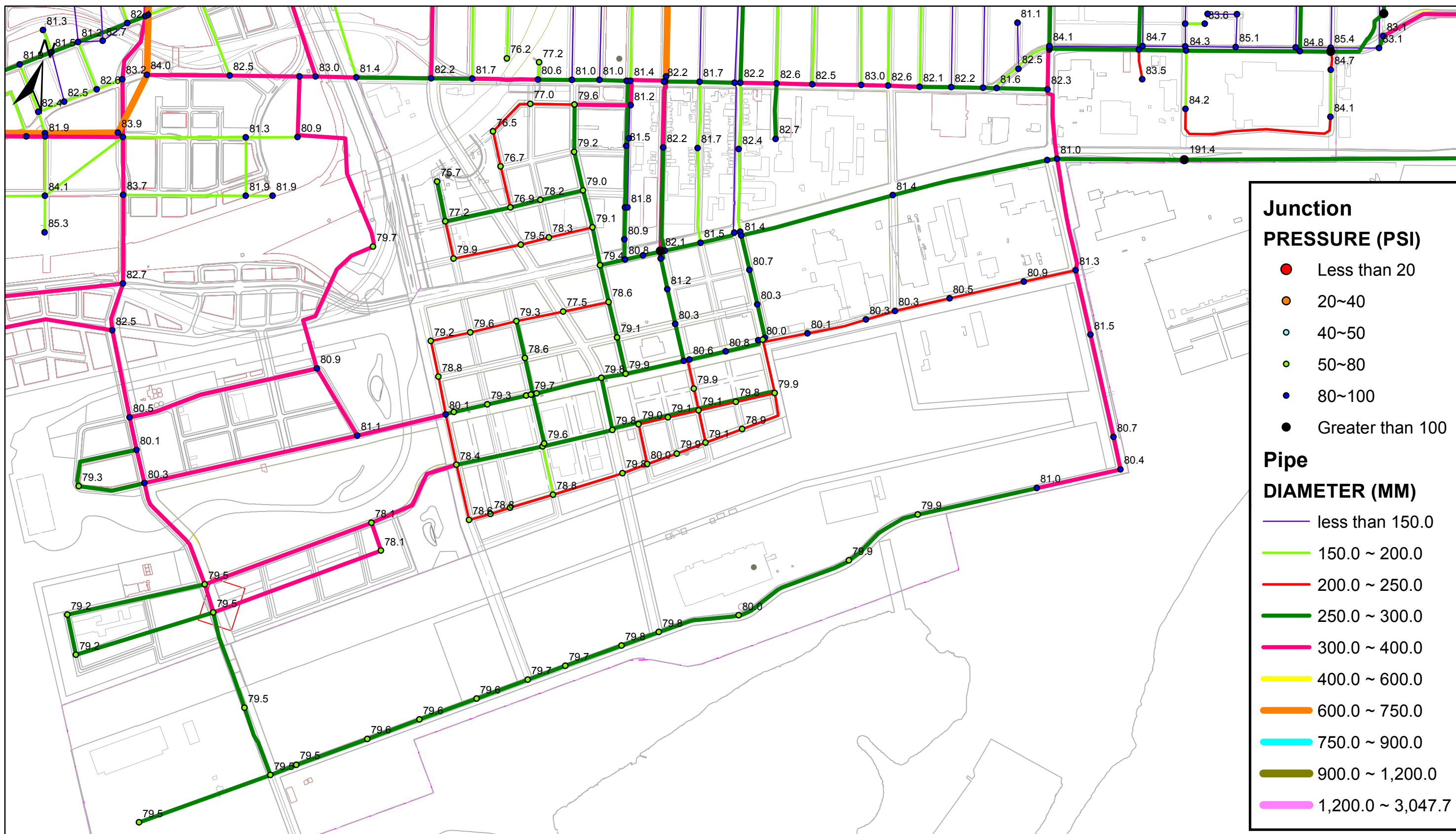


Notes:

Revision Date: September 17, 2015

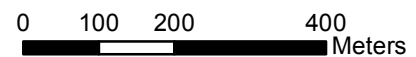


FULL BUILD-OUT - MAXIMUM DAY + FIRE FLOW - AVAILABLE FLOW
 Port Lands and South of Eastern Transportation and Servicing Master Plan



Notes:

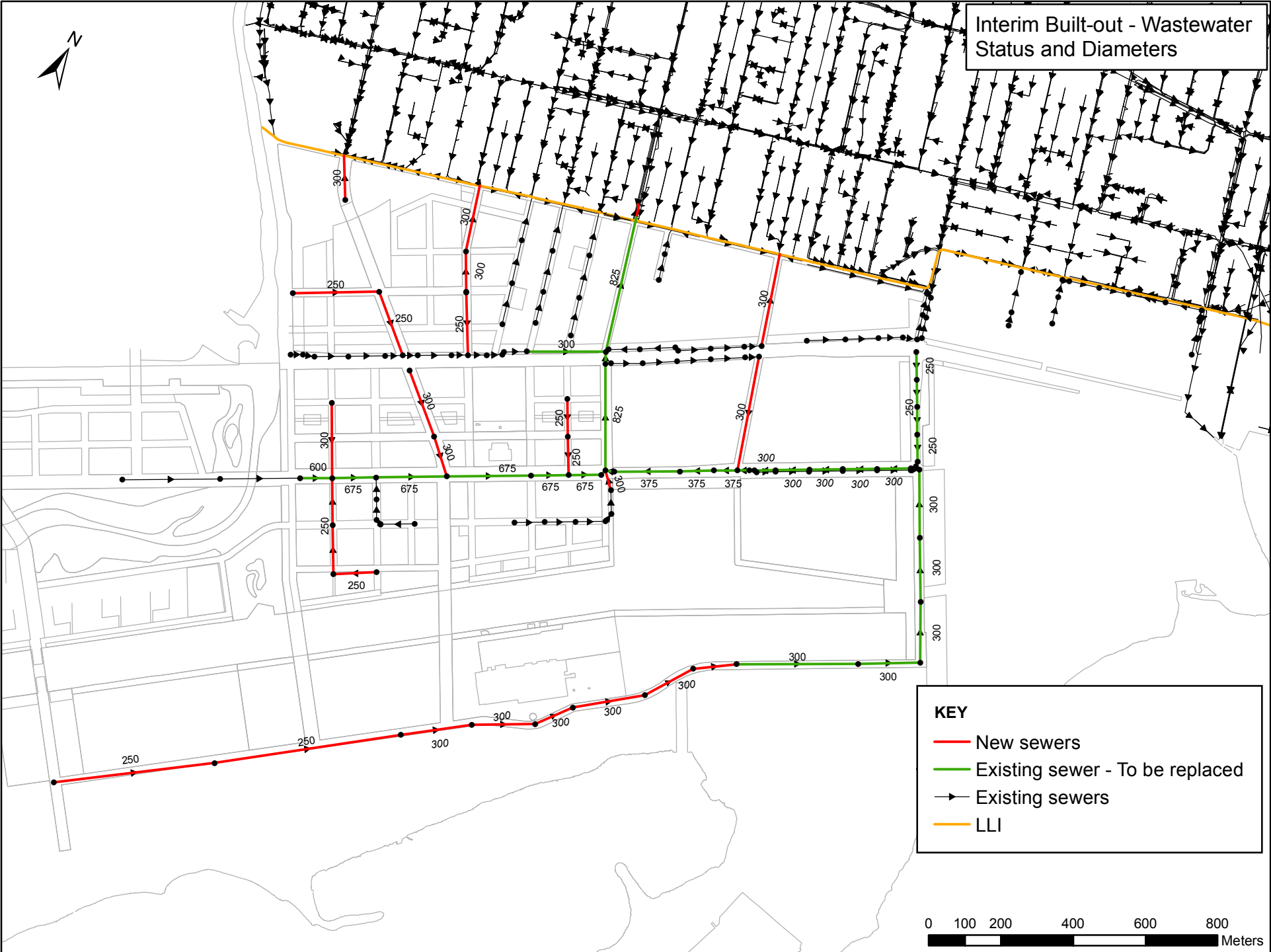
Revision Date: September 17, 2015



FULL BUILD-OUT - PEAK HOUR - MINIMUM PRESSURE
 Port Lands and South of Eastern Transportation and Servicing Master Plan

Appendix B
Wastewater Distribution Model
Documentation

Interim Built-out - Wastewater Status and Diameters

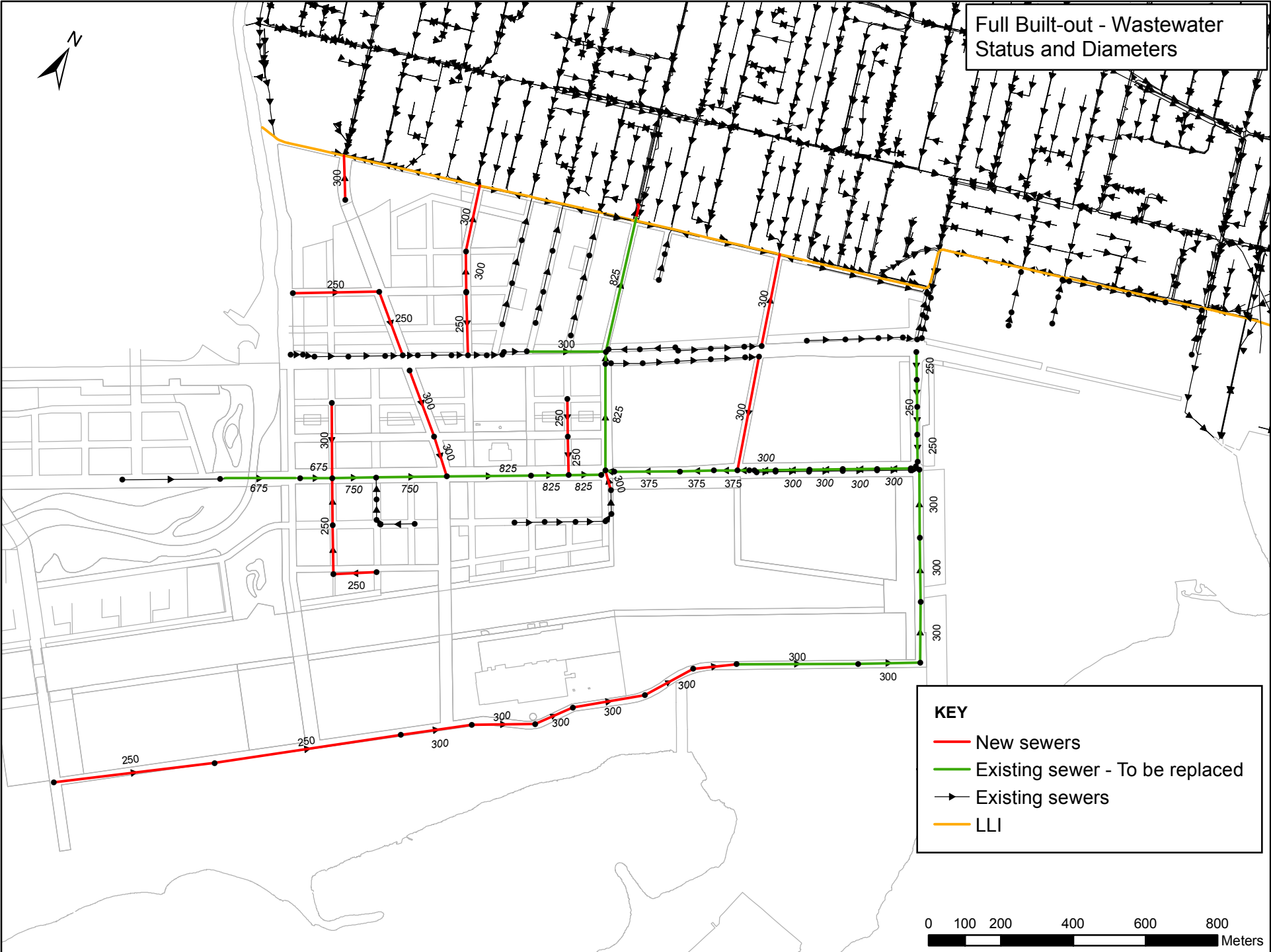


KEY

- New sewers
- Existing sewer - To be replaced
- Existing sewers
- LLI

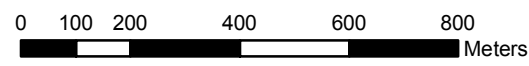
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Meters

Full Built-out - Wastewater Status and Diameters

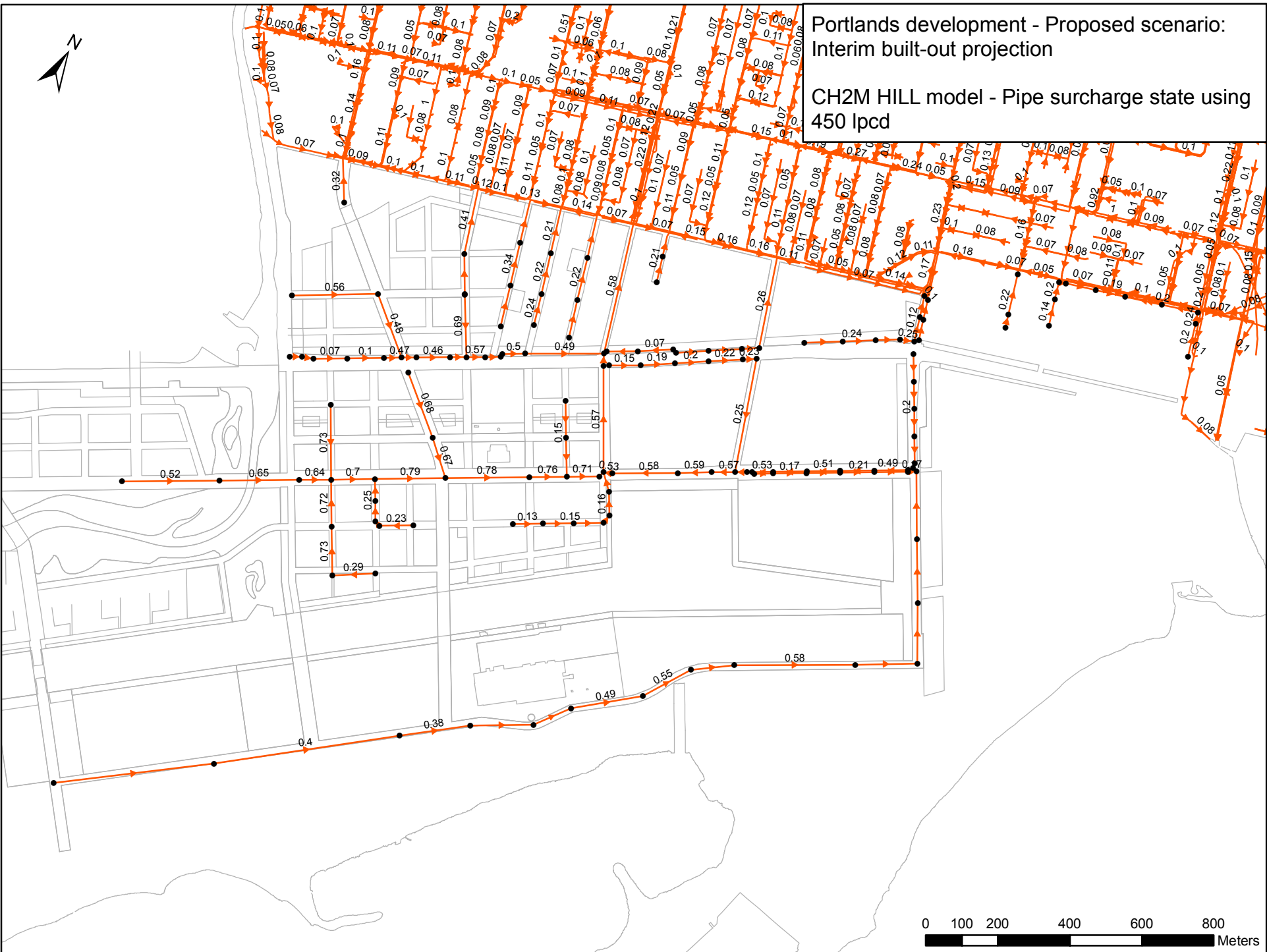


KEY

- New sewers
- Existing sewer - To be replaced
- Existing sewers
- LLI

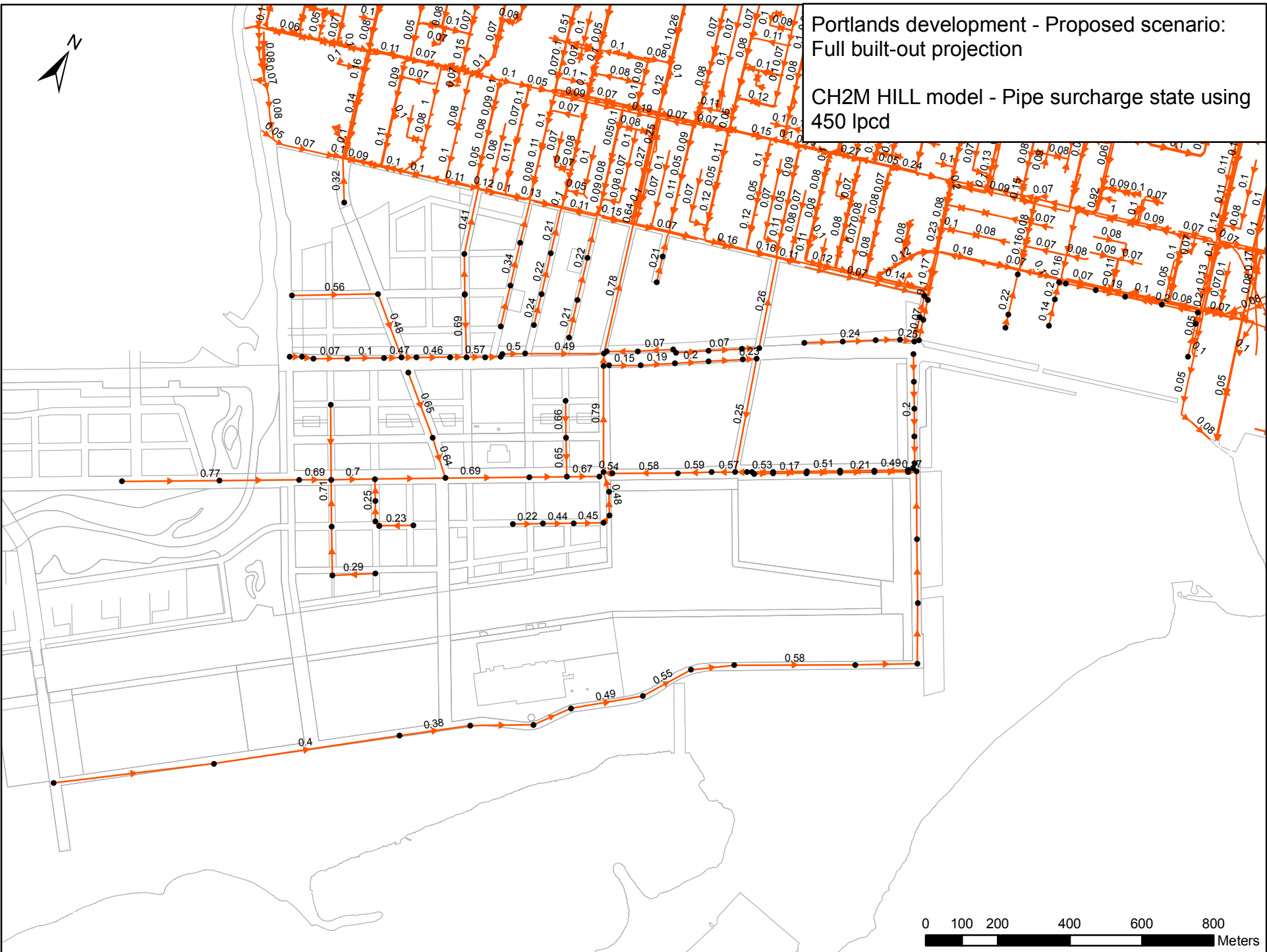


Portlands development - Proposed scenario:
Interim built-out projection
CH2M HILL model - Pipe surcharge state using
450 lpcd



0 100 200 400 600 800
Meters

Portlands development - Proposed scenario:
Full built-out projection
CH2M HILL model - Pipe surcharge state using
450 lpcd



Wastewater Distribution Model Documentation

Location	US Node ID	DS Node ID	Length (m)	Shape	Diameter (m)	Roughness Manning	US Invert (m)	DS Invert (m)	Gradient (m/m)	Pipe full capacity (m3/s)	Surcharge State	Max DS Depth (m)	Max DS Flow (m3/s)	Max DS Velocity (m/s)
Unwin Avenue	Unwin-001	Unwin-002	448.1	CIRC	250	0.013	74.80	73.31	0.0033	0.0340	0.40	0.101	0.003	0.159
	Unwin-002	Unwin-003	520.5	CIRC	250	0.013	73.31	72.32	0.0019	0.0260	0.40	0.074	0.008	0.693
	Unwin-003	Unwin-004	199.5	CIRC	300	0.013	72.27	71.91	0.0018	0.0410	0.38	0.114	0.012	0.501
	Unwin-004	Unwin-005	175.1	CIRC	300	0.013	71.91	71.60	0.0018	0.0410	0.49	0.148	0.012	0.358
	Unwin-005	Unwin-006	114.5	CIRC	300	0.013	71.60	71.39	0.0018	0.0410	0.49	0.148	0.019	0.561
	Unwin-006	Unwin-007	201.5	CIRC	300	0.013	71.39	71.03	0.0018	0.0410	0.49	0.148	0.019	0.561
	Unwin-007	Unwin-008	151.9	CIRC	300	0.013	71.03	70.75	0.0018	0.0410	0.55	0.165	0.019	0.488
	Unwin-008	Unwin-009	122.1	CIRC	300	0.013	70.75	70.53	0.0018	0.0410	0.55	0.165	0.023	0.586
	Unwin-009	Unwin-010	335.9	CIRC	300	0.013	70.53	69.92	0.0018	0.0410	0.58	0.174	0.023	0.549
	Unwin-010	Leslie-001	171.6	CIRC	300	0.013	69.92	69.61	0.0018	0.0410	0.58	0.174	0.026	0.612
Leslie Street	Leslie-001	Leslie-002	168.9	CIRC	300	0.013	69.61	69.31	0.0018	0.0410	0.58	0.174	0.026	0.612
	Leslie-002	Leslie-003	176.1	CIRC	300	0.013	69.31	68.99	0.0018	0.0410	0.58	0.174	0.026	0.612
	Leslie-003	Leslie-004	188.8	CIRC	300	0.013	68.99	68.65	0.0018	0.0410	0.58	0.124	0.026	0.944
	Leslie-004	Commissioner-016	13.6	CIRC	375	0.013	68.57	68.55	0.0018	0.0750	0.49	0.183	0.030	0.558
	Leslie-009	Leslie-008	75.5	CIRC	250	0.013	73.00	72.52	0.0063	0.0470	0.20	0.050	0.003	0.490
	Leslie-008	Leslie-007	75.9	CIRC	250	0.013	72.52	72.05	0.0063	0.0470	0.20	0.050	0.003	0.490
	Leslie-007	Leslie-006	76.5	CIRC	250	0.013	72.05	71.56	0.0063	0.0470	0.20	0.050	0.003	0.490
	Leslie-006	Leslie-005	75.1	CIRC	250	0.013	71.56	71.09	0.0063	0.0470	0.20	0.050	0.003	0.490
	Leslie-005	Commissioner-016	14.0	CIRC	250	0.013	71.09	71.00	0.0063	0.0470	0.20	0.050	0.003	0.494
	LDL-01	Commissioner-001	222.0	CIRC	675	0.013	69.57	69.35	0.0010	0.2660	0.77	0.466	0.258	0.980
Commissioners Street	Commissioner-001	BlockA_conn	89.2	CIRC	675	0.013	69.35	69.22	0.0014	0.3150	0.69	0.456	0.258	1.004
	BlockA_conn	Commissioner-002	121.7	CIRC	750	0.013	69.15	68.98	0.0014	0.4160	0.70	0.521	0.348	1.064
	Commissioner-002	Commissioner-003	195.6	CIRC	750	0.013	68.98	68.70	0.0014	0.4210	0.69	0.462	0.353	1.235
	Commissioner-003	Commissioner-004	232.6	CIRC	825	0.013	68.62	68.29	0.0014	0.5410	0.69	0.568	0.402	1.024
	Commissioner-004	Morse_St_conn	104.0	CIRC	825	0.013	68.29	68.15	0.0014	0.5340	0.69	0.554	0.440	1.151
	Morse_St_conn	Commissioner-005	91.3	CIRC	825	0.013	68.15	68.02	0.0014	0.5330	0.67	0.457	0.483	1.587
	Commissioner-005	Carlaw-004	15.9	CIRC	825	0.013	68.02	68.00	0.0014	0.5450	0.55	0.416	0.483	1.785
	Commissioner-016	Commissioner-015	15.2	CIRC	375	0.013	68.55	68.52	0.0018	0.0750	0.49	0.183	0.035	0.652
	Commissioner-015	Commissioner-014	93.1	CIRC	375	0.013	68.52	68.35	0.0018	0.0750	0.49	0.183	0.035	0.652
	Commissioner-014	Commissioner-013	94.8	CIRC	375	0.013	68.35	68.18	0.0018	0.0750	0.51	0.191	0.035	0.617
	Commissioner-013	Commissioner-012	92.9	CIRC	375	0.013	68.18	68.01	0.0018	0.0750	0.51	0.191	0.039	0.681
	Commissioner-012	Commissioner-011	93.3	CIRC	375	0.013	68.01	67.84	0.0018	0.0750	0.51	0.192	0.039	0.677
	Commissioner-011	Commissioner-010	58.7	CIRC	375	0.013	67.84	67.74	0.0018	0.0750	0.53	0.198	0.039	0.652
	Commissioner-010	Commissioner-009	14.7	CIRC	375	0.013	67.74	67.71	0.0018	0.0750	0.54	0.201	0.039	0.637
Commissioner-009	Commissioner_conn	32.4	CIRC	375	0.013	67.71	67.65	0.0018	0.0750	0.57	0.214	0.039	0.592	

Wastewater Distribution Model Documentation

Location	US Node ID	DS Node ID	Length (m)	Shape	Diameter (m)	Roughness Manning	US Invert (m)	DS Invert (m)	Gradient (m/m)	Pipe full capacity (m3/s)	Surcharge State	Max DS Depth (m)	Max DS Flow (m3/s)	Max DS Velocity (m/s)
	Commissioner_conn	Commissioner-008	65.0	CIRC	375	0.013	67.65	67.53	0.0018	0.0750	0.57	0.214	0.046	0.700
	Commissioner-008	Commissioner-007	94.2	CIRC	375	0.013	67.53	67.36	0.0018	0.0750	0.59	0.220	0.046	0.678
	Commissioner-007	Commissioner-006	181.5	CIRC	375	0.013	67.36	67.04	0.0018	0.0750	0.58	0.204	0.048	0.784
	Commissioner-006	Carlaw-004	24.4	CIRC	375	0.013	67.04	66.99	0.0018	0.0750	0.54	0.177	0.048	0.938
Carlaw Avenue	3449418085	Carlaw-004	61.7	CIRC	300	0.013	74.57	74.48	0.0015	0.0370	0.48	0.102	0.018	0.840
	Carlaw-004	Carlaw-003	295.5	CIRC	825	0.013	66.54	66.01	0.0018	0.6100	0.79	0.649	0.549	1.216
	Carlaw-003	Carlaw-002	33.6	CIRC	825	0.013	66.01	65.95	0.0018	0.6100	0.79	0.652	0.549	1.211
	Carlaw-002	Carlaw-001	381.1	CIRC	825	0.013	65.95	65.26	0.0018	0.6100	0.78	0.536	0.583	1.587
	Carlaw-001	Carlaw_conn	38.1	CIRC	825	0.013	65.26	65.19	0.0018	0.6100	0.64	0.460	0.583	1.905
Caroline Avenue	Caroline-002	Caroline_conn	258.8	CIRC	300	0.013	74.10	72.74	0.0053	0.0700	0.26	0.076	0.010	0.685
	Caroline-001	Commissioner_conn	320.9	CIRC	300	0.013	73.99	73.00	0.0031	0.0540	0.25	0.065	0.007	0.626
Unilever	Unilever-001	Unilever-002	238.8	CIRC	250	0.013	76.00	75.14	0.0036	0.0360	0.56	0.120	0.021	0.888
	Unilever-002	Lakeshore_conn	189.3	CIRC	250	0.013	75.14	74.00	0.0060	0.0460	0.48	0.117	0.021	0.915
	Unilever-003	Lakeshore_conn2	173.2	CIRC	250	0.013	74.28	73.15	0.0065	0.0480	0.69	0.171	0.009	0.250
	Unilever-004	Unilever-005	110.9	CIRC	300	0.013	74.28	73.88	0.0036	0.0580	0.41	0.124	0.020	0.722
	Unilever-006	CN99888	122.0	CIRC	300	0.013	74.00	73.43	0.0047	0.0660	0.32	0.091	0.014	0.769
	Unilever-005	Unilever_conn	185.4	CIRC	300	0.013	73.88	73.22	0.0036	0.0580	0.41	0.109	0.020	0.865
Film District	3482817885	Carlaw-002	10.1	CIRC	300	0.013	74.08	74.00	0.0079	0.0860	0.07	0.020	0.000	0.000
	3471017692	Carlaw-002	218.3	CIRC	300	0.013	72.44	71.50	0.0043	0.0630	0.49	0.133	0.030	0.980
	Broadview-001	Broadview-002	194.2	CIRC	300	0.013	75.00	74.06	0.0048	0.0670	0.65	0.195	0.018	0.369
	Broadview-002	Commissioner-003	116.7	CIRC	300	0.013	74.06	73.50	0.0048	0.0670	0.64	0.174	0.050	1.171
	TWSDI_St-001	TWSDI_St-002	119.2	CIRC	250	0.013	74.50	73.91	0.0049	0.0420	0.29	0.072	0.007	0.601
	TWSDI_St-002	TWSDI_St-003	136.4	CIRC	250	0.013	73.91	73.24	0.0049	0.0420	0.71	0.178	0.007	0.188
	TWSDI_St-003	BlockA_conn	130.5	CIRC	250	0.013	73.24	72.60	0.0049	0.0420	0.71	0.152	0.034	1.101
	BlockA_St-001	BlockA_conn	207.7	CIRC	300	0.013	75.00	74.00	0.0048	0.0670	0.71	0.185	0.056	1.226
Morse_St-001	Morse_St-002	103.1	CIRC	250	0.013	73.50	72.52	0.0095	0.0580	0.66	0.164	0.012	0.346	
Morse_St-002	Morse_St_conn	107.5	CIRC	250	0.013	72.52	71.50	0.0095	0.0580	0.65	0.162	0.043	1.280	

APPENDIX F:

**STORMWATER
MANAGEMENT CONCEPT:
FUNCTIONAL
SERVICING REPORT AND
ADDITIONAL
DOCUMENTATION**



DILLON
CONSULTING

**Toronto Port Lands and South of
Eastern Stormwater Management Concept**
Functional Servicing Report

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Introduction

The Port Lands and South of Eastern Transportation and Servicing Master Plan (TSMP) was initiated by the City of Toronto (the City) to identify municipal servicing infrastructure and the major street and transit networks required to support redevelopment planning underway within the area. The study area is on the eastern side of the Toronto waterfront and can be divided into the Port Lands and South of Eastern area. **Figure 1** shows the project location and study area boundaries.

Multiple studies have been completed that support the revitalization of the Port Lands and South of Eastern area including the Lower Don Lands Infrastructure Master Plan (2010) and 2014 Addendum and Environmental Study Report (LDLMP EA) and the Don Mouth Naturalization and Port Lands Flood Protection Project (DMNP EA). The DMNP EA was completed by the TRCA on behalf of and in co-operation with Waterfront Toronto and the City of Toronto to provide flood protection for the area for a range of storm events up to and including the Regulatory Storm event, which is a major, catastrophic flood event. Implementation of the recommendations for flood protection measures would mitigate the flood risks in the Port Lands and South of Eastern area and enable the development of these lands.

The TSMP was undertaken in coordination with the Port Lands Planning Framework, South of Eastern Strategic Direction and supplements previous Environmental Assessments (EAs) within the area.

This functional servicing report (FSR) presents the preferred stormwater management (SWM) and stormwater quality treatment alternatives within the project study area as part of the TSMP.

This document includes:

- A summary of existing conditions and background studies that were considered in the development of the SWM alternatives;
- A description of the preferred “Water as a Resource” alternative;
- A description of the SWM criteria and assumptions that formed the basis for modeling the preferred “Water as a Resource” alternative;
- A description of the stormwater quality treatment facility options for north and south of the Ship Channel; and
- A description of the SWM modelling results for the preferred “Water as a Resource” alternative.

2.0

Existing Conditions

This section provides a summary of the existing stormwater and environmental conditions in the study area and the unique opportunities and challenges they present to defining and implementing stormwater management solutions. A comprehensive assessment was completed to identify gaps and inadequacies in the existing system to ensure that these issues would be addressed as part of the proposed stormwater management improvements. These issues included existing flooding concerns, inadequate drainage networks and current water quality concerns.

2.1

Existing SWM Infrastructure

The existing storm sewer system within the study area north of Lake Shore Boulevard (Lake Shore) is shown in **Figure 2**. It is noted that there are no storm sewers within the Unilever Precinct south of the railway line, with existing development presumably served by storm sewers along Lake Shore Boulevard or Booth Avenue. Runoff in the area north of the CN railway tracks outlets west to the Don River. In the South of Eastern (SoE) area, the storm sewer network between Booth Avenue and Leslie Street generally runs from north to south and conveys minor system runoff to the Turning Basin, including a significant drainage area north of Eastern Avenue that is outside the study area limits. Stormwater runoff in the area east of Leslie Street up to Woodfield Road is conveyed easterly to Ashbridge's Bay.

Within the study area south of Lake Shore Boulevard and north of the Ship Channel, most of the existing infrastructure west of Carlaw Avenue serves the needs of local area development. The existing storm sewer system east of Carlaw Avenue to Leslie Street includes two (2) storm sewer outlets to the Turning Basin (on the north-east and north-west corner of the Turning Basin), as well as the extension of the storm drainage system from north of Lake Shore Boulevard (including drainage from lands outside the study area). The storm sewer connected to the north-east outfall at the Turning Basin is a deep tunnel which runs from Queen Street to approximately 50 m north of the Turning Basin where it connects to the high level outfall, acting like a siphon.

There is limited stormwater infrastructure within the study area that is located south of Ship Channel. The storm drainage system in this area is primarily comprised of open ditches and storm sewers that outlet directly to the Ship Channel.

There are limited stormwater management measures that have been implemented within the study area that meet the requirements of the City of Toronto Wet Weather Flow Management Guidelines (City's WWFMG) other than those implemented recently as part of the Pinewood Studios development.

Figure 2 shows the existing storm sewer network in the study area.

2.2 Existing Land Use

The study area contains a mix of industrial, employment and commercial uses, as well as vacant lands and a small area of residential development south of Eastern Avenue. There are a number of cultural heritage buildings and areas within the project limits. The areas north and south of the Ship Channel have marginally different land uses which are described below.

North of the Ship Channel

The South of Eastern area is comprised of mostly industrial and commercial uses with small sections of residential areas.

Portions of the Unilever Precinct, on the northeast corner of Lake Shore Blvd. and the DVP, are currently vacant. There are active uses including a number of existing uses north of the rail embankment such as the City's Booth Yard, Cinespace Film Studios, Avenue Road Fine Furniture, factory warehouses, an Enbridge facility and a parking area that is currently leased in the 21 Don Roadway site. The entire area is identified as an area to re-develop.

The Port Lands area (south of Lake Shore Blvd) can be further broken down into the Film Studio District and East Port areas. The Film Studio District consists of privately and publicly owned lands and some commercial, industrial and private recreation lands. Pinewood Studios and supporting facilities are located within this area, as well as some vacant lands.

The East Port area is predominantly government-related and industrial land uses. There is a large commercial complex, film studio and concrete-manufacturing and recycling facilities in the area.

South of the Ship Channel

The land use south of the Ship Channel is predominantly industrial and includes uses such as the Port Lands Energy Centre (PEC), a soil recycling facility, the Royal Canadian Yacht Club and the Ports Toronto facilities. The decommissioned Hearn Generating Plant is currently vacant but is designated as a heritage building. With the exception of the Hearn and the Port Toronto lands, most of the properties are identified for long-term redevelopment. The area immediately south of Unwin is an Environmentally Significant Area (ESA) which is described in more detail in **Section 2.6**.

2.3 Topography

The existing topography of the study area is predominantly flat with localized high and low spots and elevations ranging from approximately 78.0 to 76.0 meters above sea level (mASL).

There is minimal relief in the area which results in limited opportunity for positive (gravity-based) overland drainage.

Overland flow direction is generally north-south in the areas north of the Ship Channel and drains toward the Turning Basin; whereas the flow direction varies in the area south of the Ship Channel and drains towards both the Ship Channel and Lake Ontario. Features such as major roadways (e.g., Don Roadway, Lake Shore Boulevard, Commissioners Street) affect the topography by creating fixed elevation points that must be matched in the proposed alternative. Other fixed elevation points include existing buildings to remain such as the Pinewood Studios, and heritage buildings that must be protected. **Figure 3** shows the existing topography and contour elevations within the study area.

Due to the relative grades of the land, the study area is vulnerable to flooding from the Don River, especially during larger storm events. As outlined in **Section 1.0.**, the DMNP EA identified a recommended solution for flood protection measures to remove the flood risk to the study area from a Regulatory Storm to support re-development of the area. The proposed flood protection features consist of a Flood Protection Landform (FPL) and Valley Wall Feature (VWF). From a topographic perspective, incorporating the flood protection measures from the DMNP EA will require changes in grade in the Unilever Precinct and south of Lake Shore Blvd along the Don Roadway to accommodate the placement of fill required for their construction. Details on the recommended flood protection features and grading plan for the study area can be found in **Section 3.1** and **Section 5.2.2**, respectively.

2.4 Ground water table

Hydrogeological or geotechnical studies were not completed as part of the TSMP; however, the Port Lands area is included as part of the DMNP “Impact Assessment Study Area” and it has been assumed that similar geotechnical characteristics apply. An analysis of the available geotechnical information in the study area was also completed as part of the Waterfront Sanitary Servicing Master Plan (2012). The DMNP EA indicates that the groundwater table ranges from less than 1 m to approximately 3 m below ground surface across the study area, and the WSSMP notes that the groundwater table is consistently within 2m of ground surface based on borehole data reviewed. The height of the ground water table is influenced by Lake Ontario water levels which are prone to fluctuation. Groundwater quality is generally poor and impacted by the presence of contaminated soils. Contamination within the groundwater is typically localized and the presence of heavy metals, petroleum hydrocarbons, and other organic compounds has been reported.

The high water table poses a number of challenges for SWM including the potential for buoyancy of the proposed infrastructure, and the increased risk of infiltration and inflow of groundwater into the sewer systems.

2.5

Soil composition and contamination

The majority of the Port Lands area was reclaimed by the filling in of Ashbridge's Bay during the 1800s and mid-1900s. Numerous sources of fill were used in the reclamation including excavated native soils from borrow pits and construction sites, construction debris, and possibly municipal solid and other wastes. The composition of the soil fill is highly variable and may include metal fragments, asphalt, and contaminated soils from off-site sources.

The combined placement of industrial fill and subsequent long-term commercial and industrial/port land uses has resulted in a range of ground water and soils contamination issues that are reflected by the presence of petroleum hydrocarbons, organic compounds and heavy metals, among others in the soils in the study area. The presence of contaminated soils limits the type of SWM features that can be used under proposed conditions, specifically the use of SWM systems that promote infiltration.

The geotechnical analysis completed in the WSSMP resulted in the creation of three cross-sections of soil composition, which are described in further detail below. Figures showing the cross-sections, their locations and soil type are located in **Appendix A-1**.

- **Cross-section A-A: Unwin Avenue/Leslie Street (South of Ship Channel):** this east-west section generally consists of 15 – 20m of soil overburden overlying shale bedrock. The overburden generally consists of loose sand and fill material, overlying soft organic-rich material and soft clay and silt material. These materials overlie a layer of predominantly sand in varying density from loose to dense with the dense material typically occurring below 60 mASL; bedrock also typically occurs below 60 mASL.
- **Cross-section B-B: Commissioners Street Section (North of Ship Channel):** this east-west section consists of approximately 15 m of overburden overlying shale rock. The overburden generally consists of loose sand and fill overlying organic-rich soil and clay silt material. Clays and silts overlie predominantly loose to dense sand, with denser sand typically below 65 mASL. Bedrock typical occurs between 60 – 65mASL.
- **Cross-section C-C: Carlaw Avenue (North of Ship Channel and SoE):** this north-south section transitions from predominantly organic-rich soil in the south to predominantly glacial till material in the north. From Commissioners Street (Commissioners) to north of Lake Shore, the overburden typically consists of a 2 – 5 m thick layer of sand and gravel or fill material overlying varying thicknesses of organic-rich material, sand and silt. The depth to bedrock was only available for boreholes near Lake Shore Blvd, where it was reportedly near 65 mASL.

2.6 Natural Areas and Environmentally Significant Areas (ESA)

Existing areas of natural cover and wetlands within the study area have been identified through background information and confirmed through field investigations. Within the study area there is a segment of re-naturalized vegetation located to the south of the PEC. This area has been extensively naturalized including the introduction of a wide range of native species, active bee-hives, wetland areas and paths. Environmentally Significant Area (ESA) features adjacent to the study area include the Cherry Beach ESA and the Tommy Thompson ESA.

The location and type of existing natural environment features are shown on **Figure 4**. These natural features may provide some opportunities for natural stormwater management such as suspended solids removal in areas with natural (grassed) cover and peak flow attenuation within wetland features. Efforts will be made to preserve these naturalized features in the design of SWM systems by controlling drainage from the proposed redevelopment areas.

2.7 Aquatic Habitat

Aquatic habitat within the study area is located within the Ship Channel and includes the Turning Basin as well as the Leslie Slip. The Ship Channel is characterized by a hardened shoreline of concrete and sheet pile walls with uniform depth and little to sparse in-stream vegetation. The deep waters adjacent to the shoreline walls of the Ship Channel do not provide suitable habitat for small invertebrates or for the establishment of aquatic plants.

Due to the lack of aquatic vegetative cover, uniform shoreline morphology, poor water quality (e.g., turbid, high nutrient and metal concentrations) and other factors, fisheries resources in the study area are limited. Most fish species in the Ship Channel are transient, using the limited habitat available for foraging. This habitat is not expected to support other critical life stages (e.g., nursery, spawning, rearing) required to support a high diversity of fish or benthic invertebrates. Impacts to aquatic habitat from proposed stormwater management measures are likely to be minimal but will need to be considered further during detailed design to ensure existing habitat is not lost.

3.0 Relevant Background Studies

This section summarizes the key background studies adjacent to the study area that have been considered in the development of the preferred SWM concept. Components from the recommended solutions in each study that may impact the Port Lands are highlighted and their incorporation into the preferred alternative discussed in **Section 5.0**. **Figure 5** provides an overview of the highlighted components and outlines the background study area boundaries.

3.1 Don Mouth Naturalization and Port Lands Flood Protection Project (DMNP EA)

The DMNP EA was carried out to define the recommended solution that includes naturalizing the mouth of the Don River (Don Mouth), alleviating flood risk from lands to the south and east of the Don Mouth and providing opportunities to revitalize the Port Lands area of the Toronto Waterfront.

As part of the EA, detailed hydraulic modelling was undertaken to identify the extent of lands that would be flooded if the Regulatory Storm, Hurricane Hazel, were to occur. Results confirmed that a significant amount of land (approximately 290 hectares) to the east and south of the Don River, including a large part of the Port Lands and South of Eastern (SoE) study area, would experience flooding during the Regulatory event. Implementation of the flood protection features recommended as part of the DMNP EA preferred alternative would remove the risk of flooding to 240 ha of land in the at-risk area. Of the 50 ha to remain in the floodplain, approximately 43 ha are to be flood conveyance features, and the remaining 7 ha are located north of the rail embankment.

The DMNP EA identified a Flood Protection Landform (FPL) on the east side of the Don Roadway and north of Lake Shore Boulevard, but also permitted a Valley Wall Feature (VWF) as an alternative in the area. A Valley Wall Feature (VWF) was identified for the area south of Lake Shore and east of the Don Roadway. **Figures 5-1 and 5-2** show the location of these features within the TSMP study area as recommended in the DMNP EA.

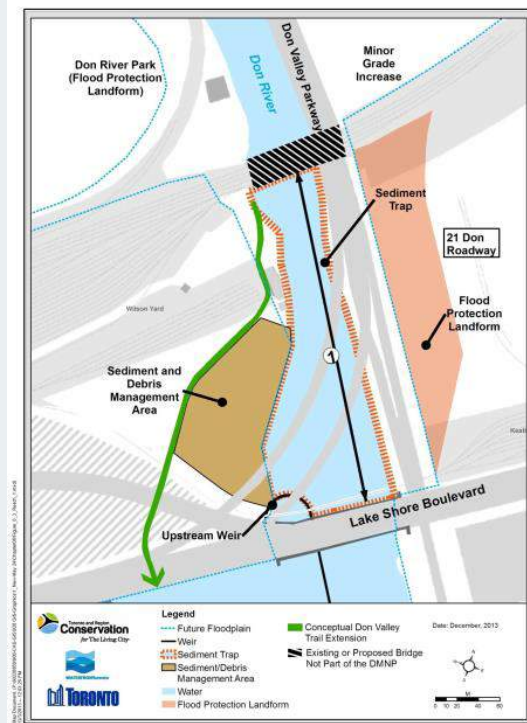


Figure 5-1: Recommended FPL North of Lake Shore and East of DVP (Source: DMNP EA 2012)



Figure 5-2: Recommended VWF South of Lake Shore and East of Don Roadway (Source: DMNP EA 2012)

The DMNP EA was approved in 2015 and as such integrating the proposed flood protection measures are key considerations in the design of the Port Lands SWM concept. The separation of the study area from the Don River flows was a key consideration that would require stormwater runoff to be directed east and south of the future (realigned) Don Mouth. The proposed grading required to mitigate flood risk for the Broadview extension as part of this EA integrates a series of VWFs, which are located adjacent to the Don Roadway, at Broadview and on the east side of the Eastern underpass. With the exception of the Broadview subway area and the north of the CN rail embankment, runoff from the study area is directed away from the Don River. Restrictions on the amount of development and specific requirements to maintain the integrity of the features would also need to be integrated into the design of SWM measures. Further details on the grading plan are found in **Section 5.2.2**.

Since the completion of the DMNP EA, the TRCA and Waterfront Toronto with the City, advanced additional due diligence analysis on the flood protection works and enabling infrastructure addressed in the Lower Don Lands Master Plan and Addendum discussed in **Section 3.3**. The two projects have been consolidated into a single initiative, referred to as the Port Lands Flood Protection and Enabling Infrastructure. Funding for the construction of the flood protection and enabling infrastructure was announced in June 2017. Detailed design work is also now underway. In addition, the TRCA, with the City and Waterfront Toronto, are undertaking a new Municipal Class EA to flood protect the lands north of the rail embankment. Further integration between the various studies and projects are required.

3.2 East Bayfront and West Don Lands

The East Bayfront (EBF) and West Don Lands (WDL) Class EA Master Plans were undertaken to address the infrastructure and servicing requirements needed to support the redevelopment of the EBF and WDL Precincts.

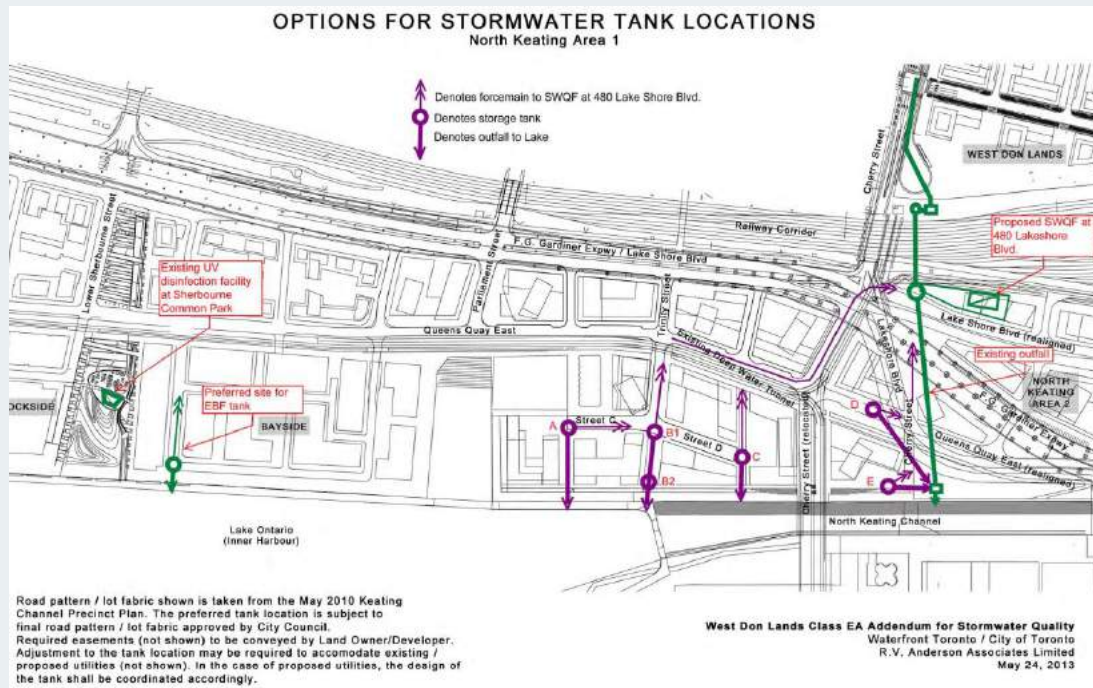
The locations of the two precincts, adjacent to the Port Lands, are shown in **Figure 5**. The preferred SWM works in the WDL and EBF Class EA involved measures for rehabilitating and using existing SWM infrastructure, as well as the construction of a new end-of-pipe Stormwater Quality Facility (SWQF) to provide water quality treatment of stormwater runoff.

The proposed SWQF is located immediately south of the railway corridor at 480 Lake Shore Boulevard and consists of an end-of-pipe oil-grit separator (OGS), a ballasted flocculation clarifier, and a UV treatment system (See **Figure 5-3**). The facility will service a total of 78 ha including the EBF Precinct and the North Keating area in the Lower Don Lands.

This SWQF (also referred to as a Ballasted Flocculation Facility – BFF) was an important factor in the development of the SWM concept in the Port Lands as there were considerations for

directing flows from the study area to the WDL facility or possibly, replicating the facility within the Port Lands.

Figure 5-3: Location of SWQTF at WDL and options for stormwater tank locations in EBF and NK1 areas.



Source: WDL Addendum 2013

3.3 Lower Don Lands Master Plan and Addendum

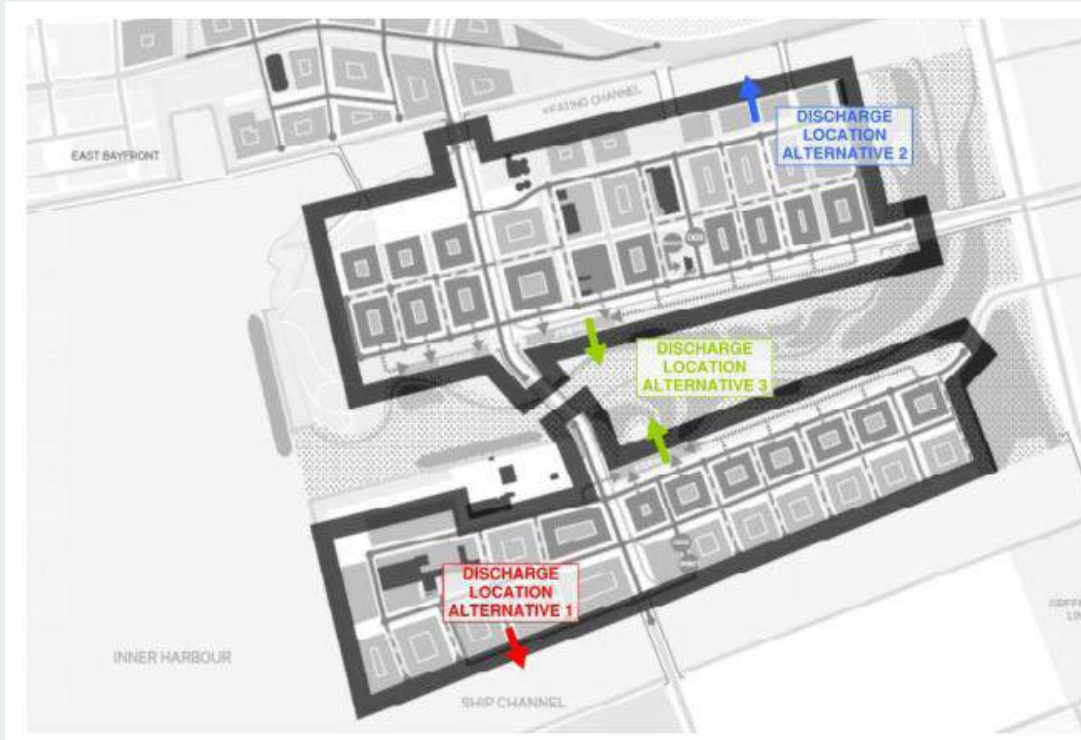
The Lower Don Lands Class Environmental Assessment Master Plan (LDL EAMP) was carried out to address the municipal infrastructure servicing requirements necessary to support the naturalization and shifting of the Don Mouth outlined in the DMNP EA, and to support the land uses proposed as part of the revitalization of the LDL area. The LDL is a 125 ha area bordered by the Inner Harbour to the west, the Don Roadway to the east, the CN rail corridor to the north and the Ship Channel to the south. **Figure 5** shows an outline of this area.

The preferred water quality treatment alternative was an SWQF within the LDL that included a storage shaft and BFF /UV facility similar to the proposed facility in the EBF & WDL EAs. The location of the SWQF and discharge point is expected to be finalized in Phase 5 of the Municipal Class EA process, as shown in **Figure 5-4** below.

Based on this, there is the potential for an additional SWQT (i.e., BFF/UV) facility to exist in the LDL. The presence of multiple BFF/UV facilities along the Toronto waterfront was one of the key considerations in developing a SWM concept for the Port Lands and SoE area as the one of

the guiding intentions was to avoid redundancy in the area where possible. The preferred water treatment alternative for the Port Lands is detailed in **Section 5.3**.

Figure 5-4: Discharge locations of potential SWQTF in LDL (Source: LDL Addendum 2013)



3.4 Don River and Central Waterfront EA

The Don River and Central Waterfront EA (2012) was undertaken to decrease the levels of pollution along the Toronto waterfront. One of the main objectives of the project was to address wet and dry weather flow management within the study area, including the collection, storage and treatment of combined sewer overflows and the provision of sufficient capacity in the sanitary system to accommodate future growth within the study area.

An integrated dry weather flow (DWF) and wet weather flow (WWF) alternative was recommended and included:

- A new satellite WWF treatment facility to be at Ashbridge's Bay Treatment Plant (ABTP).
- Three interconnected tunnels to collect, store and convey combined sewer overflows to the new satellite WWF treatment facility at Ashbridge's Bay Treatment Plant, namely the Inner Harbour Tunnel (IHT), the Taylor Massey Creek Tunnel and the Lower Don/Coxwell Bypass Tunnel. Further details on the IHT are provided below.
- Three underground storage tanks for offline storage of CSOs flow from four remote outfall locations.

- Moderate upgrades to the North Toronto Treatment Plant to ensure effluent quality meets the Provincial Water Quality Objectives (PWQO's), including a retrofit of the existing CSO tank at the NTP.

Figure 5-5 shows the preferred alternative from the Don River and Central Waterfront EA, including the proposed tunnels. More detail on the recommended alternatives can be found in the EA document.

3.4.1 Inner Harbour Tunnel (IHT)

The length of the IHT is an estimated 5.5 km long, and the eastern section of the proposed tunnel extends through the Port Lands and South of Eastern study area along Lake Shore Blvd E. There is one proposed hydraulic drop shaft location within the study area at Lake Shore Boulevard and Carlaw Avenue. Recent developments by the IHT design team propose 1950 mm diameter (on Commissioners) and 2250 mm diameter (on Carlaw) storm sewers at the Turning Basin to intercept the one-year flows from the existing trunk storm sewer outlets to the Turning Basin and directing these flows to the IHT at the Carlaw drop shaft.

The proposed SWM concept and stormwater treatment options for the Port Lands and SoE area includes the desirable long-term option to divert the 1-year flows from the study area north of the Ship Channel to the IHT for treatment at the proposed satellite WWF facility at ABTP. The IHT will be constructed as part of the phasing for the infrastructure components of the Don River and Central Waterfront Master Plan EA. The proposed five stage implementation process begins with the construction of the Coxwell Bypass Tunnel and Inner Harbour Tunnel East which is estimated to be complete by 2030. Stages two to five involve the construction of the Taylor Massey Tunnel, the DWF and WWF offline storage tanks, the Inner Harbour Tunnel West and the WWF connections and vertical storage shafts. The schedules for stages two to five are to be determined by funding.

Due to the longer-term funding and timing considerations for the construction of the IHT, development in the study area may proceed ahead of the tunnel or hydraulic drop shaft completion. An interim solution to incorporate a SWQF at the Turning Basin for the portion of the study area north of the Ship Channel was considered in light of this. Details on how the proposed IHT infrastructure has been taken into consideration in the preferred SWM concept and stormwater treatment alternatives are further described in **Section 5.3**.

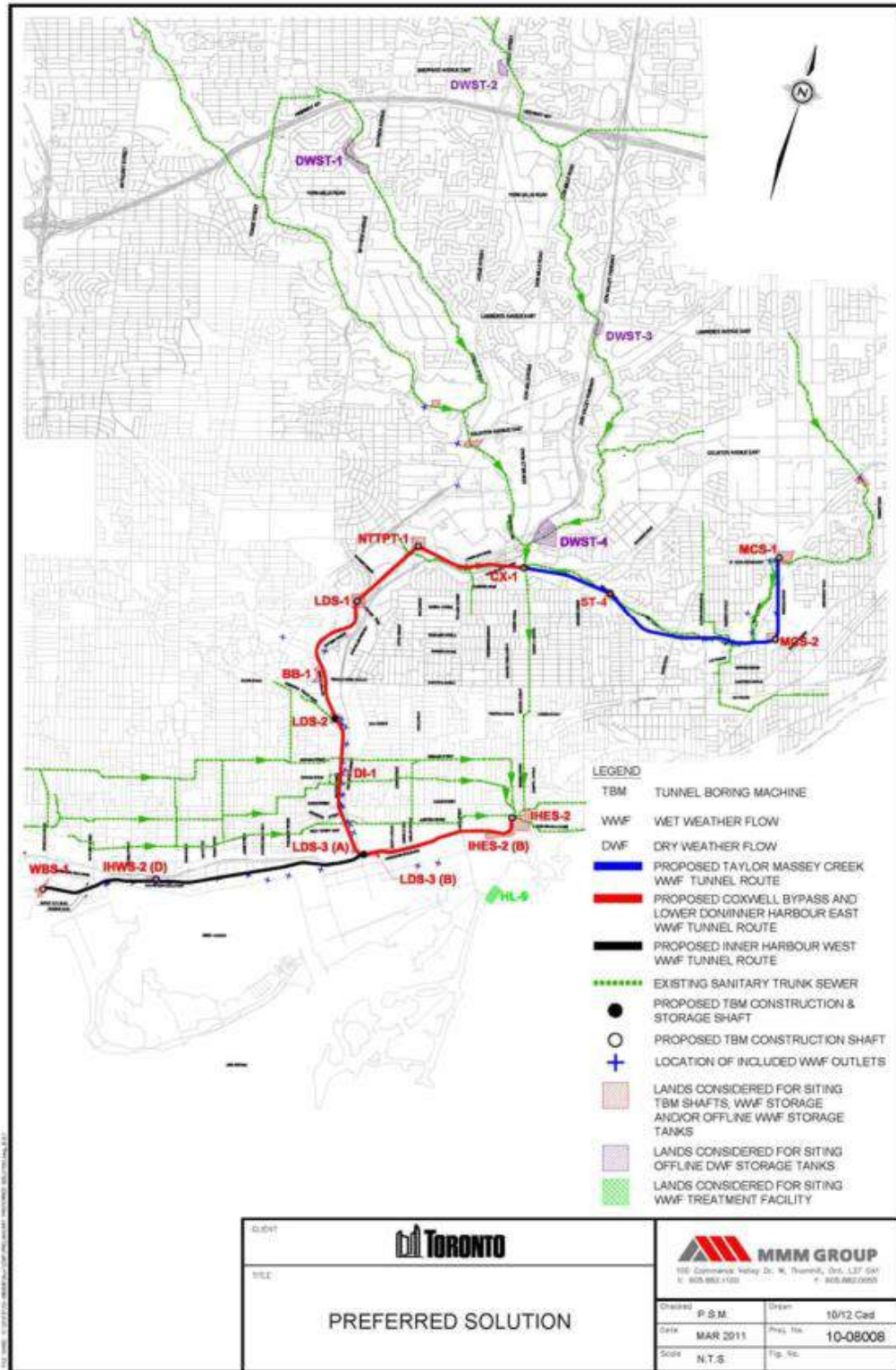


Figure 5-5: Preferred solution from Don River & Central Waterfront EA (Source: Don River and Central Waterfront ESR 2012)

4.0

Design Considerations and Criteria

This section presents the design considerations, assumptions and criteria that were taken into account when conceptualizing, refining and modelling the preferred SWM alternative. These considerations and criteria, in addition to the components of the previously completed and approved studies, were key elements in developing the overall SWM strategy and design concept for the Port Lands.

4.1

Design Criteria - Overview

SWM criteria are generally classified under the categories of water balance, water quantity and water quality. These classifications characterize the impacts of development on stormwater runoff, such as increased volume and conveyance of runoff, degraded water quality and alteration to natural hydrologic cycles. The following is a brief explanation of the criteria and how they were considered in developing the SWM concept.

Water Quantity

Water quantity criteria are utilized as a means of quantifying the impact of increased peak flows and runoff volume caused by urban development or an increase in the degree of imperviousness. The drainage systems designed to manage runoff and peak flow rate from various storm events can be considered as one of two types: minor or major drainage systems.

- **A minor drainage system** conveys surface runoff from frequent storm events (i.e., storms which have return period from the 2 to 5-year design storms). The system is typically made up of storm sewers, but can also include catchbasin inlets, curb and gutters and open channels.
- **A major drainage system** conveys the total surface runoff from infrequent storm event (i.e., storms greater than the 5-year and up to the 100-year design storm). The major system flow is usually conveyed by an **overland flow path** which can consist of roadways or paved easements, as well as open drainage systems. The terms *major system* and *overland flow path* are used interchangeably in this report.

The proposed stormwater management solution for the Port Lands addresses both major and minor drainage systems that provide a suitable level of service to support development.

Flood Protection

Another aspect of water quantity control is the consideration of flood protection measures, which have both a regional context and localized/urban built form context.

Flood protection measures for the urban built form are typically based on the ability to accommodate and convey major storm events without flood damage to public and private properties. Design of urban flood protection works are based on allowable depths/spread of ponding and maximum velocities of flow especially on overland flow routes.

Regional flood protection aims to manage overflows from natural features such as watercourses and river valleys (riverine flooding) caused by large storm events. Development that occurs adjacent to rivers, lakes and other water features that are subject to riverine flooding are required to follow strict development guidelines. Regional flood protection measures are completed on a much larger scale such as those in the DMNP EA. Since the regional flood protection solution for the study area was undertaken as part of the DMNP EA, regional flood protection measures will not be considered for the SWM concept as part of this FSR.

Water Balance

The main objective of water balance criteria is to incorporate measures that would preserve a degree of pre-development hydrologic characteristics. Water balance targets can be met through a combination of infiltration, landscaping, stormwater reuse and retention or storage. Typical water balance measures on a lot-level may include green roofs, rain gardens, bioretention areas, rooftop storage, and rainwater harvesting cisterns.

Given the high water table and highly contaminated soil in the Port Lands, water balance measures that depend on infiltration are not possible. As an alternative, bioswales and bio-retention areas may instead be designed for evapotranspiration and filtration to improve runoff water quality and attenuation of runoff volume in the conveyance system. The use of green roofs on individual properties may also provide runoff capture and contribute to meeting water balance criteria. There may be opportunities to utilize water balance measures on a larger, community scale. These could involve the use of public open spaces for artificial wetlands and/or stormwater management ponds. The use of public open spaces for communal SWM management measures will facilitate the intent to educate the public on the concept of “water as a resource” and to further achieve LID approach to SWM management. It is recommended that the use of communal areas to achieve water balance targets be further reviewed at the subsequent detailed design stages.

Water Quality - TSS Removal

The main objective of water quality criteria is to ensure that appropriate measures are implemented to achieve an improved degree of quality in surface runoff leaving a site and prevent the degradation of water quality in the receiving water body. Total suspended solids (TSS) removal efficiency is a measure of water quality. Different levels of TSS removal (60 – 80%) may be specified based on the sensitivity of, and consequent level of protection for the receiving watercourse. TSS removal can be achieved through a “treatment train” approach which could include:

- **Source or lot-level controls** i.e., management of stormwater runoff at the source/location where it is generated;
- **Conveyance controls** i.e., management of stormwater runoff as it is being conveyed from the lot to an outlet system; and
- **End-of-Pipe controls** i.e., management of stormwater runoff prior to it being discharged to a receiving waterbody.

A treatment train approach is recommended to be incorporated into the SWM concept for the Port Lands and South of Eastern area, and it is expected that this approach would be designed to achieve the TSS removal target.

Water Quality - Disinfection

Another measure of water quality, specifically for areas discharging directly to a lake or waterfront areas, is the bacterial count. The Ontario Provincial Water Quality Objectives (PWQO) identifies *Escherichia Coli* (*E. Coli*) as the most suitable indicator of fecal contamination and therefore, the most suitable indicator of the amount of bacteria in water. The treatment method for *E. Coli* is disinfection, which is typically carried out through ultra violet (UV) radiation and requires UV light to be shone onto water to kill the bacteria within the water column. UV treatment requires that the turbidity of the water be low enough to allow UV light to penetrate the water column. Therefore, a minimum 80% TSS removal is required to allow for effective disinfection of stormwater runoff. Measures such as lot-level controls and end-of-pipe oil-grit separators (OGSS) would be needed to achieve the high level of TSS removal necessary for UV treatment/disinfection to be successful.

As noted in the completed West Don Lands and Lower Don Lands Master Plan EAs, the City is planning to use a Ballasted Flocculation Facility (BFF) for stormwater quality treatment, which will provide additional polishing of stormwater runoff prior to the UV treatment. In discussions with the City of Toronto, the *E. Coli* counts for the Ship Channel have been in the range of 20 *E. Coli*/100 ml and the City expects to maintain the current low bacteria counts for the area. This criteria and the potential to replicate or use the proposed facilities in the West Don Lands and

Lower Don Lands were considered in developing and selecting the preferred stormwater treatment alternative.

4.2 Design Criteria - Regulatory Agencies

The following municipal and provincial guidelines were reviewed to select the governing SWM criteria:

- City of Toronto Wet Weather Flow Management Guidelines (2006);
- Toronto Region Conservation Authority (TRCA) Stormwater Management Criteria (2012);
- Toronto Region Conservation Authority (TRCA) and Credit Valley Conservation (CVC) Low Impact Development Stormwater Management Planning and Design Guide (2010); and,
- Ministry of Environment and Climate Change (MOECC) Stormwater Planning and Design Manual (2003).

Other guidelines that were reviewed for input into the preferred concept include:

- City of Toronto Green Standard (2014)
- City of Toronto Green Roof By-law (2010)

4.2.1 City of Toronto WWFMG

The City of Toronto (the City) Wet Weather Flow Management Guidelines (WWFMG) were developed to help achieve the objectives in the Wet Weather Flow Master Plan (WWFMP) which is the City's long-term plan to address water pollution. The WWFMG were developed by the City with input from the MOECC and TRCA. The following summarizes the City-specific requirements:

- **Water Quantity:** The allowable release rate to the municipal storm sewer system from the site should not exceed the peak runoff rate from the 2-year storm at a maximum runoff coefficient of 0.5.
 - However, if a suitable overland flow route of sufficient hydraulic capacity exists and is accepted by the City, post-development runoff peak flow rates which exceeds the allowable release rate are allowed to discharge off-site via the overland flow route, provided that all other criteria are met and the total area discharge still meets the applicable quantity control criteria (*Section 2.2.3.8 of the WWFMG*).
- **Flood Protection (Urban Built Form):** The major drainage system must be designed to accommodate and/or convey runoff from the major storm flow, without causing flooding damage to adjacent properties. The depth and spread of overland flow to be accommodated within the major system are limited based on road classification, as outlined below.

- For local roads, the maximum depth of ponding for the 100-year storm shall be the lesser of 0.15 m above the crown of the road or the water level up to the ROW limit
- For collector and industrial roads, the maximum depth of ponding for the 100-year storm shall be the lesser of 0.1 m above the crown of the road or the water level up to the ROW limit, and;
- For arterial roads, the maximum depth of ponding for the 100-year storm is to the crown of the road.

Overland flow shall only be conveyed through walkways, easements and within the road allowance. Continuity of overland flow routes shall be maintained. This criterion is to be applied to the urban built form.

- **Water Balance:** The minimum on-site retention requires proponents to retain all runoff from the 5mm design rainfall event through infiltration, evapotranspiration and/or rainwater re-use. It is anticipated that City and/or MOECC will be advancing more stringent requirements for on-site retention in the coming years; however, the 5 mm retention requirement was used to more conservatively establish the proposed storm drainage system through modelling. This degree of conservatism would, to some degree, account for the following:
 - Phased development of properties and the transitional period when existing properties in the latter phases of development continue to discharge uncontrolled runoff while redeveloped properties begin to implement runoff controls.
 - Allowance for climate change impacts relative to increased runoff from the risk of storms having increased intensity and duration.
- **Water Quality – TSS Removal:** The WWFMG requires the long term removal of 80% of total suspended solids (TSS) on an annual basis. However, this requirement does not apply to existing development where the built form will remain unchanged.
- **Water Quality – Disinfection:** The WWFMG requires the provision of disinfection treatment (i.e., ultraviolet light radiation or equivalent) for stormwater runoff from development sites which discharge directly to the Lake or Waterfront areas. The following *E. Coli* thresholds are outlined in the WWFMG:
 - Wet Weather Periods: Less than 1000 *E. Coli*/100 ml during swimming season;
 - Dry Weather Periods: Less than 100 *E. Coli*/100 ml during swimming season.

For the study area, it is expected that the more stringent dry weather period criteria of 100 *E. Coli*/100 mL will be applied to all stormwater runoff entering Lake Ontario,

including the Ship Channel. This will ensure that there is no net increase in degradation to water quality in the Turning Basin or Lake Ontario.

Note: The City of Toronto Sewer Use By-Law also regulates TSS Removal and E.Coli levels in storm sewer discharge. The By-Law limits TSS in discharge to storm sewer to a maximum 15 mg/L⁵ and requires less than 200 E.Coli/100ml. It also outlines the discharge levels of at least forty different chemical compounds to be achieved prior to discharge to the storm sewer. The WWFMG criteria for E.Coli is more stringent and will therefore be used as the governing criteria in this case however the requirements of the Sewer Use by-law will need to be reviewed and met at the site plan approval stage for properties to be redeveloped.

The City's Green Streets Toronto initiative is advancing standards/guidelines to promote the use of "green infrastructure" in the design of City streets. "Green infrastructure" supports a resilient city by performing important ecological services such as absorbing rain, improving the water quality of stormwater run-off, reducing the urban heat island effect, enhancing biodiversity and the urban tree canopy and improving air quality. The standards/guidelines are currently being developed and in consultation with the MOECC. Once the guidelines/standards are developed, any applicable criteria should be incorporated in the design of the preferred alternative.

4.2.2 TRCA

The TRCA SWM document outlines the design criteria that apply to all new developments within its jurisdiction.

- **Water Quantity:** The water quantity criteria requires the control of post-development peak flows to pre-development peak flows for all storms up to and including the 100 year storm (including the 2, 5, 10, 25, and 50-year storms).
- **Water Balance:** The water balance criteria for proposed developments are dependent on the type of natural features impacted by the development. Developments may be subject to site-specific water balance analyses or simply maintenance of the natural hydrologic regimes of nearby water features. Erosion control criteria for small sites require, at the minimum, the retention of the first 5mm of every rainfall of every event. This is consistent with the water balance criteria required by the WWFMG.
- **Water Quality:** The water quality criteria indicates that all watercourses and water bodies within TRCA jurisdiction require an enhanced level of water quality protection, equivalent to 80% TSS removal.

TRCA/CVC LID Design Guide

The TRCA/CVC LID Manual promotes a "landscape-based" approach, including viewing stormwater as a resource, and integrating SWM facilities into the existing community and landscape. Low-Impact Development practices are highly recommended as a way to achieve

this approach as they aim to replicate the naturally occurring hydrologic cycle by managing runoff as close to the source as possible. The key principles outlined in the manual for Low Impact Development practices include:

- Using existing natural systems as a framework for planning and integrating SWMPs;
- Focusing on runoff prevention;
- Treating stormwater as close to the source as possible;
- Creating multi-functional landscapes;
- Educating and Maintenance.

These principles provided guidance in conceptualizing the SWM concept for the Port Lands.

4.2.3

MOECC

The MOECC Stormwater Planning and Design Manual outlines general criteria and considerations for stormwater planning on a watershed and subwatershed scale. It recommends that development be undertaken according to a SWM Plan and includes the design of stormwater management practices to meet the design criteria.

- **Water Quantity:** The water quantity criteria states that maximum post-development peak flow rates must not exceed pre-development values for storms with return periods from 2 to 100 years.
- **Water Balance:** There are no explicit water balance criteria; however there are water balance methods and modelling tools suggested to determine the amounts of water that need to be retained or infiltrated to compensate for reductions caused by large paved areas.
- **Water Quality:** The water quality criteria outlines the end-of pipe storage volumes required to achieve different levels of pollutant removal, based on the level of protection needed in the receiving waters. These range from *Enhanced* protection (80% suspended solids removal) to *Basic* protection (60% suspended solids removal).

The MOECC criteria were used as a guideline for the development of many of the local and municipal SWM standards, and as such, they will already be incorporated into the governing criteria for the Port Lands.

The City of Toronto (City) WWFMG criteria has been selected to be the governing criteria as they are the most specific, however, all the guidelines reviewed provided guidance into the design and selection of the preferred alternative.

For the purposes of this report, the WWFMG water quantity criteria has been defined to include Discharge to Municipal Infrastructure criteria but does not consider Erosion Control. Erosion is normally a concern of receiving waters like rivers because an increase in flows to the river may

cause additional bank erosion. Erosion is not a concern for flows discharged directly into the lake, however deposition of sediments may be a concern. The Port Lands TSMP SWM concept is currently at the large-scale master planning level and it is expected that during detailed design and construction phases, all City criteria will be reviewed and met on a development site basis.

4.3 Preferred Land Use

The preferred land use for the Port Lands includes a mix of properties to be redeveloped, and properties to remain. The Unilever Precinct is an Employment Area and therefore residential uses are not permitted, however, it is envisioned as a major office destination with supportive retail and service uses. The South of Eastern and East Port areas will remain relatively unchanged with majority of the existing buildings to remain, including heritage buildings. For areas designated to remain, there are limited opportunities for modifications to the existing storm sewer infrastructure and connections, and stormwater management practices within this area. A few properties in the area have been identified for redevelopment, and it is assumed that these properties will meet the City's design criteria once they redevelop.

Majority of the Film Studio District (FSD) will undergo re-development to include residential, industrial, commercial and employment land uses, however, the Pinewood Studios and heritage buildings within McCleary Park are identified as areas to remain. The McCleary District within the FSD is a Production, Interactive and Creative (PIC) Mixed-Use area, allowing for residential uses subject to relocation of the Waste Transfer Station and a minimum amount of PIC uses. Media City and the Turning Basin District within the FSD is also a Production, Interactive and Creative Core Area where residential uses are not permitted.

Areas south of the Ship Channel will be partially redeveloped with the exception of the PEC and the Hearn.

Figure 6 highlights the buildings to remain and buildings to redevelop and is based on the existing street network and property parcels. As these buildings and areas re-develop, there are numerous opportunities for improvement including:

- improving existing streets and establish new streets;
- providing innovative, state-of-the-art stormwater measures; and,
- providing the needed capacity within municipal infrastructure (transit, roads, servicing) to support/accommodate future growth.

It should be noted that the buildings highlighted in **Figure 6** were used as input into the SWM model however, the property parcels and road network used in the model differ from those shown in **Figure 6** and are based on the proposed street network and property parcels.

It is expected that properties to re-develop will install green roofs in accordance with the Toronto Green-Roof By-law however the size of green roofs were not calculated as part of the modelling exercise. It would be expected that calculations for green roof and related features would be considered during detailed design. Parks and open spaces identified in the Port Lands Planning Framework have been accounted for in the analysis based on information provided by the City, and are shown in **Figure 7**.

4.4 Lake Levels

For stormwater modelling purposes, a high lake level of 75.7 m was used as the downstream boundary condition for the higher frequency 2-year storm; whereas a low lake level of 75.2 m was used as the boundary condition for the lower frequency 100-year storm. This approach is a commonly used practice and is based on the relatively low probability that a low-frequency storm would occur simultaneously with a high lake level (i.e., 100-year lake level and 100-year storm).

As outlined in the *Existing Conditions - Stormwater Management* technical memo completed by Dillon in 2013, the normal lake level of 75.2 m, is an increase from the mean lake level of 74.7 m. It was selected to provide a conservative estimate of flood conveyance, and is consistent with the TRCA flood plain mapping initial conditions at the Lake for all rivers and streams mapped.

Climate Change Considerations

Climate change is an especially important consideration for stormwater management within the Port Lands due the potential impacts on water levels in the Lake and Shipping Channel and possible changes to storm event duration, intensity and frequency which can affect infrastructure sizing. Quantitative and qualitative analyses of the impacts of climate change for the Port Lands were not completed as part of TSMP EA since it was beyond the scope of this study.

Based on correspondence with the City, it may be possible that water levels may drop by 0.5m due to climate change. Regardless, some climate change resiliency may already exist since the Lake Ontario water levels in the study area are controlled and potential changes to water level can be mitigated to some extent. In an attempt to more effectively plan municipal infrastructure investment and provision of services, the City undertook the “Toronto’s Future Weather and Climate Driver Study” in 2012 (Senes, 2012). The study assessed extremes of temperature and precipitation, and determined that warmer annual temperatures are expected, in addition to less snow and more rain anticipated in the winters. Fewer storm events are expected overall, however more extreme rainstorms and marked rainfall increases are predicted. The City currently does not have specific guidelines to assess the effect of increased frequency/intensity of storms on the design of drainage systems. However, a degree

of conservatism was incorporated into the modelling and is reflected in the conservative assumptions made.

4.5 Public Health

A public health concern for the study area is the presence of untreated, stagnant or ponded stormwater runoff within the Port Lands which may create breeding grounds for mosquitoes and contribute to increased occurrences of West Nile virus and other mosquito-borne diseases.

In order to address this issue, any proposed open water conveyance or storage measures (e.g., bioswales) will be required to drain within 24-48 hours, after all storm events, either via the use of into the storm sewer systems or perforated pipes and underdrains that outlet to the Lake. Positive drainage based on the proposed grading will ensure that there are limited instances of prolonged runoff ponding on the roadway and that overland flow is directed to the appropriate outlets. To facilitate drainage of these features to the lake within 24-48 hours, a backflow prevention valve will be installed at the channel outlets to prevent high lake levels from backing up into the channels. As outlined in **Section 4.4**, the hydraulic modelling accounted for high lake levels under the 2-year storm event, whereas a low lake level was used as a boundary condition for the 100-year storm. Should high lake levels coincide with the 100-year storm, it is expected that ponding depths would exceed the allowable 0.3 m depth, which may result in short-term impacts to public access. Further details on the interaction of the roadway and open channels can be found in **Section 6.3**. As detailed in **Section 2.4**, the groundwater level is within 1 – 3 m below ground surface due to proximity to the lake. The City requires contaminated soils to be excavated to a depth of 1.5 m and replaced with clean fill and an impermeable hard cap. This hard cap can prevent ground water seepage into the channels and the type of fill can be designed to allow for temporary sub-surface storage of runoff which would reduce surface ponding until lake levels drop and capacity is available in the storm sewers. Further geotechnical study and detailed modelling will be required to ensure the ability of bioswales to drain within the required time frame.

5.0 Preferred Alternative – Water as a Resource

This section describes the preferred stormwater treatment alternative for the study area. An overview of all the alternatives considered is provided, followed by a description of the preferred concept. The details of the concept, how they meet applicable criteria, and the grading plan developed to support the concept is provided. Finally, details on the preferred alternative for storm water quality treatment are discussed.

5.1 Overview of SWM Alternatives

Three SWM alternatives were assessed before the selection of the preferred alternative. The three alternatives were “Do Nothing”, “Conventional SWM” and “Water as a Resource”. Each alternative was evaluated to determine how it would meet applicable criteria as well as overall project objectives. Details of each alternative and associated evaluation can be found in the Port Lands TSMP document. A summary of the alternatives are outlined below:

- **Do Nothing:** This alternative involved keeping existing SWM infrastructure and practices unchanged. Due to proposed redevelopment in the study area, this alternative would be insufficient to handle future development needs.
- **Conventional SWM:** This alternative considered the use of current SWM methods to meet the WWFMG criteria. This included the use of a treatment train approach to meet water quantity, quality and water balance criteria, which would include rainwater storage tanks, cisterns and OGSs at the lot-level, storm sewers for conveyance of flows and an end-of-pipe treatment facility. While this alternative will meet the City requirements, there are fewer opportunities for showcasing innovative technologies.
- **Water as a Resource:** This alternative proposes a Low Impact Development (LID) approach to stormwater management in the area and was selected as the preferred alternative due to its ability to meet the City guidelines and incorporate a forward-thinking SWM approach.

5.2 Concept Description for Preferred Stormwater Management Alternative

The “Water as a Resource” alternative is an LID-based integrated stormwater management (SWM) approach that is being proposed for the Port Lands and South of Eastern area. The concept incorporates key ideas from the City’s WWFMG, TRCA’s SWM Manual, TRCA/CVC’s LID Manual and the MOECC SWM guidelines as described in **Section 4.0**. In the concept, stormwater runoff is managed with a combination of open channels and/or a conventional storm sewer system. The distinguishing feature of the preferred alternative is the integration

of LID features into the local landscape of all major streets and on some local streets. Another feature of the preferred alternative is the introduction of a “pilot area” to showcase naturalized SWM systems, highlight stormwater runoff as a valuable resource, and integrate SWM measures into the local landscape.

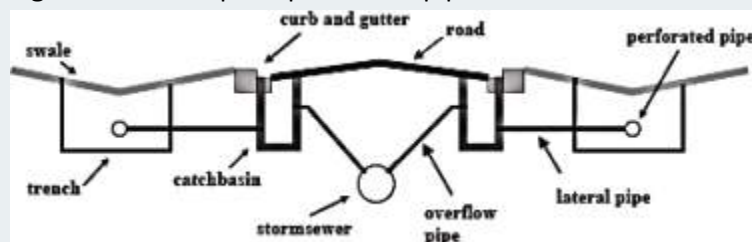
There are four main channel types used in the SWM concept as outlined below. The locations of all channels and the overall conceptual plan are shown in **Figure 8-1**. Rendered cross-sections for the open channels and hybrid channels are shown in **Figure 8-2**.

- **Planted Open Channel – bioswale:** The planted open channel along Commissioners Street within the pilot area will be designed as the main stormwater feature in the area. It will be a wide, planted feature that will be a key aspect of the public realm. There are additional planted open channels (open channels) located on the north-south streets within the pilot area that will be used for conveyance of stormwater runoff from the proposed redevelopment properties and road right-of-ways (ROWs). Further details of the function of these channels as part of the major and minor drainage systems are found in **Section 5.2.1**.
- **Paved Open Channel:** These channels are located on minor north-south streets within the pilot area and serve as stormwater conveyance features. Similar to the planted open channels, they are designed to service redevelopment properties and the ROW adjacent to them and direct flows to Commissioners Street Channel.
- **Planted Hybrid Open Channel – bioswale with storm sewer:** These planted hybrid open channels (hybrid channels) are located on streets outside the pilot area including, Broadview, Carlaw, Caroline, Leslie, Unwin, Commissioners Street east of Carlaw, Street 6, Street 7 and Basin Street, east of Broadview. They consist of at-grade planted channels and sub-surface perforated pipes to be connected to the storm sewers in the rights-of-way (ROWs). The main function of these channels are to convey runoff from the road ROWs as part of the overland drainage system. Details of the function of these channels as part of the major and minor drainage systems are found in **Section 5.2**.
 - City of Toronto standards require that a 1.5 metre trench of “clean” fill with a hard cap be installed for new streets. It is assumed that this 1.5m depth is sufficient to install the hybrid channels and perforated pipe system. In theory, this hard cap will prevent contaminated groundwater from entering into the bioswale, as well as minimize the impact of the high lake level. **Section 5.2.2** includes further details on how this 1.5 m clean fill trench can be achieved. Additional detailed geotechnical work and hydraulic modelling is needed at detailed design, in particular, for areas in the Port Lands where there can be only limited grade changes due to development to remain.

- Planted Hybrid Open Channel – sand filter with storm sewer:** This type of hybrid channel is located along Cherry Street in the south of Ship Channel area. It is comprised of a sub-surface sand filter with a perforated pipe connected to the storm sewer. The at-grade plantings of the open channel form part of a linear park feature adjacent to the road ROW. This hybrid channel also conveys flows from the road ROW but the sand filter is expected to provide additional water quality treatment through filtration.

The hybrid channels will be designed to contain the minor system flows which will be discharged to the storm sewer system via the sub-surface perforated pipe system. Overflows from the hybrid channels will occur under major storm events only and will be managed within the roadway. The perforated pipe system is expected to attenuate stormwater runoff volume into the storm sewers, and also reduce the contaminant loading to the receiving waters. A conceptual schematic of the hybrid channel system is shown in **Figure 8-3**. The perforated pipe-storm sewer interface has not been modelled since it requires a more detailed level of design than is being undertaken at this stage. The interaction between the hybrid channels and storm-sewer system that was used in the SWM model is discussed in **Section 6.3**.

Figure 8-3: Conceptual perforated pipe-storm sewer interface



Source: TRCA/CVC LID SWM Guide Appendix A-1

The pilot area (i.e., the Commissioners Street pilot area) relies entirely on open channels, bioswales or hard channels for stormwater conveyance instead of a storm sewer system. Runoff from at-grade impervious surfaces from development sites north and south of Commissioners St. are being directed to open channels which differs from City's traditional application of WWFMG. A more detailed description of the pilot area is located in **Section 5.2.1.1**.

Overall, the open channels are expected to provide enhanced water quality benefits and some natural treatment through bio-retention, filtration and evapotranspiration however due to the limitations associated with the presence of contaminated soils and groundwater, infiltration of runoff from the channels is not feasible. Driveway crossings (culverts) that intersect with the open channels will be minimized wherever possible, however it is expected that the channels

located within the ROW median would not be affected. Sizing of driveway culverts should be completed as part of the detailed design stage.

The LID features within the ROWs will become components of the City infrastructure after they are constructed. The application of the proposed LID features on a large scale is new to the City, based on which there are currently no established practices in place to maintain these features. Key issues that will need to be addressed in later stages include, but are not limited to: how daily and general maintenance will be performed including garbage removal, overgrowth or horticultural maintenance and, if necessary, sediment removal, and culvert maintenance at driveway crossings; how City operations (truck and/or equipment) will occur within the different ROWs; and who will be responsible for channel diversion and restoration plans if there is a need for future construction in these areas.

In keeping with the idea of viewing “Water as a Resource”, it is expected that other LID measures will be integrated into building and site design, including green roofs, landscaping at a lot level, the creation of parks, naturalized open spaces, and street design throughout the Port Lands and SoE area.

5.2.1 Proposed Stormwater Infrastructure

The following sections provide a detailed description of the stormwater infrastructure proposed within the study area based on areas to be serviced by existing infrastructure and areas to be serviced by new infrastructure. It provides details on how the different areas meet the WWFMG criteria outlined in **Section 4.2.1**, with the exception of the disinfection criteria which are discussed in **Section 5.3**. The Commissioners Street pilot area is discussed separately due to its unique approach to stormwater management.

5.2.1.1 Commissioners Street Pilot Area

The Commissioners Street Pilot Area, shown on **Figure 8-1**, is an area unique to the preferred concept that uses LID measures only to manage stormwater runoff. The area will be serviced by planted open channels and paved open channels on the north-south streets, which will direct runoff from at-grade impervious area from adjacent development properties to the main planted open channel on Commissioners Street. It is envisioned that the Pilot Area will meet the WWFMG criteria as follows:

- **Water Quantity:** Stormwater runoff into the open channels will be uncontrolled from public roads and public spaces, and at-grade impervious areas from properties to be redeveloped. The runoff volume from the properties to be redeveloped will not include the required water balance retention volume described below.
 - **Minor system** runoff from this area (**Area C on Figure 9**) will be conveyed by planted and paved open channels to be captured for treatment at the Turning Basin.

- **Major system** runoff from this area (included as part of **Area B on Figure 10**) will be conveyed by roadways and planted and paved open channels towards the Turning Basin.
- **Water Balance:** The minimum on-site volume that proponents are required to retain would be the volume arising from the initial 5mm of a design rainfall event

Water Quality – TSS Removal: A treatment train approach will be required to achieve 80 % TSS removal and will incorporate lot level controls, as well as conveyance and end-of-pipe controls. An end-of-pipe OGS and BFF are proposed to supplement the lot-level and conveyance measures for water quality treatment however detailed design of these measures will be a future design consideration. See **Section 5.3.1.3** for further details on the preferred water quality treatment facility.

The pilot area will be monitored to determine the performance of the LID measures and the success of the approach. Should it be found that the LIDs are not proving to be effective, the open channels may be supplemented with sub-surface storm sewers and perforated pipes, similar to the proposed hybrid system. This approach would preserve the proposed overland drainage capacity and allow overland flow from properties to be maintained.

The Pinewood Studio buildings located within the pilot area are identified as existing development to remain. It has been assumed that these properties will continue to be served by existing storm sewers and that further redevelopment will be aligned with the 2007 and 2008 FILMPORT Functional Servicing Reports completed by Dillon. The first phase of Pinewood pre-dated the City's WWFMG; however, it was one of the first developments to propose the use of bioswales as a best management practice (BMP) to mitigate the effects of development. Expansion within the site or alterations of the existing treatments will be required to meet the WWFMG.

5.2.1.2 Areas to remain being serviced by existing stormwater infrastructure

There are areas/sites that are anticipated to remain and that will continue to be serviced by existing stormwater infrastructure. These areas are shown on **Figure 9** and include the area in the north-west corner of the Unilever Precinct, north of the CN railway tracks (**Area A**), the South of Eastern (SoE) area (**Area E**), and the area east of Woodfield Road, north of Lake Shore in the SoE area (**Area F**).

Most of the properties in these areas are expected to remain under existing conditions; however there are a few properties that are identified for redevelopment. Existing developments, as well as properties being redeveloped within these areas would be connected to the existing minor system. Properties to redevelop within these areas will be expected to meet the WWFMG criteria as and when they redevelop. Outlined below are details on how these areas will be serviced, their outlet locations, and how they meet the WWFMG criteria:

- **Water Quantity:** In general, properties in these areas will discharge to the existing storm sewer system (minor system) and major overland system without any restriction in flows. This is a conservative assumption as these properties may in actuality have site storage and discharge controls; however due to the limited information available, the level and type of control (if any) are unknown at this stage.
 - **Minor System:**
 - **Area A (Figure 9)** will be ultimately be serviced by the existing sewer on Eastern Avenue with an existing outlet to Don River. A proposed/new storm sewer will connect into the existing sewer on Eastern to direct flows away from the Broadview underpass;
 - **Area E (Figure 9)** will remain being serviced by the existing storm sewer system with its existing outlets at the Turning Basin (at Caroline and at Carlaw); and
 - **Area F (Figure 9)** will be serviced by the existing storm sewer system with existing outlet to Ashbridge’s Bay.
 - **Major System:**
 - **Area A (Figure 10):** Overland flows from this area would be conveyed by gravity through the existing/proposed minor system north of the CN Rail line and will outlet to the Don River;
 - **Areas C2 Figure 10):** Overland flows will discharge directly to the Ship Channel from these properties;
 - **Area D (Figure 10):** Overland flows will be conveyed by roadways and hybrid channels along Caroline Avenue, Carlaw Avenue, Leslie Street and Commissioners Street (east of Carlaw) and will outlet to Turning Basin; and
 - **Area E (Figure 10):** Overland flows in this area will be conveyed by roadways to Ashbridge’s Bay.
- **Water Balance:** There are no provisions for additional on-site stormwater retention for areas to remain under existing conditions. Existing on-site measures, if any, are assumed to remain in place.
- **Water Quality:** No TSS removal is expected from properties that are to remain under existing conditions in these areas. This is an assumption made due to lack of information on the individual stormwater treatment measures on site, which are assumed to be minimal. Runoff from these areas is expected to be treated by the proposed end-of-pipe OGS at the Turning Basin however, it is expected that any existing on-site treatment measures will remain.

5.2.1.3 Areas to be serviced by new stormwater infrastructure

These areas are shown on **Figure 9** and include the Unilever Precinct, Film Studio District and the East Port Area (**Areas B and D**), and majority of the South of the Ship Channel area (**Area G**). Most of the properties in the Unilever Precinct, Film Studio District and the South of Ship Channel areas are identified to be redeveloped, whereas most of the properties in the East Port area are identified to remain. The approach to meeting the WWFMG for these properties to redevelop is outlined below:

- **Water Quantity:** Major and minor storm runoff from properties that are to be redeveloped will be controlled to the allowable release rate and directed to proposed storm sewer system (minus the required water balance retention volume described below). Major and minor storm runoff from the road right-of-way (ROW) will be managed by the roadway and hybrid channels.
 - **Minor System:**
 - **Areas B and D (Figure 9)** will be serviced by a new storm sewer system with an upsized outlet at Carlaw and Street 7 that discharges to the Turning Basin; and
 - **Area G (Figure 9)** will be serviced by a new storm sewer system with new outlet at Don Greenway Park (DGP) that discharges to the Ship Channel.
 - **Major System:**
 - **Areas B (Figure 10):** Overland flows from this area will be conveyed to Turning Basin and Ship Channel by roadways and hybrid channels (bioswales with storm sewers) along Broadview Avenue, Street 6 and Street 7;
 - **Area C1 (Figure 10):** Overland flows will discharge directly to the Ship Channel from properties in this area;
 - **Area F (Figure 10):** Overland flows from this area will be conveyed to the DGP and outlet Ship Channel by roadways and hybrid channels on Unwin Av. and Cherry Street; and
 - **Area G (Figure 10):** Overland flows from this area will be conveyed by the roadway and hybrid channel on Unwin and will discharge to the Port Lands Energy Center (PEC) circulation channel.
- **Water Balance:** The minimum on-site volume that proponents are required to retain would be the volume arising from the initial 5mm of a design rainfall

- **Water Quality:** 80% TSS removal is to be achieved on-site before discharge to storm sewers. 80% TSS removal is also to be achieved for proposed ROWs and proposed laneways within development blocks.

Further details on the concept assumptions are detailed in **Table 1 of Appendix B**.

5.2.2 Grading and Overland Drainage System

A grading plan was completed for the study area to support the preferred alternative. The existing topography, location of the DMNP EA valley wall features, and fixed roadway elevations were all incorporated into the development of the grading plan. A comprehensive grading solution was also specifically completed for the Unilever Precinct due to need to mitigate flood risk associated with the Broadview extension. This grading plan has been integrated into the preliminary grading plan for the entire Study Area and reflects the minimum grades required for flood protection and mitigation purposes.

Taking into consideration the extremely flat nature of the Port Lands and the relatively high lake levels, the grading plan aimed to maintain existing drainage patterns to the extent possible, and to design overland flow routes that reduce or eliminate localized ponding and enable positive (gravity-based) drainage towards the major system drainage outlets. Based on discussions with the City of Toronto (Engineering and Construction Services), a minimum slope of 0.5% is to be maintained in roadways for local drainage. Due to the limitations with achieving the required slope between roadway intersections, it was agreed that under future detailed design consideration, the criteria to achieve a minimum 0.5% slope can be implemented by utilizing a longitudinal “saw-tooth” grading pattern for local road drainage to catch basin inlets. Overland grades are identified on the proposed grading plan (**Sheet 01 in Appendix C**). The proposed grading plan is based on the proposed street network, and was used as a basis to determine the open channel inverts, in coordination with the modelling results. Based on the lake level criteria for 100-yr event (75.2m), overland flow depths within the roadway network are within the allowable 0.3 m depth of flooding, with the exception of the existing low points within the South of Eastern area, as described in **Sections 5.2.2.1**. **Section 6.5.2** provides further detail on the resulting ponding depth within the roadway as determined by the modelling.

As mentioned in **Section 5.2.1**, a 1.5 m trench of clean fill is required by the City for new streets. Typically, this trench is accomplished by raising the grades, however major constraints in the area such as Toronto Hydro building at Carlaw and Commissioners and other heritage resources limit the ability to do this. The 1.5 m depth could alternatively be achieved by excavating the existing soil; however, there may be geotechnical considerations associated with excavating the trench. It is recommended that further detailed geotechnical studies are completed (e.g., on soil composition, water table etc.) during detailed design. The grading plan that has been completed is preliminary and predicated on minimizing grade changes in the

vicinity of the Toronto Hydro building, the Strauss Trunion Bascule Bridge and the Base Lands ESA in the Leslie/Unwin area. The grading plan was developed for minimum flood protection purposes and does not specifically address soils remediation, or the needs for underground infrastructure or plantings in green spaces. Additional fill may be required to address these aspects, which would be determined and established in more detailed design.

5.2.2.1 North of the Ship Channel

Grading in the area north of the Ship Channel was completed in the areas to redevelop with the aim of directing overland flow to the Turning Basin and Ship Channel. Overland flow in the north of Ship Channel area will be predominantly from the road ROW and public spaces since the properties to be redeveloped will control major system flows to the WWFMG criteria. Existing properties to remain are expected to have an overland flow contribution, with the exception of the Pinewood Studios which are understood to meet the City's WWFMG. There will be overland flow spill locations to the Ship Channel at Saulter Street, Bouchette Street, Logan Avenue and Carlaw Avenue for flows south of the pilot area (**Area C1 on Figure 10**). The overland flow spill locations at the Turning Basin will be located at Caroline Avenue and Carlaw Avenue and will direct overland flows from the areas east and west (**Areas B and D on Figure 10**) to the Turning Basin. Grading for the Unilever Precinct was completed as a separate undertaking (detailed below), whereas grading for the Film Studio District, including the pilot area was undertaken as part of the grading for the entire study area. There are minor adjustments to grades in the East Port and South of Eastern areas as most of the area is to remain as existing. Specific items that required further consideration are outlined below.

Existing Low Points

There are two existing low points on Booth and Logan, shown in the proposed grading plan (**Sheet 01 in Appendix C**), in the South of Eastern area that experience overland ponding depths in excess of the City requirement for maximum depth of ponding. For the purposes of the TSMP, a solution to resolve this ponding is not included as this is an existing condition in an area that is not proposed to redevelop. In addition, there are limitations to upgrading the existing sewers in this area since they are located under the existing buildings that are to remain. **Section 6.5.2** highlights potential options that could be considered.

Unilever Precinct Grading

A detailed grading plan was developed for the Unilever Precinct and the underpass at Eastern Avenue and the CN Rail. The intent was to develop a conceptual grading plan to be used by the TRCA to complete modelling for regional stormwater management as well as achieving a workable grading plan for the development of the First Gulf Area. The plan was developed to enable the Broadview extension and in recognition of the unique issues faced within the Unilever Precinct with the creation of the VWFs and the flooding at the CN rail embankment. Re-grading east of the Eastern underpass was required for flood protection purposes. The

grading plan was based on a solution that did not require a pump station at the underpass and prevented a hydraulic connection north and south of the rail embankment to be consistent with the requirements of the TRCA flood protection analysis. Another consideration in developing the grading plan was the grades surrounding existing heritage buildings on Eastern Avenue. These were reviewed and it was determined that no additional re-grading was required in the area. Notes on the grading plan highlight these and other considerations incorporated into the final plan.

The Unilever Precinct grading plan was incorporated into the overall study area grading to ensure continuity of drainage. While consideration was initially given to introducing a low point in the Unilever Precinct north of Lakeshore Boulevard, it was agreed that this should be revised to limit the impact this would have on the associated minor storm sewer system upgrades that would be required to provide drainage for the major event. The resulting grading plan is now based on the grading of Broadview to direct overland flows southerly across Lake Shore Boulevard towards the Turning Basin. Existing grades along Lake Shore Boulevard and the railway tracks immediately to the north are generally expected to be maintained with the exception of the re-grading associated with the future changes to the Gardiner Expressway ramp that is currently located west of Booth Avenue. The future re-grading associated with the Gardiner Expressway revisions should take into consideration the proposed overland flow crossing Lake Shore along Broadview so that stormwater runoff does not pond within the roadway and exceed the maximum allowable ponding depth and spread outlined in the City guidelines. It is recommended that the re-grading of Lake Shore Boulevard be considered as part of the Gardiner Expressway and Lake Shore Boulevard Reconfiguration Environmental Assessment (Gardiner EA) and that further detailed analyses be completed to support the concept.

Street 7 in Film Studio District, Broadview Bridge

The grading for Street 7, east and west of Broadview will be graded away from Broadview with overland flows to be redirected north for discharge at the Turning Basin or to be directed south to the Ship Channel. The proposed road grading of the Broadview crossing of the Ship Channel considered the need to meet the existing road grades at Basin Street, as well as to limit the grade difference at Street 7. Achieving the City's requirement for a 3.5 m vertical clearance for the continuous water's edge promenade undercrossing the proposed Broadview Bridge was also a key consideration in establishing the proposed road profile of Broadview Avenue (a promenade surface elevation of 76.3m and a structure depth of 1.5m was assumed). It is expected that the Broadview Bridge would include a moveable span to allow for the passage of ships through the Ship Channel. Further details can be found in the notes section of the Grading Plan (**Appendix C**).

5.2.2.2 South of the Ship Channel

The proposed grading in the South of Ship Channel area has been based on introducing positive overland flow gradients to available outlet locations while minimizing the impact on existing grades, particularly for the Environmentally Significant Area (ESA) south of Unwin Avenue. As a result, it is proposed to direct overland flows to the following outlets:

- the Ship Channel via the Don Greenway Park (DGP); and
- the Port Lands Energy Centre (PEC) circulation channel.

Major system flows will ultimately be from the ROW only as properties redevelop and control flows to the City's water quantity and quality criteria for discharge to municipal sewers.

5.3

Concept Description for Preferred Stormwater Treatment Alternative

The preferred Stormwater Treatment Alternative aims to address the City's WWFMG disinfection criteria. The WWFMG *E. Coli* criteria apply to the Port Lands and South of Eastern area since the area drains to Lake Ontario or the Ship Channel. Disinfection is required only for the "first flush" of runoff because it typically contains the most sediment and contaminated material and tends to have the highest fecal coliform count. The "first flush" has been defined as the runoff from a 1-year storm event for this study.

Based on discussions with the City, the north-west corner of the Unilever Precinct (i.e., the area north of the CN Rail line) that drains to the Don River via the existing storm sewer will not be required to meet the disinfection criteria. This is due to the complexity involved in directing water from the area to a treatment facility and would involve creating a hydraulic connection through the VWF, which is not permitted by the TRCA. The Don River is also not considered a swimming or bathing area therefore can be exempt from the criteria. All other criteria are to be met for this area (**Area A on Figure 11**).

A range of disinfection alternatives were assessed separately for the areas north and south of the Ship Channel. This section discusses the preferred stormwater treatment alternative for north and south of the Ship Channel. Details of the disinfection alternatives that were assessed can be found in the TSMP report. **Table 2 in Appendix B** outlines the concept assumptions that were used to develop the preferred SWM treatment systems north and south of the Ship Channel.

5.3.1.1 North of the Ship Channel

Stormwater treatment north of the Ship Channel is broken down under the sub-areas below:

South of Eastern Area

- **Areas A and D on Figure 11:** 1-year flows from these areas are directed to existing infrastructure and discharge with no treatment under existing conditions. Once the drop shaft at Lake Shore and Carlaw (Carlaw drop shaft), and the satellite treatment facility at the Ashbridge's Bay Treatment Plant (ABTP) are constructed, runoff from Area D will be directed to the Inner Harbour Tunnel (IHT) to be treated in the long-term.
- **Area C on Figure 11:** 1-year flows from this area are to be directed to IHT via the proposed 1950/2550 mm storm sewers and Carlaw drop shaft (which is to be assessed by City's IHT team). Flows above the 1-year storm event for this area will be discharged to the Turning Basin.

Unilever Precinct, East Port Area and Film Studio District (including the Pilot Area)

- **Area B on Figure 11:** 1-year flows from this area are to be directed in the short term to the proposed interim SWQTF facility at the Turning Basin, with the longer-term solution being to direct these flows to the IHT at Carlaw via the proposed 1950/2550 mm storm sewers for treatment at the ABTP satellite facility.
 - For the shorter-term SWQTF option at the Turning Basin, minor system flows will be directed to a hydraulic diversion structure which will direct the 1-year flows to the proposed end-of-pipe OGS and pump station, with gravity overflow of the balance of the flows to a new outlet to the Turning Basin. The 1-year flows will then be pumped to the SWQTF for treatment and discharged via a new outlet to the Turning Basin located at Street 7 and Carlaw Avenue. More details on the stormwater quality treatment infrastructure are provided in **Section 5.3.1.3**.
 - The longer term option to direct flows from this area to the IHT is not assessed as part of this study. It is expected that the City's IHT team will be responsible for ensuring that there is sufficient capacity in the proposed 1950/2550 mm sewers to include the 1-year flows from this area that would ultimately be directed to the IHT.

5.3.1.2 South of the Ship Channel

- **Area E on Figure 11:** 1-year flows from this area are to be directed to the proposed SWQTF at Don Greenway Park. The minor system flow will be directed to a hydraulic diversion structure in the Don Greenway Park which will direct the 1-year flows to the proposed end-of-pipe OGS and pump station, with gravity overflow of the balance of the flows to a new outlet at the Ship Channel. The 1-year flows will then be pumped to the SWQTF at the Don Greenway Park for treatment and discharged via a new outlet to the Ship Channel. More details on the stormwater quality treatment infrastructure are provided in **Section 5.3.1.3**.

5.3.1.3 Stormwater Quality Treatment Infrastructure

Minor System and Hydraulic Diversion Structure

Minor system flows both north and south of the Ship Channel are split upstream of the SWQTF through a hydraulic diversion structure. Minor system flows from the pilot area will be captured from an inlet grate in the Commissioners Street open channel and diverted into the storm sewer system at the Turning Basin, conceptually shown in **Figure 8-1**. Minor system flows from the remainder of the north of Ship Channel area (i.e., East Port, Unilever Precinct and Film Studio District) and south of Ship Channel area will be directed to the hydraulic diversion structure directly through the storm sewer system.

The hydraulic diversion structure will consist of a maintenance hole with an inlet pipe from the minor system and two outlet pipes. 1-year flows will be directed to the end-of-pipe OGS at the same elevation as the inlet pipe; and flows greater than the 1-year flows will be directed to the appropriate outlets (upsized outlet at the Turning Basin and new outlet at the Ship Channel) through an overflow pipe. **Figure 12** shows a conceptual representation of this hydraulic diversion structure device.

Oil-Grit Separators (OGS)

The proposed end-of-pipe OGSs were sized to enable high levels of sediment removal, particularly for areas and properties expected to remain undeveloped that would not have on-site water quality treatment measures in place. It is expected that the proposed open channels will provide some level of natural sediment removal for the roads on which they exist however, the TSS removal rate achieved is not expected to meet the 80% TSS removal rate required by the City criteria. The WWFMG allows for up to 50% TSS removal by an OGS. The balance is expected to be achieved through a treatment train approach involving lot-level measures for properties being redeveloped, as well as the proposed open channel features within the ROWs. The preliminary sizing of the OGS features is based on a proration of the total incoming 1-year flows.

Based on the OGS sizing in the draft *West Don Lands Facility 2011 Pre-Design Report (RVA 2011)* and the *2014 Preliminary Design Report for the Cherry St. Stormwater Facility (RVA 2014)*, a ratio of 40% of the incoming flow was assumed to be treated by the proposed OGSs.

In the north of the Ship Channel area, this 40% ratio has been assumed to represent the proportional area to be treated north of the Ship Channel including the ROWs in the Unilever Precinct and Film Studio District, properties to remain undeveloped and the ROWs in the East Port area. The corresponding flow rate for TSS removal served by this OGS is 3.1 m³/s. A single end-of pipe OGS is shown conceptually in **Figure 8-1** however there may be opportunities to consider smaller, off-line OGSs in the different areas north of the Ship Channel. It is recommended that this option be reviewed during later design stages.

In the south of the Ship Channel area, the OGS would address flows predominantly from the ROW however; the 40% factor is still used to account for interim development conditions during which not all properties in the area are redeveloped. This OGS is estimated address TSS removal for a flow rate of 0.9 m³/s.

Flows in excess of the OGS TSS removal rates north and south of the Ship Channel would bypass the OGS and be directed to the pump stations.

Pump Stations

The pump stations north and south of the Ship Channels have been sized to ultimately pump the total incoming 1-year flows.

North of the Ship Channel, the pump station would be designed to accommodate pumps for the ultimate 7.5 m³/s capacity, but in the short term, would only be outfitted with pumps that would deliver 50% of that flow to the SWQTF (i.e., 3.75 m³/s). The current pump station design assumes no attenuation storage; however this additional storage could be incorporated to further reduce the size of the SWQTF and short term PS capacity, but this would be considered during detailed design. In the long-term, north of the Ship Channel, the pump station would be upgraded with additional pumps that would pump 7.5 m³/s to the future 1950/2550 sewer being proposed by the City's IHT team. It is expected that the City's IHT team will confirm whether this future 1950/2550 sewer should be further upgraded to accept 7.5 m³/s from the Port Lands area north of the Ship Channel.

In terms of the south of Ship Channel area, it is assumed that the pump station in the Don Greenway Park would be considered a long term measure with a pump capacity of 2.2 m³/s.

The proposed pump stations would likely be located within the Turning Basin park and the Don Greenway Park, as shown schematically in **Figure 13-A, 13-B and Figure 14**. More details on the pumping station are found in **Sections 6.4 and 7.1**.

SWQTF

In the south of Ship Channel area, the proposed SWQTF is sized to treat the 1-year flow from the area (i.e. 2.2 m³/s). It is assumed that the SWQTF in the Don Greenway Park would be considered a long- term strategy, as there would not appear to be other opportunities to direct these lands to the IHT. The approximate footprint of this facility would be 1795 m², which was estimated based on directly prorating the pump rate and corresponding footprint for the Cherry St. facility in the in the West Don Lands.

The proposed SWQTF at the Turning Basin is expected to serve as a temporary measure until the IHT is built. Based on a phased development approach discussed in **Section 7.1**, the interim

footprint of the facility was estimated to be **3060 m²** to treat up to 50% of ultimate 1-yr peak flow from the area (i.e., 3.75 m³/s). The footprint of the interim facility is also based on prorating the Cherry St. facility in the West Don Lands, which would be approximately five times the size of the WDL facility. In the long-term, the SWQTF at the Turning Basin can be abandoned, and 100% of the ultimate 1-year peak flow redirected to the IHT at the Carlaw drop shaft, as outlined above.

Specifics regarding the type of treatment facility have not been determined at this stage; however, it is assumed that the proposed facility will provide water quality treatment to achieve City effluent criteria.

Figures 13A, 13B and Figure 14 show conceptual drawings of the SWQTFs and associated infrastructure for north and south of the Ship Channel. It should be noted that these figures are not to scale. Prorating calculations can be found in **Table 3 in Appendix B**.

6.0 Stormwater Modelling and Analysis

6.1 Model Configuration

This section presents the modelling results for the Water as a Resource alternative that will serve the stormwater management requirements of the Port Lands TSMP.

As a basis for the stormwater (STM) network modelling, **Figure 8-1** (concept drawing) shows the main elements of the system that were used to define the dual-drainage model in Infoworks CS v13.5. Each of the different components and characteristics of the hydraulic model are described in the following sub-sections.

The objective of developing the hydraulic model was to reflect the concept outlined in the previous sections and validate its effectiveness for the design storm events.

The stormwater modeling includes the proposed redevelopment for a significant portion of the study area and its required compliance with the WWFMG. For this reason, parcels in the model were differentiated between redeveloped lots and lots to remain as existing. Depending on either condition, the generated runoff was routed in a different manner through the system.

6.1.1 Hydrology

Subcatchments in the study area have been discretized to a lot level resolution and **Appendix D** shows the location for each of the subcatchments in the model. Both the properties and the right-of-way were included and appropriately defined in the model. Considering the highly urbanized conditions in the area, the SWMM routing method was adopted. For the infiltration model, a fixed runoff coefficient has been used for impervious surfaces, while the Horton method was applied to pervious surfaces using the following standard parameters:

- Initial infiltration= 200 mm/h
- Limiting infiltration =13 mm/h
- Exponential Decay = 2.0 /h

As mandated by the WWFMG, the minimum 5 mm of rainfall retention for water balance was utilized in modelling for properties to be redeveloped. This 5mm retention was represented through the initial abstraction parameter in the model and applied to properties to be redeveloped and the parks and open spaces system, but excluded EA streets and conceptual local streets. Given the initial abstraction assumed in the model (usually achieved by green areas and LID features), details of pervious and impervious areas on development properties

were not considered at this stage since they will be detailed as development proceeds and will need to be supported by stormwater management plans at the site plan approval stage.

The 2-year pre-development peak flow rate based on a runoff coefficient of 0.5 (i.e., percent imperviousness of 43%) was used to determine the allowable release rate and controlled outflow from the properties to be redeveloped. Runoff from the redevelopment properties is to be stored and released at the allowable release rate, and runoff in excess of the proposed controls will be stored on-site.

No flow restrictions were modelled for properties to remain as existing, and peak flow calculations for these properties were based on existing conditions percent imperviousness.

Parks and open spaces were accounted for in the model as per **Figure 7** and the corresponding CAD plans provided by the City. **Table 1 in Appendix E** contains details on the parks and open spaces considered as part of the model.

Due to the limited number of properties identified for redevelopment in the South of Eastern area*, the model in this area is based on existing conditions without any runoff controls. This assumption does not have a significant impact on storm runoff rates, and will provide a degree of conservativeness that may be beneficial at this level of detail. **Figure 15** presents the modelled study area with the lots considered to be redeveloped.

****Clarification:** It should be noted that the South of Eastern area technically includes the Unilever Precinct (i.e. areas C & D on Figure 11), however the Unilever Precinct is a major development site whereas the remaining area (east of Bouchette) is predominantly to remain as existing.*

6.1.2 Design Storms

The design storms used in the model correspond to a Chicago storm profile, as defined by the City of Toronto standards. For the Port Lands Area, a 4-hour storm duration was established, which corresponds with the Area 32 Environmental Assessment study.

The 2-year storm event was used to size the proposed minor system which is intended to accommodate flows based on a pre-development peak flow rate and a runoff coefficient of 0.5, as per the City's WWFMG. The 1-year, 4-hour Chicago storm event was used to define peak flows for treatment.

Overland flows were modelled based on the 100-year storm event, and evaluated based on meeting the required overland flow depth criteria based on road classification.

Figure 16 shows the hyetographs of the design storms used as input for the model simulations.

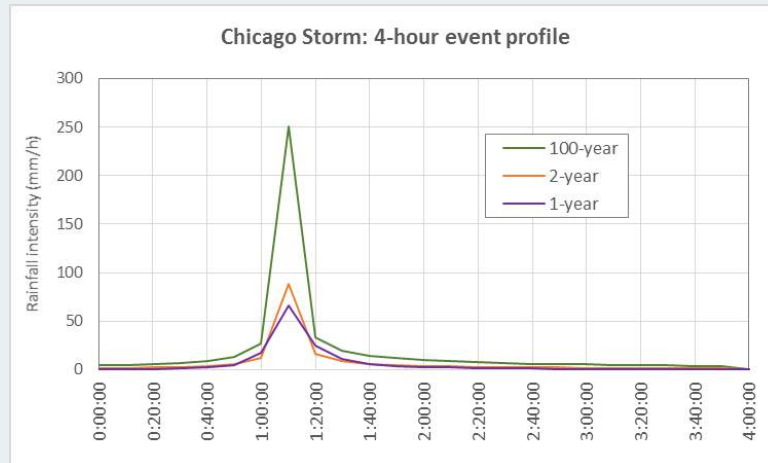


Figure 16: 4-hour Chicago event profile for 1-year, 2-year and 100-year storms

6.1.3 Boundary Conditions – Lake Levels

The lake level boundary conditions considered for the hydraulic model simulations were:

- Up to 2-yr event: Lake Level (LL)= 75.7m
- Greater than the 2-year event up to the 100-yr event: Lake Level (LL) = 75.2m

6.1.4 External Drainage Areas and Existing Drainage System

The hydraulic model for the Port Lands TSMP was set up within the larger Area 32 model, which implies that external flows were considered as part of the model. It is therefore worth highlighting the following points for the development of the proposed system:

- Minor system flow contributions from external areas and their impact on the performance of the existing storm sewer system in areas to remain (i.e., South of Eastern and East Port) were not included in this scope of work.
- Major system flow contributions from external areas, based on the City's existing Area 32 model, were included as contributions to the proposed overland drainage system. For storm sewer sizing purposes, the major system flows from the areas to remain were accounted for in the proposed separate storm sewer system and hybrid channels in the East Port area.

6.2 Minor System

The storm sewer system proposed to serve the properties to be redeveloped is expected to be independent of the existing system. This means that there will be no connections to the existing trunk sewers on Carlaw Avenue and on Leslie or Commissioners Streets; therefore avoiding impact from the minor flows originating from the external areas to the proposed system. The diversion structures and conveyance elements that divert the 1-year flow from

these existing culverts to the IHT for treatment were not considered part of the proposed system and therefore they were not represented in the model as they do not affect the hydraulic performance of the proposed system.

The proposed minor system was sized to accommodate the 2-year storm based on a pre-development peak flow rate and a runoff coefficient of 0.5 for the properties to be redeveloped, as per the City's WWWFMG. Uncontrolled runoff from right-of-way and existing properties to remain was also considered in sizing of the sewers.

Regarding the existing properties to remain, the following considerations were taken:

- Existing properties to remain in the areas south of Lake Shore were assumed to be connected to the proposed system (East Port area).
- Properties and areas to remain as existing were assumed not to have any site storage or discharge controls for modelling purposes (with the exception of Pinewood Studios).
- No improvements in the existing system were considered for the existing area north of Lake Shore Avenue and east of Carlaw Avenue (South of Eastern area).

Figure 8-1 shows the proposed minor system and flow direction considered in setting up the model.

For the Unilever Precinct and the Film Studio District, the main sub-trunk sewer runs along Broadview Avenue and Basin Street (i.e., the existing pipe servicing Pinewood Studios on Basin Street is to be upgraded). For the East Port area, the main trunk sewers were proposed along Leslie Street and Commissioners Street, with a branch along Caroline Avenue. All the main storm sewers drain towards the Turning Basin, at which point, the 1-year flow hydraulic diversion structure would be introduced, directing flows greater than the 1-year flow to the proposed gravity outlet at the southern end of Carlaw Avenue. The 1-year flow is proposed to be conveyed to a wet well from where it would be pumped for treatment.

For the area south of the Ship Channel, the main storm sewer is along Unwin Avenue, draining towards the Don Greenway Park where, as described in Section 5.3, the 1-year flows are to be diverted for treatment before the system is connected to a gravity outfall to the Ship Channel.

For properties to redevelop, orifice plates were used as outlet control elements for on-site storage, with upper discharge limits applied based on the 2-year pre-development conditions.

Given the outlet conditions and the lake level constraints (i.e. small difference in elevation between the ground level and lake level), the proposed minor system will not be required to achieve the Basement Flooding level of service of 1.80m of freeboard for the 100yr event.

6.3

Major System

The second component of the dual drainage system is the major system, comprised of both roads and open channel features. The types of channels are discussed in **Section 5.2**; and the road network and open channels were defined according to the grading plan shown in **Appendix C**. The conceptual street and right-of-ways cross-sections developed for the Master Plan were used as input to the model to define the conveyance capacity of the overland network. The pervious and impervious areas assumed for the different street ROWs are shown in **Table 2 in Appendix E**.

Overland flow routes include spill locations to the Ship Channel at Saulter Street, Bouchette Street, Logan Avenue, and Carlaw Avenue, as generally shown in **Figure 10**. The major system includes an overflow spill location to the Turning Basin both at Carlaw and Caroline Avenue assuming a curb level +0.20m from road elevation. City standards indicate a curb height of 0.15 m, however based on a site visit, 0.20 m seems to be a more conservative value for flow spilling into the Turning Basin. The overland route can actually be engineered and designed as part of detailed design to make sure excessive overland flow is safely discharged to the Turning Basin.

The following are the Manning's roughness values applied to the conveyance elements in the model:

- Planted open channels: 0.025;
- Concrete pipes: 0.013; and
- Roads: 0.013.

The dimensions of the proposed channels and the overall system layout are shown in **Appendix F-3**.

For the pilot area, the channel invert at Commissioners Street and Carlaw was set to a minimum channel bed elevation of 75.55m which allows free outflow to the lake during extreme events. Two (2) new discharge locations from the Commissioners Street channel were proposed for flows greater than the 2-year storm. The proposed outlets from the open channel are to be installed underneath the existing utilities at the Turning Basin and will have a backflow valve to prevent inflow into the channel. Two outlets were needed due to the narrowed width of the channel in this area.

Only the storm sewer element for the hybrid channels on Street 6, Street 7 and Basin Street were modelled. However, the LID measures continue to form part of the overall concept. The minor system flows were directed to the storm sewers and overland flow was managed within the roadway based on allowable depths/spread as defined in the City's WWFMG.

Hybrid channels on major streets (i.e., Broadview Avenue, Carlaw Avenue, Caroline Avenue, Leslie Street, Unwin Avenue, Cherry Street and Commissioners Street east of Carlaw Avenue) are modelled as follows:

- Both storm sewer and open channel elements were modelled;
- Overland flow from ROW (and not redevelopment properties) was directed to the channel before discharging 2-yr flow to the minor storm system; and
- Open channels and roadways conveyed major overland flows based on allowable depths/spread defined in the WWFMG.

To simulate the interaction between the hybrid channels and the storm sewers, interconnecting weirs were used between the two elements. For the interconnecting weirs and overflows, a default value of 0.85 was used as discharge coefficient. This was deemed appropriate for subcritical conditions along the length of the weir. The weir lengths were selected to allow free interaction between the storm sewers and channels.

Standard catchbasin (CB) inlet capacity (i.e., 47.6 L/s) considering no grate blockage was used both in the hybrid channels, as well as the roads without channels. The number of catchbasins within the ROW was rounded down, while the storm sewers were designed for the 2-year storm. The final number of CBs will be determined during future preliminary and detailed design phases

Figure 17 shows a schematic of the flow runoff routing and the interaction between the minor and major systems, specifically for the areas with hybrid channels.

6.4 Storm Pumping Stations

The pumping station was simulated in the model as a simple one pump with one point head-discharge curve.

The proposed pump station wet well north and south of the Ship Channel was sized for 1-year flow conveyance based on the 1-year flow volume. As described previously, a hydraulic diversion structure will be placed upstream of the pump station to pump only the 1-year flows to the wet well. Flows above the 1-year event will overflow from the diversion structure by gravity to the Turning Basin outlet or Ship Channel outlet through the Don Greenway Park.

6.5 Modeling Results

The figures included in the following appendices show the hydraulic performance of the system during the 2-year and 100-year storm events. The sewers were sized according to the 2-year flows. However, during larger storm events the inlet capacity of the system restricts the

incoming flow to the 2-year flow. Results presented here represent the restricted inflow conditions.

- **Appendix D** – Plan of modelled subcatchment lots in study area
- **Appendix E** – POPs & ROW Land Use tables
- **Appendix F-1** – Minor System pipe layout and dimensions - Water as a Resource Alternative
- **Appendix F-2** – Pipe surcharge state and freeboard Water as a Resource Alternative 100-year event
- **Appendix F-3** – Open channels layout and Dimensions Water as a Resource Alternative
- **Appendix F-4** – Water depth in streets network Water as a Resource Alternative 100-year event
- **Appendix G-1** – Minor System layout – Maintenance holes names
- **Appendix G-2** – Tabular results for proposed conduits
- **Appendix H** – Long Section profiles 2-year and 100-year events
- **Appendix I** – ROW Inlet Control
- **Appendix J** – Lots Storage and Control Model Results

Table 1 below shows the pumping rates set up in the model and the total pumping values for each of the events considered during the design of the system.

Table 1 -1-yr flow pump rates.

	<i>Pumped Scenario (Total Volume m3)</i>	
Turning Basin	PS= 7.47 m³/s	
1yr		21,455
2yr		25,761
100y		67,011
1991 - Typical storm		585,092
South of Ship Channel	PS= 2.20m³/s	
1yr		8,772
2yr		10,783
100y		30,865
1991 - Typical storm		267,182

- The maximum pass forward flow (1-yr) into the treatment facility at the Turning Basin is 7470 L/s. The 1-yr “typical storm” volume is 585,092 m³.
- The maximum pass forward flow (1-yr) into the Don Greenway Park treatment facility is 2200L/s. The 1-yr “typical storm” volume is 267,182 m³.

For comparison, the 1-year flows were estimated using the Rational Method for the study area.

Table 2 below presents the results for the area **north of the Ship channel** assuming a conservative C=0.5 in pre-development conditions. As it can be seen below, the resulting flow is higher than the post-development conditions flow obtained in the hydraulic model, therefore the model values are considered to be reasonable.

Table 2 –Rational Method 1-yr flow comparison (north of Ship Channel only)

Tc Method	L (m)	S (m/m)	Tc (min)	C	I (mm/h)	A(ha)	Rational (m³/s)
Kirpich	1721	0.003	22	0.5	44.13	129	7.91
Bransby Williams	1721	0.003	19	0.5	48.18	129	8.64

6.5.1 Minor System Hydraulic Grade Line (HGL)

For the 100-year storm event, considering the restricted inflow conditions, the pumping station at the Turning Basin together with the available volume in the system was able to maintain the HGL low enough to meet the 1.80m of freeboard with no minor flows being overspilled to the Ship channel in the proposed system north of the Ship Channel.

However, for the area south of the Ship Channel, the available volume in the system was insufficient – given the 1-yr pumping rate that was determined, the system would be surcharged due to lake level conditions during the 100-year event and would overspill excess minor system flows to the Ship Channel.

Model results in **Appendix F-2** show that several sections of the existing system in the South of Eastern area do not provide the required level of protection during the 100-year storm event. The problems in this area include surcharged sewers and surface water ponding. Solutions for this area should be investigated and coordinated with concurrent projects in the area (i.e., Area 32 EA).

6.5.2 Major System Ponding Depths

During the 100yr validation event it can be seen that the overland system was able to convey all overland flows. **Appendix F-3** shows the required channel dimensions measured from the channel bed. **Appendix I** shows the simulated water depths for the most critical sections.

At some locations in Broadview Avenue and Commissioners Street, the proposed overland channels are overtopped, but the maximum water depths in the streets are still beneath the maximum allowable road ponding depth of 300mm. **Appendix F-4** showcases the dual drainage system that takes advantage of all the components of the drainage system during extreme event conditions.

Appendix F-4 also identifies the presence of excessive overland flooding at various locations within the South of Eastern area. These areas are not being redeveloped, nor are revisions to the existing grades and the storm sewer system being considered. These areas are highlighted as existing conditions and the model simulations show that the proposed drainage system in the Port Lands will have no detrimental impact on these areas. Potential methods to alleviate the depth of overland flooding at the existing low spot locations in the South of Eastern area include increasing inlet capacity into the storm sewer and/or upsizing the storm sewer. From a constructability perspective, the lane width and proximity to the existing heritage building would need to be taken into considerations if sewer improvement works were to take place.

6.6 Model Limitations

- There is a potential conflict with the crossing of the planted open channel on Commissioners over the 20" gas main crossing Commissioners at a depth of 1.5m – 2m. There is a similar condition on Unwin Avenue, where the proposed channel crosses a gas main at an elevation of between 74 m and 75 m. A potential channel break may be required, including a siphon to interconnect the channels however allowances for this siphon have not been made as part of this design. It is recommended that the need for channel breaks or siphons be considered during future studies.

- Flow controls used in the model like the orifice plates and interconnection weirs meet the requirements for the conceptual design. During future stages of project implementation, such controls will need to be refined according to the final engineering designs. It should be noted that the approach used for flow control and transfer generates an outflow hydrograph with a quicker flow release into the proposed system. During detailed design head/discharge curves will end up in smoother flow hydrographs profiles before reaching the maximum allowable release rate from lots. Optimization of the road conveyance capacity can also be achieved by refining the lateral weirs connecting to the overland channels.
- Inlet capacity in the overland system has been defined to maximize the flow on the surface and confirm the capacity of the proposed overland channels. Even though the minor system was sized according to the 2-year design storm, the number of catch basins assigned to capture flows during the 100-year event was rounded down, aiming to control the flows into the pipe network. The use of inlet control devices was been considered, but this can be evaluated as part of the future preliminary and detail stages of the project.

Order of Magnitude Cost Estimates

These OMC estimates reflect the major infrastructure components identified for the Water as a Resource alternative and do not include complete stormwater servicing requirements on the minor streets. The OMC estimates are based on a proposed SWQTF and UV treatment facility at the Turning Basin that has been assumed to serve 50 per cent of the required 1-year flow for the shorter-term requirements for development within Area B, as shown on **Figure 11**. Given the longer-term time horizons associated with the redevelopment, it is assumed that the drop shaft connection point to the Inner Harbour Tunnel and satellite treatment facility will be in place by 2030-2035. At this point, the City can elect to decommission the separate SWQTF and connect this area to the broader city system. Details of the preferred Stormwater Quality Treatment Facility (SWQTF) which consists of an end-of pipe OGS, a Ballasted Flocculation Facility (BFF) and a UV/Disinfection system are located in **Section 5.3.1.3**.

The OMC estimates were broken out by blocks, as indicated on **Figure 18** and the estimates are in 2016 dollar amounts. The OMC costs do not include the excavation and fill cost for the replacement of the 1.5 m depth of contaminated soils with a clay cap, as these costs were accounted for in the transportation OMC costs. Landscaping costs for the open channels include the cost of planters, trees, soil bedding and all concrete edge walls, curbs or hardscape features required as part of the landscaping concept.

Generally, each block contains pipes, open channels and maintenance hole structures at depths varying from two to ten metres. However, certain blocks contain specific infrastructure that were considered to be key elements required for the treatment and conveyance of stormwater flows for the overall study area. The key drainage infrastructure components within these blocks are outlined below:

Unilever Precinct

- Connection of new 825mm diameter storm pipe to existing 2400mm diameter maintenance hole on Eastern Avenue.

Block 5

- Existing 375mm diameter pipe connection to Basin Street 1800mm diameter maintenance hole from Saulter Street; and
- Existing 375mm diameter pipe connection to Basin Street 3000mm diameter maintenance hole from Broadview Avenue.

Block 6

- Proposed inlet grate for 2-year stormwater flow from Commissioners Street open channel.

Block 7

- Proposed 3060m² Stormwater Quality Treatment Facility (SWQTF) to treat 50% of the 1-year stormwater flows (i.e., 3.75m³/s);
- Proposed pump station with 7.5m³/s capacity to pump total 1-year flows to IHT at Carlaw Avenue drop shaft;
- Two (2) new outlets with backflow valves to Turning Basin from on Commissioners Street open channel;
- 1-year flow hydraulic diversion structure;
- Upsized existing outlet to Turning Basin at Carlaw and Street 7;
- Forcemain from pump station capable of delivering 1-year stormwater flows to SWQTF;
- Oil-grit separator (OGS) sized for 40% of 1-year flows (3.1m³/s); and
- Ultraviolet water quality treatment system.

Block 11

- Proposed 1795 m² SWQTF to treat 1-year stormwater flows (i.e., 2.2m³/s);
- Proposed pump station with 2.2m³/s capacity to pump total 1-year flows to proposed SWQTF at Don Greenway Park;
- One (1) new outlet to Ship Channel from hydraulic diversion structure;
- One (1) new outlet with backflow valve to the Ship Channel from SQWTF;
- 1-year flow hydraulic diversion structure;
- Forcemain from pump station capable of delivering 1-year stormwater flows to SWQTF;
- Oil grit separator (OGS) sized for 40% of 1-year stormwater flows; and
- Ultraviolet water quality treatment system.

Assumptions

The stormwater quality treatment facilities located in Blocks 7 and 11 were assumed to be individual facilities on conventional concrete slab and footing foundations, which house the ballasted flocculation clarifiers needed to treat their respective stormwater design flows. These facilities were assumed to contain the necessary mechanical, electrical, process, structural, architectural and yard piping components to achieve the proper conveyance and treatment of the incoming stormwater flows. The costs for the structural, treatment and internal components of the facilities were estimated based on costs obtained from the R.V. Anderson Associates Limited, *Preliminary Design Report - Cherry Street Stormwater Facility Design Report*, (the Report) prepared on July 18, 2014. The costs contained within this report were

scaled up by a factor of 5 and 2.95 for Blocks 7 and 11, respectively, to account for the increased footprint of the facilities based on a pro-ration of the Cherry Street facility.

While certain assumptions were made for the purpose of developing the OMC costs, the proposed SWQTFs are located within future signature park spaces (Turning Basin Park and Don Greenway South) and as such their design will need to ensure appropriate integration into the parks with a high-quality design that minimizes the above-grade footprint and maximizes park utility.

Table 3 below summarizes the OMC estimates for the proposed stormwater infrastructure requirements for each block of the study area. Appendix K shows a detailed breakdown of the OMC costs.

TABLE 3 - SUMMARY OMC ESTIMATES FOR WATER AS A RESOURCE ALTERNATIVE

BLOCK	SWM Infrastructure	SUB-TOTAL COST¹	TOTAL COST¹
Unilever Precinct	Pipes, Maintenance Holes, Connections	\$ 6,893,638	\$ 10,228,791
	Open Channels	\$ 3,335,153	
South of Eastern	Pipes, Maintenance Holes	\$ 602,775	\$ 2,326,718
	Open Channels	\$ 1,723,943	
Block 4	Pipes, Maintenance Holes, Connections	\$7,436,063	\$ 25,734,857
	Open Channels	\$ 18,298,794	
Block 5	Pipes, Maintenance Holes, Connections	\$ 5,538,116	\$ 8,375,157
	Open Channels	\$ 2,837,041	
Block 6	Pipes, Maintenance Holes, Connections	\$ 14,955,824	\$ 35,098,474
	Open Channels	\$ 20,142,650	
Block 7	Pipes, Maintenance Holes, Pump Station, SWQTF/UV Facilities	\$ 130,639,969	\$ 145,405,707
	Open Channels	\$ 14,765,738	
Block 8	Pipes, Maintenance Holes, Connections	\$ 585,902	\$ 3,260,095
	Open Channels	\$ 2,674,193	
Block 9	Pipes, Maintenance Holes, Connections	\$ 2,394,441	\$ 12,147,471
	Open Channels	\$ 9,753,030	
Block 10	Pipes, Maintenance Holes, Connections	\$ 3,539,924	\$ 8,649,247
	Open Channels	\$ 5,109,323	
Block 11	Pipes, Maintenance Holes, Pump Station SQWTF/UV Facilities	\$ 73,949,027	\$ 97,764,703
	Open Channels	\$ 23,815,676	
Block 12	Pipes, Maintenance Holes, Connections	\$ 512,669	\$ 3,677,644
	Open Channels	\$ 3,164,975	
		TOTAL	\$ 352,668,857

¹Includes 30% engineering and 20% construction contingency costs

7.1

Phasing

The study area has been separated into blocks to facilitate a phasing strategy that will be undertaken by the City as a separate exercise. Based on discussions with the City, the estimated time for full build-out is approximately 30 -50 years. As such, some staging of infrastructure has been considered to support the phased development of the area. Key infrastructure that would be required to support new development within the study area has been highlighted to enable the orderly implementation of infrastructure improvements and servicing of private properties. The key infrastructure is highlighted in **Figure 18**, and is described in further detail below.

Spines and Outlets

North of the Ship Channel

The main storm sewer infrastructure, or “spine”, is the Broadview Ave. and Basin St. storm sewer. This spine will act as the main trunk sewer for conveyance of the minor system flow from the proposed redevelopment blocks. This spine begins in the Unilever Precinct immediately south of the CN rail line and continues south and east to the hydraulic diversion structure at the corner of the Turning Basin where flows are to be directed to the end-of-pipe OGS and outlet. The new outlets at the Turning Basin will need to be constructed at the same time as the spine, as will the hydraulic diversion structure.

South of the Ship Channel

The main storm sewer infrastructure is to be located within the Don Greenway Park and connects the proposed minor system with the hydraulic diversion structure in the park. There are two outlets to the Ship Channel: the new outlet for the overflow from the hydraulic diversion structure and the new outlet from the SWQTF. The outlets, storm sewer infrastructure and hydraulic diversion structure will need to be constructed simultaneously.

OGS, Pump Stations and SWQTF - North and South of the Ship Channel

The OGS, pump stations and stormwater quality treatment facilities (SWQTF) at the Turning Basin and Don Greenway Park are also key pieces of infrastructure that will need to be constructed to support development in the study area. This infrastructure is particularly important to meet the water quality treatment criteria and to control the amount of flow being directed to the treatment facility, as well as provide end-of-pipe measures for the spines and outlets. The cost of the key infrastructure in this area is outlined in **Table 4**, based on the OMC estimates.

Based on discussions with the City, it is likely that the IHT will be in place before full-buildout conditions for the area north of the Ship Channel will be achieved. Therefore in an effort to minimize the footprint of the proposed SWQTF and outlet north of the ship Channel, it was assumed that the facility will be sized to service 50% of the drainage area (which is assumed to

correspond with 50% of the flow). The footprint and outlet of the facility were therefore revised to account for the smaller flow rate and drainage area.

The pump station north of the Ship Channel is proposed to be sized for the ultimate 1-year flow conditions, however the installation of the pumps can be staged to initially account for the proportion of flow to the SWQTF at the Turning Basin (i.e., 50% incoming flow), and then increased to account for the total flow to the IHT once the drop shaft and tunnel are built. It is expected that the City's IHT team will account for the additional flows from the Port Lands area and ensure the proposed storm sewers and related connections to the IHT are sized appropriately. This report will account for the cost to redirect the flows from the proposed pumping station to the proposed 1950/2550mm storm sewer.

The key infrastructure south of the Ship Channel will be sized for the ultimate conditions.

TABLE 4 - KEY INFRASTRUCTURE FOR PHASING

Infrastructure	OMC Estimate ¹
North of the Ship Channel	
Broadview-Basin St. spine	\$ 16,340,000.00
Commissioners St. infrastructure (at Turning Basin)	\$ 3,420,000.00
Forcemain from pump station	\$ 650,000.00
Carlaw Av. infrastructure (south of Commissioners)	\$ 3,450,000.00
Hydraulic Diversion Structure at Turning Basin	\$ 540,000.00
Improved Outlet at Street 7 and Carlaw	\$ 1,500,000.00
OGS at TB	\$ 5,180,000.00
Pump Station at TB	\$ 16,880,000.00
Commissioners Street Channel outlets at TB	\$ 3,000,000.00
SWQTF at Turning Basin	\$ 89,780,000.00
UV Treatment System	\$ 6,000,000.00
New outlet from SWQTF to Turning Basin	\$ 1,500,000.00
South of the Ship Channel	
Hydraulic Diversion Structure at DGP	\$ 240,000.00
Infrastructure at (pipes, MH) DGP	\$ 1,860,000.00
Forcemain from pump station	\$ 60,000.00
OGS at DGP	\$ 1,520,000.00
Pump Station at DGP	\$ 4,950,000.00
SWQTF at Don Greenway Park	\$ 52,970,000.00
New outlet from SWQTF to Ship Channel	\$ 1,500,000.00
UV Treatment System	\$ 3,540,000.00
New outlet from hydraulic diversion structure to Ship Channel	\$ 1,500,000.00
TOTAL	\$ 216,380,000

¹Includes 30% engineering and 20% construction contingency costs

FIGURES



Port Lands and South of Eastern
Transportation and Servicing Master Plan

Figure 1

Study Area

- SWM Study Area
- Included in TSMP Study Area
- Road

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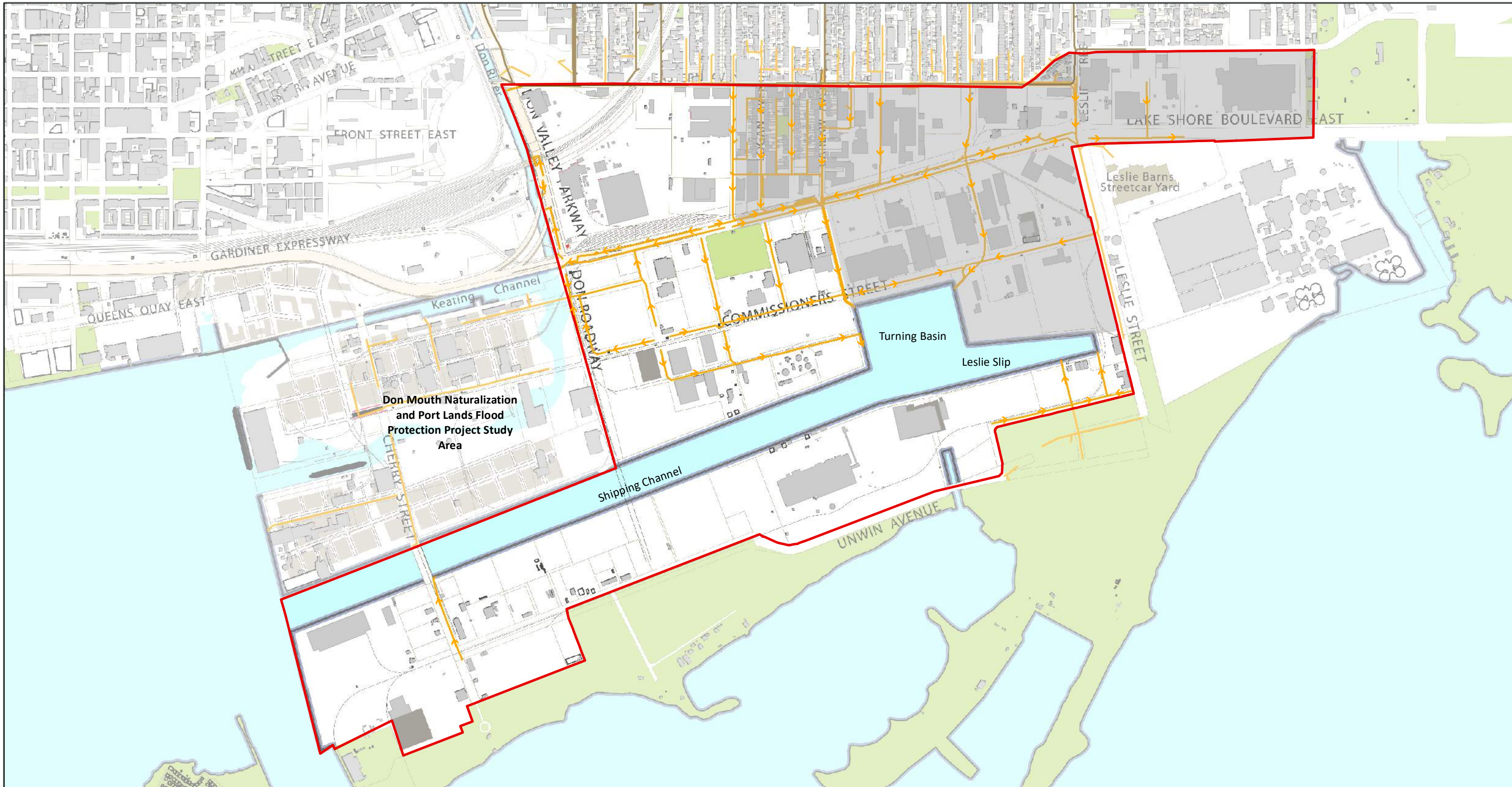


Map Drawing Information: City of Toronto, Dillon Consulting Limited

Map Created By: ECH/MZO
Map Checked By: MT
Map Projection: MTM 3 Degree

PROJECT: I3-8520
STATUS: Draft
DATE: 2016-12-19





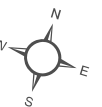
Port Lands and South of Eastern
Transportation and Servicing Master Plan

Figure 2

Existing Infrastructure

- SWM Study Area
- Areas with Existing Storm sewers to remain
- Storm Sewers

SCALE 1:12,000
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Map Drawing Information: City of Toronto, Dillon Consulting Limited

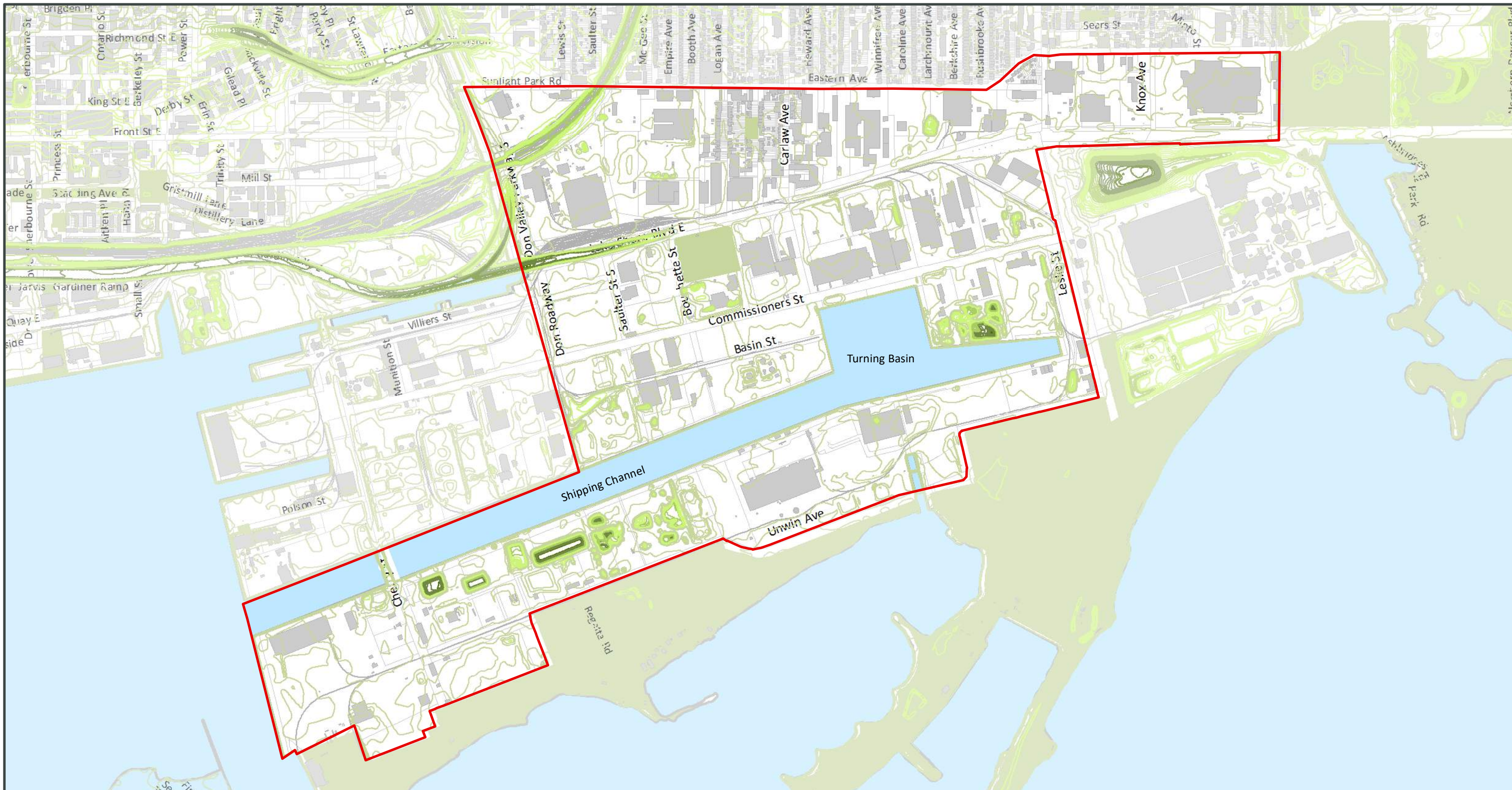
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Map Checked By: MT
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PROJECT: I3-8520

STATUS: Draft

DATE: 2016-12-19





Port Lands and South of Eastern
Transportation and Servicing Master Plan

Figure 3

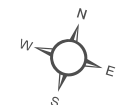
Existing Topography

SWM Study Area

Contour Elevation

- 71 - 78
- 78.5 - 81.5
- 82 - 85.5
- 86 - 89.5
- 90 - 96

SCALE 1:12,000
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Map Drawing Information: City of Toronto, Dillon Consulting Limited

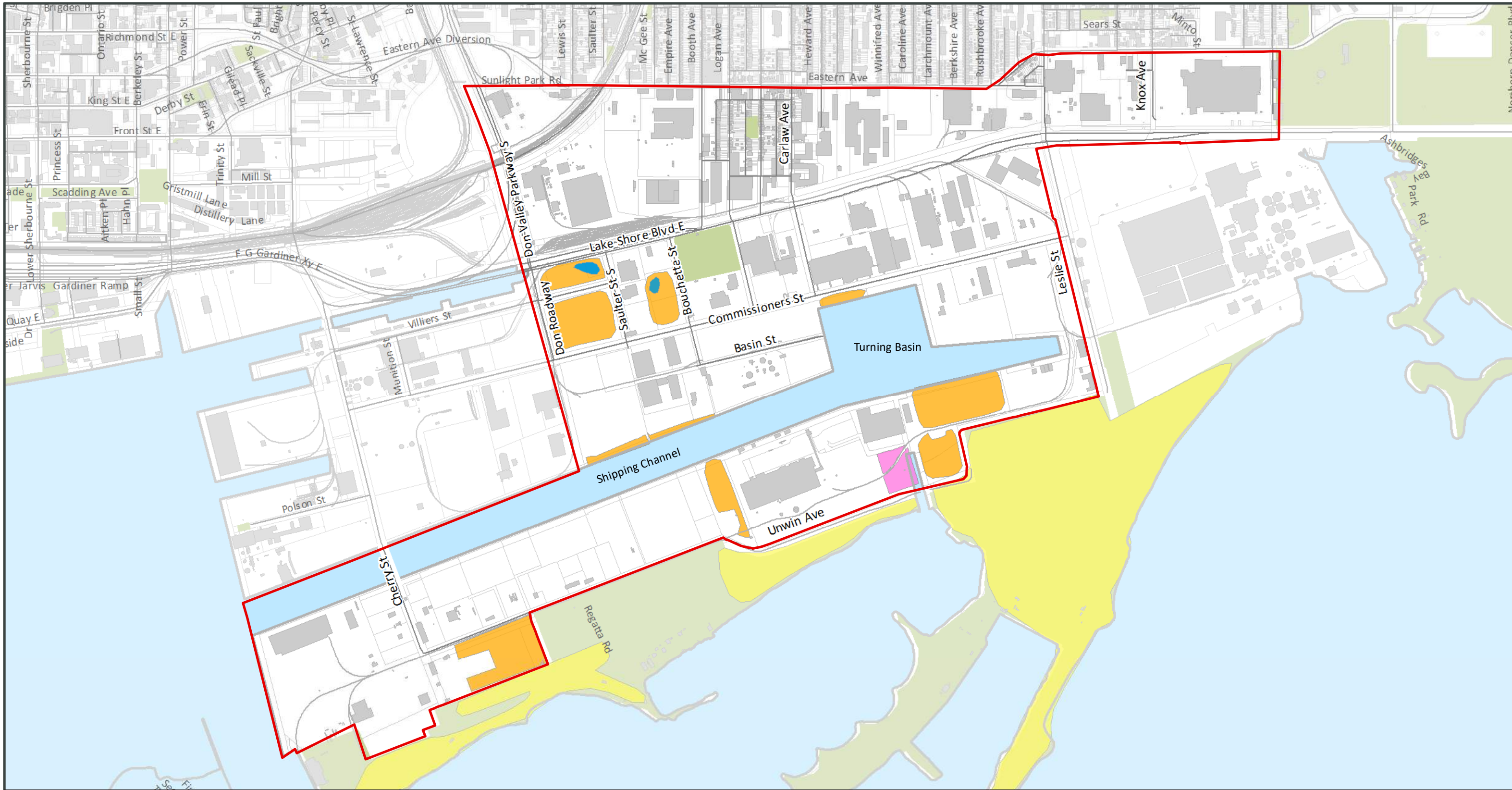
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Map Checked By: MT
Map Projection: MTM 3 Degree

PROJECT: I3-8520

STATUS: Draft

DATE: 2016-12-19





Port Lands and South of Eastern
Transportation and Servicing Master Plan

Figure 4

Existing Natural and Environmentally Significant Areas (ESA)

- SWM Study Area
- Environmentally Significant Areas (ESA)
- Existing Natural Cover (TRCA/Field)
- Existing Wetland (TRCA)
- PEC Naturalization Project

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Map Drawing Information: City of Toronto, Dillon Consulting Limited

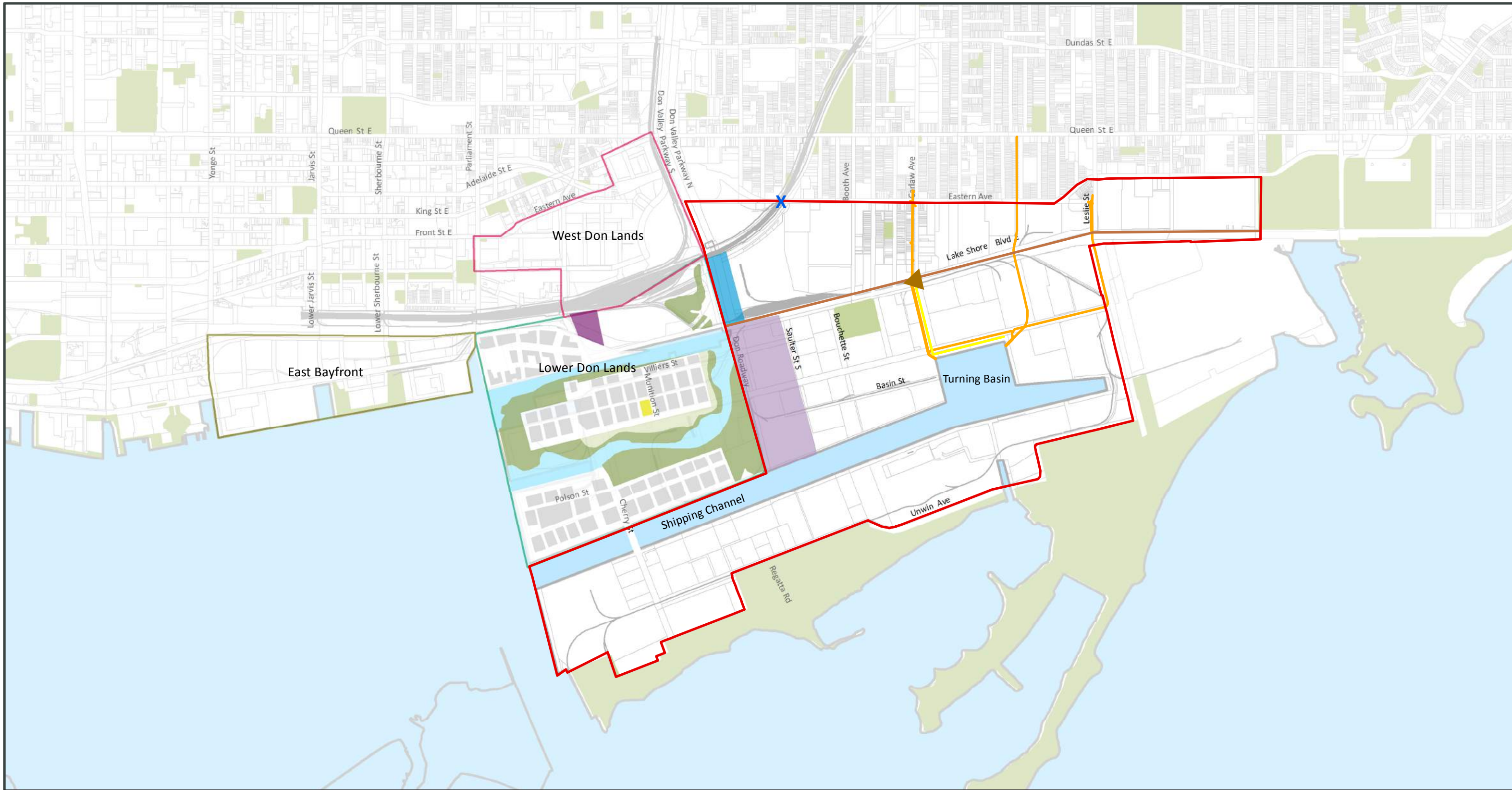
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PROJECT: I3-8520

STATUS: Draft

DATE: 2016-12-20















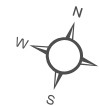
Port Lands and South of Eastern
Transportation and Servicing Master Plan

Figure 5

Recommended Stormwater Infrastructure from Background Studies

-  Drop Shaft Connection Point to Inner Harbour Tunnel
-  SWM Study Area
-  Proposed Inner Harbour Tunnel
-  Proposed 1950 mm and 2550 mm Storm Sewer to IHT Drop Shaft
-  Existing Sewer
- Past Studies**
-  Stormwater Quality Treatment Facility (SWQTF) at 480 Lake Shore Blvd
-  Potential Location of proposed SWQTF in Lower Don Lands
-  Proposed Valley Wall Feature (extent as recommended in DMNP EA)
-  Proposed Floodplain Landform (extent as recommended in DMNP EA)
-  Proposed grade raising at Eastern Av. Underpass at CN Railway

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Map Drawing Information: City of Toronto, Dillon Consulting Limited

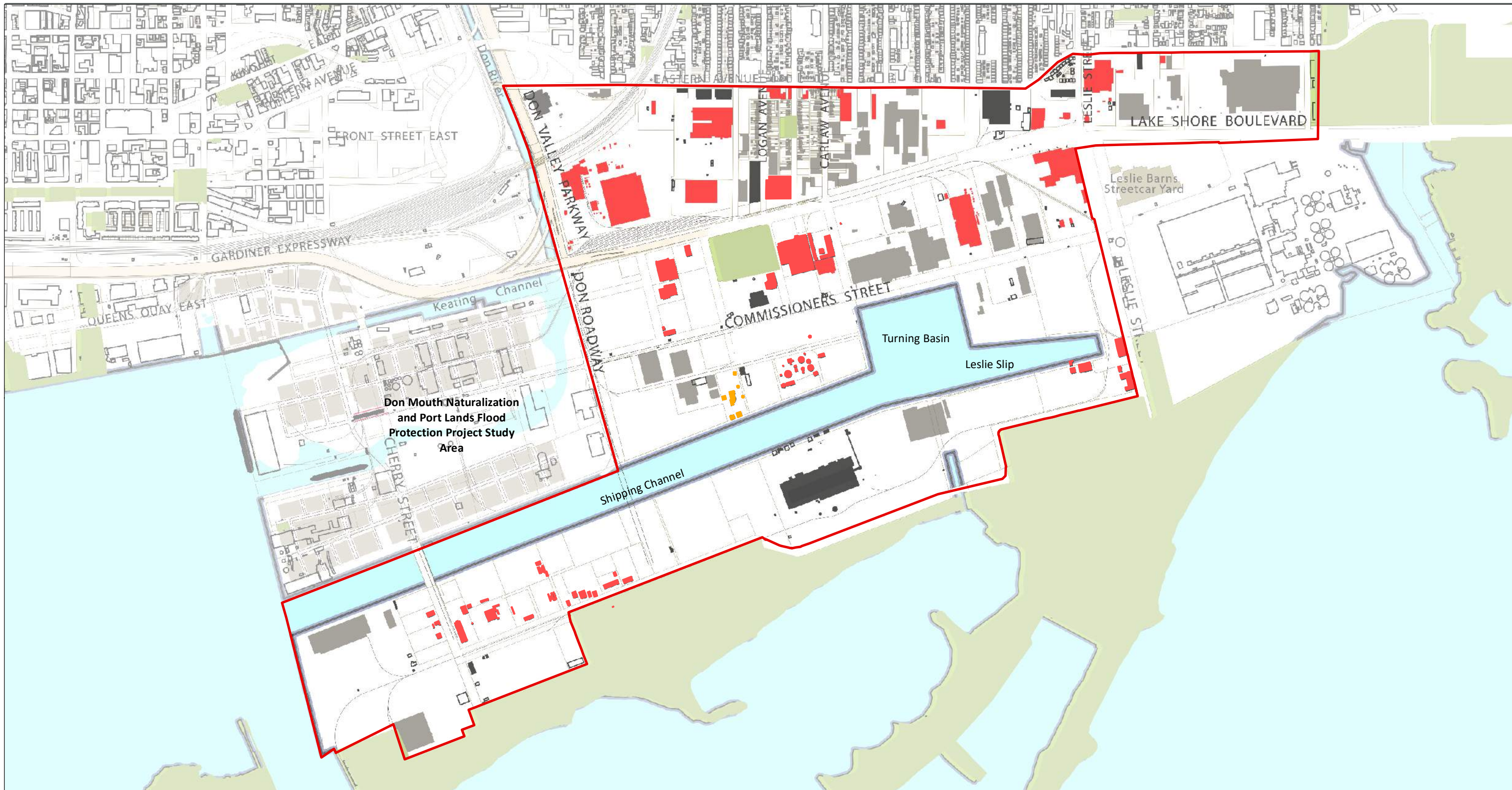
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PROJECT: 13-8520

STATUS: Draft

DATE: 9/20/2017





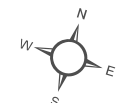
Port Lands and South of Eastern
Transportation and Servicing Master Plan

Figure 6

Heritage Buildings and Buildings To Remain

- SWM Study Area
- Redevelopment Potential
- Building to Remain
- Building to be Relocated
- Heritage Building/Structures
- Other Buildings

SCALE 1:12,000
0 125 250 500 Meters



Map Drawing Information: City of Toronto, Dillon Consulting Limited

Map Created By: ECH/MZO/YA
Map Checked By: YA
Map Projection: MTM 3 Degree

PROJECT: 13-8520

STATUS: Draft

DATE: 2016-12-20















**Port Lands
Planning Framework**

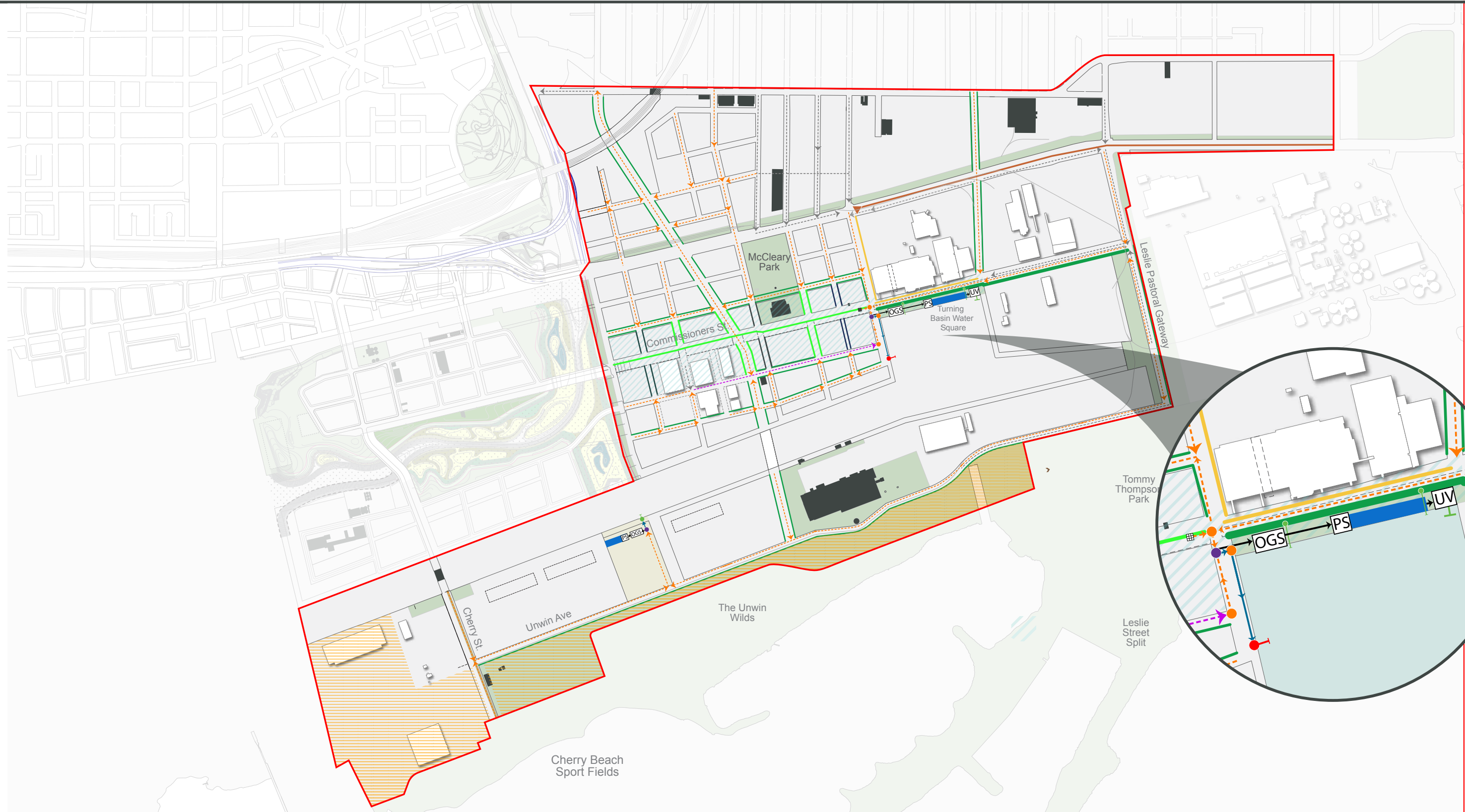
Figure 7

Parks and Open Space System

2016-08-31

- | | | | | | |
|---|---------------------------------------|---|-------------------------------|---|---|
|  | Major Public Parks and Open Space |  | Local Parks and Open Space* |  | Publicly Accessible Open Spaces (POPs)* |
|  | Natural Open Space and Don Greenway |  | Water's Edge Promenade |  | Linear Green within ROW |
|  | Future Naturalization |  | Future Water's Edge Promenade |  | Hydro |
|  | Parks and Open Spaces in Context Area | | | | |

*Local parks and open spaces and POPs are conceptually shown. Precinct planning or concept planning would define the location, size and programming for these spaces



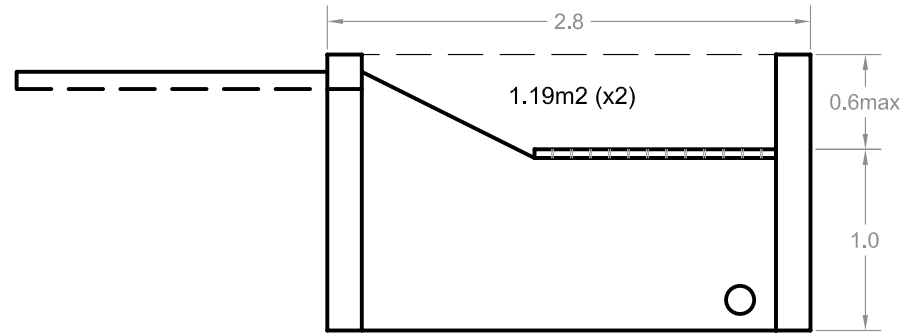
**Port Lands and South of Eastern
Transportation and Servicing Master Plan**

Figure 8-1

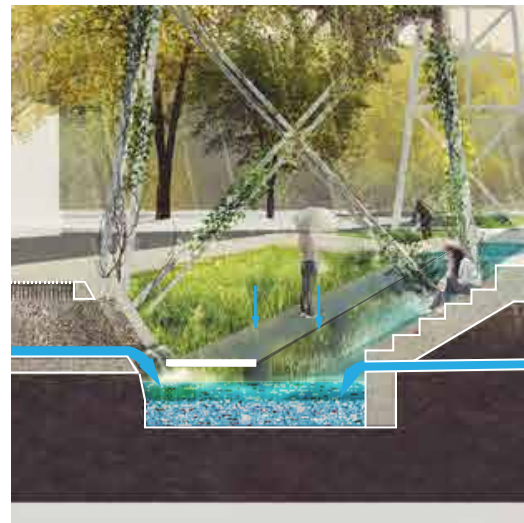
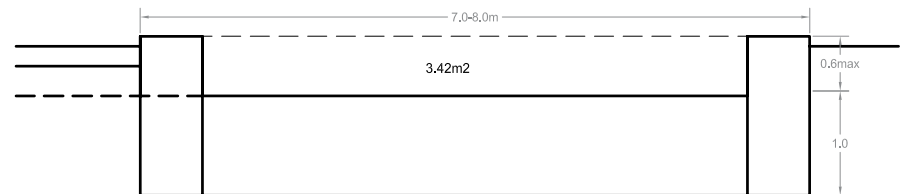
**Water as a Resource
Concept Drawing**

- | | | | |
|---|---|---|--|
| Planted Hybrid Open Channel (sand filter + storm sewer) | Portion of Study Area not included in stormwater servicing solution | 1 year hydraulic bypass | Commissioners St. Pilot Area |
| Planted Hybrid Channel (bioswale + storm sewer) | Existing storm sewers | New Outlet w/ backflow valve | Proposed 1950mm and 2250mm Sewer |
| Paved/ Hardscape Channel | Existing storm sewers - potential to be upgraded | Upsized Existing Outlet w/ backflow valve | Inner Harbour Tunnel (East of Carlaw Only) |
| Planted Open Channel | Proposed storm sewers | Stormwater Quality Treatment Facility | Dropshaft Connection Point to Inner Harbour Tunnel |
| Study Area Boundary | 1 year flow | Pump Station | Inlet grate for 2 year flow into sewer system |
| | >1 year overflow | | |

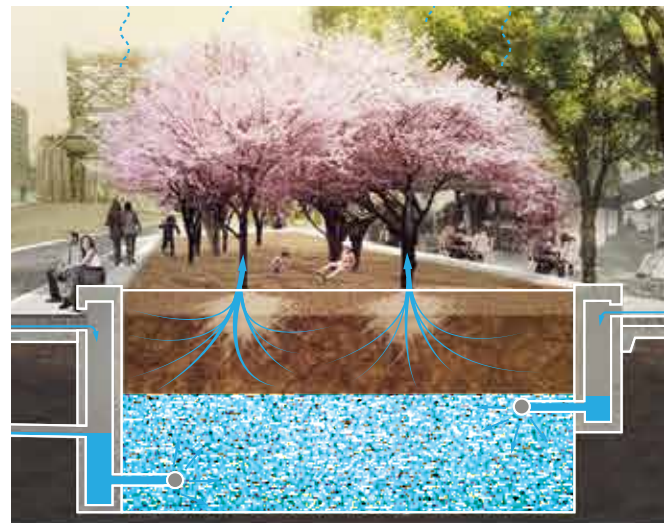
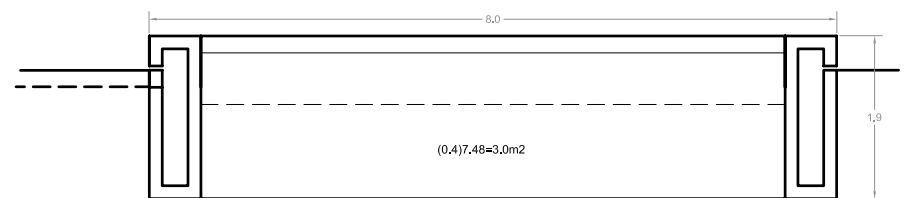
Planted Open Hybrid Channel



Commissioners St.
Planted Open Channel



Cherry St.
Planted Hybrid Open Channel
and Sand Filter



Unwin Av.
Planted Open Hybrid Channel

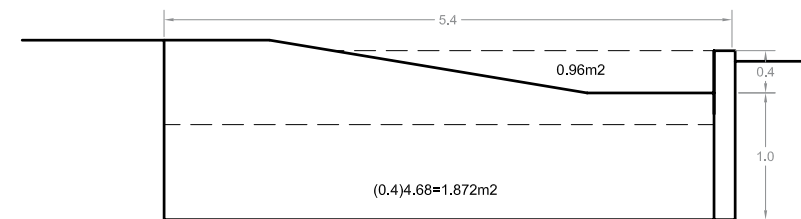
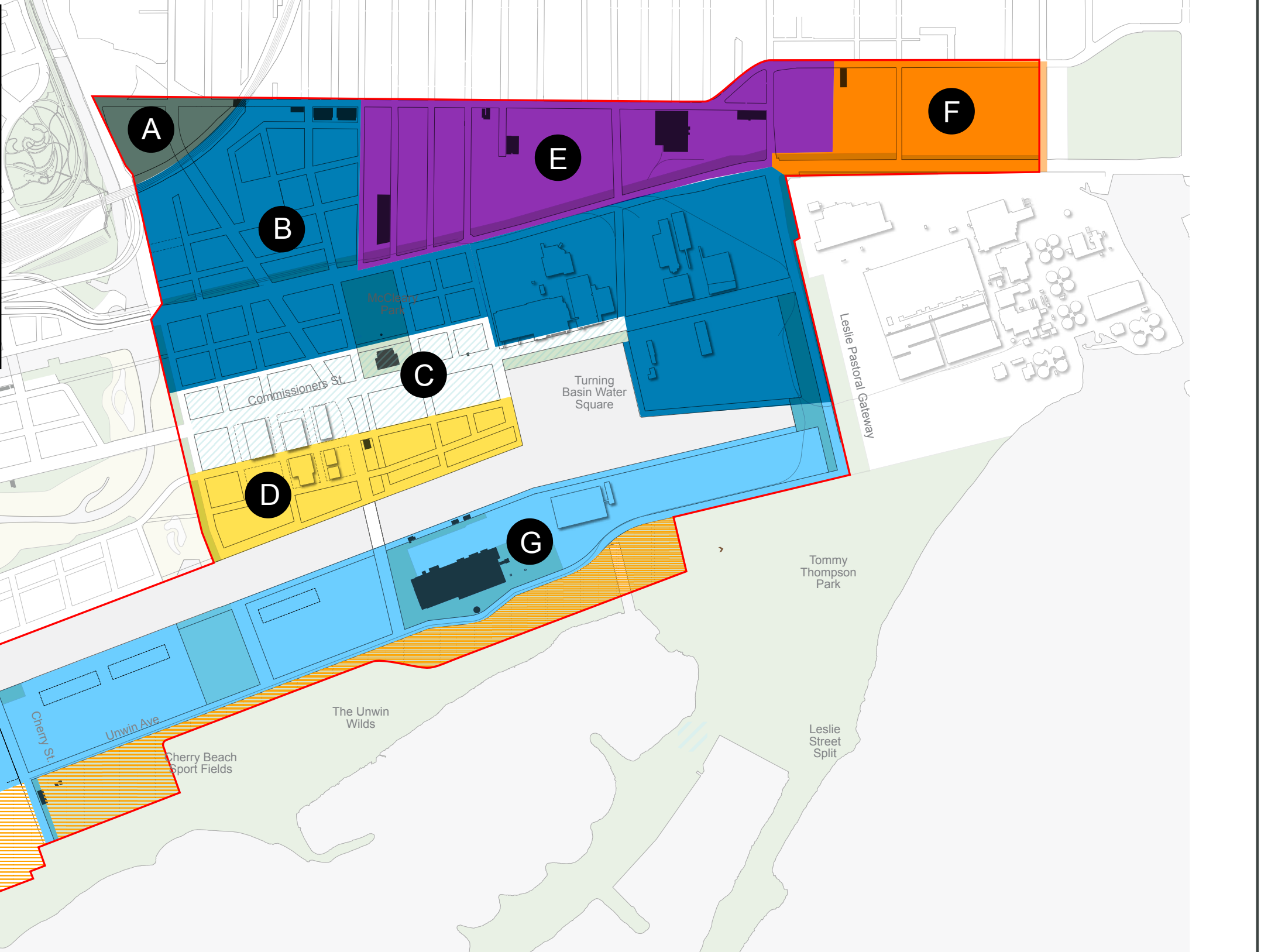


Figure 8-2

Water as a Resource

2016-05-14 - Precedents and Examples




STORMWATER SERVICING INFRASTRUCTURE	OUTLET AREA
New Storm Sewer System · Improved outlet to turning basin · Includes Hybrid Channels	B, D
Existing Storm Sewer System with Existing Outlet to Turning Basin · Includes Hybrid Channels	E
Existing Storm Sewer System with Existing Outlet to Ashbridges Bay · N/A	F
New Storm Sewer System · New outlet to Ship Channel at DGP · Hybrid Channels & Sand Filter	G
Open Channel System · New outlet to TB	C
New Storm Sewer System · Existing outlet to Don River	A

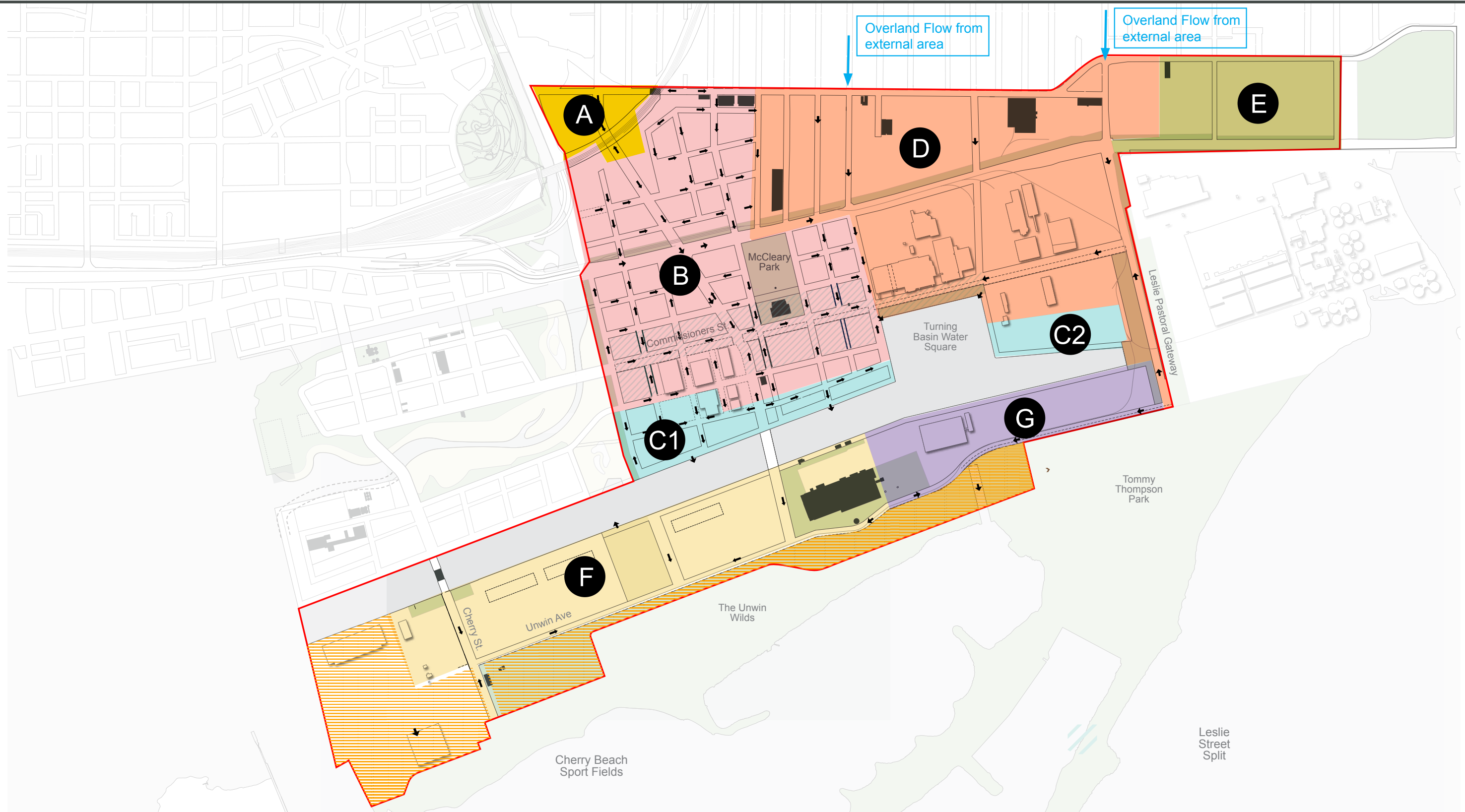


Port Lands and South of Eastern Transportation and Servicing Master Plan

Figure 9

Water as a Resource
Minor System Catchment Areas

-  Portion of Study Area not included in stormwater servicing solution
-  Commissioners St. Pilot Area
-  Study Area Boundary



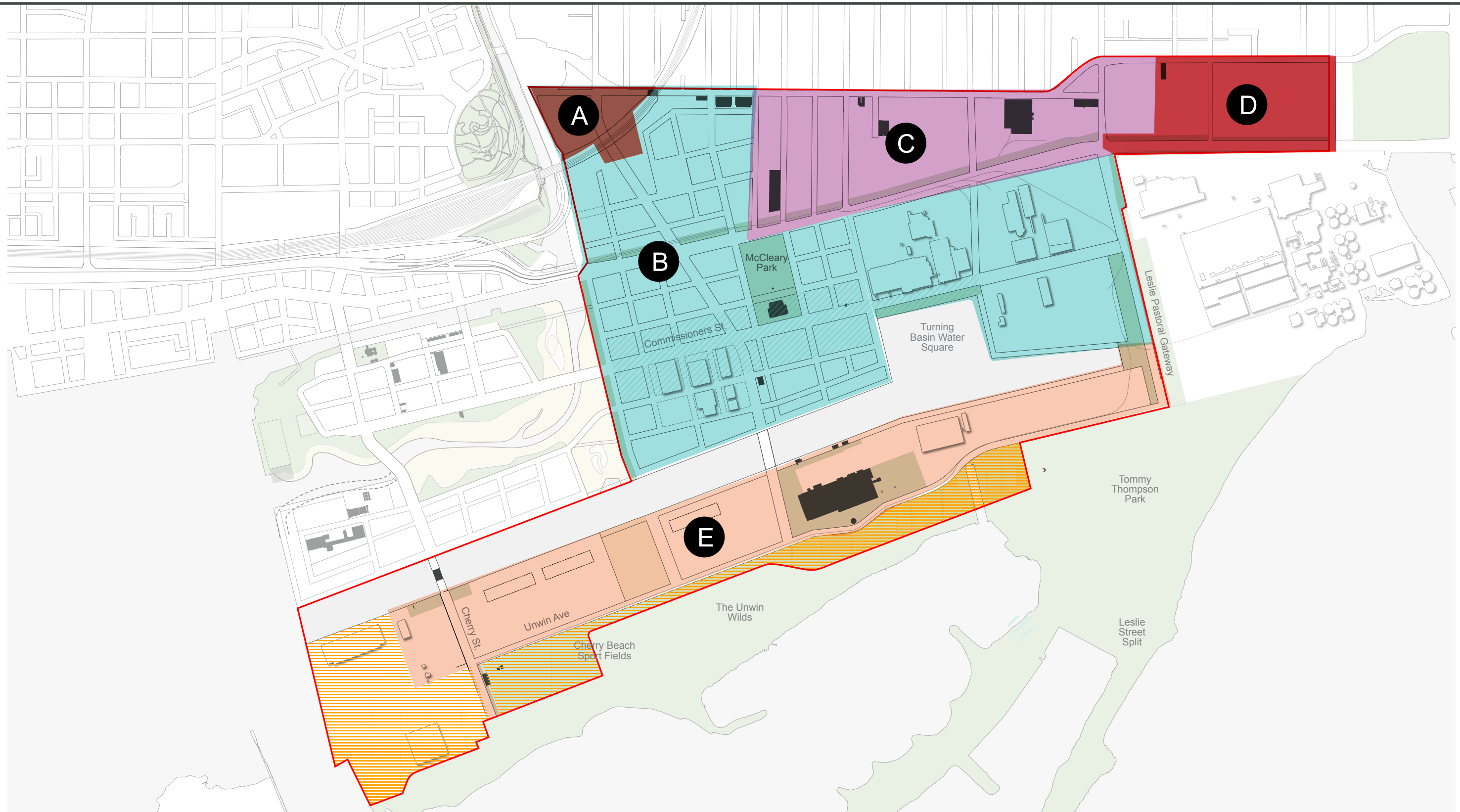
Port Lands and South of Eastern Transportation and Servicing Master Plan

Figure 10

Water as a Resource
Major System Catchment Areas

- To Ship Channel
 - To Turning Basin via Commissioners St. Channel
 - To TB via existing overland routes
 - To PEC Circulation Channel
 - To Don Greenway Park
- To Don River through Minor System
 - To Ashbridges Bay
- Commissioners St. Pilot Area
 - Portion of Study Area not included in stormwater servicing solution
 - Study Area Boundary

Note: Map to be read in conjunction with Port Lands Grading Plan

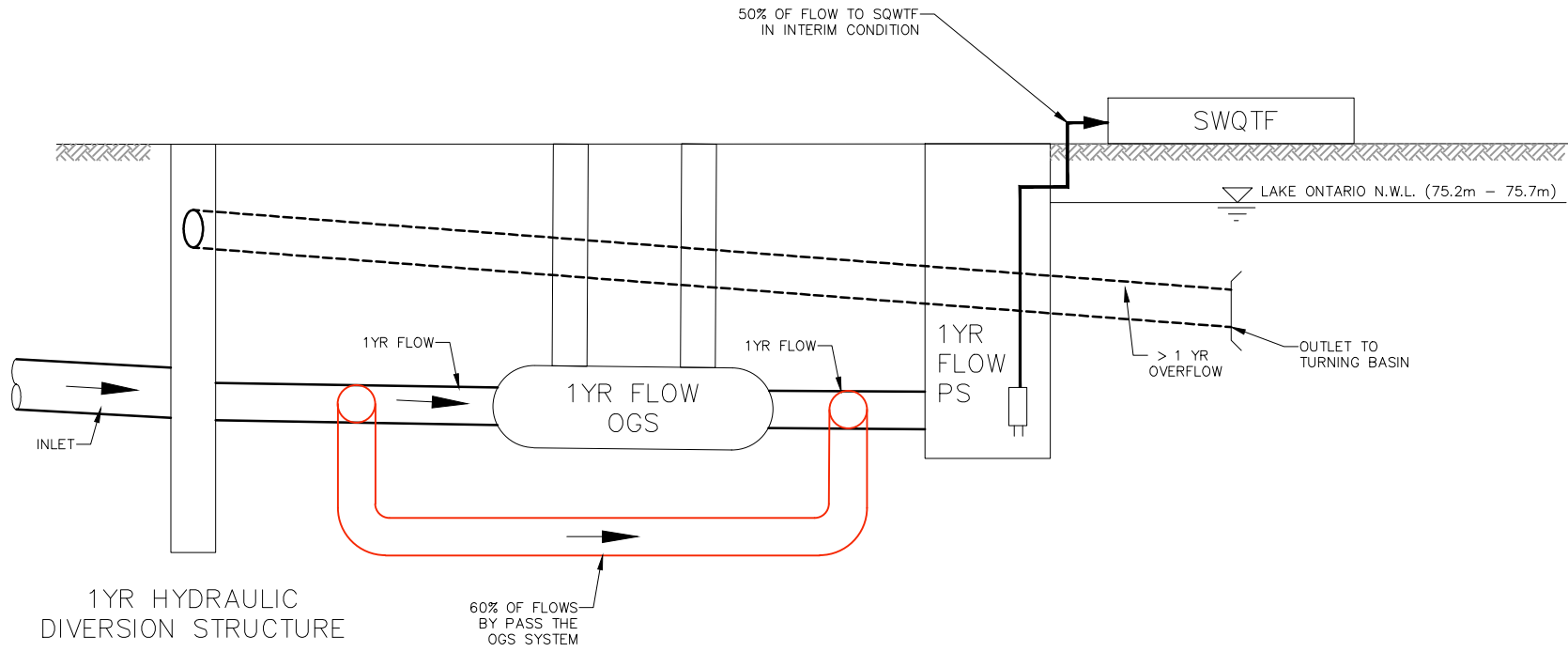


**Port Lands and South of Eastern
Transportation and Servicing Master Plan**


Figure 11

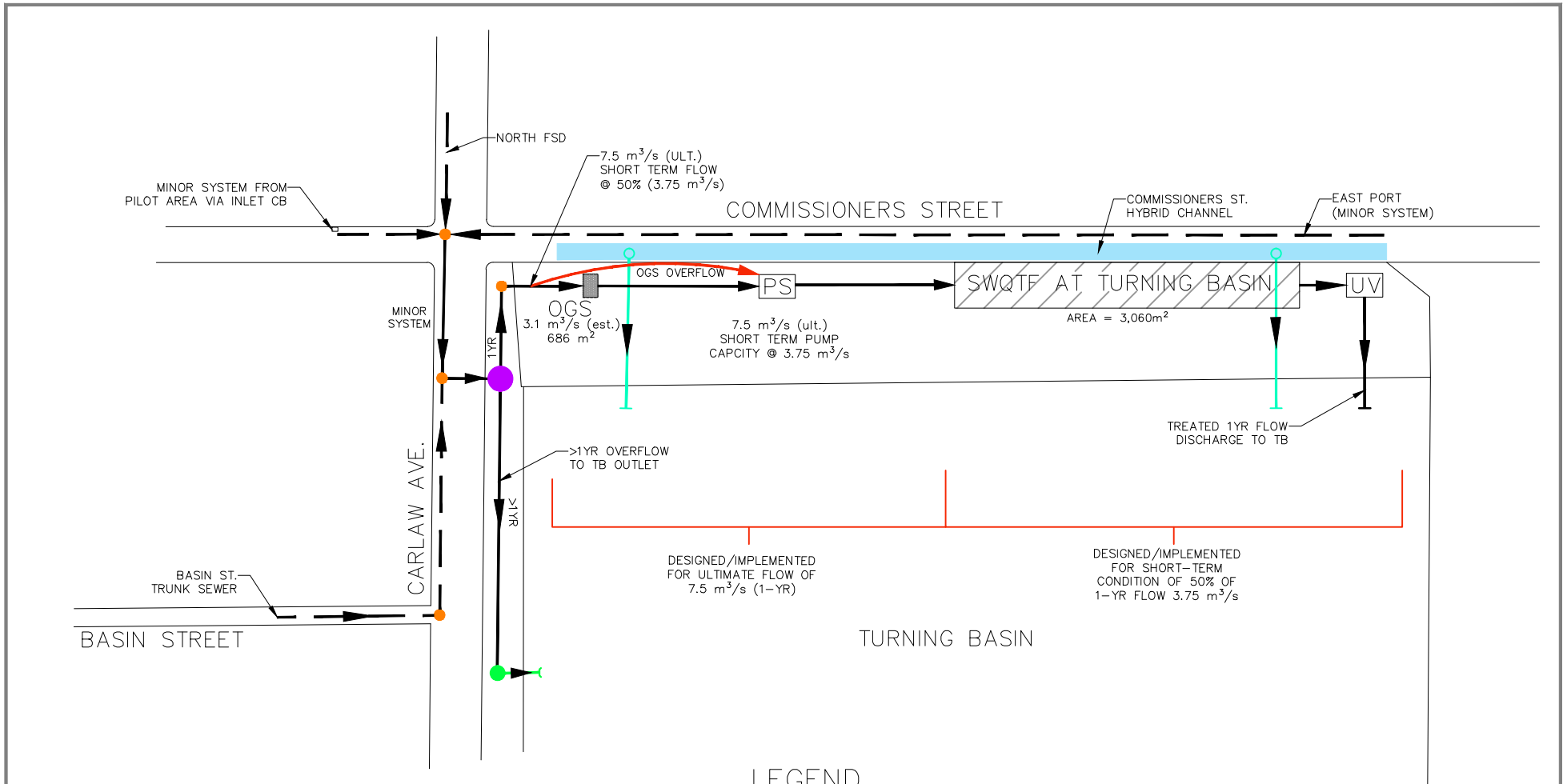
Water as a Resource
Disinfection Catchment Areas

- Commissioners St. Pilot Area
- Portion of Study Area not included in stormwater servicing solution
- To DGP (SWQTF at Don Greenway Park)
- To SWQTF at Turning Basin with option for outlet to IHT at Carlaw shaft
- To Satellite treatment facility at Ashbridge Bay Treatment Plant via Inner Harbour Tunnel
- No Disinfection



CONCEPTUAL SCHEMATIC SECTION
N.T.S.

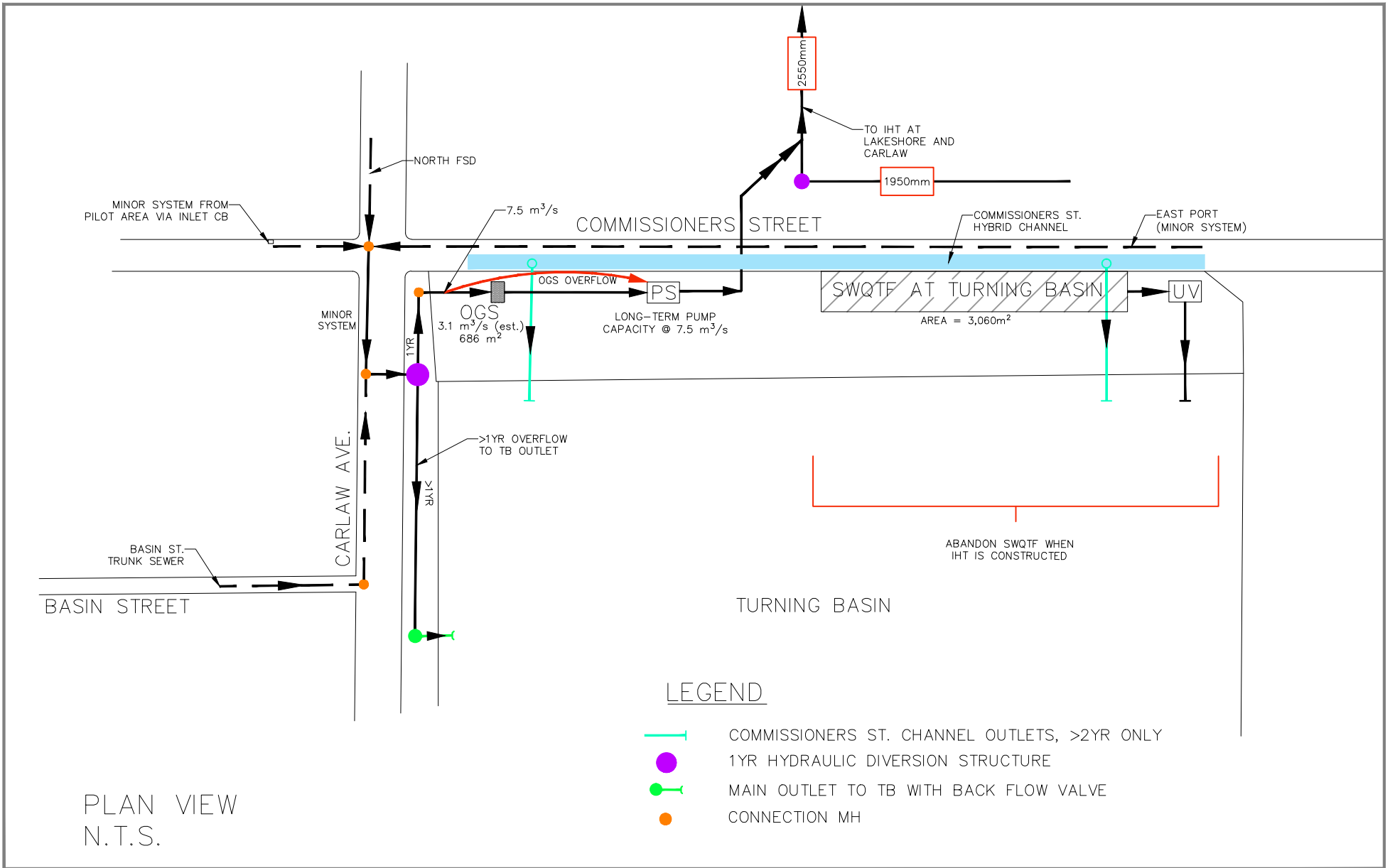
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	TITLE SWQTF INFRASTRUCTURE	FIGURE NO. 12
DATE NOV 25, 2016		




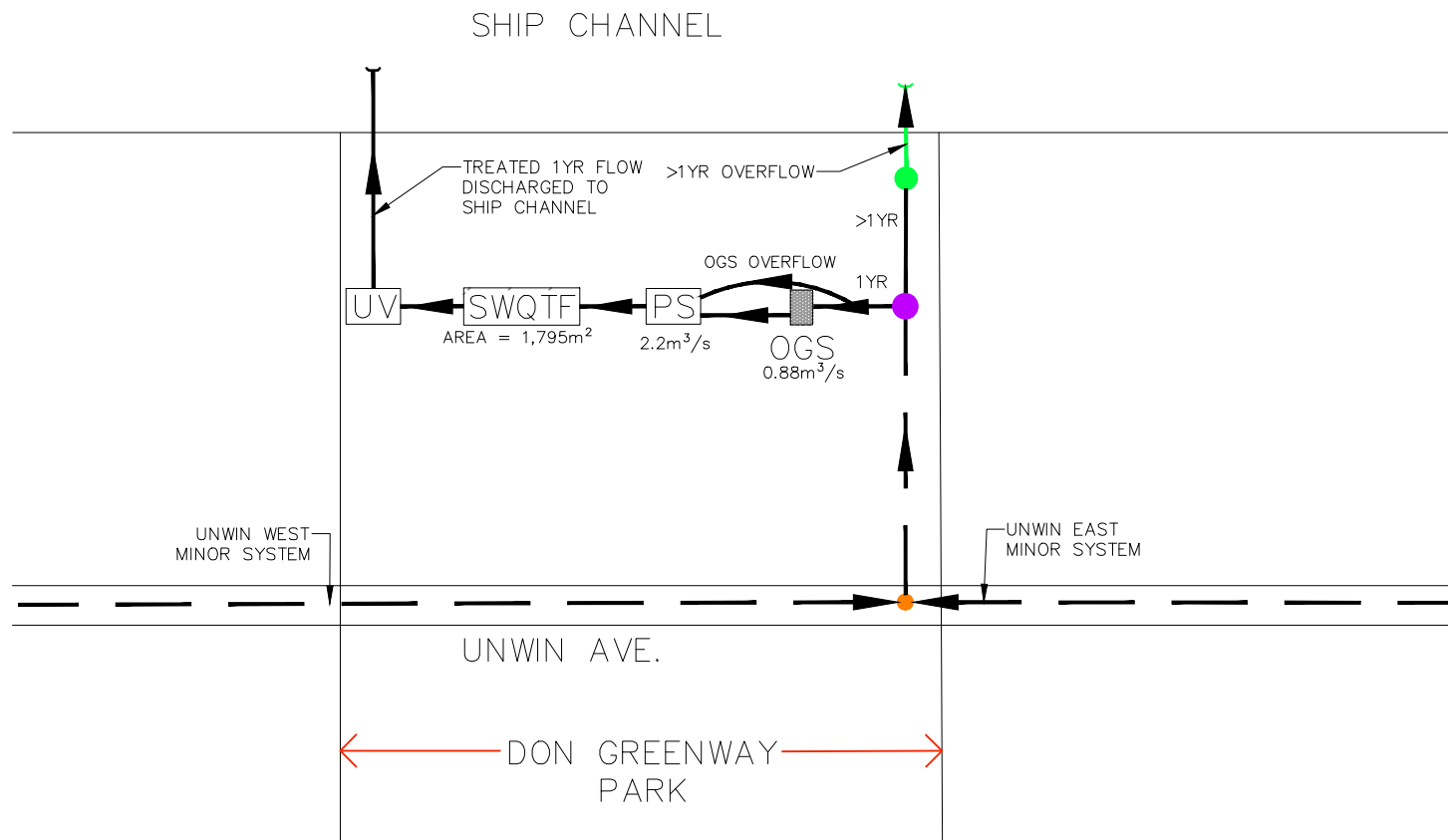
LEGEND

- | COMMISSIONERS ST. CHANNEL OUTLETS, >2YR ONLY
- 1YR HYDRAULIC DIVERSION STRUCTURE
- | MAIN OUTLET TO TB WITH BACK FLOW VALVE
- CONNECTION MH

 DILLON CONSULTING	PROJECT	PORT LANDS TSMP – SWM	PROJECT NO.	13-8520
	TITLE	SHORT TERM SWQTF INFRASTRUCTURE (50% OF 1-YR FLOW)		FIGURE NO.
DATE	NOV 25, 2016			



 DILLON CONSULTING	PROJECT PORT LANDS TSMP – SWM	PROJECT NO. 13-8520
	TITLE LONG TERM INFRASTRUCTURE (IHT FOR 100% OF 1-YR FLOW)	FIGURE NO. 13-B
DATE NOV 25, 2016		



LEGEND

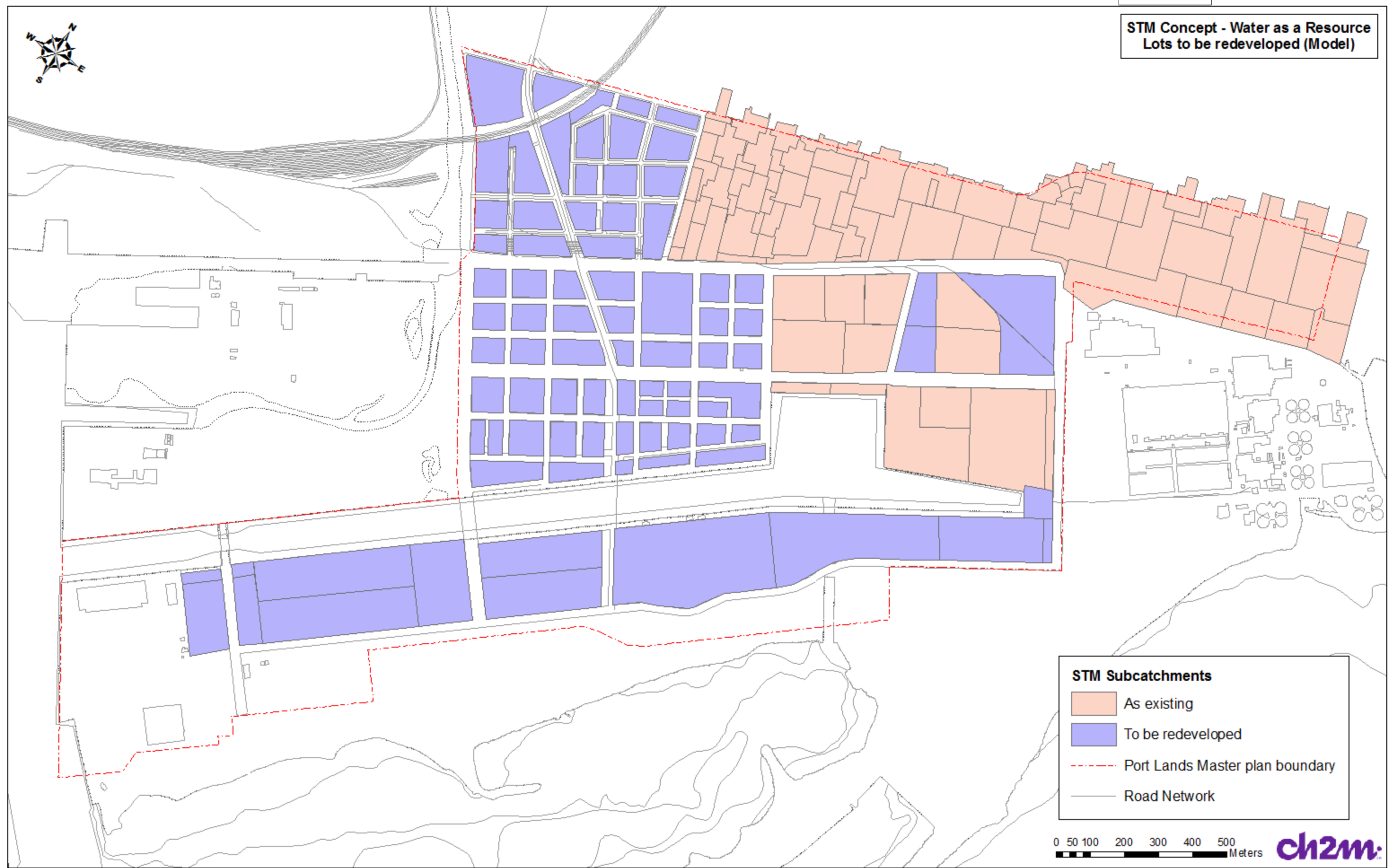
- 1YR HYDRAULIC DIVERSION STRUCTURE
- → OUTLET TO SHIP CHANNEL WITH BACK FLOW VALVE
- CONNECTION MH

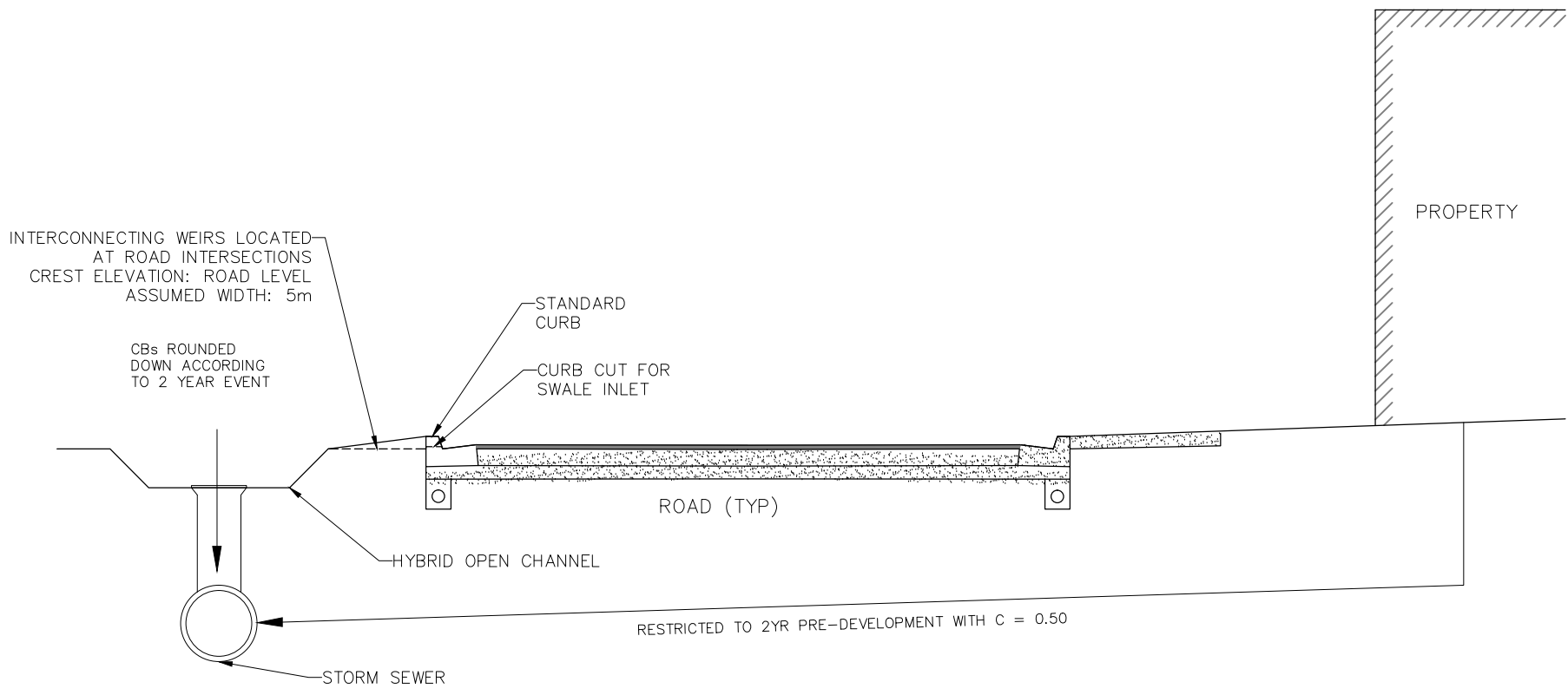
CONCEPTUAL SCHEMATIC PLAN VIEW
N.T.S.

 DILLON CONSULTING	PROJECT PORT LANDS TSMP – SWM	PROJECT NO. 13-8520
	TITLE PUMP STATION SKETCH – SOUTH OF SHIP CHANNEL	FIGURE NO. 14
DATE NOV 25, 2016		

Figure 15

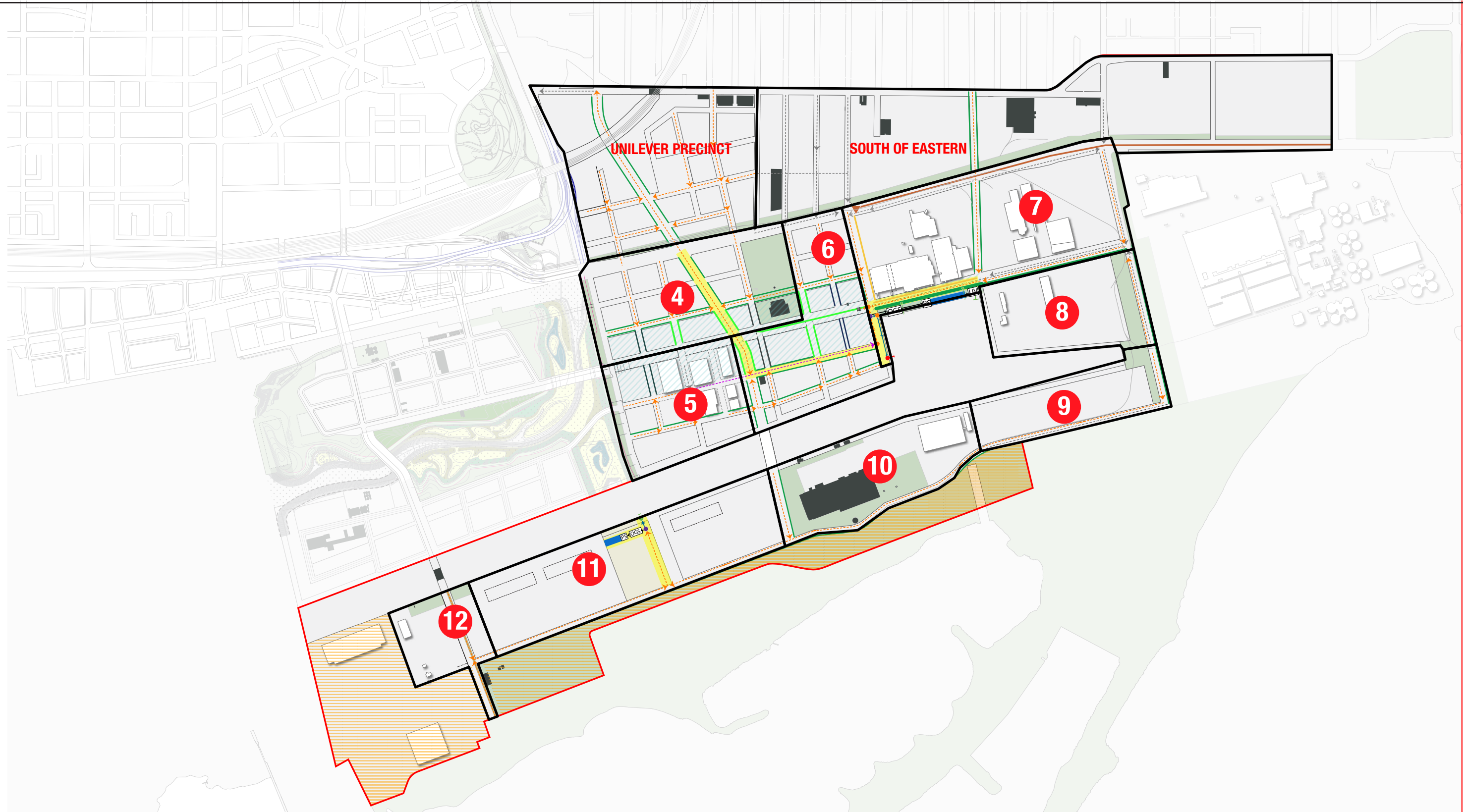
STM Concept - Water as a Resource
Lots to be redeveloped (Model)





CONCEPTUAL SECTION
N.T.S.

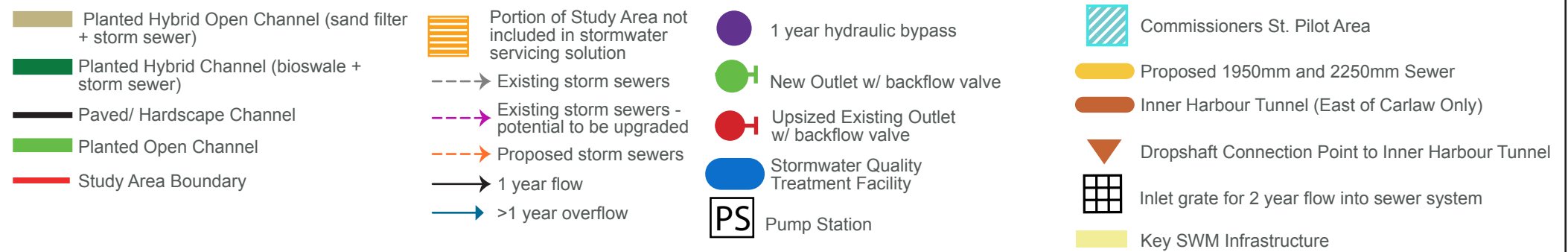
	PROJECT PORT LANDS TSMP – SWM	PROJECT NO. 13-8520
	TITLE HYBRID CHANNEL MODEL SCHEMATIC – MAJOR & MINOR SYSTEM RUNOFF INTERACTION	FIGURE NO. 17
DATE NOV 25, 2016		



**Port Lands and South of Eastern
Transportation and Servicing Master Plan**

Figure 18

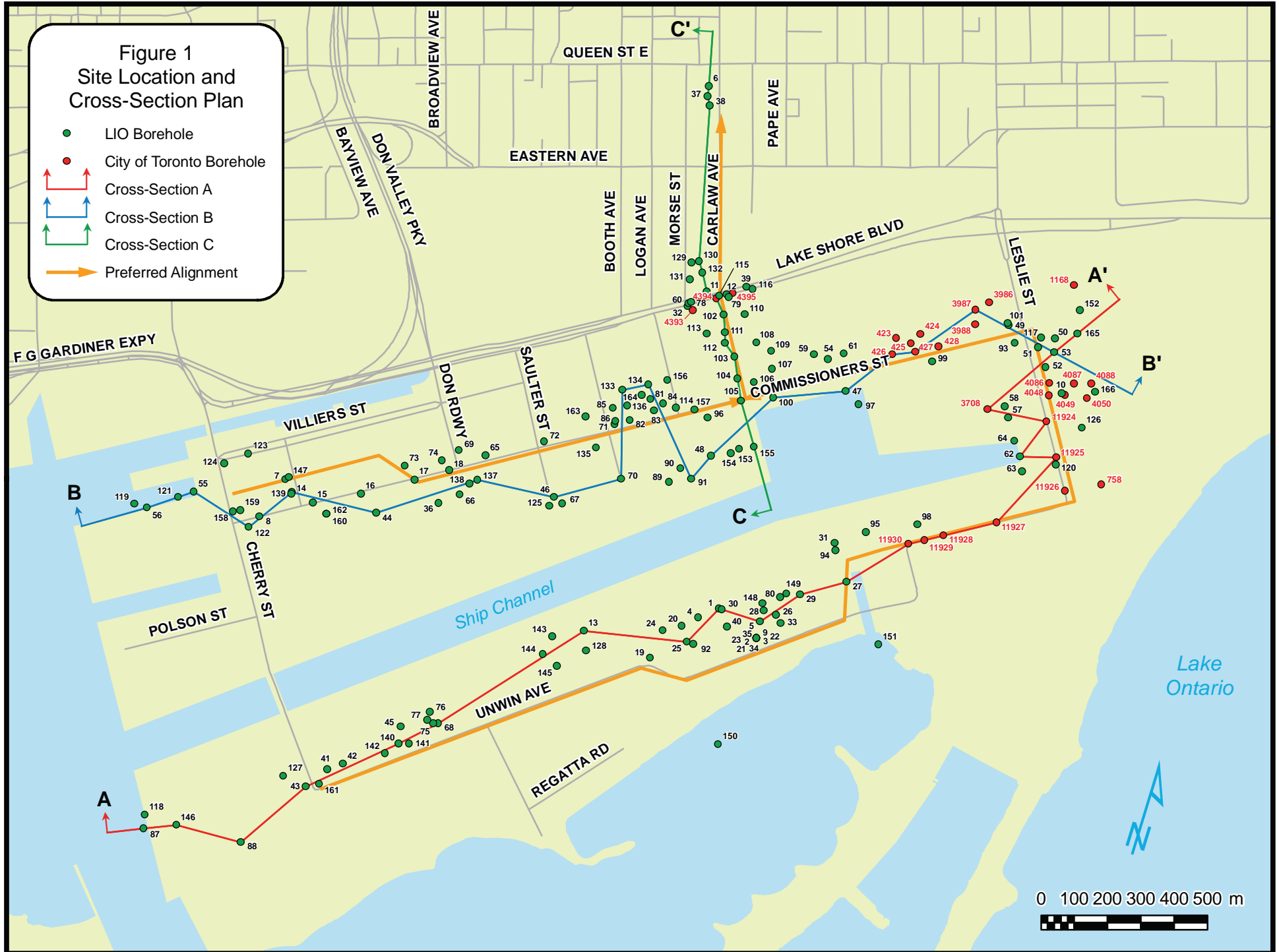
Water as a Resource
Block and Key Infrastructure Plan



APPENDICES

APPENDIX A

Port Lands TSMP Existing Conditions – Geotechnical Cross-Sections



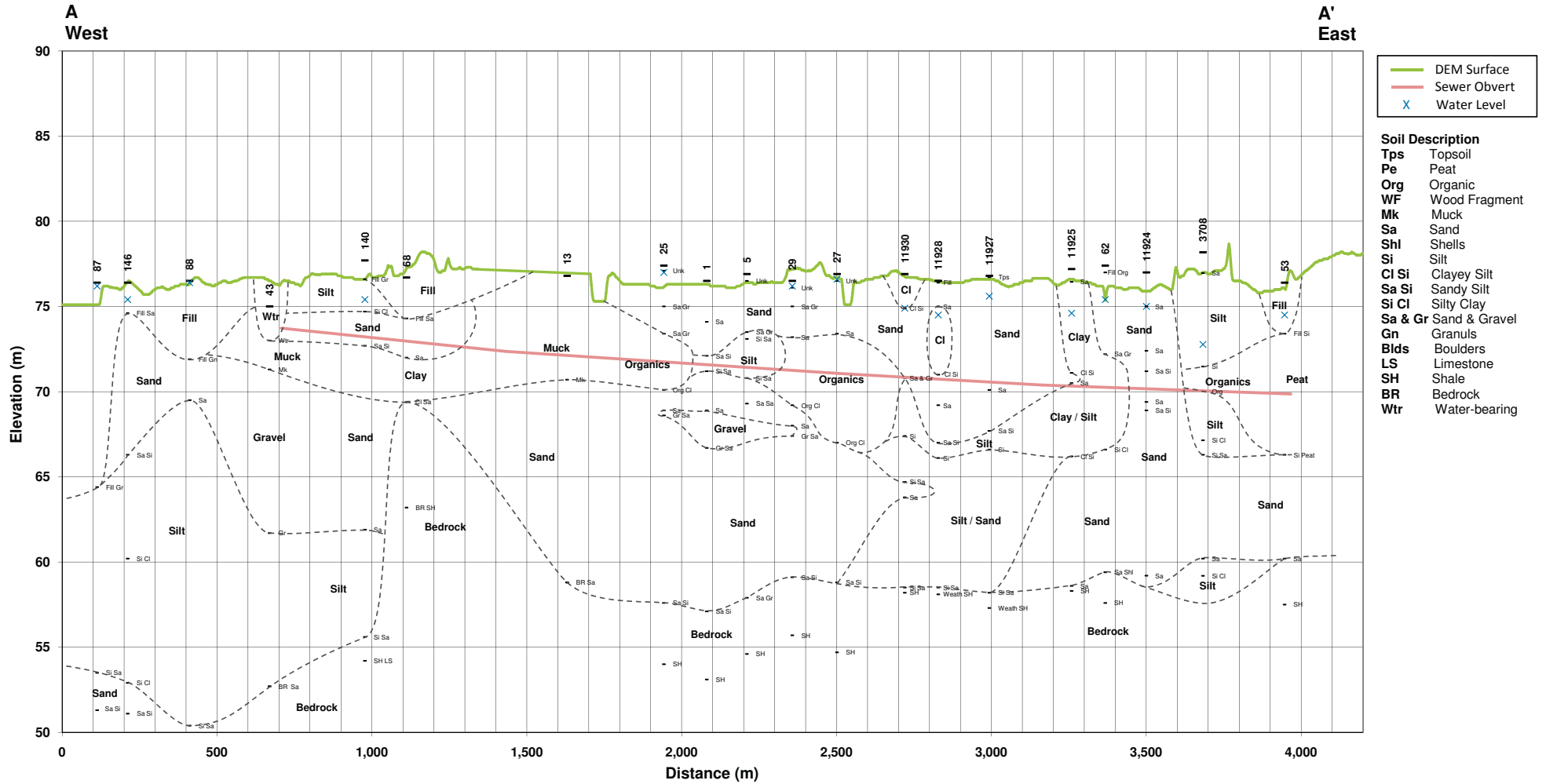


Figure 2 - Cross-Section A-A' Profile

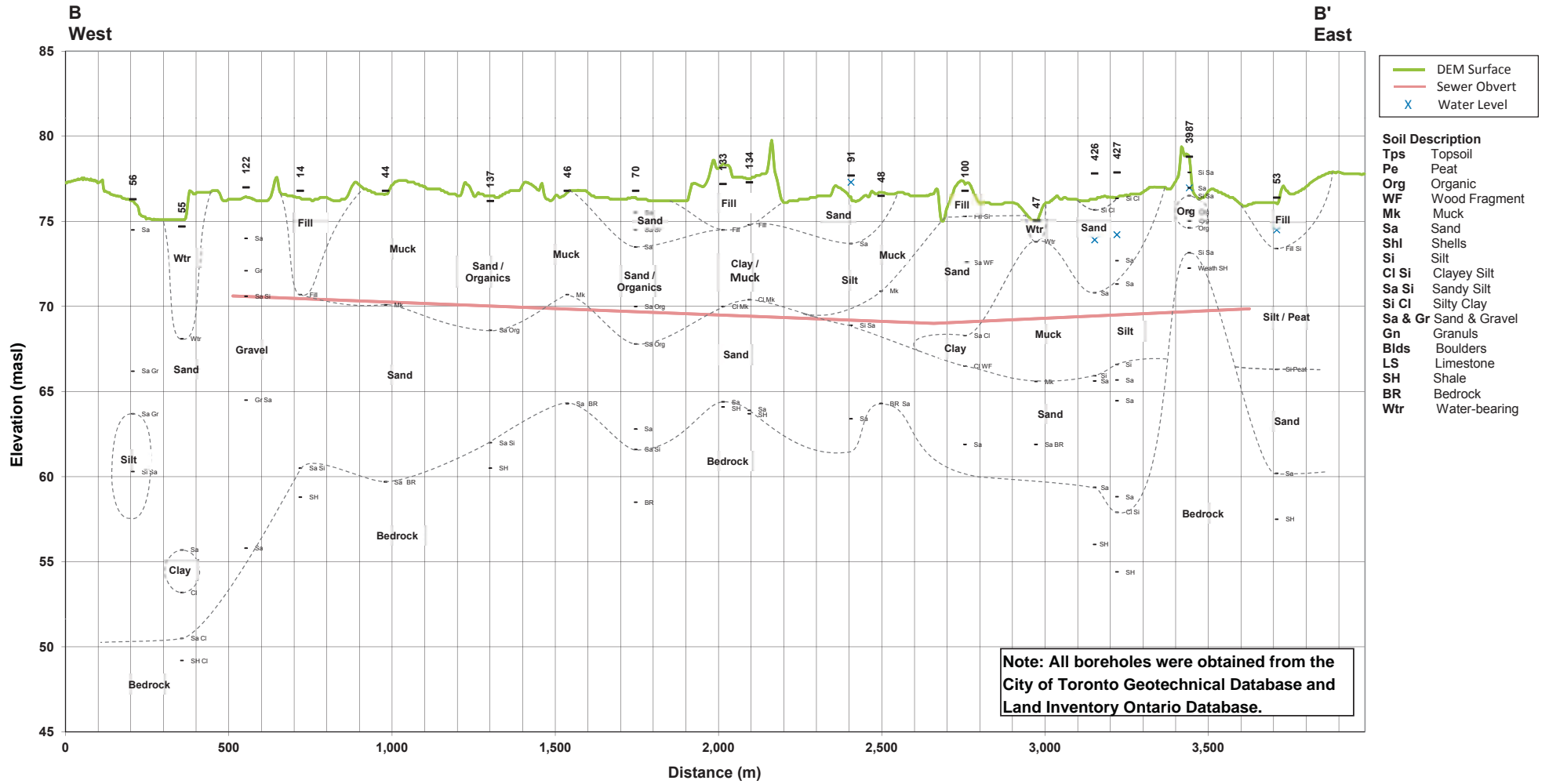


Figure 3 - Cross-Section B-B' Profile

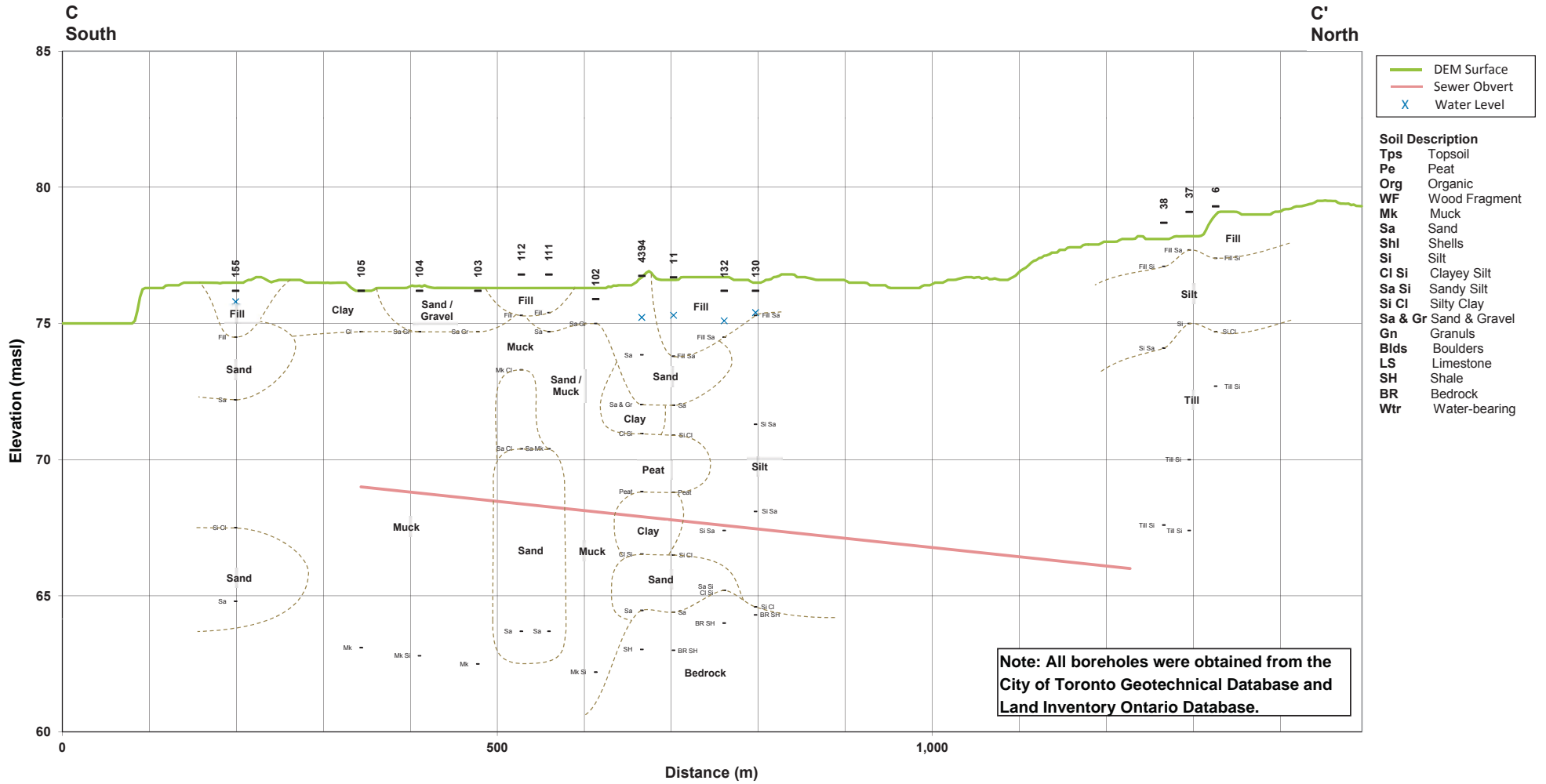


Figure 4 - Cross-Section C-C' Profile

APPENDIX B

Revised Concept Modelling Assumptions Table

Table 1 – SWM Concept & Modelling Assumptions Table (To Be Read In Conjunction with updated SW Concept Figures)

Item	Concept Description	Concept/Modelling Assumptions	Modelling Parameters
<p>1. Water as a Resource Concept Overview</p>	<p>LID-based SWM strategy. Stormwater managed with open channels and/or conventional storm sewer system. Includes one pilot area with open channels only for SWM, and hybrid channels on major and minor streets in non-pilot areas. There are four main types of channels, as shown in Figure 8-1:</p> <ul style="list-style-type: none"> § Planted Open channels; § Planted Hybrid Open Channel – bioswales & storm sewer; § Planted Hybrid Open Channel – sand filter & storm sewer; and, § Paved Open Channels. <p><u>Areas to be Redeveloped</u></p> <ul style="list-style-type: none"> • Water Quantity: <ul style="list-style-type: none"> § Major and minor storm runoff from properties that are to be redeveloped will be controlled to the allowable release rate (2-yr) and directed to proposed storm sewer system. § Major and minor storm runoff from ROW will be managed by roadways and hybrid channels/sewers. • Water Quality: <ul style="list-style-type: none"> § 80% TSS removal to be achieved on-site before discharge to storm sewers. § Flows from proposed laneways within development properties to achieve 80% TSS removal. § For proposed ROW, 80% TSS removal from ROW to be achieved (future design consideration). • Water Balance: <ul style="list-style-type: none"> § 5mm retention to be achieved for properties to be redeveloped. <p><u>Areas to Remain in Existing Conditions</u></p> <ul style="list-style-type: none"> • Water Quantity: <ul style="list-style-type: none"> § Major and minor runoff from properties to remain in existing conditions will discharge to the existing storm sewer system (South of Eastern area) or proposed storm sewer system (for East Port area) and major overland system without any restriction in flows. • Water Quality: <ul style="list-style-type: none"> § No TSS removal from these properties would be applicable. Water Balance: <ul style="list-style-type: none"> § No provisions for on-site water retention for these properties. 	<ul style="list-style-type: none"> • The proposed minor system will be sized to accommodate the 2-yr storm, based on a pre-development peak flow rate and a runoff coefficient of 0.5, as per the City's Wet Weather Flow Management Guidelines • Planted hybrid open channels (hybrid channels) on major streets (i.e. Broadview, Carlaw, Caroline, Leslie, Unwin, Cherry and Commissioners' east of Carlaw) will be modelled as follows: <ul style="list-style-type: none"> § Both storm sewer and open channel elements to be modelled § Overland flow from ROW (and not redevelopment properties) will be directed to the channel before discharging 2-yr flow to the minor storm system. § Open channels and roadways to convey major overland flows based on allowable depths/spread defined in the WWFMG. • Planted hybrid channels on minor streets (i.e. Street 6, Street 7 and Basin Street) will be modelled as follows: <ul style="list-style-type: none"> § Only storm sewer element to be modelled, no open channels § Minor system flows from ROW will be directed to storm sewers. Overland flow from ROW will be managed within roadway based on allowable depths/spread defined in the City's WWFMG. • Current scope of modeling with respect to external area contributions is based on: <ul style="list-style-type: none"> § Including external area contributions for major system flows based on the City's existing Area 32 model. § Excluding external area contributions for minor system flows, based on which the performance of the existing storm sewer system in areas to remain (i.e. South of Eastern and East Port) will not be included in this scope of work. For storm sewer sizing purposes, the major system flows from the areas to remain will be accounted for in the proposed separate storm sewer system and hybrid channels in the East Port area. See <i>Item 3 of this Table for further detail.</i> • Properties and areas to remain as existing are assumed not to have any site storage or discharge controls for modelling purposes. These properties may in actuality have site storage and discharge controls, however due to the limited information available, the level and type of control (if any) are unknown at this stage; and the more conservative assumption of no controls was made. • Possible methods of TSS removal will be reviewed and included in Order of Magnitude Cost (OMC) estimates. A description of the recommended solution will be included in the Stormwater Functional Servicing Report (SWM FSR) • Grading: 0.5% minimum slopes in roadways are to be maintained for local drainage using saw-tooth grading. Overall overland grading is identified on the proposed grading plan, as shown in Sheet 01. Locations having >0.5% slope are to be identified as per grading comments received from the City. • As agreed upon with the City, accounting for a 5mm initial abstraction in the model means that details of perviousness/imperviousness levels on development sites do not need to be considered at this stage. Parks and open spaces will be accounted for in the model as per the 2016-08-31 Parks and Open Spaces System PDF and CAD plans provided by the City. 	<ul style="list-style-type: none"> • Lake level boundary conditions: <ul style="list-style-type: none"> § Up to 2-yr event: LL= 75.7m § From 2-yr event up to the 100-yr event: LL = 75.2m • Initial 5mm of rainfall for water balance will be an initial abstraction in the model for the properties that are to be redeveloped and Publicly Accessible Open Spaces (POPs) but will exclude EA streets, conceptual local streets. • Road-Channel Interaction: Connecting weirs will be included in the model at manhole locations to allow flow exchange between road and channel. • Standard CB inlet capacity will be used (i.e. 47.6 L/s) considering no grate blockage. <ul style="list-style-type: none"> § As agreed upon with the City, the number of CBs within the ROW will be rounded down while the storm sewers will be designed for the 2-yr storm • Overland flows will be modelled based on the 100-yr, 4-hour storm duration (Chicago profile), and evaluated based on meeting the required overland flood depth criteria according to road classification. • As agreed upon with the City, the proposed minor system will not be required to achieve the Basement Flooding level of service of 1.80m of freeboard for the 100yr event.

Item	Concept Description	Concept/Modelling Assumptions	Modelling Parameters
2. Commissioners Street Pilot Area (See Area C on Figure 9)	<ul style="list-style-type: none"> • Water Quantity: Stormwater runoff will be uncontrolled from public roads and public spaces, and at-grade impervious areas from individual lots being redeveloped: <ul style="list-style-type: none"> § Major storm runoff directed and conveyed by roadways and planted and paved open channels § Minor storm runoff to be conveyed by planted and paved open channels • Water Quality: A treatment train approach will be required to achieve 80 % TSS removal and will incorporate lot level controls as well as conveyance and end of pipe controls within the pilot areas (future design consideration). • Water Balance: 5mm of rainfall will be retained on site for those areas to be redeveloped. 	<ul style="list-style-type: none"> • All runoff from the properties being redeveloped will be directed to the planted open channel on Commissioners Street • It will be assumed that existing development to remain within the Pilot Area (i.e. Pinewood Studio buildings) will continue to be served by existing storm sewers which will be upgraded to allow for minor system flows from the Unilever Precinct and remainder of the Film Studio District. The 1-yr flows from the Pinewood Studio buildings will be directed to the proposed SWQTF at the Turning Basin through the upgraded existing sewer (as shown in Figure 8-1). • The 1-year flows from the pilot area are to be treated at the SWQTF at the Turning Basin. Minor system flows from the Commissioners Street open channel will be directed towards the proposed 1-year hydraulic diversion structure via an inlet catchbasin (see Figure 6A). Flows greater than the minor system flows (2-year flows) will continue to the hybrid channel on Commissioners at the Turning Basin where they will be discharged via the two new outlets from the channel. • As per discussions with the City, the Pinewood Studios have been modelled as meeting the WWFMG with 5mm of initial rainfall abstraction and allowable release rate based on a runoff coefficient of 0.5. • Planted Open Channels on Commissioners' Street and smaller north south streets will be modelled to convey major and minor system flows. • Paved open channels on minor streets within the pilot area are not to be modelled since these flows are considered minimal. Major and minor flows from properties adjacent to the paved open channels will be directed to the Commissioners St. planted open channel. 	<ul style="list-style-type: none"> • For the pilot area, Dillon/CH2M will aim to limit the channel invert at Commissioners St and Carlaw to an elevation of 75.7 m to ensure free outflow to lake, however this will need to be verified by modelling. • There will be two (2) new discharge locations from the Commissioners St. Channel for flows greater than the 2-year storm. The proposed new outlets from the open channel will be installed underneath the existing utilities at the Turning Basin and will have a backflow valve to prevent inflow into the channel. The two outlets are needed due to the narrowed width of the channel in this area.
3. Portion of Study Area to Remain Being Served by Existing Storm Sewer System	<p>North of Ship Channel</p> <ul style="list-style-type: none"> • Minor system for Area E on Figure 9: <ul style="list-style-type: none"> § This area will remain being served by the existing storm sewer system with its existing outlets at the Turning Basin (at Caroline and at Carlaw). § 1-year flows from minor system to be directed to IHT at Carlaw via proposed 1950/2550 mm, as determined by the City. (See Figure 8-1 and Table 2 for details). § Flows greater than the 1-year flows from minor system will continue being discharged to the Turning Basin via existing outlets. § Based on the City's direction not to consider external area flows conveyed by the minor system through the TSMP study area, existing storm sewers within the study area will not be evaluated. § It is expected that the City and IHT team will assess the capacity of existing storm sewers to adequately convey flows from the areas to remain. • Minor System for Area A on Figure 9: <ul style="list-style-type: none"> § Proposed storm sewer system will connect to existing sewer on Eastern Avenue with existing outlet to Don River (There will not be a pump station to serve proposed Broadview underpass, as previously reviewed and confirmed by the City). 	<p>North of Ship Channel</p> <ul style="list-style-type: none"> • Existing developments, as well as properties to be redeveloped within these areas (i.e. South of Eastern area, and north of CN Rail) would be connected to the existing minor system. • 1-year flows will be provided to the City for sizing verification of proposed flow interception into IHT. • Overland drainage system will include an overflow spill location at the intersection of Commissioners St/Caroline Ave towards the Turning Basin • For mitigation of existing low points on Booth and Logan, the potential impacts of upgrades to existing sewers on existing buildings will be reviewed as part of the modelling exercise. The existing east-west storm sewer downstream of the existing heritage building will be addressed from a constructability perspective should it be determined that upgrades are required to mitigate ponding depths at the existing low points on Booth and Logan. The City will be advised as soon as results are available. • Due to the limited number of properties identified for redevelopment in the South of Eastern area, the model will be based on existing conditions without any runoff controls. This assumption will not have a significant impact on storm runoff rates, and will provide a degree of conservativeness that may be beneficial at this level of detail. • Existing outlet to Don River is part of City's Area 32 model; no modifications are proposed to the existing outlet or existing storm sewer on Eastern. • Existing sewers that do not provide sufficient conveyance capacity to meet minimum 2-year level of service criteria or the overland criteria will be identified and highlighted in the SWM FSR. <ul style="list-style-type: none"> § For the minor system in the South of Eastern and East Port areas, the conveyance capacity of the existing storm sewers is <u>not</u> to be assessed/evaluated since the 	<ul style="list-style-type: none"> • Inlet capacity will not be adjusted in ROWs that are to remain as existing unless improvements are required to meet the overland criteria.

<p>3 ctd.</p>	<ul style="list-style-type: none"> • Minor System for Area F on Figure 9: <ul style="list-style-type: none"> § Existing storm sewer system with existing outlet to Ashbridges' Bay. • Major system for Areas C2 and D on Figure 10: <ul style="list-style-type: none"> § Roadways and planted hybrid open channels (bioswales and storm sewer) along Caroline Av, Carlaw Av, Leslie St. and Commissioners St (east of Turning Basin) to convey overland flows to Turning Basin. • Major system for Area A on Figure 10: <ul style="list-style-type: none"> § Major system overland flows would outlet to the Don River by gravity through existing/proposed minor system. • Major system for Area E on Figure 10: <ul style="list-style-type: none"> § Roadways to convey overland drainage to Ashbridges' Bay. 	<p>exclusion of external area flows would not allow for representative results. No upgrades will be proposed for the existing infrastructure; however, a separate local storm sewer system for the East Port area is proposed to account for the flows from properties in the area for modelling purposes. The existing infrastructure is currently connected to the large box culverts on Commissioners, Carlaw and Leslie, and as agreed upon with the City, there will be no additional discharge from the Port Lands study area into these sewers.</p> <p>§ For the major system in the South of Eastern and East Port areas, external area flows will be included to confirm overland flow depths resulting from both sewer surcharging and overland flow. The major system requirements are proposed to be addressed as follows:</p> <ul style="list-style-type: none"> i) Locations that do not meet overland flow depth requirements will be highlighted and recommendations for additional inlet capacity and updates to the existing minor system are to be provided in the SWM FSR; and ii) The conveyance capacity of the proposed separate storm sewer system in the East Port area will be adjusted to relieve overland flooding upstream. (See Item 4) 	
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Item	Concept Description	Concept/Modelling Assumptions	Modelling Parameters
<p>4. Portion of Study Area to be Served by Hybrid Channel and New Storm Sewer System</p>	<p><i>North of Ship Channel:</i></p> <ul style="list-style-type: none"> • Minor system for Areas B and D on Figure 9: <ul style="list-style-type: none"> § New storm sewer system with upsized outlet at Carlaw and Street 7 that discharges to Turning Basin § 1-year flows from minor system to be pumped to new SWQTF at Turning Basin, with the option to direct flows to IHT. (See Table 2 for details) § Flows greater than the 1-year flows from minor system to be discharged to Turning Basin via improved outlet on Carlaw and Street 7 (see Figure 8-1 for schematic). • Major system for Areas B and C1 on Figure 10: <ul style="list-style-type: none"> § Roadways and Planted Hybrid Open Channels (bioswales and storm sewer) along Broadview Av., Street 6 and Street 7 to convey overland flows to Turning Basin and Ship Channel. <p><i>South of Ship Channel:</i></p> <ul style="list-style-type: none"> • Minor System for Area G on Figure 9: <ul style="list-style-type: none"> § New storm sewer system with new outlet at Don Greenway Park (DGP) that discharges to Ship Channel § 1-year flow from minor system to be pumped to new SWQTF at DGP (See Table 2 below for details) § Flows greater than 1-year flows from minor system to be pumped to DGP and overflow to Ship Channel • Major System for Area F on Figure 10 <ul style="list-style-type: none"> § Roadway and Planted Hybrid Open Channel (bioswale/sand filter and storm sewers) on Unwin Ave and Cherry St. to convey overland flows to DGP/Ship Channel • Major System for Area G on Figure 10 <ul style="list-style-type: none"> § Roadway and Planted Hybrid Open Channel (bioswale and storm sewers) on Unwin Ave to convey overland flows to PEC Channel. 	<p>North of Ship Channel</p> <ul style="list-style-type: none"> • Major and minor system flows for the redevelopment properties will be stored and released at the corresponding pre-development peak flow rates based on a runoff coefficient of 0.5 (i.e. percent imperviousness of 43%). Runoff in excess of the proposed controls will be stored on-site. No flow restrictions will be modelled for properties to remain as existing, and peak flow calculations will be based on existing conditions percent imperviousness. • For proposed hybrid channels on Street 7, an inlet catchbasin will divert minor system flow into the storm sewer system. Overland flows will be directed south to the Ship Channel. • Minor flows from properties to be redeveloped will be connected to the upsized existing sewer on Basin St (which outlets to the Ship Channel via the improved/upsized outlet). • The existing storm sewer system on Basin Street (which will be upsized) will continue to convey runoff from the Pinewood Studios buildings. • Overland flow route will include spill locations to the Ship Channel at Saulter St, Bouchette St, Logan Ave, and Carlaw Ave, generally shown in Figure 10. • Overland system will include an overflow spill location to the Turning Basin both at Carlaw and Caroline Ave assuming a curb level +0.20m from road elevation. • Overland flows in this area will be predominantly from the ROW and public spaces since properties to be redeveloped will be modelled based on meeting the WWFMG criteria. Properties to remain as existing will be modelled based on existing conditions without any runoff controls. The Pinewood Studios buildings will be modelled based on meeting the WWFMG. • Street 7 east and west of the proposed Broadview extension will be graded away from Broadview with respect to overland drainage • The planted open channel element of the hybrid channels on Street 7 and Street 6 are not to be modelled (only the proposed storm sewers will be modelled). • The planted hybrid channel previously shown on Basin St., west of Broadview has been removed due to the lack of an appropriate drainage outlet. • A revised concept for the East Port area will be modelled as follows: <ul style="list-style-type: none"> § A separate local storm sewer system will be introduced for the East Port Area only § The proposed hybrid channels in the area will connect into separate local storm sewer system § The separate local storm sewer system will direct 1-year flows to the SWQTF at the Turning Basin. 	<ul style="list-style-type: none"> • Water Quality (80% TSS) is not to be modelled. • For proposed ROWs, inlet capacity to the minor system will be restricted to the 2-yr peak storm flow. • The proposed pump station wet well north of the Ship Channel will be sized for 1-yr flow conveyance based on the 1-year flow/volume. A hydraulic diversion structure will be placed upstream of the pump station to pump only the 1-year flows to the wet well. Flows above the 1-year event will overflow from the diversion structure by gravity to the Turning Basin. • The proposed pump station wet well south of the Ship Channel will be sized for the 1-year flow conveyance based on 1-year flow volume. A hydraulic diversion structure will be placed upstream of the pump station to pump only the 1-year flows to the Pump Station. Flows above the 1-year will overflow to the Ship Channel through the Don Greenway Park from the diversion structure. • Potential conflict between OPG gas main and channels. <ul style="list-style-type: none"> § A 20" gas main crosses Commissioners at depth of 1.5 – 2m. There are expected to be conflicts with the crossing of the planted open channel on Commissioners over the gas main. There is a similar scenario on Unwin Avenue, for proposed channel where gas main runs at elevation between 74 and 75 m. A potential channel break may be needed, including siphon to interconnect channels. Elevations for the gas mains will be compared to the proposed channel depth, based on which any needed breaks or siphons will be modelled. The City will be notified if there are any concerns.

Item	Concept Description	Concept/Modelling Assumptions	Modelling Parameters
4 ctd.		<p>South of Ship Channel</p> <ul style="list-style-type: none"> • Planted hybrid open channels will be designed to contain the 2-year flows which will be discharged to the storm sewer system. Overflows from the hybrid channels will occur under major overflow events only. Overflows from the westerly portion of the proposed channel on Unwin Avenue will discharge to the DGP via a new outlet to the Ship Channel, and the overflows from the easterly portion of the channel will discharge to the PEC channel, as shown on Figure 10. The interaction between the channel and perforated pipe system will be documented in the Stormwater FSR. • Modelling will assume that lands south of Ship Channel have redeveloped and implemented changes to meet WWFMG and other applicable legislation, similar to other redevelopment areas in the study area. The minor storm sewer system will be designed for 2-year runoff from the redeveloped properties, discharging to the new outlet at the DGP. <ul style="list-style-type: none"> § There is the potential for utility conflicts at the PEC discharge location. The need for sub-surface investigations in future detailed design stages will be documented in the SW FSR. • Major system flows into planted hybrid open channels will be from ROW and public spaces only since properties to re-develop will control flows as per water quantity criteria listed in Item 1. 	

Table 2: Disinfection – Water as a Resource only (To Be Read In Conjunction with SW Concept Figures)

	Concept Description	Concept & Modelling Assumptions	Modelling parameters
North of Ship Channel – Unilever Precinct, East Port Area and Film Studio District including Commissioners Street Pilot Area (Area B on Figure 11)	<ul style="list-style-type: none"> 1-year flows are to be directed to the proposed SWQTF facility at Turning Basin, with the option to outlet to the Inner Harbour Tunnel at Carlaw via the proposed 1950/2550 mm storm sewers. <ul style="list-style-type: none"> § A hydraulic diversion structure will direct the 1-year flows to a proposed pump station where it will be pumped to the SWQTF at the Turning Basin. Flows greater than the 1-year flow will outlet to the Turning Basin via gravity overflow. 	<ul style="list-style-type: none"> For the Unilever Precinct, Film Studio District and East Port area, the option to direct flows to the IHT via the proposed 1950/2550mm sewers will not be modelled. Flows above the 1-year storm event for these areas will be discharged to the Turning Basin. The 1-year flow rate from the East Port areas will be provided to the City (Toronto Water), assuming that 1-year flows from the South of Eastern area and the external areas north of Eastern Av. have been accounted for by the City's IHT team. It is assumed that areas to be redeveloped within this location will discharge into the proposed storm sewer network. The total pump station volumes for the 1-yr, 2-yr, and 100-yr storms (Chicago Distribution) will be provided to the City (Toronto Water) The proposed SWQTF north and south of the Ship Channel will be assumed to provide water quality treatment to achieve City effluent criteria. An approximate footprint of the proposed facility and a high level cost estimate will be prorated based on similar facility in the WDL. The proposed pump stations will likely be located within an easement on the corner of a property and outside the ROW. The size of the proposed pump stations will be verified by modelling and the proposed location, and need for private lands will be confirmed in the SWM FSR. The proposed flow-splitting mechanism will be specified in the FSR (e.g. weir vs overflow pipe) and a concept figure will be developed as part of the SWM FSR to describe how the flows will be split 	<ul style="list-style-type: none"> For the SWQTF at the Turning Basin, sizing of the pumping facilities will be done based on the 1-yr, 4-hour design storm (Chicago profile). For the SWQTF at the Don Greenway Park, sizing of the pumping facilities will be done based on the 1-yr, 4-hour design storm (Chicago profile) The pumping station will be added in the model as a simple one pump with one point head-discharge curve.
North of Ship Channel – South of Eastern Area (Area C on Figure 11)	<ul style="list-style-type: none"> 1-year flows from South of Eastern area are to be directed to Inner Harbour Tunnel via proposed 1950/2550 mm storm sewers and proposed Carlaw drop shaft (assessed by City's IHT Team). 		
South of Ship Channel (Area E on Figure 11)	<ul style="list-style-type: none"> 1-year flows are to be directed to the proposed SWQTF at Don Greenway Park <ul style="list-style-type: none"> § A hydraulic diversion structure will direct the 1-year flows to a proposed pump station where it will be pumped to the SWQTF at the Don Greenway Park. Flows greater than the 1-year flow will outlet to the Ship Channel via gravity overflow. 		
North of Ship Channel - South of Eastern (Areas A and D on Figure 11)	<ul style="list-style-type: none"> 1-year flows are directed to existing infrastructure and discharge with no treatment under existing conditions. Once the drop shaft at Lake Shore/Carlaw and the satellite treatment facility at Ashbridges' Bay are constructed, Area D will be treated (long-term). 	<ul style="list-style-type: none"> Area A discharges to the Don River with no treatment Area D discharges to Ashbridges' Bay without treatment Long-term concept not to be modelled 	

APPENDIX C

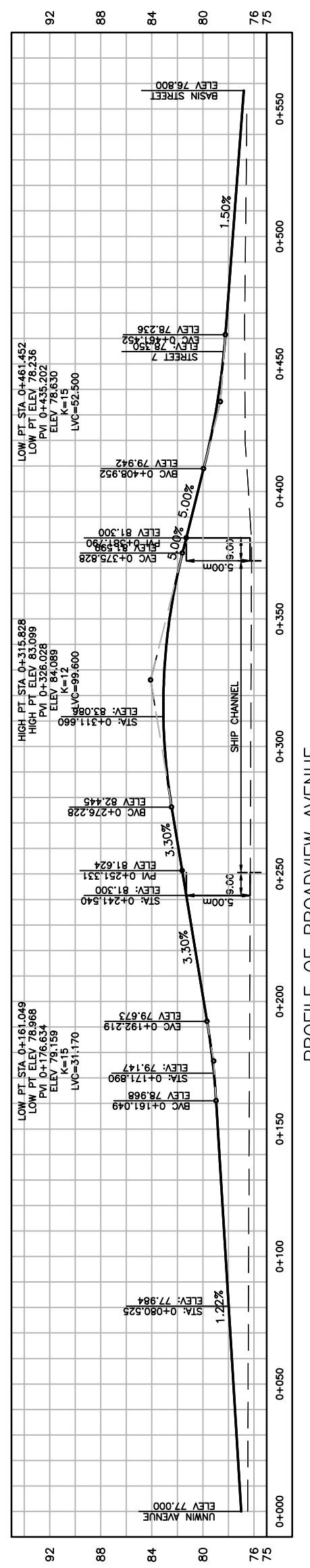
Grading Plan

LEGEND

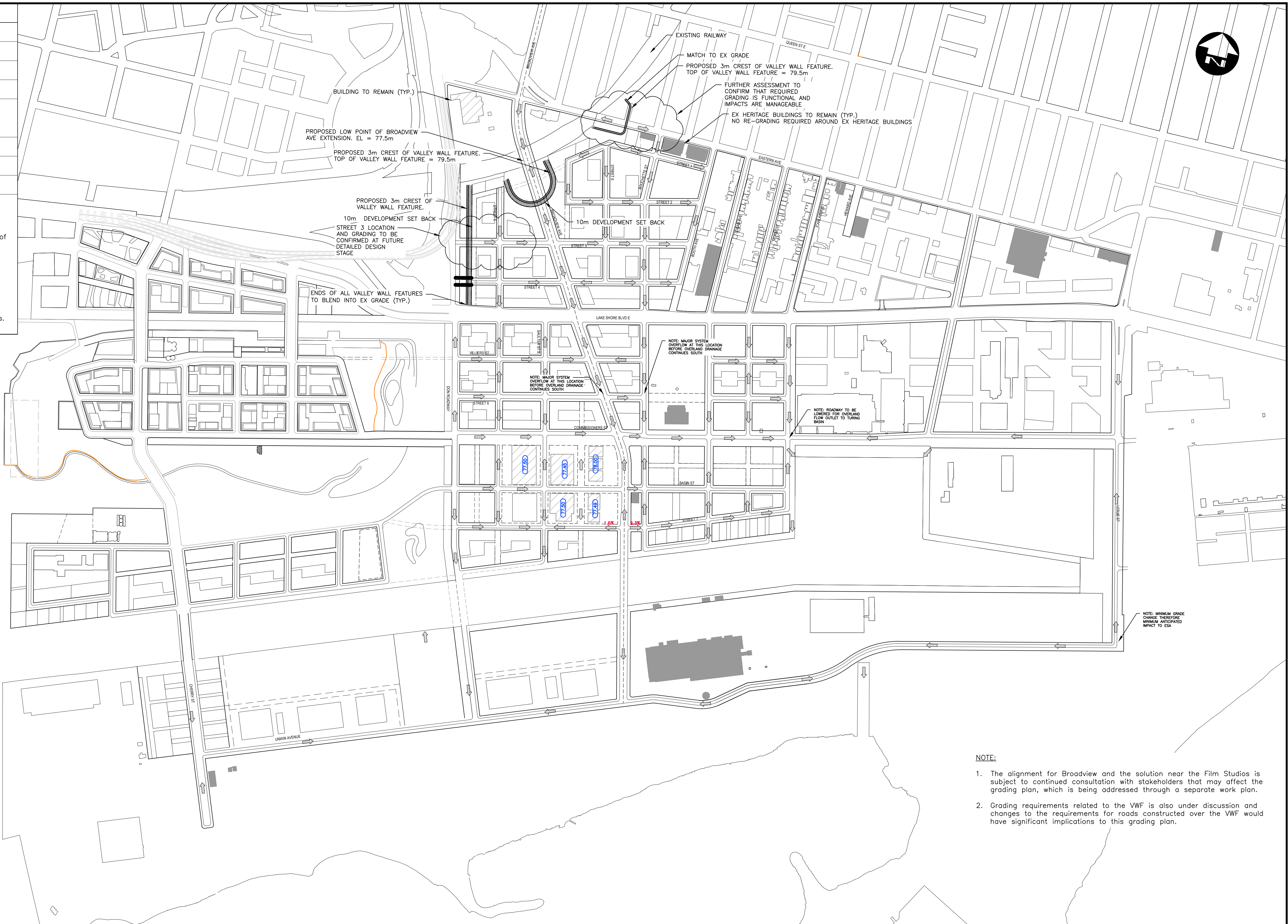
	PROPOSED TOP OF SLOPE
	PROPOSED TOE OF SLOPE
	EX MAJOR/MINOR CONTOURS
	VALLEY WALL FEATURE WITH 3m WIDE CREST AND 10m WIDE SET BACK
	PROPOSED ELEVATION
	EX ELEVATION AT PROPOSED LOCATION
	EX FINISHED FLOOR ELEVATION
	EX ELEVATION
	PROPOSED OVERLAND FLOW DIRECTION
	HERITAGE BUILDINGS/STRUCTURES

NOTE:

- Clearance shown is preliminary and based on achieving 6 metres from top of road to top of structure that meets the TTC's minimum required LFLRV pantograph height of 3962mm. Phase 3 of the Municipal Class EA process will address design and clearance requirements for the structure in more detail to a minimum 30% design and in consultation with relevant stakeholders.
- Grades shown are the minimum elevations required for flood protection. Additional fill may be required to provide sufficient depths for soil remediation/planting requirements and road sub-grades, to accommodate any services and/or associated appurtenances. Phase 3 of the Municipal Class EA process will further develop the grading plan to account for these requirements.



PROFILE OF BROADVIEW AVENUE FROM UNWIN AVE. TO BASIN ST.



NOTE:

- The alignment for Broadview and the solution near the Film Studios is subject to continued consultation with stakeholders that may affect the grading plan, which is being addressed through a separate work plan.
- Grading requirements related to the VWF is also under discussion and changes to the requirements for roads constructed over the VWF would have significant implications to this grading plan.

FILENAME: \\DILLON\CA\Dillon\DESIGN\WINDSOR\WINDSOR CAD\CAD\138520-TORONTO PORT LANDS\CIVIL\DESIGN\138520-02-GRF-REVISED-CONDWG PLOTTED BY: AMATO, JOSEPH WINDSOR, ONTARIO
 PLOT DATE: 2017-05-26 9:35:54 AM PLOT SCALE: 1:1 PLOT STYLE: DILLON-STANDARD.CTB

Conditions of Use

Verify elevations and/or dimensions on drawing prior to use. Report any discrepancies to Dillon Consulting Limited.

Do not scale dimensions from drawing.

Do not modify drawing, re-use it, or use it for purposes other than those intended at the time of its preparation without prior written permission from Dillon Consulting Limited.

PRELIMINARY

NOT FOR CONSTRUCTION



No.	ISSUED FOR	DATE	BY
7	CONTOURS ADDED	2016-11-22	FRF,RJZ
6	GRADING REVISED	2016-08-30	YA,RJZ
5	BROADVIEW GRADING REVISED OVER CHANNEL	2016-05-10	FRF,RJZ
4	STREET 7 RELOCATED	2016-04-21	FRF
3	3.5m PROM. CLEAR. & PINEWOOD GRADING	2016-02-20	FRF
2	2.5m PROM. CLEAR. & PINEWOOD GRADING	2016-02-10	FRF
1	PRELIMINARY REVIEW	2016-02-03	FRF

TORONTO PORT LANDS TORONTO, CORPORATION OF THE CITY	PROJECT NO. 13-8520
GRADING PLAN	SHEET NO. 01

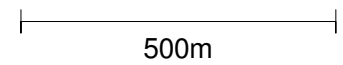
APPENDIX D

Model Sub-catchment Lots

Portlands development - STM Model
Appendix D : CH2M HILL model - Modelled
subcatchment lots within study area



Map Centre Coords
x: 317789, y: 4834364
Date Printed: 2/8/2016
Scale 1:12000



APPENDIX E

POPs and ROW Land Use Tables

Table 1 – Port Lands/South of Eastern Parks and Open spaces. Port Lands Planning Framework.
Pervious/Impervious surfaces

Ref. Number	Property/ Subcatchment Name	Area [ha]	Paved Area [%]	Connected Roof Area [%]	Disconnected Roof Area [%]	Permeable Area [%]
80	Don Green way_south	3.78	20.0	0.0	0.0	80.0
97	FilmEast_H	0.23	26.8	0.0	0.0	73.2
100	FilmEast_K	0.37	26.8	0.0	0.0	73.2
101	FilmEast_park	0.35	26.8	0.0	0.0	73.2
118	FilmWest_park	0.78	20.0	0.0	0.0	80.0
119	FilmEast_G	0.33	90.4	0.0	0.0	9.6
120	Hearn	10.17	81.3	0.0	0.0	18.7
123	McCleary_Park_A	2.64	44.8	0.0	0.0	55.2
124	McCleary_park_B	1.06	44.8	0.0	0.0	55.2
126	MH_East_park	0.25	65.0	0.0	0.0	35.0
128	MH_West_park	0.37	65.0	0.0	0.0	35.0
131	PastoralGatewayWest_park1	0.74	20.0	0.0	0.0	80.0
132	PastoralGatewayWest_park2	0.75	20.0	0.0	0.0	80.0
133	PastoralGatewayWest_park3	0.32	20.0	0.0	0.0	80.0
148	Subarea1_10	0.39	79.8	0.0	0.0	20.2
149	Subarea1_11	0.52	79.8	0.0	0.0	20.2
150	Subarea1_13	0.83	79.8	0.0	0.0	20.2
151	Subarea1_14	1.10	79.8	0.0	0.0	20.2
152	Subarea1_15	1.09	79.8	0.0	0.0	20.2
153	Subarea1_16	1.25	79.8	0.0	0.0	20.2
154	Subarea1_17	0.71	79.8	0.0	0.0	20.2
155	Subarea1_19	0.71	79.8	0.0	0.0	20.2
156	Subarea1_2	0.88	90.0	0.0	0.0	10.0
157	Subarea1_20	0.98	79.8	0.0	0.0	20.2
158	Subarea1_21	0.75	79.8	0.0	0.0	20.2
159	Subarea1_22	0.65	79.8	0.0	0.0	20.2
160	Subarea1_23	1.19	79.8	0.0	0.0	20.2
161	Subarea1_24	0.95	79.8	0.0	0.0	20.2
162	Subarea1_3	1.49	79.8	0.0	0.0	20.2
163	Subarea1_4	1.35	79.8	0.0	0.0	20.2
164	Subarea1_5	0.78	79.8	0.0	0.0	20.2
165	Subarea1_6	1.04	79.8	0.0	0.0	20.2
166	Subarea1_7	0.50	79.8	0.0	0.0	20.2
167	Subarea1_8	0.94	79.8	0.0	0.0	20.2
168	Subarea1_9	0.61	79.8	0.0	0.0	20.2
171	TurningBasin_park_1	0.53	100.0	0.0	0.0	0.0
172	TurningBasin_park_2	0.50	100.0	0.0	0.0	0.0

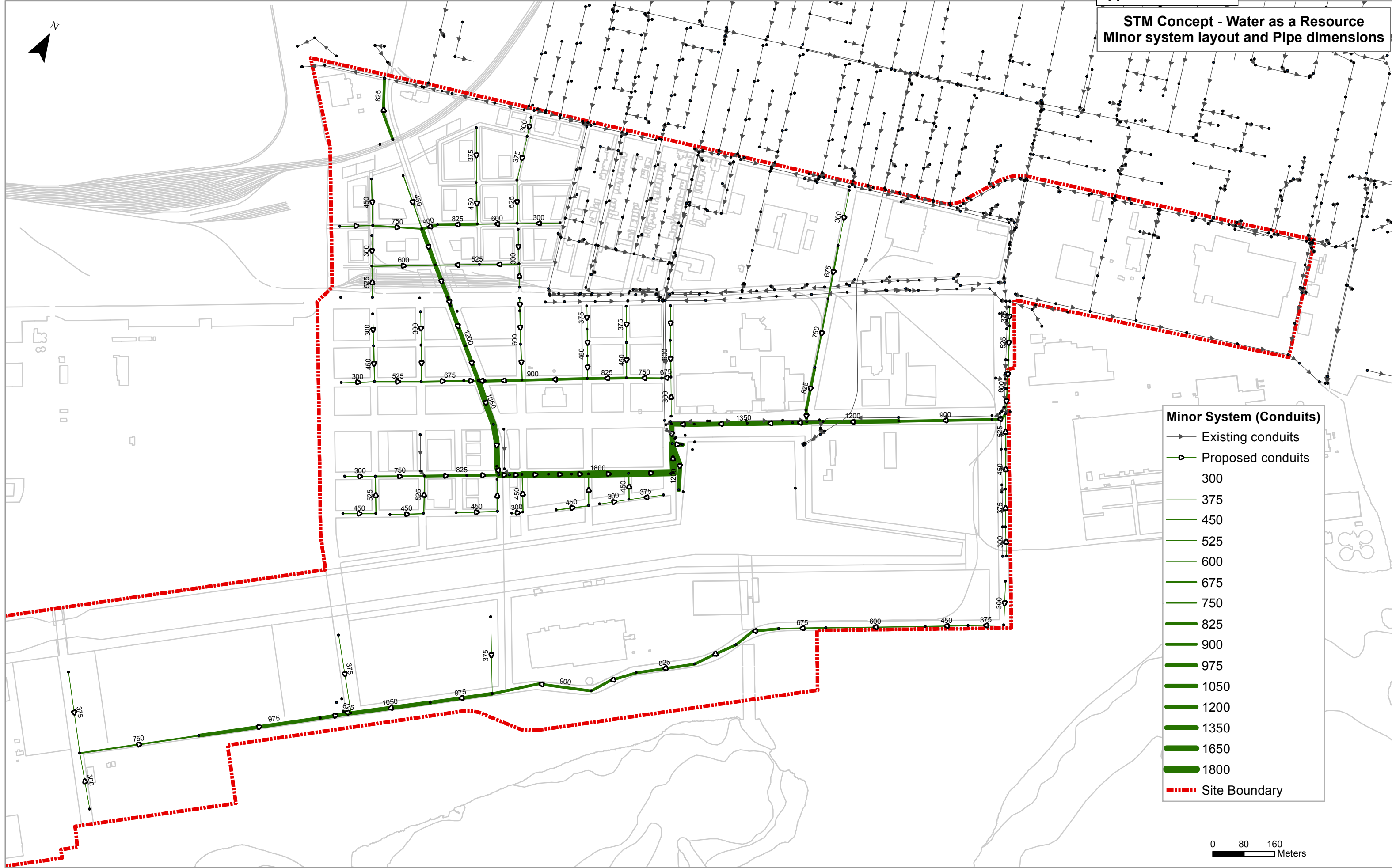
Table 2 – Port Lands/South of Eastern proposed Right-of-way. Port Lands Planning Framework.
Pervious/Impervious surfaces

ROW name	Paved Area [%]	Connected Roof Area [%]	Disconnected Roof Area [%]	Grassed/ Permeable Area [%]
Basin Street	86	0	0	14
bouchette Ave	86	0	0	14
Broadview Ave	87	0	0	13
Carlaw Street	74	0	0	26
Caroline Avenue	84	0	0	16
Cherry Street	45	0	0	55
Commisioners Road	72	0	0	28
Don Roadway	78	0	0	23
Eastern Avenue	90	0	0	10
Leslie Street	69	0	0	31
Lakeshore Blvd	86	0	0	14
New Local 18.5m	90	0	0	10
Logan Avenue	84	0	0	16
New Local 23m	84	0	0	16
Unwin Avenue	78	0	0	22

APPENDIX F-1

Model Results – STM Conduit Dimensions

STM Concept - Water as a Resource
Minor system layout and Pipe dimensions



Minor System (Conduits)

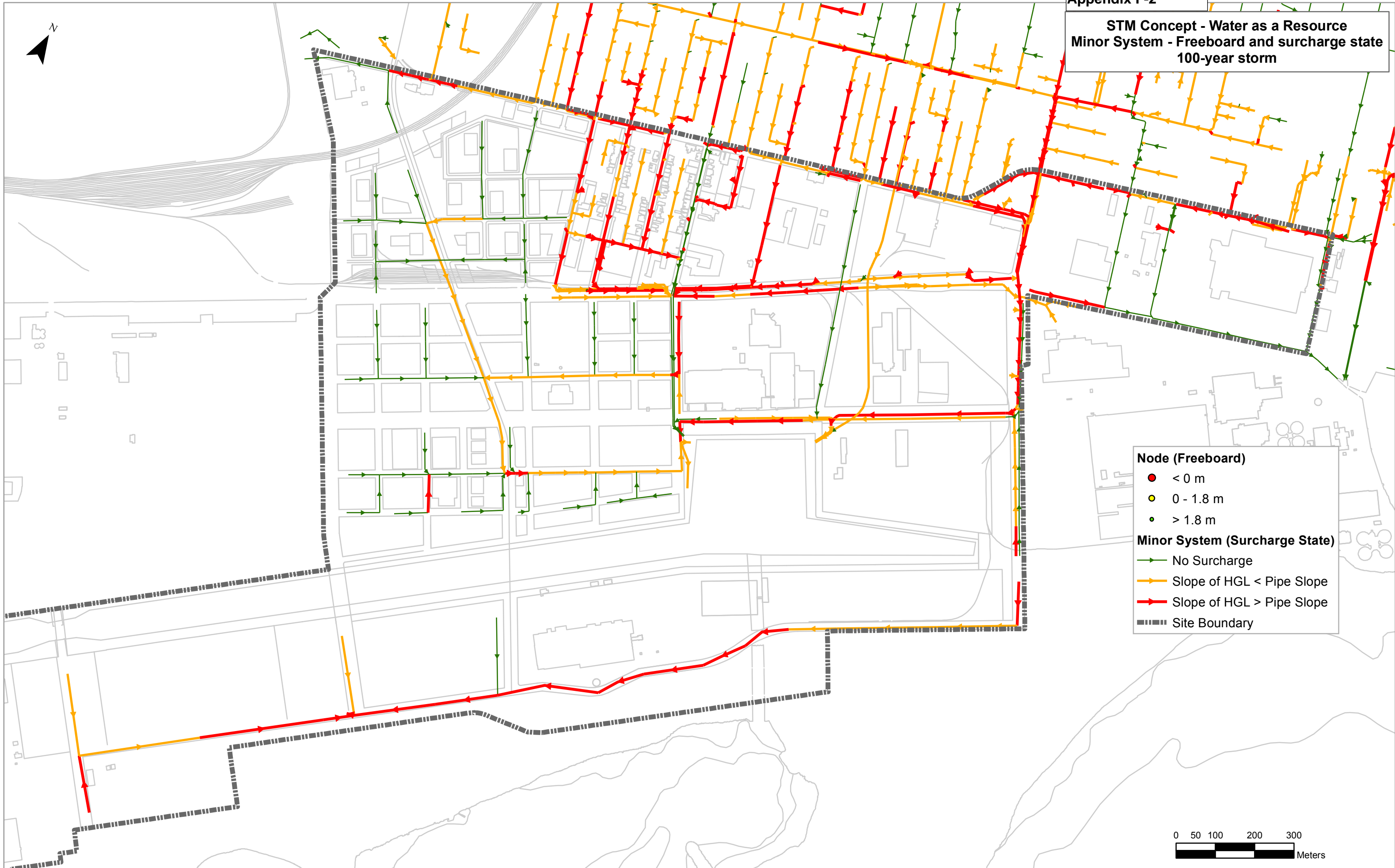
- Existing conduits
- Proposed conduits
- 300
- 375
- 450
- 525
- 600
- 675
- 750
- 825
- 900
- 975
- 1050
- 1200
- 1350
- 1650
- 1800
- Site Boundary

0 80 160
Meters

APPENDIX F-2

Model Results – STM Conduit (100-year)

STM Concept - Water as a Resource
Minor System - Freeboard and surcharge state
100-year storm



Node (Freeboard)

- < 0 m
- 0 - 1.8 m
- > 1.8 m

Minor System (Surcharge State)

- No Surcharge
- Slope of HGL < Pipe Slope
- Slope of HGL > Pipe Slope
- Site Boundary

0 50 100 200 300
Meters

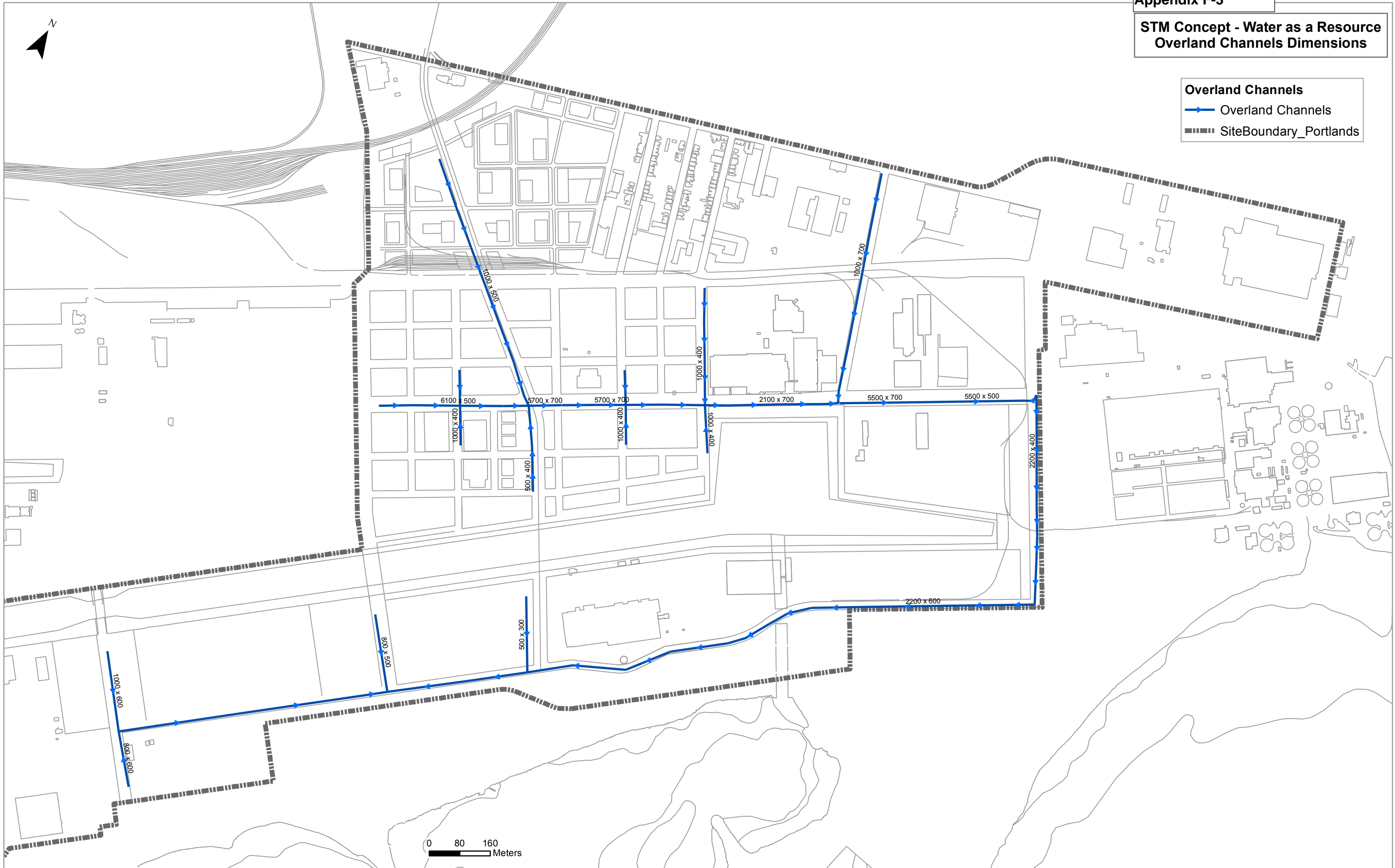
APPENDIX F-3

Model Results – STM Channel Dimensions

STM Concept - Water as a Resource
Overland Channels Dimensions

Overland Channels

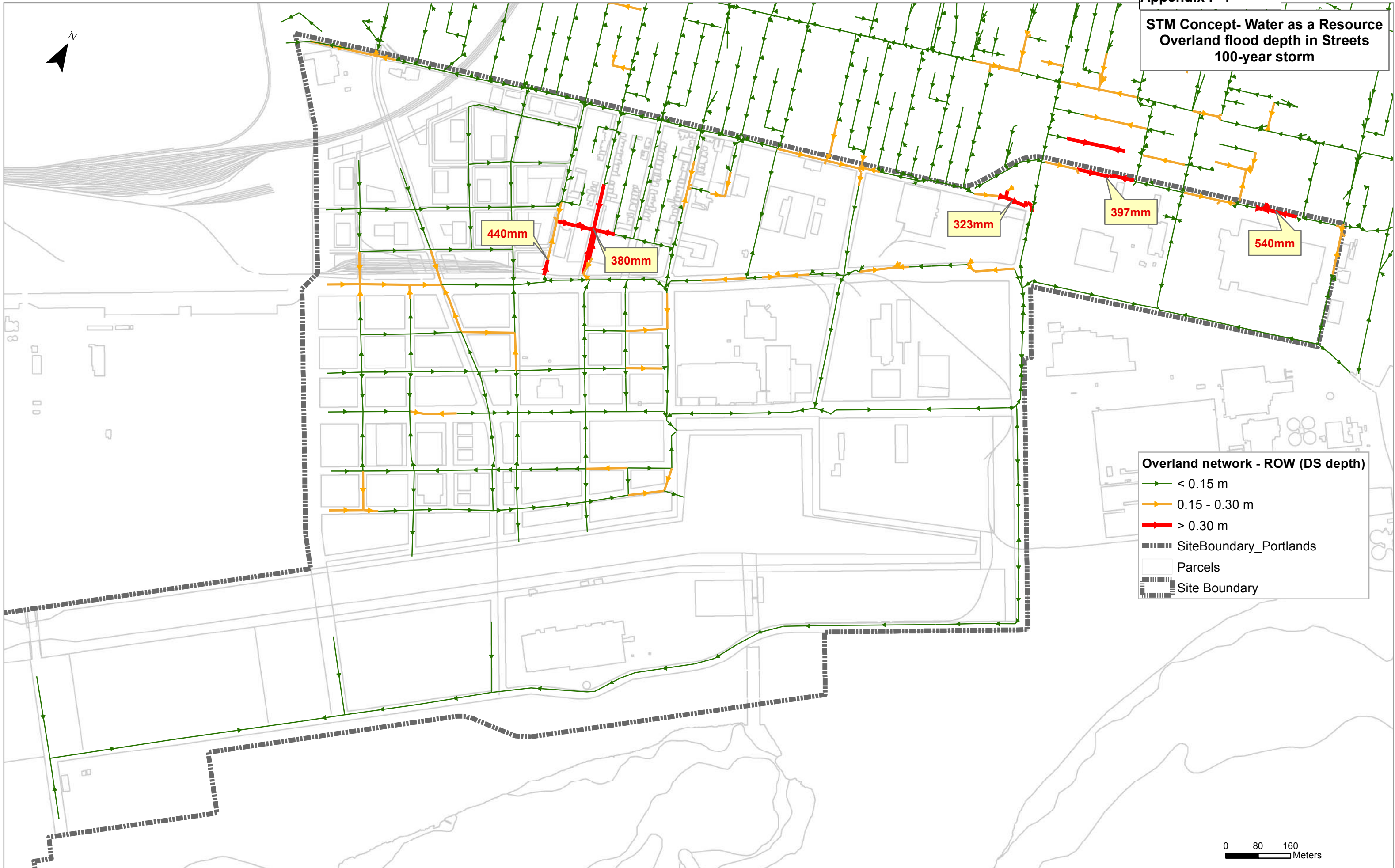
- Overland Channels
- SiteBoundary_Portlands



APPENDIX F-4

Model Results – STM Street Depths (100 year)

STM Concept- Water as a Resource
Overland flood depth in Streets
100-year storm



APPENDIX G-1

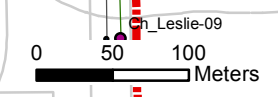
Model Results – Manhole Names 1

STM Concept - Water as a Resource Minor system Layout - Maintenance hole names



Minor System (Conduits)

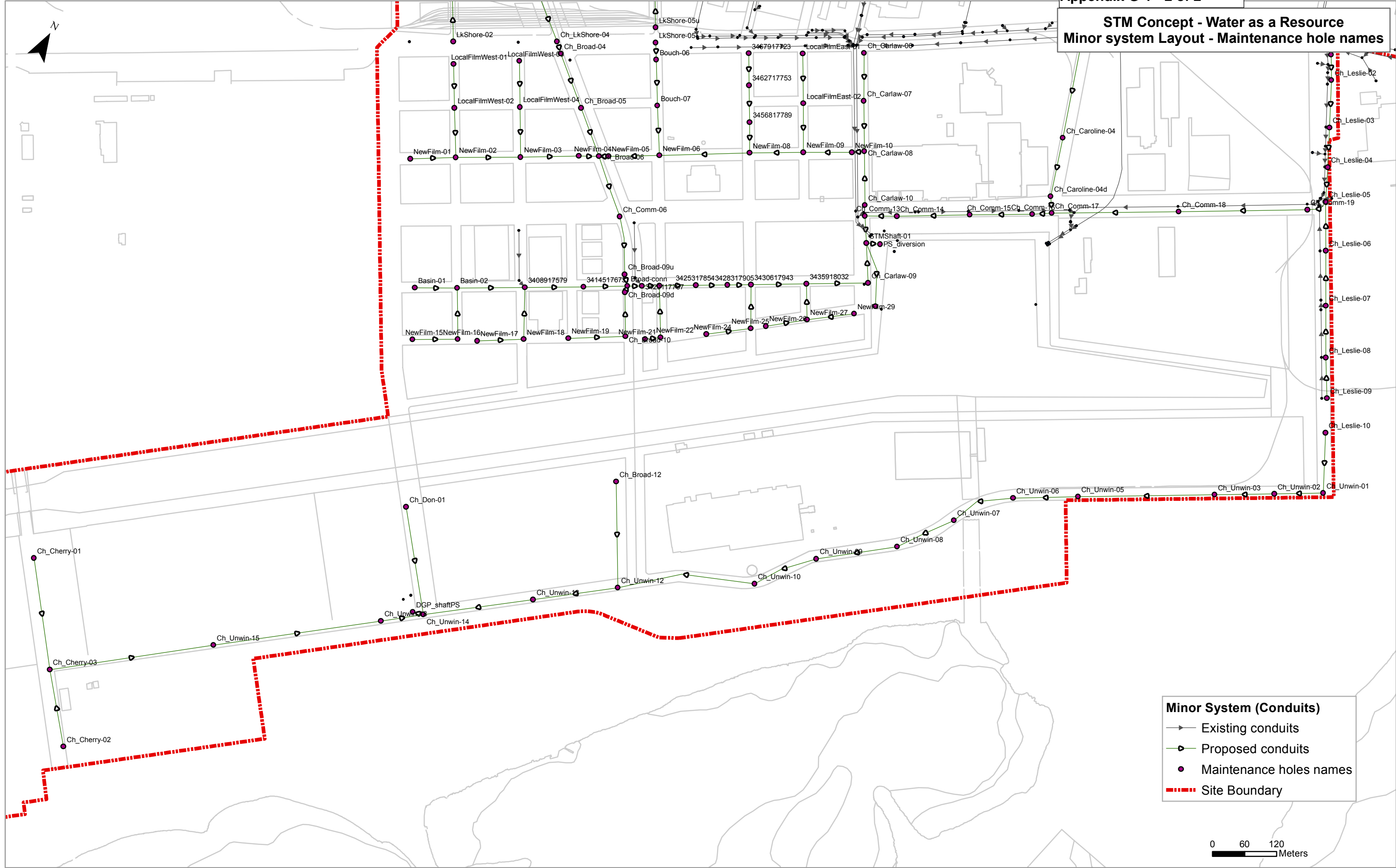
- Existing conduits
- Proposed conduits
- Maintenance holes names
- Site Boundary



APPENDIX G-1

Model Results – Manhole Names 2

**STM Concept - Water as a Resource
Minor system Layout - Maintenance hole names**



Minor System (Conduits)

- Existing conduits
- Proposed conduits
- Maintenance holes names
- Site Boundary

0 60 120 Meters

APPENDIX G-2

Model Results – Conduits

STM Concept - Portlans Master plan
Storm system: Proposed conduits
Appendix G-2: Hydraulic model results

US Node	DS Node	Shape	Width (mm)	Height (mm)	Length (m)	Slope (m/m)	US Inv. (m)	DS Inv. (m)	US G.L. (m)	DS G.L. (m)	US Cover depth (m)	DS Cover depth (m)	Q full (m ³ /s)	Model Results (100 year) - Preliminary design				Model Results (2 year)		
														Q100yr (m ³ /s)	Vel. Max 100yr (m/s)	Surcharge state	US HGL Freeboard (m)	DS HGL Freeboard(m)	Q 2yr (m ³ /s)	Vel. Max 2yr (m/s)
Bouch-01	Bouch-02	Circular	300	300	49.5	0.0050	75.75	75.50	77.75	77.56	1.70	1.76	0.068	0.328	2.173	0.000	1.980	1.498	0.158	1.697
Bouch-02	Bouch-03	Circular	375	375	116.5	0.0050	75.40	74.82	77.56	77.50	1.79	2.31	0.124	1.204	3.086	0.068	1.962	1.694	1.204	2.338
Bouch-03	Bouch-04	Circular	525	525	112.1	0.0050	74.64	74.08	77.50	77.36	2.34	2.76	0.304	1.579	2.044	0.210	2.538	2.262	1.579	1.707
Bouch-04	NewSub1-04	Circular	600	600	103.1	0.0050	73.12	72.60	77.36	77.80	3.64	4.60	0.435	1.846	2.983	0.368	3.810	4.152	1.786	0.000
NewSub1-04	NewSub1-03	Circular	825	825	102.5	0.0035	72.35	71.99	77.80	77.85	4.63	5.04	0.849	1.905	0.000	0.585	4.833	4.848	1.819	2.943
NewSub1-03	Ch_Broad-02	Circular	900	900	42.1	0.0035	71.88	71.74	77.85	77.37	5.07	4.74	1.069	1.845	0.000	0.585	5.001	4.643	1.765	2.629
Ch_Broad-02	Ch_Broad-03	Circular	1200	1200	99.4	0.0035	71.41	71.06	77.37	76.85	4.77	4.59	2.307	1.535	2.333	1.112	4.556	4.890	1.519	0.000
Ch_Broad-03	Ch_LkShore-04	Circular	1200	1200	90.6	0.0035	71.03	70.71	76.85	76.82	4.62	4.91	2.318	2.086	2.144	1.689	4.094	5.127	2.044	0.000
Ch_LkShore-04	Ch_Broad-04	Circular	1200	1200	23.4	0.0034	70.68	70.60	76.82	76.32	4.94	4.52	2.265	2.155	0.000	1.814	4.179	4.742	2.113	0.000
Ch_Broad-04	Ch_Broad-05	Circular	1200	1200	108.9	0.0035	70.57	70.19	76.32	76.30	4.55	4.91	2.307	2.280	3.388	1.979	3.729	5.131	2.210	0.000
Ch_Broad-05	Ch_Broad-06	Circular	1200	1200	96.4	0.0035	70.16	69.82	76.30	76.32	4.94	5.30	2.309	2.645	3.723	2.143	3.910	5.506	2.525	0.000
STMShaft-01	STM_TBoutfall	Circular	1200	1200	122.3	0.0033	69.40	69.00	76.50	76.50	5.90	6.30	2.230	0.123	0.000	0.250	5.758	7.306	0.111	2.227
Ch_Broad-06	Ch_Comm-06	Circular	1650	1650	119.7	0.0020	69.34	69.10	76.32	76.00	5.33	5.25	4.074	2.049	1.655	3.513	4.148	6.027	2.104	0.000
Ch_Comm-06	Ch_Broad-09u	Circular	1650	1650	109	0.0020	69.07	68.85	76.00	76.28	5.28	5.78	4.077	2.322	0.000	3.948	3.977	6.464	2.272	0.000
Ch_Broad-09u	Broad-conn	Circular	1650	1650	22.6	0.0020	68.82	68.78	76.28	76.80	5.81	6.37	4.071	2.323	2.640	3.950	4.441	7.112	2.258	0.000
Broad-conn	3420117767	Circular	1650	1650	27.2	0.0020	68.75	68.69	76.80	77.85	6.40	7.51	4.064	2.833	1.392	4.679	5.023	8.181	2.743	0.000
3420117767	Bouch-conn2	Circular	1650	1650	32.6	0.0020	68.66	68.60	77.85	76.60	7.54	6.35	4.070	3.056	1.197	4.771	6.164	7.006	2.948	1.111
Bouch-conn2	3425317854	Circular	1800	1800	68.4	0.0020	68.42	68.28	76.60	77.57	6.38	7.49	5.146	2.531	4.437	4.840	5.023	8.307	2.458	0.000
3425317854	3428317905	Circular	1800	1800	59.1	0.0020	68.25	68.13	77.57	77.52	7.52	7.59	5.138	2.512	1.429	4.815	6.112	8.404	2.444	1.277
3428317905	3430617943	Circular	1800	1800	44.3	0.0020	68.10	68.01	77.52	76.50	7.62	6.69	5.153	2.475	1.796	4.786	6.171	7.521	2.430	1.376
3430617943	3435918032	Circular	1800	1800	103.7	0.0020	67.98	67.78	76.50	76.50	6.72	6.92	5.137	2.461	1.515	4.742	5.240	7.808	2.461	1.553
3435918032	Ch_Carlaw-09	Circular	1800	1800	115.6	0.0020	67.75	67.52	76.50	76.01	6.95	6.70	5.150	2.895	1.831	4.789	5.412	7.500	2.498	1.670
Ch_Carlaw-09	STMShaft-01	Circular	1800	1800	74.3	0.0021	67.52	67.36	76.01	76.50	6.70	7.34	5.252	2.776	0.000	4.823	5.123	8.053	2.811	0.000
STMShaft-01	PS_diversion	Circular	1200	1200	26.3	0.0400	67.30	66.25	76.50	76.50	8.00	9.05	7.798	11.902	0.000	7.788	5.758	1.884	34.618	1.563
Street6-01	Street6-02	Circular	375	375	142.9	0.0050	76.98	76.26	79.05	78.04	1.70	1.40	0.124	1.407	2.945	0.067	1.878	-0.535	1.098	2.340
Street6-02	NewSub1-04	Circular	450	450	106.6	0.0050	76.16	75.62	78.04	77.80	1.43	1.73	0.202	1.386	2.899	0.123	1.627	1.180	1.325	2.330
Ch_Broad-01	Ch_Broad-02	Circular	450	450	145.1	0.0015	75.52	75.30	78.50	77.37	2.53	1.62	0.110	1.314	1.497	0.105	2.645	1.076	1.314	0.000
Street3-01	Bouch-04	Circular	300	300	110.9	0.0050	74.00	73.45	76.30	77.36	2.00	3.61	0.068	-0.091	2.690	0.000	2.280	3.716	0.195	2.841
LocalSub1-01	NewSub1-02	Circular	450	450	119.7	0.0020	75.98	75.74	79.19	78.00	2.76	1.81	0.128	1.309	0.000	0.104	2.903	1.263	1.309	0.000
NewSub1-01	NewSub1-02	Circular	450	450	84.8	0.0020	75.91	75.74	79.50	78.00	3.14	1.81	0.128	1.063	0.000	0.069	3.355	0.825	1.286	1.853
NewSub1-02	Ch_Broad-02	Circular	750	750	127.2	0.0011	75.44	75.30	78.00	77.37	1.81	1.32	0.374	1.620	0.000	0.328	2.066	1.077	1.519	2.052
Ch_Broad-09d	Broad-conn	Circular	450	450	12.3	0.0050	73.79	73.73	76.30	76.80	2.06	2.62	0.203	1.267	2.579	0.095	2.292	2.070	1.267	0.000
NewFilm-05	Ch_Broad-06	Circular	900	900	18	0.0035	70.87	70.81	76.85	76.32	5.08	4.61	1.070	2.310	0.000	1.064	4.590	4.509	2.109	0.000
LocalSub1-04	LocalSub1-05	Circular	300	300	79.3	0.0050	75.32	74.93	77.90	77.63	2.28	2.41	0.068	-0.072	0.000	0.000	2.559	2.530	0.000	0.000
LkShore-02	LocalSub1-05	Circular	525	525	81	0.0050	75.11	74.70	77.13	77.63	1.50	2.40	0.304	1.618	0.000	0.224	1.685	1.906	1.457	0.000
LocalSub1-05	Ch_Broad-03	Circular	600	600	163.2	0.0050	74.60	73.78	77.63	76.85	2.44	2.47	0.434	1.779	0.000	0.336	2.636	2.025	1.596	0.000
Bouch-04d	Bouch-05	Circular	300	300	89.7	0.0050	75.30	74.85	77.35	77.30	1.75	2.15	0.068	0.000	3.837	0.000	2.030	2.449	0.000	0.000
LkShore-05u	Bouch-05	Circular	300	300	60.3	0.0049	75.15	74.85	77.20	77.30	1.75	2.15	0.068	0.000	0.000	0.000	2.031	2.449	0.000	0.000
Bouch-05	street-conn03	Circular	525	525	102	0.0035	74.60	74.24	77.30	77.55	2.18	2.79	0.254	1.345	3.419	0.132	2.436	2.319	1.345	0.000
street-conn03	Ch_Broad-03	Circular	525	525	114.1	0.0035	74.21	73.81	77.55	76.85	2.82	2.51	0.254	1.345	2.991	0.132	3.073	2.048	1.345	2.357
LocalFilmWest-01	LocalFilmWest-02	Circular	300	300	82.3	0.0050	75.30	74.89	77.30	77.55	1.70	2.36	0.068	1.200	0.000	0.053	1.799	1.672	1.200	0.000
NewFilm-01	NewFilm-02	Circular	300	300	85.5	0.0050	75.23	74.80	78.90	77.60	3.38	2.50	0.068	0.000	0.000	0.000	3.655	2.802	0.000	0.000
LocalFilmWest-02	NewFilm-02	Circular	450	450	92.5	0.0035	74.71	74.39	77.55	77.60	2.39	2.76	0.169	1.308	0.000	0.104	2.583	2.222	1.308	0.000

STM Concept - Portlans Master plan
Storm system: Proposed conduits
Appendix G-2: Hydraulic model results

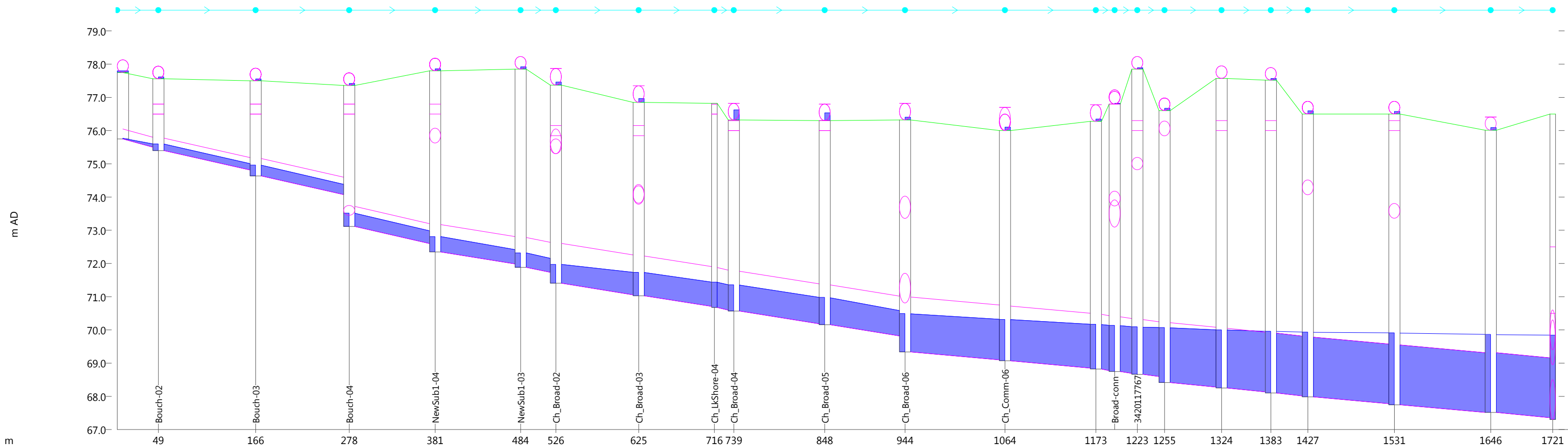
US Node	DS Node	Shape	Width (mm)	Height (mm)	Length (m)	Slope (m/m)	US Inv. (m)	DS Inv. (m)	US G.L. (m)	DS G.L. (m)	US Cover depth (m)	DS Cover depth (m)	Q full (m ³ /s)	Model Results (100 year) - Preliminary design					Model Results (2 year)	
														Q100yr (m ³ /s)	Vel. Max 100yr (m/s)	Surcharge state	US HGL Freeboard (m)	DS HGL Freeboard(m)	Q 2yr (m ³ /s)	Vel. Max 2yr (m/s)
NewFilm-02	NewFilm-03	Circular	525	525	121.4	0.0035	74.28	73.86	77.60	77.60	2.79	3.22	0.254	1.262	0.000	0.104	3.086	2.749	1.246	0.000
NewFilm-03	NewFilm-04	Circular	675	675	108.9	0.0020	73.68	73.46	77.60	77.60	3.25	3.47	0.376	1.410	0.000	0.261	3.518	3.152	1.336	0.000
NewFilm-04	Ch_Broad-06	Circular	675	675	37.7	0.0020	73.43	73.35	77.60	76.32	3.50	2.29	0.375	1.553	0.000	0.261	3.797	1.974	1.426	0.000
LocalFilmWest-03	LocalFilmWest-04	Circular	300	300	86.1	0.0050	75.05	74.62	77.05	77.20	1.70	2.28	0.068	1.226	0.000	0.056	1.787	1.590	1.226	0.000
LocalFilmWest-04	NewFilm-03	Circular	525	525	94	0.0035	74.37	74.04	77.20	77.60	2.31	3.04	0.255	1.424	0.000	0.157	2.535	2.571	1.240	0.000
Ch_Carlaw-06	Ch_Carlaw-07	Circular	600	600	89.7	0.0035	73.70	73.39	76.10	75.90	1.80	1.91	0.363	1.708	0.000	0.374	1.779	1.519	1.601	0.000
Ch_Carlaw-10	Ch_Carlaw-08	Circular	300	300	101.1	0.0050	73.53	73.03	75.85	75.88	2.02	2.55	0.068	-0.266	0.000	0.000	2.237	2.733	-0.153	0.000
Ch_Carlaw-07	Ch_Carlaw-08	Circular	600	600	94.4	0.0035	73.36	73.03	75.90	75.88	1.94	2.25	0.363	1.583	0.000	0.375	1.927	1.862	1.603	0.000
Ch_Carlaw-08	NewFilm-10	Circular	675	675	23.4	0.0035	72.92	72.84	75.88	76.30	2.28	2.79	0.498	2.150	0.000	0.614	2.269	2.464	1.974	0.000
NewFilm-10	NewFilm-09	Circular	750	750	91.2	0.0035	72.73	72.42	76.30	76.40	2.82	3.24	0.659	2.018	0.000	0.616	2.836	2.975	1.874	0.000
NewFilm-09	NewFilm-08	Circular	825	825	100.8	0.0035	72.31	71.96	76.40	76.40	3.27	3.62	0.850	2.067	0.000	0.731	3.209	3.448	1.925	0.000
NewFilm-08	NewFilm-06	Circular	900	900	169.1	0.0035	71.85	71.26	76.40	76.75	3.65	4.59	1.071	1.697	0.000	0.840	3.463	4.505	1.658	0.000
NewFilm-06	NewFilm-05	Circular	900	900	95	0.0035	71.23	70.90	76.75	76.85	4.62	5.05	1.070	2.261	0.000	1.064	4.161	4.933	2.109	0.000
LocalFilmEast-01	LocalFilmEast-02	Circular	375	375	93.2	0.0050	74.32	73.85	76.39	76.35	1.70	2.13	0.124	1.074	0.000	0.048	1.912	1.514	1.074	0.000
LocalFilmEast-02	NewFilm-09	Circular	450	450	91.4	0.0035	73.74	73.42	76.35	76.40	2.16	2.53	0.169	1.273	0.000	0.096	2.360	1.983	1.273	0.000
3467917723	3462717753	Circular	375	375	58.8	0.0050	74.33	74.03	76.40	76.45	1.70	2.04	0.124	1.074	1.818	0.048	1.912	1.432	1.074	1.521
3462717753	3456817789	Circular	450	450	67.4	0.0035	73.93	73.69	76.45	76.40	2.07	2.26	0.169	1.025	1.531	0.048	2.358	1.725	0.832	1.379
3456817789	NewFilm-08	Circular	450	450	56.8	0.0035	73.66	73.46	76.40	76.40	2.29	2.49	0.169	1.295	1.547	0.101	2.488	1.946	1.295	1.500
LkShore-05	Bouch-06	Circular	600	600	32	0.0020	73.60	73.54	77.13	77.25	2.93	3.11	0.275	0.433	0.000	0.043	3.239	3.097	0.310	0.000
Bouch-06	Bouch-07	Circular	600	600	86.3	0.0020	73.51	73.33	77.25	76.70	3.14	2.77	0.275	1.130	3.500	0.196	3.362	2.459	1.070	0.000
Bouch-07	NewFilm-06	Circular	600	600	93.3	0.0020	73.30	73.12	76.70	76.75	2.80	3.03	0.274	1.577	3.761	0.242	2.978	2.638	1.394	0.000
Basin-01	Basin-02	Circular	300	300	79.1	0.0050	74.74	74.34	79.00	77.30	3.96	2.66	0.068	0.000	1.756	0.000	4.241	2.957	0.000	1.390
NewFilm-15	NewFilm-16	Circular	450	450	84.3	0.0035	74.71	74.42	77.74	76.86	2.58	1.99	0.169	1.136	0.000	0.120	2.743	1.456	1.118	0.000
NewFilm-16	Basin-02	Circular	525	525	95.9	0.0020	74.31	74.12	76.86	77.30	2.03	2.66	0.192	1.531	0.000	0.192	2.145	2.186	1.372	0.000
Basin-02	3408917579	Circular	750	750	126.8	0.0020	73.86	73.61	77.30	77.00	2.69	2.64	0.497	0.707	2.112	0.192	3.065	2.480	0.590	1.885
3408917579	3414517673	Circular	825	825	109.8	0.0020	73.51	73.29	77.00	77.33	2.67	3.22	0.643	1.628	2.020	0.652	2.842	3.071	1.558	1.508
3414517673	Broad-conn	Circular	825	825	82.4	0.0020	73.26	73.09	77.33	76.80	3.25	2.88	0.642	1.982	1.523	0.651	3.468	2.714	1.856	1.231
NewFilm-17	NewFilm-18	Circular	450	450	86.4	0.0035	74.70	74.40	76.85	76.82	1.70	1.97	0.169	0.631	0.000	0.047	1.967	1.526	0.411	0.000
NewFilm-18	3408917579	Circular	525	525	97	0.0020	74.29	74.10	76.82	77.00	2.00	2.38	0.192	1.685	0.000	0.247	1.994	1.904	1.545	0.000
NewFilm-19	Ch_Broad-10	Circular	450	450	107.2	0.0050	74.80	74.26	76.95	77.95	1.70	3.24	0.202	0.504	0.000	0.000	2.127	3.172	0.814	2.186
Ch_Broad-10	Ch_Broad-09d	Circular	450	450	82.9	0.0050	74.23	73.82	77.95	76.30	3.27	2.03	0.202	1.267	0.000	0.095	3.496	1.483	1.267	0.000
NewFilm-21	NewFilm-22	Circular	300	300	28.7	0.0050	76.50	76.36	78.50	77.10	1.70	0.44	0.068	0.000	0.000	0.000	1.980	0.743	0.000	3.178
NewFilm-22	Bouch-conn2	Circular	450	450	96.9	0.0035	76.18	75.84	77.10	76.60	0.47	0.31	0.169	1.050	0.000	0.052	0.751	-0.223	0.912	2.589
NewFilm-24	NewFilm-25	Circular	450	450	83.8	0.0050	74.80	74.38	76.95	76.77	1.70	1.94	0.202	0.913	0.000	0.033	2.024	1.414	0.913	2.570
NewFilm-25	3430617943	Circular	450	450	82	0.0035	74.35	74.06	76.77	76.50	1.97	1.99	0.169	0.916	0.000	0.033	2.283	1.457	0.916	2.718
NewFilm-26	NewFilm-27	Circular	300	300	77.5	0.0050	74.16	73.77	76.72	76.61	2.26	2.54	0.068	-0.051	0.000	0.000	2.540	2.712	0.071	3.216
NewFilm-29	NewFilm-27	Circular	375	375	89.5	0.0050	74.15	73.70	76.22	76.61	1.70	2.54	0.124	1.444	0.000	0.111	1.796	1.918	1.354	1.379
NewFilm-27	3435918032	Circular	450	450	67.1	0.0035	73.59	73.36	76.61	76.50	2.57	2.69	0.169	1.336	0.000	0.111	2.752	2.148	1.265	0.664
Ch_Leslie-09	Ch_Leslie-08	Circular	300	300	76.2	0.0050	74.44	74.06	76.75	76.60	2.01	2.24	0.068	1.145	0.000	0.047	2.128	1.557	0.990	0.000
Ch_Leslie-08	Ch_Leslie-07	Circular	375	375	96.9	0.0050	73.95	73.47	76.60	76.50	2.27	2.66	0.124	1.064	0.000	0.047	2.489	2.047	0.934	0.000
Ch_Leslie-07	Ch_Leslie-06	Circular	450	450	103.1	0.0050	73.36	72.85	76.50	76.40	2.69	3.11	0.202	1.260	0.000	0.093	2.921	2.557	1.176	0.000
Ch_Leslie-06	Ch_Leslie-05	Circular	525	525	91.9	0.0050	72.74	72.28	76.40	76.31	3.14	3.50	0.304	1.370	0.000	0.140	3.406	2.965	1.251	0.000
Ch_Leslie-05	Ch_Comm-19	Circular	900	900	40.9	0.0035	71.88	71.73	76.31	76.18	3.53	3.55	1.075	1.355	0.000	0.465	3.652	3.471	1.139	0.000

STM Concept - Portlans Master plan
Storm system: Proposed conduits
Appendix G-2: Hydraulic model results

US Node	DS Node	Shape	Width (mm)	Height (mm)	Length (m)	Slope (m/m)	US Inv. (m)	DS Inv. (m)	US G.L. (m)	DS G.L. (m)	US Cover depth (m)	DS Cover depth (m)	Q full (m ³ /s)	Model Results (100 year) - Preliminary design					Model Results (2 year)	
														Q100yr (m ³ /s)	Vel. Max 100yr (m/s)	Surcharge state	US HGL Freeboard (m)	DS HGL Freeboard(m)	Q 2yr (m ³ /s)	Vel. Max 2yr (m/s)
Ch_Comm-19	Ch_Comm-18	Circular	900	900	241.2	0.0035	71.70	70.86	76.18	76.08	3.58	4.32	1.071	2.142	0.000	0.885	3.551	4.227	1.999	0.000
Ch_Comm-18	Ch_Comm-17	Circular	1200	1200	237.5	0.0020	70.53	70.05	76.08	75.75	4.35	4.50	1.744	1.578	0.000	1.305	3.992	4.713	1.622	0.000
Ch_Comm-17	Ch_Comm-16	Circular	1350	1350	36.6	0.0020	69.87	69.80	75.75	75.70	4.53	4.55	2.383	1.919	0.000	2.256	3.929	4.998	1.846	0.000
Ch_Comm-16	Ch_Comm-15	Circular	1350	1350	117	0.0020	69.77	69.54	75.70	75.60	4.58	4.71	2.388	2.074	0.000	2.442	3.973	5.115	2.007	0.000
Ch_Comm-15	Ch_Comm-14	Circular	1350	1350	136.7	0.0020	69.51	69.23	75.60	75.62	4.74	5.04	2.386	2.003	0.000	2.441	4.148	5.491	1.923	0.000
Ch_Comm-14	Ch_Comm-13	Circular	1350	1350	59.8	0.0020	69.20	69.08	75.62	75.55	5.07	5.12	2.391	2.174	0.000	2.579	4.483	5.604	2.007	0.000
Ch_Comm-13	STMShaft-01	Circular	1350	1350	51.4	0.0020	69.05	68.95	75.55	76.50	5.15	6.20	2.385	2.877	0.000	3.046	4.589	6.553	2.698	0.000
Ch_Leslie-01	Ch_Leslie-02	Circular	375	375	48.1	0.0050	74.39	74.15	76.46	76.35	1.70	1.83	0.124	0.654	0.000	0.000	2.055	1.266	0.192	0.000
Ch_Leslie-02	Ch_Leslie-03	Circular	525	525	88.5	0.0050	73.97	73.52	76.35	76.30	1.86	2.25	0.304	1.952	0.000	0.183	2.086	1.407	1.506	0.000
Ch_Leslie-03	Ch_Leslie-04	Circular	600	600	74.4	0.0035	73.42	73.16	76.30	76.15	2.28	2.39	0.364	1.640	0.000	0.325	2.442	1.999	1.614	0.000
Ch_Leslie-04	Ch_Leslie-05	Circular	600	600	64.5	0.0035	73.13	72.90	76.15	76.31	2.42	2.80	0.363	1.757	0.000	0.325	2.589	2.409	1.725	0.000
Ch_Caroline-01	Ch_Caroline-02	Circular	300	300	145.1	0.0050	74.50	73.78	75.90	75.90	1.10	1.83	0.068	0.000	0.000	0.000	1.380	2.125	0.000	0.000
Ch_Caroline-02	Ch_Caroline-03	Circular	675	675	140.4	0.0035	73.37	72.88	75.90	75.80	1.86	2.25	0.498	0.788	0.000	0.093	2.323	1.992	0.566	0.000
Ch_Caroline-03	Ch_Caroline-04	Circular	750	750	180.6	0.0020	72.77	72.41	75.80	75.80	2.28	2.64	0.498	1.719	0.000	0.540	2.359	2.244	1.671	0.000
Ch_Caroline-04	Ch_Caroline-04d	Circular	825	825	112	0.0020	72.31	72.08	75.80	75.80	2.67	2.89	0.642	1.788	0.000	0.625	2.875	2.727	1.750	0.000
Ch_Caroline-04d	Ch_Comm-17	Circular	825	825	31.4	0.0020	72.05	71.99	75.80	75.75	2.92	2.94	0.643	1.954	0.000	0.625	3.204	2.764	1.899	0.000
Ch_Cherry-01	Ch_Cherry-03	Circular	375	375	211	0.0050	75.13	74.07	77.20	76.40	1.70	1.96	0.124	1.350	0.000	0.093	0.697	1.337	1.231	0.000
Ch_Cherry-02	Ch_Cherry-03	Circular	300	300	146.6	0.0050	74.88	74.15	77.00	76.40	1.82	1.96	0.068	-1.015	0.000	-0.021	0.713	1.499	0.000	0.000
Ch_Leslie-10	Ch_Unwin-01	Circular	300	300	112.6	0.0050	74.50	73.94	76.85	76.90	2.05	2.66	0.068	-0.990	0.000	-0.036	-0.189	1.982	0.000	0.000
Ch_Unwin-01	Ch_Unwin-02	Circular	375	375	91.8	0.0050	73.83	73.37	76.90	76.70	2.69	2.95	0.124	-1.008	0.000	-0.082	-0.139	2.349	0.000	0.000
Ch_Cherry-03	Ch_Unwin-15	Circular	750	750	310.3	0.0020	73.67	73.04	76.40	76.20	1.99	2.41	0.498	1.469	0.000	0.308	0.125	2.162	1.331	0.000
Ch_Unwin-02	Ch_Unwin-03	Circular	450	450	111.6	0.0050	73.27	72.71	76.70	76.50	2.98	3.34	0.202	0.835	0.000	0.084	-0.339	2.853	0.647	0.000
Ch_Unwin-15	Ch_Unwin-18	Circular	975	975	316.9	0.0020	72.79	72.16	76.20	76.05	2.44	2.92	1.002	1.729	0.000	1.031	0.138	2.977	1.711	0.000
Ch_Unwin-03	Ch_Unwin-05	Circular	600	600	256	0.0035	72.53	71.63	76.50	76.30	3.37	4.07	0.363	1.671	0.000	0.306	-0.568	3.620	1.507	0.000
Ch_Unwin-18	Ch_Unwin-14	Circular	975	975	80.1	0.0020	72.13	71.97	76.05	75.90	2.95	2.96	1.005	2.347	0.000	1.227	0.650	2.938	2.048	0.000
Ch_Unwin-05	Ch_Unwin-06	Circular	675	675	121.9	0.0020	71.53	71.29	76.30	76.00	4.10	4.04	0.376	1.404	0.000	0.327	-0.622	3.708	1.424	0.000
Ch_Unwin-06	Ch_Unwin-07	Circular	825	825	123.4	0.0020	71.11	70.86	76.00	75.90	4.07	4.22	0.642	1.546	0.000	0.652	-0.904	4.056	1.445	0.000
Ch_Unwin-07	Ch_Unwin-08	Circular	825	825	117.8	0.0020	70.83	70.59	75.90	76.35	4.25	4.93	0.641	1.503	0.000	0.669	-0.898	4.773	1.438	0.000
Ch_Unwin-08	Ch_Unwin-09	Circular	825	825	152.7	0.0020	70.56	70.26	76.35	76.78	4.96	5.70	0.643	1.556	0.000	0.687	-0.347	5.540	1.416	0.000
Ch_Unwin-09	Ch_Unwin-10	Circular	825	825	125.5	0.0020	70.23	69.98	76.78	76.60	5.73	5.80	0.642	1.499	0.000	0.709	0.213	5.634	1.332	0.000
Ch_Unwin-10	Ch_Unwin-12	Circular	900	900	260.1	0.0020	69.87	69.35	76.60	76.40	5.83	6.15	0.810	2.001	0.000	1.066	0.140	6.054	1.859	0.000
Ch_Unwin-12	Ch_Unwin-13	Circular	975	975	160.4	0.0020	69.25	68.93	76.40	76.15	6.18	6.25	1.003	1.972	0.000	1.112	0.427	6.231	1.711	0.000
Ch_Unwin-13	Ch_Unwin-14	Circular	1050	1050	207.6	0.0020	68.82	68.41	76.15	75.90	6.28	6.45	1.221	2.423	0.000	1.511	0.395	6.499	2.431	0.000
Ch_Unwin-14	DGP_shaftPS	Circular	825	825	20.2	0.0218	68.40	67.96	75.90	76.00	6.68	7.22	2.119	4.645	0.000	2.485	0.685	5.859	5.558	0.000
Ch_Don-01	Ch_Unwin-14	Circular	375	375	204.4	0.0050	73.59	72.57	77.40	75.90	3.44	2.96	0.124	1.064	0.000	0.047	2.095	2.348	0.938	0.000
Ch_Broad-12	Ch_Unwin-12	Circular	375	375	198.4	0.0050	76.60	75.60	78.67	76.40	1.70	0.42	0.124	1.350	0.000	0.093	1.830	-0.196	1.114	0.000

APPENDIX H

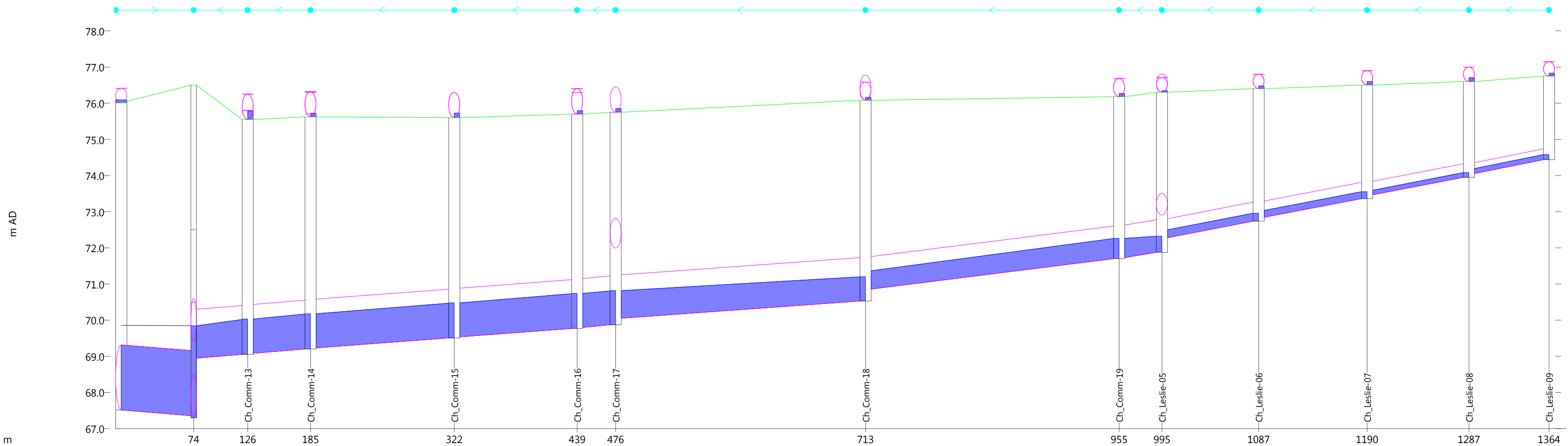
Model Results – Long Section Profiles for 2-year and 100-year storms



Link	-	Bouch-02.4	Bouch-03.1	Bouch-04.4	NewSub1-04.4	-	Ch_Broad-02.2	Ch_Broad-03.3	-	Ch_Broad-04.3	Ch_Broad-05.2	Ch_Broad-06.2	Ch_Comm-06.2	-	-	-	-	-	3430617943.1	3435918032.1	-	
length (m)	49.5	116.5	112.1	103.1	102.5	42.1	99.4	90.6	23.4	108.9	96.4	119.7	109.0	27.2	32.6	68.4	59.1	44.3	103.7	115.6	74.3	
Shape ID	CIRC	CIRC	CIRC	CIRC	CIRC	CIRC	CIRC	CIRC	CIRC	CIRC	CIRC	CIRC	CIRC	CIRC	CIRC	CIRC	CIRC	CIRC	CIRC	CIRC	CIRC	CIRC
width (mm)	300	375	525	600	825	900	1200	1200	1200	1200	1200	1650	1650	1650	1650	1800	1800	1800	1800	1800	1800	1800
height (mm)	300	375	525	600	825	900	1200	1200	1200	1200	1200	1650	1650	1650	1650	1800	1800	1800	1800	1800	1800	1800
us inv (m AD)	75.750	75.398	74.635	73.117	72.346	71.882	71.405	71.027	-	70.568	70.157	69.339	69.070	-	-	68.418	68.251	68.103	67.984	67.747	67.515	
ds inv (m AD)	75.503	74.815	74.075	72.601	71.987	71.735	71.057	70.707	-	70.187	69.819	69.100	68.852	-	-	68.281	68.133	68.014	67.777	67.515	67.360	
grad (m/m)	0.00499	0.00500	0.00499	0.00501	0.00350	-	0.00350	0.00353	-	0.00350	0.00351	0.00200	0.00200	-	-	0.00200	0.00200	0.00201	0.00200	0.00201	0.00209	
r.pfc (m3/s)	0.068	0.124	0.304	0.435	0.849	1.069	2.307	2.318	-	2.307	2.309	4.074	4.077	-	-	4.070	5.146	5.138	5.153	5.137	5.150	
surc	0.32	0.53	0.62	0.66	0.56	0.49	0.56	0.61	0.63	0.66	0.68	0.74	0.80	-	0.85	0.89	0.96	1.00	1.00	1.00	1.00	
DS Depth (m)	0.095	0.191	0.310	0.382	0.430	0.419	0.675	0.734	-	0.792	0.763	1.219	1.319	-	1.473	1.720	1.828	1.922	2.138	2.353	2.484	
DS Flow (m3/s)	0.00168	0.06800	0.21000	0.33908	0.51273	-	0.96311	1.45961	-	1.75026	1.91475	3.04593	3.58973	-	-	4.52569	4.67066	4.78968	4.92030	4.92101	4.77731	
DS Velocity (m/s)	0.146	1.204	1.579	1.786	1.819	1.765	1.519	2.044	-	2.210	2.525	2.104	2.272	-	-	2.458	2.444	2.514	2.548	2.766	2.888	
Node	-	Bouch-02	Bouch-03	Bouch-04	NewSub1-04	-	Ch_Broad-03	-	-	Ch_Broad-05	Ch_Broad-06	Ch_Comm-06	-	-	-	-	-	-	3430617943	3435918032	Ch_Carlaw-09	
ground (m AD)	-	77.560	77.500	77.360	77.800	77.850	77.370	76.850	76.820	76.320	76.300	76.320	76.000	76.280	-	76.600	77.570	77.520	76.500	76.500	76.010	
Head Discharge Tab:	-	HD 46	HD 46	HD 46	HD 46	HD 46	HD 46	HD 46	HD 46	HD 46	HD 46	HD 46	HD 46	HD 46	-	HD 46	HD 46	HD 46	HD 46	HD 46	HD 46	
Number of Gullies	-	0.000	0.000	1.000	1.000	0.000	1.000	1.000	1.000	1.000	1.000	1.000	10.000	1.000	-	1.000	0.000	0.000	0.000	0.000	2.000	
level (m AD)	-	75.598	74.962	73.519	72.812	72.319	71.975	71.732	71.441	71.358	70.979	70.492	70.318	70.170	-	70.070	70.000	69.961	69.935	69.915	69.867	
gully flow (m3/s)	-	0.00000	-0.00000	0.01410	0.01692	-0.00000	0.03915	0.04671	-	0.04670	0.04670	0.03589	0.46713	0.02172	-	0.02555	-0.00000	-	-0.00000	-0.00000	0.06245	
expr: Freeboard	-	1.962428	2.537796	3.841369	4.987614	5.531305	5.395200	5.117784	5.379410	4.961678	5.321347	5.828034	5.681793	6.109857	-	-	7.569626	-	6.564552	6.585320	6.142713	
expr:OverlandDepth	-	0.058782	0.057045	0.058884	0.062526	0.069121	0.091014	0.116454	-	0.305298	0.234355	0.086952	0.104691	0.068526	-	-	0.002136	-	0.096436	0.078659	0.081042	



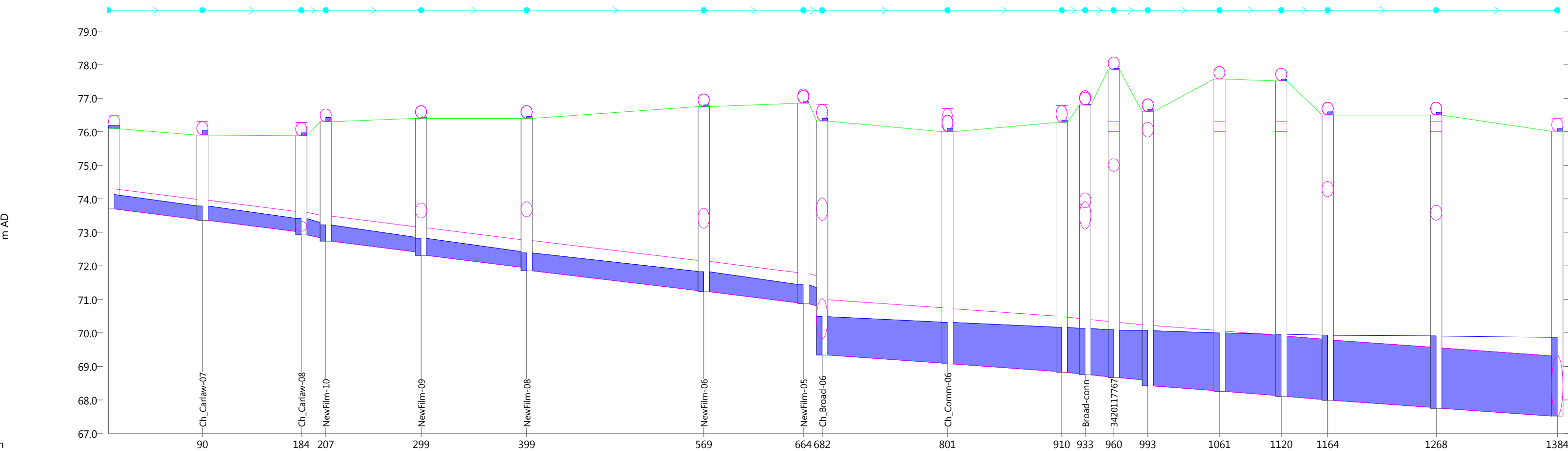
Proposed Sewers profile - 2 year storm event validation



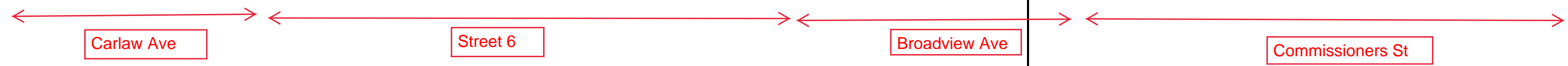
Link	Ch_Carlaw-09.5	-	-	Ch_Comm-15.2	Ch_Comm-16.3	-	Ch_Comm-18.2	Ch_Comm-19.1	-	Ch_Leslie-06.2	Ch_Leslie-07.2	Ch_Leslie-08.2	Ch_Leslie-09.2	
length (m)	74.3	51.4	59.8	136.7	117.0	36.6	237.5	241.2	40.9	91.9	103.1	96.9	76.2	
Shape ID	CIRC	CIRC	CIRC	CIRC	CIRC	CIRC	CIRC	CIRC	CIRC	CIRC	CIRC	CIRC	CIRC	
width (mm)	1800	1350	1350	1350	1350	1350	1200	900	900	525	450	375	300	
height (mm)	1800	1350	1350	1350	1350	1350	1200	900	900	525	450	375	300	
us inv (m AD)	67.515	69.053	69.203	69.506	69.770	69.873	70.528	71.702	71.876	72.740	73.361	73.950	74.436	
ds inv (m AD)	67.360	68.950	69.083	69.233	69.536	69.800	70.053	70.858	71.732	72.281	72.845	73.466	74.055	
grad (m/m)	0.00209	0.00200	0.00201	0.00200	0.00200	0.00199	0.00200	0.00350	0.00352	0.00499	0.00500	0.00500	0.00500	
r.pfc (m3/s)	5.252	2.385	2.391	2.386	2.388	2.383	1.744	1.071	1.075	0.304	0.202	0.124	0.068	
surc	1.00	0.71	0.72	0.71	0.71	0.70	0.64	0.62	0.59	0.41	0.43	0.35	0.48	
DS Depth (m)	2.484	0.894	0.949	0.946	0.941	0.938	0.762	0.506	0.528	0.217	0.191	0.127	0.136	
DS Flow (m3/s)	4.77731	3.10079	2.14867	2.05227	2.05766	1.90500	1.00810	0.73686	0.41438	0.10545	0.07549	0.03068	0.03072	
DS Velocity (m/s)	2.888	4.598	2.007	1.923	2.007	1.846	1.622	1.999	1.139	1.251	1.176	0.934	0.990	
Node	-	STMShaft-01	-	Ch_Comm-14	Ch_Comm-15	Ch_Comm-16	Ch_Comm-17	Ch_Comm-18	Ch_Comm-19	Ch_Leslie-05	Ch_Leslie-06	Ch_Leslie-07	Ch_Leslie-08	-
ground (m AD)	76.010	76.500	75.550	75.620	75.600	75.700	75.750	76.080	76.180	76.305	76.400	76.500	76.600	76.750
Head Discharge Tab:	HD 46	HD 46	HD 46	HD 46	HD 46	HD 46	HD 46	HD 46	HD 46	HD 46	HD 46	HD 46	HD 46	HD 46
Number of Gullies	2.000	1.000	10.000	3.000	0.000	4.000	7.000	9.000	9.000	0.000	1.000	1.000	0.000	1.000
level (m AD)	69.867	69.843	70.031	70.178	70.476	70.738	70.815	71.200	72.260	72.320	72.957	73.553	74.080	74.580
gully flow (m3/s)	-	0.46700	0.14010	-	-0.00000	0.16933	0.32701	0.29572	0.33526	-0.00000	0.03055	0.04535	-0.00000	-
expr: Freeboard	-	6.656708	5.519032	5.441785	5.124239	4.962276	4.935005	4.879507	3.920227	3.984825	3.443266	2.946709	2.520418	-
expr:OverlandDepth	-	0.234492	0.104846	-	0.126997	0.094800	0.103737	0.083109	0.088669	0.042946	0.080194	0.098396	0.105742	-



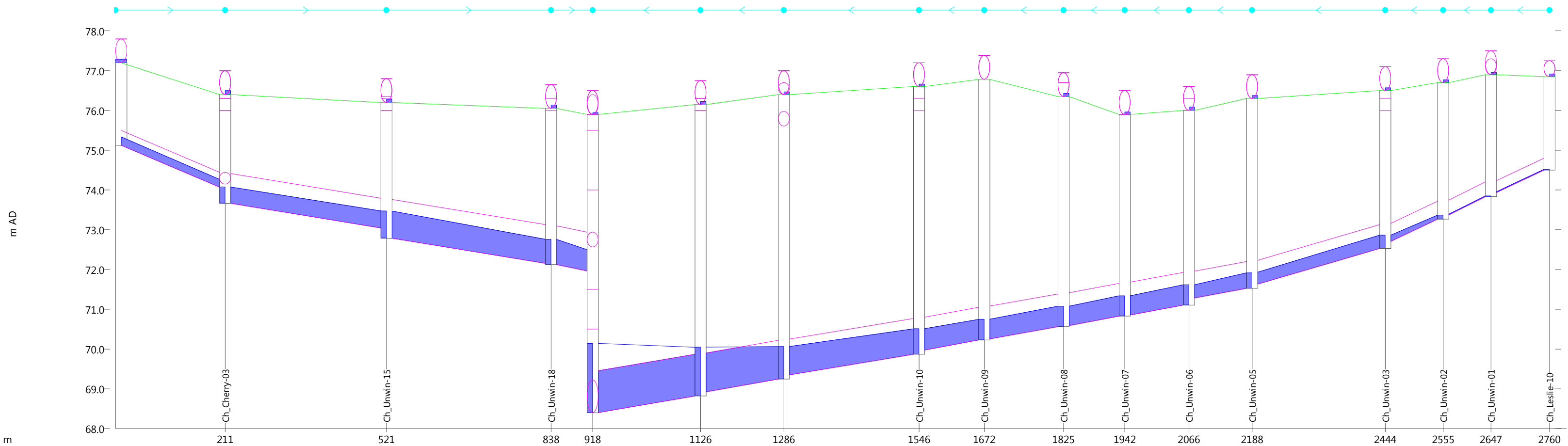
Proposed Sewers profile - 2 year storm event validation



Link	Ch_Carlaw-06.2	Ch_Carlaw-07.2	-	NewFilm-10.1	NewFilm-09.5	NewFilm-08.4	NewFilm-06.5	-	Ch_Broad-06.2	Ch_Comm-06.2	-	-	-	Bouch-conn2.1	-	-	3430617943.1	3435918032.1	
length (m)	89.7	94.4	23.4	91.2	100.8	169.1	95.0	-	119.7	109.0	22.6	27.2	32.6	68.4	59.1	44.3	103.7	115.6	
Shape ID	CIRC	CIRC	CIRC	CIRC	CIRC	CIRC	CIRC	-	CIRC	CIRC	CIRC	CIRC	CIRC	CIRC	CIRC	CIRC	CIRC	CIRC	
width (mm)	600	600	675	750	825	900	900	900	1650	1650	1650	1650	1650	1800	1800	1800	1800	1800	
height (mm)	600	600	675	750	825	900	900	900	1650	1650	1650	1650	1650	1800	1800	1800	1800	1800	
us inv (m AD)	73.700	73.356	-	72.734	72.310	71.852	71.230	-	69.339	69.070	68.663	68.663	68.663	68.418	68.251	68.103	67.984	67.747	
ds inv (m AD)	73.386	73.026	-	72.415	71.957	71.260	70.898	-	69.100	68.852	68.598	68.598	68.598	68.281	68.133	68.014	67.777	67.515	
grad (m/m)	0.00350	0.00350	-	0.00350	0.00350	0.00350	0.00349	-	0.00200	0.00200	-	-	-	0.00200	0.00200	0.00201	0.00200	0.00201	
r.pfc (m3/s)	0.363	0.363	-	0.659	0.850	1.071	1.070	-	4.074	4.077	-	4.064	4.070	5.146	5.138	5.153	5.137	5.150	
surc	0.72	0.71	0.73	0.65	0.62	0.63	0.66	-	0.74	0.80	0.83	0.85	0.89	0.96	1.00	1.00	1.00	1.00	
DS Depth (m)	0.403	0.394	-	0.438	0.468	0.570	0.545	-	1.219	1.319	-	1.403	1.473	1.720	1.828	1.922	2.138	2.353	
DS Flow (m3/s)	0.31301	0.31017	-	0.50191	0.60190	0.70145	0.85024	-	3.04593	3.58973	-	-	-	4.52569	4.67066	4.78968	4.92030	4.92101	
DS Velocity (m/s)	1.601	1.603	-	1.874	1.925	1.658	2.109	-	2.104	2.272	-	2.735	2.936	2.458	2.444	2.514	2.548	2.766	
Node	-	Ch_Carlaw-07	-	-	NewFilm-09	NewFilm-08	NewFilm-06	-	Ch_Broad-06	Ch_Comm-06	-	-	-	3425317854	-	3430617943	3435918032	-	
ground (m AD)	76.100	75.900	75.880	76.300	76.400	76.400	76.750	76.850	76.320	76.000	76.280	-	-	76.600	77.570	77.520	76.500	76.500	76.010
Head Discharge Tab:	HD 46	HD 46	HD 46	HD 46	HD 46	HD 46	HD 46	HD 46	HD 46	HD 46	HD 46	-	-	HD 46	HD 46	HD 46	HD 46	HD 46	HD 46
Number of Gullies	8.000	0.000	5.000	0.000	1.000	0.000	0.000	0.000	1.000	10.000	1.000	-	1.000	1.000	0.000	0.000	0.000	0.000	2.000
level (m AD)	74.135	73.788	73.420	73.223	72.825	72.387	71.830	71.439	70.492	70.318	70.170	-	-	70.070	70.000	69.961	69.935	69.915	69.867
gully flow (m3/s)	0.31697	-0.00000	0.19927	-0.00000	0.00492	0.00000	-0.00000	-0.00000	0.03589	0.46713	0.02172	-	-	0.02555	-0.00000	-0.00000	-0.00000	-0.00000	0.06245
expr: Freeboard	-	2.111517	2.460315	3.076550	3.575087	4.012549	4.920204	5.410562	5.828034	5.681793	6.109857	-	-	6.529680	7.569626	7.559459	6.564552	6.585320	6.142713
expr:OverlandDepth	-	0.149728	0.091848	0.128101	0.042886	0.061143	0.050667	0.044493	0.086952	0.104691	0.068526	-	-	0.073538	0.002136	0.051747	0.096436	0.078659	0.081042



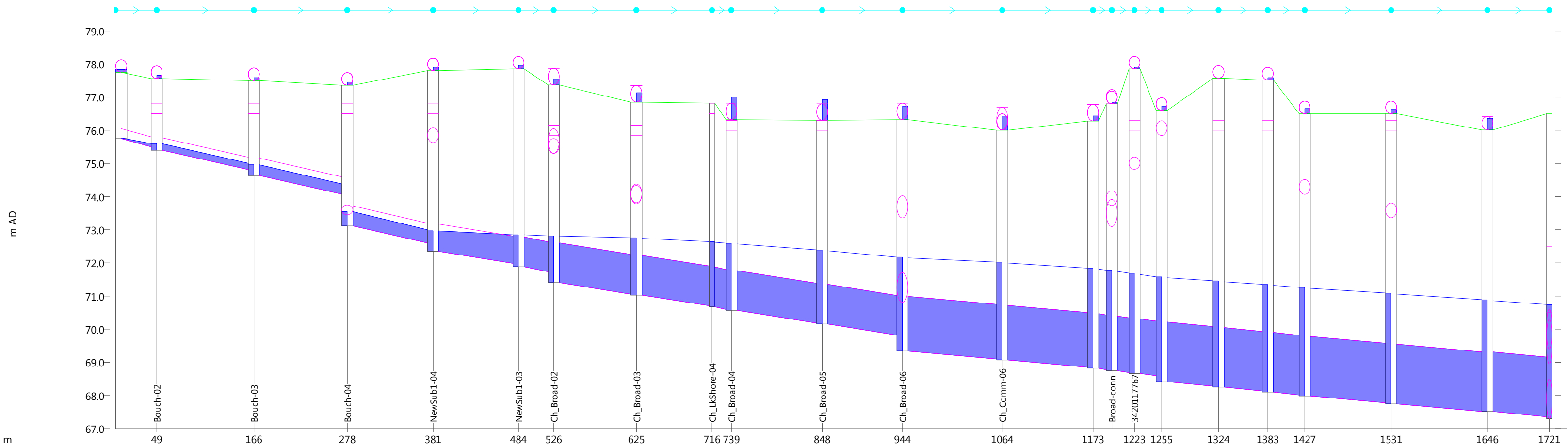
Proposed Sewers profile - 2 year storm event validation



Link	Ch_Cherry-01.3	Ch_Cherry-03.3	Ch_Unwin-15.2	-	Ch_Unwin-13.2	Ch_Unwin-12.4	Ch_Unwin-10.2	-	Ch_Unwin-08.2	-	-	-	Ch_Unwin-03.2	-	-	-
length (m)	211.0	310.3	316.9	80.1	207.6	160.4	260.1	125.5	152.7	117.8	123.4	121.9	256.0	111.6	91.8	112.6
Shape ID	CIRC	CIRC	CIRC	CIRC	CIRC	CIRC	CIRC	CIRC	CIRC	CIRC	CIRC	CIRC	CIRC	CIRC	CIRC	CIRC
width (mm)	375	750	975	975	1050	975	900	825	825	825	825	675	600	450	375	300
height (mm)	375	750	975	975	1050	975	900	825	825	825	825	675	600	450	375	300
us inv (m AD)	75.125	73.665	72.789	72.126	68.820	69.246	69.871	70.227	70.563	70.828	71.105	71.529	72.530	73.268	73.832	74.500
ds inv (m AD)	74.070	73.044	72.156	71.965	68.405	68.925	69.351	69.976	70.257	70.593	70.858	71.285	71.634	72.710	73.373	73.937
grad (m/m)	0.00500	0.00200	0.00200	0.00201	0.00200	0.00200	0.00200	0.00200	0.00200	0.00200	0.00200	0.00200	0.00350	0.00500	0.00500	0.00500
r.pfc (m3/s)	0.124	0.498	1.002	1.005	1.221	1.003	0.810	0.642	0.643	0.641	0.642	0.376	0.363	0.202	0.124	0.068
surc	0.56	0.58	0.70	0.65	1.00	1.00	0.79	0.65	0.62	0.62	0.62	0.57	0.56	0.35	0.05	0.07
DS Depth (m)	0.197	0.432	0.606	0.535	1.740	1.124	0.714	0.538	0.494	0.487	0.484	0.333	0.299	0.155	0.020	0.020
DS Flow (m3/s)	0.07246	0.28157	0.83027	0.85876	1.30873	0.81178	0.69564	0.45343	0.45344	0.45375	0.45440	0.23736	0.21262	0.02177	-0.00000	-0.00000
DS Velocity (m/s)	1.231	1.203	1.711	2.048	2.302	1.680	1.860	1.332	1.416	1.438	1.445	1.424	1.507	0.647	0.000	0.000
Node	-	Ch_Cherry-03	Ch_Unwin-15	Ch_Unwin-18	Ch_Unwin-14	Ch_Unwin-13	Ch_Unwin-12	Ch_Unwin-10	Ch_Unwin-09	Ch_Unwin-08	-	-	Ch_Unwin-05	Ch_Unwin-03	-	-
ground (m AD)	77.200	76.400	76.200	76.050	75.900	76.150	76.400	76.600	76.780	76.350	75.900	76.000	76.300	76.500	76.700	76.900
Head Discharge Tat	HD 46	HD 46	HD 46	HD 46	HD 46	HD 46	HD 46	HD 46	HD 46	HD 46	HD 46	HD 46	HD 46	HD 46	HD 46	HD 46
Number of Gullies	2.000	0.000	1.000	0.000	0.000	1.000	0.000	1.000	0.000	0.000	0.000	0.000	1.000	0.000	1.000	0.000
level (m AD)	75.336	74.077	73.476	72.761	70.145	70.049	70.065	70.514	70.751	71.080	71.342	71.618	71.917	72.865	73.369	73.852
gully flow (m3/s)	0.07303	0.00000	0.03224	-0.00000	0.00000	0.02466	0.00000	0.01917	-0.00000	-0.00000	-0.00000	-0.00000	0.02688	0.00000	0.02181	-0.00000
expr: Freeboard	1.864421	2.322951	2.724292	3.288785	5.755499	6.100867	6.335150	6.086221	6.029466	5.270074	4.558241	4.381584	4.383176	3.634537	3.330722	3.048003
expr:OverlandDepth	0.087743	0.100290	0.082326	0.088405	0.042955	0.072343	0.065012	0.065337	0.000006	0.078856	0.063722	0.087852	0.075313	0.071732	0.068639	0.053033



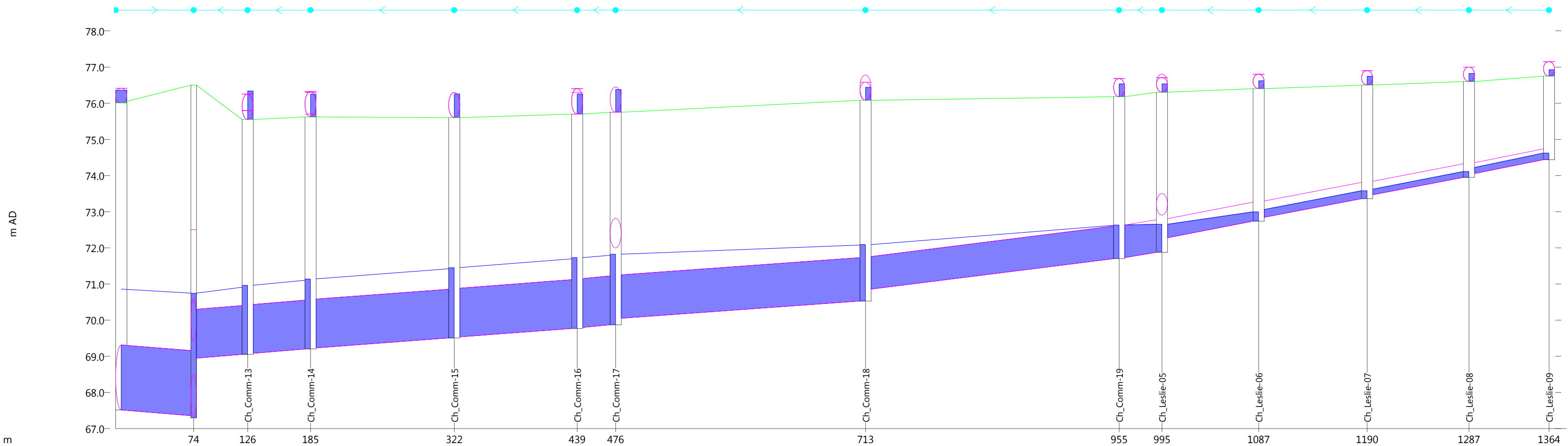
Proposed Sewers profile - 2 year storm event validation



Link	-	Bouch-02.4	Bouch-03.1	Bouch-04.4	NewSub1-04.4	-	Ch_Broad-02.2	Ch_Broad-03.3	-	Ch_Broad-04.3	Ch_Broad-05.2	Ch_Broad-06.2	Ch_Comm-06.2	-	-	-	-	-	3430617943.1	3435918032.1	-	
length (m)	49.5	116.5	112.1	103.1	102.5	42.1	99.4	90.6	23.4	108.9	96.4	119.7	109.0	27.2	32.6	68.4	59.1	44.3	103.7	115.6	74.3	
Shape ID	CIRC	CIRC	CIRC	CIRC	CIRC	CIRC	CIRC	CIRC	-	CIRC	CIRC	CIRC	CIRC	CIRC	CIRC	CIRC	CIRC	CIRC	CIRC	CIRC	CIRC	CIRC
width (mm)	300	375	525	600	825	900	1200	1200	-	1200	1200	1650	1650	1650	1650	1800	1800	1800	1800	1800	1800	1800
height (mm)	300	375	525	600	825	900	1200	1200	-	1200	1200	1650	1650	1650	1650	1800	1800	1800	1800	1800	1800	1800
us inv (m AD)	75.750	75.398	74.635	73.117	72.346	71.882	71.405	71.027	-	70.568	70.157	69.339	69.070	-	-	68.418	68.251	68.103	67.984	67.747	67.515	
ds inv (m AD)	75.503	74.815	74.075	72.601	71.987	71.735	71.057	70.707	-	70.187	69.819	69.100	68.852	-	-	68.281	68.133	68.014	67.777	67.515	67.360	
grad (m/m)	0.00499	0.00500	0.00499	0.00501	0.00350	-	0.00350	0.00353	-	0.00350	0.00351	0.00200	0.00200	-	-	0.00200	0.00200	0.00201	0.00200	0.00201	0.00209	
r.pfc (m3/s)	0.068	0.124	0.304	0.435	0.849	1.069	2.307	2.318	-	2.307	2.309	4.074	4.077	-	-	4.070	5.146	5.138	5.153	5.137	5.150	5.252
surc	0.32	0.53	0.62	0.71	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	-	2.00	2.00	1.00	1.00	1.00	1.00	1.00	
DS Depth (m)	0.095	0.191	0.310	0.398	0.863	1.080	1.701	1.937	-	2.206	2.356	2.926	2.991	-	2.984	3.180	3.220	3.249	3.315	3.376	3.386	
DS Flow (m3/s)	0.00339	0.06800	0.21000	0.36774	0.58513	-	1.10872	1.68799	-	1.97896	2.14336	3.48203	3.90498	-	-	4.78139	4.75154	4.70965	4.64283	4.73220	4.88066	
DS Velocity (m/s)	0.283	1.204	1.579	1.847	1.905	1.845	1.534	2.086	-	2.280	2.645	2.049	2.322	-	-	2.531	2.512	2.474	2.454	2.824	2.789	
Node	-	Bouch-02	Bouch-03	Bouch-04	NewSub1-04	-	Ch_Broad-03	-	-	Ch_Broad-05	Ch_Broad-06	Ch_Comm-06	-	-	-	-	-	-	3430617943	3435918032	Ch_Carlaw-09	
ground (m AD)	-	77.560	77.500	77.360	77.800	77.850	77.370	76.850	76.820	76.320	76.300	76.320	76.000	76.280	-	76.600	77.570	77.520	76.500	76.500	76.010	
Head Discharge Tab:	-	HD 46	HD 46	HD 46	HD 46	HD 46	HD 46	HD 46	HD 46	HD 46	HD 46	HD 46	HD 46	HD 46	-	HD 46	HD 46	HD 46	HD 46	HD 46	HD 46	
Number of Gullies	-	0.000	0.000	1.000	1.000	0.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	-	1.000	0.000	0.000	0.000	0.000	2.000	
level (m AD)	-	75.598	74.962	73.550	72.968	72.850	72.815	72.757	72.642	72.592	72.391	72.172	72.024	71.840	-	71.578	71.459	71.350	71.261	71.089	70.888	
gully flow (m3/s)	-	0.00000	0.00000	0.04283	0.04671	0.00000	0.04700	0.04670	0.04670	0.04670	0.04670	0.04684	0.47502	0.04677	-	0.04670	0.00000	0.00000	0.00000	-0.00000	0.09340	
expr: Freeboard	-	1.962428	2.537796	3.810089	4.832196	5.000444	4.555326	4.093019	4.177895	3.727700	3.909322	4.147629	3.976456	4.439889	-	-	6.111405	-	5.239487	5.411079	5.121649	
expr: OverlandDepth	-	0.097036	0.090172	0.095391	0.103297	0.107626	0.179866	0.286841	0.679535	0.630534	0.406578	0.430382	0.153739	-	-	-	0.010826	-	0.156151	0.129829	0.348170	



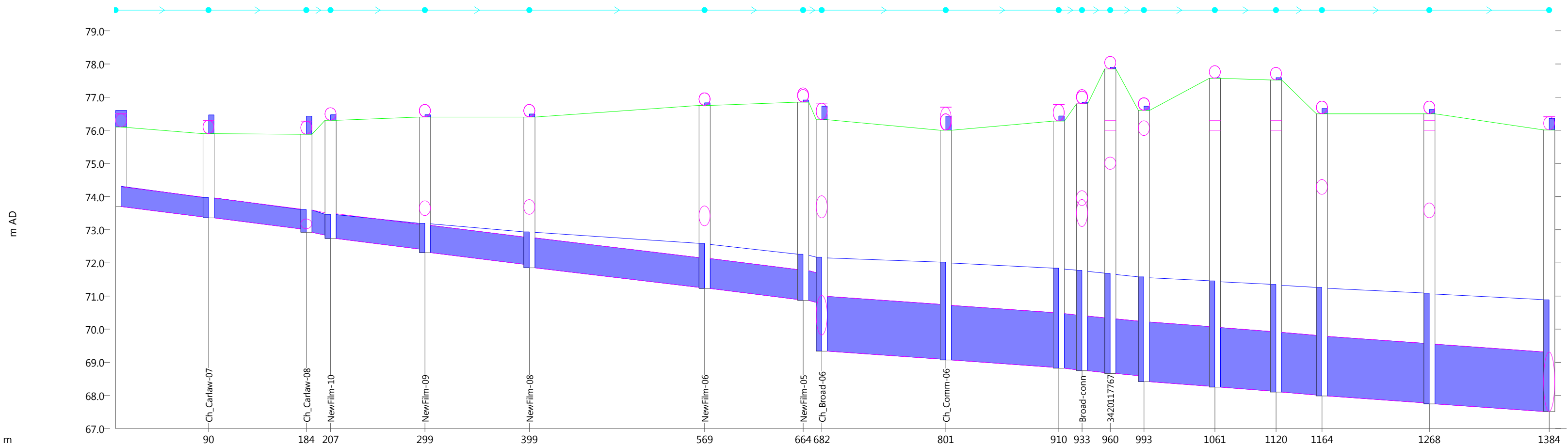
Proposed Sewers profile - 100 year storm event validation



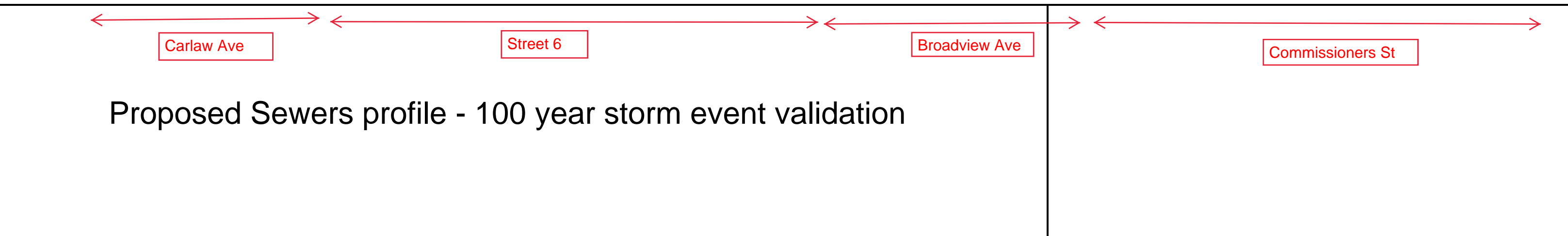
Link	Ch_Carlaw-09.5	-	-	Ch_Comm-15.2	Ch_Comm-16.3	-	Ch_Comm-18.2	Ch_Comm-19.1	-	Ch_Leslie-06.2	Ch_Leslie-07.2	Ch_Leslie-08.2	Ch_Leslie-09.2	
length (m)	74.3	51.4	59.8	136.7	117.0	36.6	237.5	241.2	40.9	91.9	103.1	96.9	76.2	
Shape ID	CIRC	CIRC	CIRC	CIRC	CIRC	CIRC	CIRC	CIRC	CIRC	CIRC	CIRC	CIRC	CIRC	
width (mm)	1800	1350	1350	1350	1350	1350	1200	900	900	525	450	375	300	
height (mm)	1800	1350	1350	1350	1350	1350	1200	900	900	525	450	375	300	
us inv (m AD)	67.515	69.053	69.203	69.506	69.770	69.873	70.528	71.702	71.876	72.740	73.361	73.950	74.436	
ds inv (m AD)	67.360	68.950	69.083	69.233	69.536	69.800	70.053	70.858	71.732	72.281	72.845	73.466	74.055	
grad (m/m)	0.00209	0.00200	0.00201	0.00200	0.00200	0.00199	0.00200	0.00350	0.00352	0.00499	0.00500	0.00500	0.00500	
r.pfc (m3/s)	5.252	2.385	2.391	2.386	2.388	2.383	1.744	1.071	1.075	0.304	0.202	0.124	0.068	
surc	1.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	0.71	0.48	0.43	0.62	
DS Depth (m)	3.386	1.797	1.882	1.908	1.920	1.931	1.771	1.233	0.898	0.373	0.213	0.157	0.168	
DS Flow (m3/s)	4.88066	3.04532	2.57932	2.44013	2.44174	2.25611	1.30445	0.92183	0.46480	0.14010	0.09340	0.04670	0.04670	
DS Velocity (m/s)	2.789	2.877	2.175	2.004	2.073	1.919	1.578	2.142	1.354	1.370	1.260	1.064	1.145	
Node	-	STMShaft-01	-	Ch_Comm-14	Ch_Comm-15	Ch_Comm-16	Ch_Comm-17	Ch_Comm-18	Ch_Comm-19	Ch_Leslie-05	Ch_Leslie-06	Ch_Leslie-07	Ch_Leslie-08	-
ground (m AD)	76.010	76.500	75.550	75.620	75.600	75.700	75.750	76.080	76.180	76.305	76.400	76.500	76.600	76.750
Head Discharge Tab:	HD 46	HD 46	HD 46	HD 46	HD 46	HD 46	HD 46	HD 46	HD 46	HD 46	HD 46	HD 46	HD 46	HD 46
Number of Gullies	2.000	1.000	10.000	3.000	0.000	4.000	7.000	9.000	9.000	0.000	1.000	1.000	0.000	1.000
level (m AD)	70.888	70.743	70.962	71.138	71.453	71.728	71.822	72.089	72.630	72.654	72.994	73.579	74.111	74.622
gully flow (m3/s)	-	-	0.46700	0.14010	0.00000	0.18680	0.32690	0.42030	0.42030	0.00000	0.04678	0.04670	-0.00000	-
expr: Freeboard	-	5.757385	4.588422	4.482083	4.146951	3.971797	3.927727	3.990896	3.550033	3.651260	3.406104	2.920815	2.489244	-
expr:OverlandDepth	-	-	0.787013	0.633601	0.655615	0.554868	0.630379	0.358805	0.354012	0.231354	0.221124	0.245300	0.224257	-



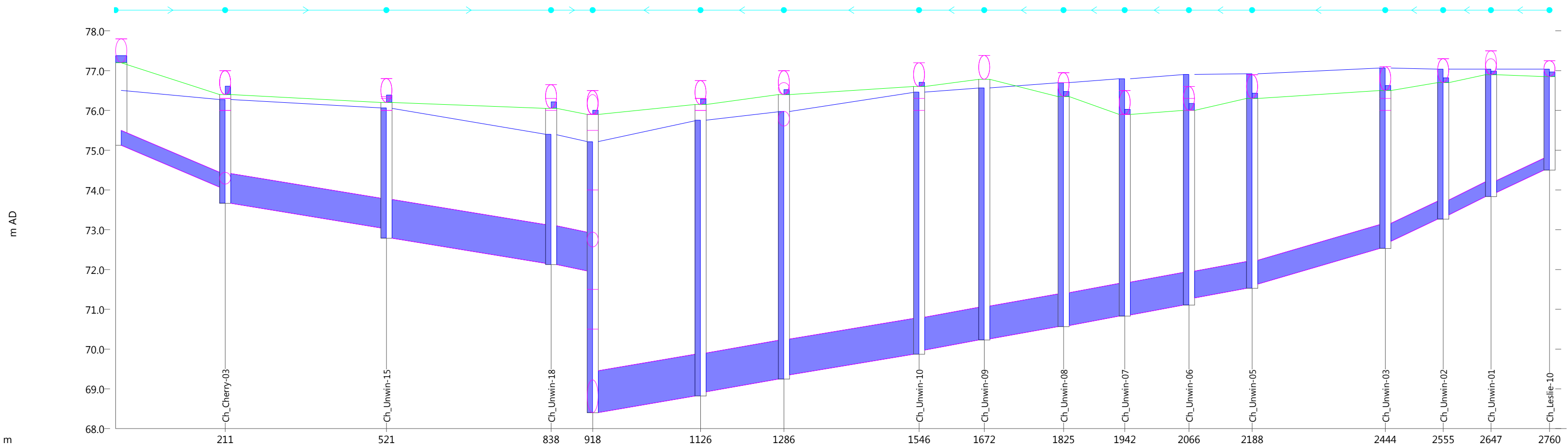
Proposed Sewers profile - 100 year storm event validation



Link	Ch_Carlaw-06.2	Ch_Carlaw-07.2	-	NewFilm-10.1	NewFilm-09.5	NewFilm-08.4	NewFilm-06.5	-	Ch_Broad-06.2	Ch_Comm-06.2	-	-	-	Bouch-con	-	-	3430617943.1	3435918032.1
length (m)	89.7	94.4	23.4	91.2	100.8	169.1	95.0	-	119.7	109.0	22.6	27.2	32.6	68.4	59.1	44.3	103.7	115.6
Shape ID	CIRC	CIRC	CIRC	CIRC	CIRC	CIRC	CIRC	-	CIRC	CIRC	CIRC	CIRC	CIRC	CIRC	CIRC	CIRC	CIRC	CIRC
width (mm)	600	600	675	750	825	900	900	900	1650	1650	1650	1650	1650	1800	1800	1800	1800	1800
height (mm)	600	600	675	750	825	900	900	900	1650	1650	1650	1650	1650	1800	1800	1800	1800	1800
us inv (m AD)	73.700	73.356	-	72.734	72.310	71.852	71.230	-	69.339	69.070	-	-	-	68.663	68.418	68.251	68.103	67.984
ds inv (m AD)	73.386	73.026	-	72.415	71.957	71.260	70.898	-	69.100	68.852	-	-	-	68.598	68.281	68.133	68.014	67.777
grad (m/m)	0.00350	0.00350	-	0.00350	0.00350	0.00350	0.00349	-	0.00200	0.00200	-	-	-	0.00200	0.00200	0.00201	0.00200	0.00201
r.pfc (m3/s)	0.363	0.363	-	0.659	0.850	1.071	1.070	-	4.074	4.077	-	4.064	4.070	5.146	5.138	5.153	5.137	5.150
surc	2.00	2.00	2.00	1.00	1.00	1.00	1.00	-	1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00
DS Depth (m)	0.588	0.586	-	0.778	0.982	1.331	1.366	-	2.926	2.991	-	2.997	2.984	3.180	3.220	3.249	3.315	3.376
DS Flow (m3/s)	0.37512	0.37804	-	0.62474	0.73872	0.84247	1.06422	-	3.48203	3.90498	-	-	-	4.78139	4.75154	4.70965	4.64283	4.73220
DS Velocity (m/s)	1.708	1.583	-	2.018	2.068	1.697	2.261	-	2.049	2.322	-	2.834	3.056	2.531	2.512	2.474	2.454	2.824
Node	-	Ch_Carlaw-07	-	-	NewFilm-09	NewFilm-08	NewFilm-06	-	Ch_Broad-06	Ch_Comm-06	-	-	-	-	3425317854	-	3430617943	3435918032
ground (m AD)	76.100	75.900	75.880	76.300	76.400	76.400	76.750	76.850	76.320	76.000	76.280	-	-	76.600	77.570	77.520	76.500	76.500
Head Discharge Tab:	HD 46	HD 46	HD 46	HD 46	HD 46	HD 46	HD 46	HD 46	HD 46	HD 46	HD 46	-	-	HD 46	HD 46	HD 46	HD 46	HD 46
Number of Gullies	8.000	0.000	5.000	0.000	1.000	0.000	0.000	0.000	1.000	10.000	1.000	-	1.000	1.000	0.000	0.000	0.000	0.000
level (m AD)	74.321	73.974	73.612	73.465	73.192	72.938	72.589	72.261	72.172	72.024	71.840	-	-	71.578	71.459	71.350	71.261	71.089
gully flow (m3/s)	0.37360	0.00000	0.23350	0.00000	0.02388	0.00000	0.00000	0.00000	0.04684	0.47502	0.04677	-	-	0.04670	0.00000	0.00000	0.00000	-0.00000
expr: Freeboard	-	1.926474	2.268367	2.835011	3.207785	3.462332	4.160675	4.589136	4.147629	3.976456	4.439889	-	-	5.022066	6.111405	6.169681	5.239487	5.411079
expr: OverlandDepth	-	0.563524	0.545987	0.171886	0.071306	0.094217	0.081200	0.065001	0.406578	0.430382	0.153739	-	-	0.127615	0.010826	0.068600	0.156151	0.129829



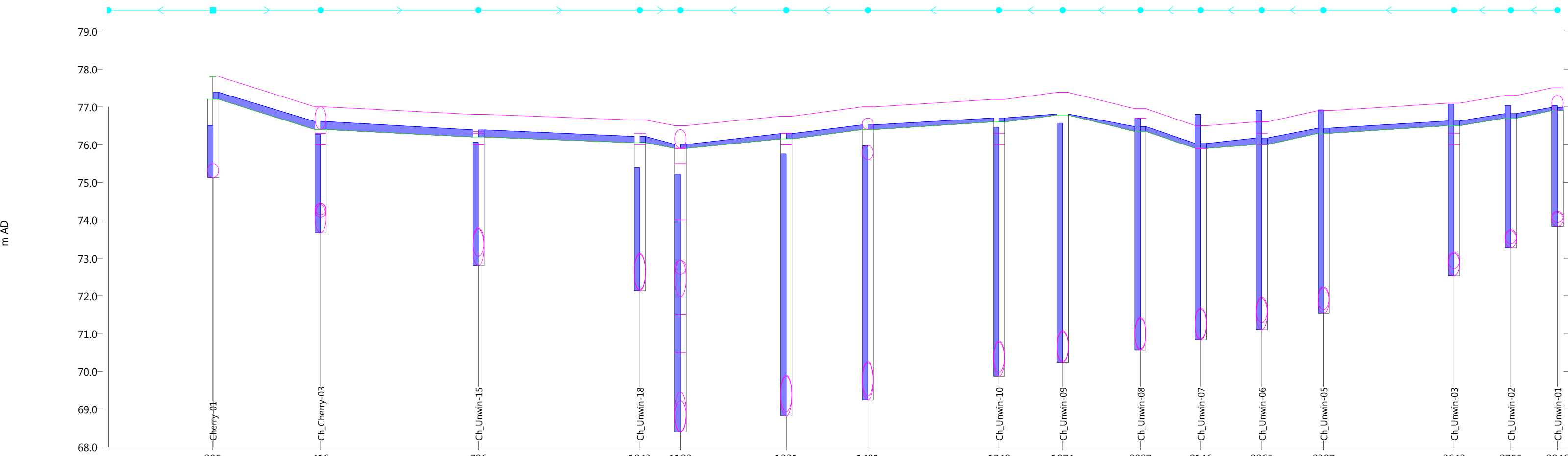
Proposed Sewers profile - 100 year storm event validation



Link	Ch_Cherry-01.3	Ch_Cherry-03.3	Ch_Unwin-15.2	-	Ch_Unwin-13.2	Ch_Unwin-12.4	Ch_Unwin-10.2	-	Ch_Unwin-08.2	-	-	-	Ch_Unwin-03.2	-	-	-
length (m)	211.0	310.3	316.9	80.1	207.6	160.4	260.1	125.5	152.7	117.8	123.4	121.9	256.0	111.6	91.8	112.6
Shape ID	CIRC	CIRC	CIRC	CIRC	CIRC	CIRC	CIRC	CIRC	CIRC	CIRC	CIRC	CIRC	CIRC	CIRC	CIRC	CIRC
width (mm)	375	750	975	975	1050	975	900	825	825	825	825	675	600	450	375	300
height (mm)	375	750	975	975	1050	975	900	825	825	825	825	675	600	450	375	300
us inv (m AD)	75.125	73.665	72.789	72.126	68.820	69.246	69.871	70.227	70.563	70.828	71.105	71.529	72.530	73.268	73.832	74.500
ds inv (m AD)	74.070	73.044	72.156	71.965	68.405	68.925	69.351	69.976	70.257	70.593	70.858	71.285	71.634	72.710	73.373	73.937
grad (m/m)	0.00500	0.00200	0.00200	0.00201	0.00200	0.00200	0.00200	0.00200	0.00200	0.00200	0.00200	0.00200	0.00350	0.00500	0.00500	0.00500
r.pfc (m3/s)	0.124	0.498	1.002	1.005	1.221	1.003	0.810	0.642	0.643	0.641	0.642	0.376	0.363	0.202	0.124	0.068
surc	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	2.00
DS Depth (m)	2.206	3.019	3.245	3.251	6.811	6.831	6.623	6.484	6.310	6.105	5.941	5.619	5.288	4.358	3.666	3.102
DS Flow (m3/s)	0.09340	0.38843	1.05960	1.22678	1.55544	1.13123	1.09228	0.71959	0.69941	0.67688	0.66036	0.33138	0.32030	-0.13593	-0.11379	-0.07289
DS Velocity (m/s)	1.350	1.464	1.724	2.347	2.463	1.973	2.003	1.500	1.452	1.569	1.571	1.404	1.617	0.849	-1.003	-1.024
Node	-	Ch_Cherry-03	Ch_Unwin-15	Ch_Unwin-18	Ch_Unwin-14	Ch_Unwin-13	Ch_Unwin-12	Ch_Unwin-10	Ch_Unwin-09	Ch_Unwin-08	-	-	Ch_Unwin-05	Ch_Unwin-03	-	-
ground (m AD)	77.200	76.400	76.200	76.050	75.900	76.150	76.400	76.600	76.780	76.350	75.900	76.000	76.300	76.500	76.700	76.900
Head Discharge Tat	HD 46	HD 46	HD 46	HD 46	HD 46	HD 46	HD 46	HD 46	HD 46	HD 46	HD 46	HD 46	HD 46	HD 46	HD 46	HD 46
Number of Gullies	2.000	0.000	1.000	0.000	0.000	1.000	0.000	1.000	0.000	0.000	0.000	0.000	1.000	0.000	1.000	0.000
level (m AD)	76.504	76.276	76.062	75.400	75.215	75.755	75.973	76.460	76.567	76.697	76.798	76.904	76.922	77.068	77.039	77.039
gully flow (m3/s)	0.09340	0.00000	0.04670	-0.00000	-0.00000	0.04670	0.00000	0.04670	0.00000	0.00000	0.00000	0.00000	-0.04751	-0.00000	-0.04824	-0.00000
expr: Freeboard	0.695735	0.124487	0.137584	0.650052	0.685370	0.394652	0.426985	0.140436	0.212907	-0.347212	-0.898409	-0.904289	-0.622020	-0.567955	-0.338666	-0.138765
expr:OverlandDepth	0.179837	0.208513	0.189107	0.167308	0.104700	0.138712	0.122858	0.105460	0.000121	0.128195	0.129549	0.175766	0.135387	0.125885	0.120145	0.087442



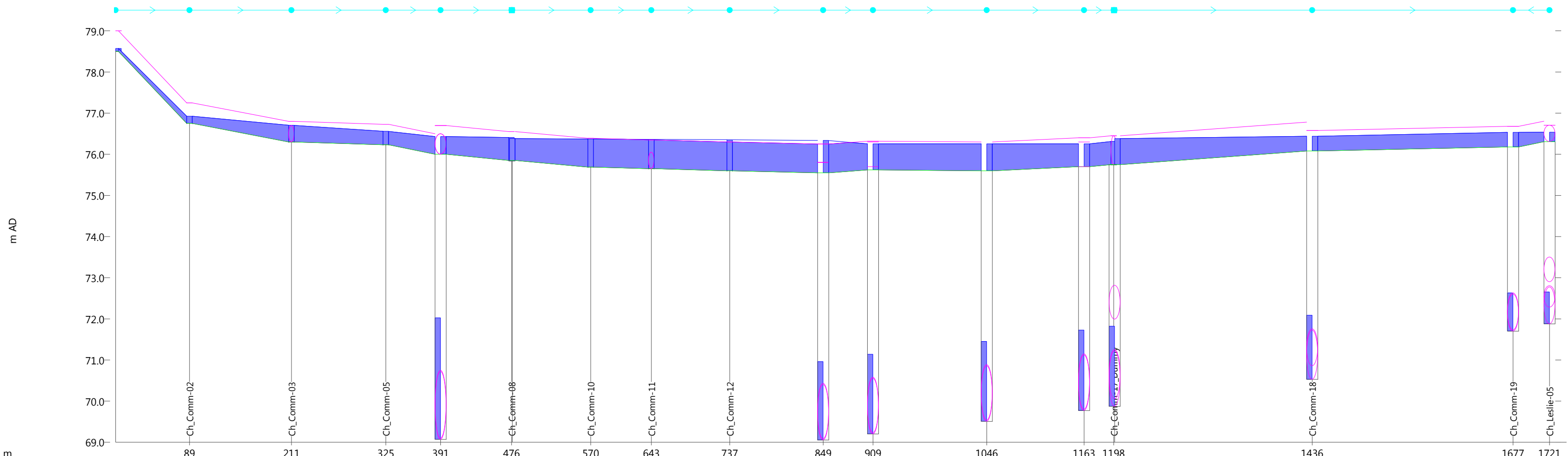
Proposed Sewers profile - 100 year storm event validation



Link	Cherry-01.2	Ch_Cherry-01.1	Ch_Cherry-03.1	Ch_Unwin-15.1	-	Ch_Unwin-13.1	Ch_Unwin-12.1	Ch_Unwin-10.1	-	Ch_Unwin-08.1	-	-	-	Ch_Unwin-03.1	-	-
length (m)	204.8	211.0	310.3	316.9	80.1	207.6	160.4	258.1	124.8	152.7	118.7	119.6	121.9	256.0	111.6	91.8
Shape ID	CHERRYNORTH	OREC	OREC	OREC	OREC	OREC	OREC	OREC	OREC	OREC	OREC	OREC	OREC	OREC	OREC	OREC
width (mm)	30500	1000	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200
height (mm)	420	600	600	600	600	600	600	600	600	600	600	600	600	600	600	600
us inv (m AD)	77.800	77.200	76.400	76.200	76.050	76.150	76.400	76.600	76.780	76.350	75.900	76.000	76.300	76.500	76.700	76.900
ds inv (m AD)	77.000	76.400	76.200	76.050	75.900	75.900	76.150	76.400	76.600	76.780	76.350	75.900	76.000	76.300	76.500	76.700
grad (m/m)	0.00391	0.00379	0.00064	0.00047	0.00187	0.00120	0.00156	0.00077	0.00144	-0.00282	-0.00379	0.00084	0.00246	0.00078	0.00179	0.00218
r.pfc (m3/s)	7.651	0.622	0.713	0.611	1.216	0.975	1.109	0.782	1.067	-1.491	-1.730	0.813	1.394	0.785	1.190	1.311
surc	0.22	0.35	0.35	0.32	0.28	0.23	0.23	0.20	0.18	0.21	0.22	0.29	0.29	0.23	0.21	0.20
DS Depth (m)	0.087	0.209	0.189	0.167	0.105	0.105	0.139	0.123	0.105	0.030	0.128	0.130	0.176	0.135	0.126	0.120
DS Flow (m3/s)	0.18214	0.10650	0.13556	0.10509	0.16735	0.09757	0.08845	0.04105	-0.00759	0.00000	-0.14929	0.12968	0.13212	0.06612	0.08858	0.05453
DS Velocity (m/s)	0.642	0.650	0.343	0.336	0.857	0.545	0.293	0.154	-0.042	0.000	-0.530	0.646	0.436	0.264	0.394	0.208
Node	Cherry-03	Cherry-01	-	Ch_Cherry-03	Ch_Unwin-15	Ch_Unwin-18	Ch_Unwin-14	Ch_Unwin-13	Ch_Unwin-12	Ch_Unwin-10	Ch_Unwin-09	Ch_Unwin-08	-	Ch_Unwin-05	Ch_Unwin-03	-
ground (m AD)	77.000	77.800	77.200	76.400	76.200	76.050	75.900	76.150	76.400	76.600	76.780	76.350	75.900	76.000	76.300	76.700
Head Discharge Tat	HD 46	HD 46	HD 46	HD 46	HD 46	HD 46	HD 46	HD 46	HD 46	HD 46	HD 46	HD 46	HD 46	HD 46	HD 46	HD 46
Number of Gullies	0.000	0.000	2.000	0.000	1.000	0.000	0.000	1.000	0.000	1.000	0.000	0.000	0.000	0.000	1.000	1.000
level (m AD)	77.056	77.893	76.504	76.276	76.062	75.400	75.215	75.755	75.973	76.460	76.567	76.697	76.798	76.904	76.922	77.039
gully flow (m3/s)			0.09340	0.00000	0.04670	-0.00000	-0.00000	0.04670	0.00000	0.04670	0.00000	0.00000	0.00000	0.00000	-0.04751	-0.00000
expr:OverlandDepth			0.179837	0.208513	0.189107	0.167308	0.104700	0.138712	0.122858	0.105460	0.000121	0.128195	0.129549	0.175766	0.135387	0.120145



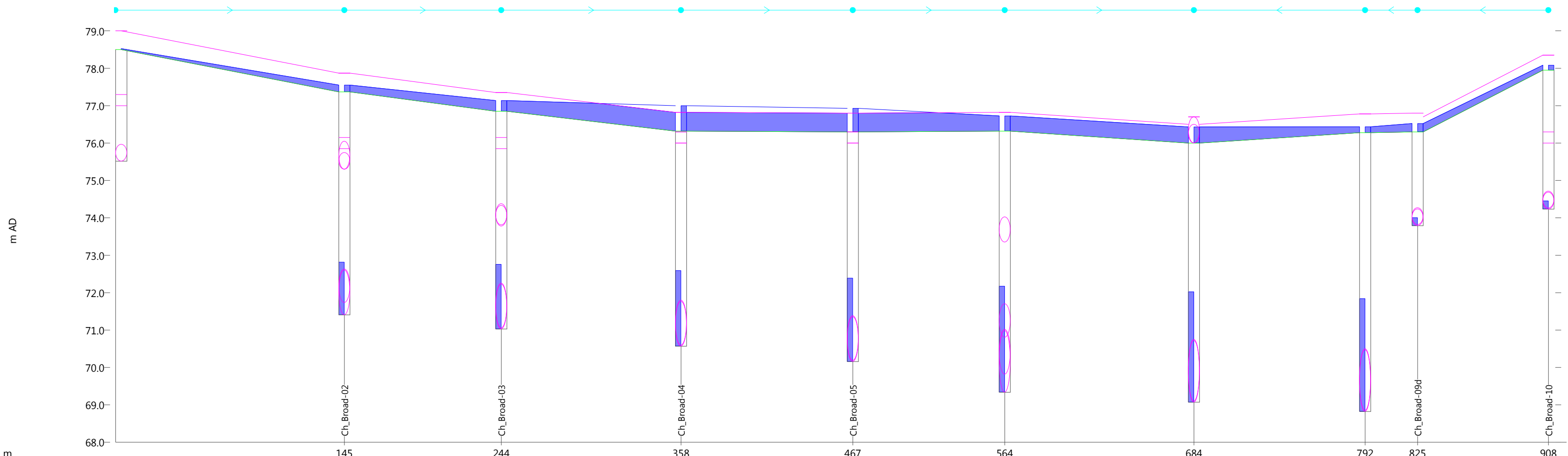
Proposed Overland Channels - 100 year storm event validation



Link	Ch_Comm-01.1	Ch_Comm-02.1	Ch_Comm-03.1	-	Ch_Comm-06.1	-	-	Ch_Comm-11.1	Ch_Comm-12.1	-	Ch_Comm-14.1	Ch_Comm-15.1	-	Ch_Comm-17.1	Ch_Comm-18.1	-		
length (m)	88.9	122.4	113.4	65.7	85.2	94.1	73.0	94.1	112.3	59.8	136.7	117.0	35.6	237.5	241.2	43.8		
Shape ID	OT1:1	OT1:1	OT1:1	OT1:1	OT1:1	OT1:1	OT1:1	OT1:1	OT1:1	OREC	OREC	OREC	OREC	OT1:1	OT1:1	OT1:1		
width (mm)	6100	6100	6100	6100	5700	5700	5700	5700	5700	2100	2100	2100	2100	5500	5500	5500		
height (mm)	500	500	500	500	700	700	700	700	700	700	700	700	700	700	500	500		
us inv (m AD)	78.500	76.750	76.300	76.230	76.000	75.850	75.690	75.650	75.600	75.550	75.620	75.600	-	75.750	76.080	76.305		
ds inv (m AD)	76.750	76.300	76.230	76.000	75.850	75.690	75.650	75.600	75.550	75.620	75.600	75.700	-	76.080	76.180	76.180		
grad (m/m)	0.01968	0.00368	0.00062	0.00350	0.00176	0.00170	0.00055	0.00053	0.00045	-0.00117	0.00015	-0.00085	-	-0.00139	-0.00041	0.00286		
r.pfc (m3/s)	10.698	4.624	1.894	4.512	5.248	5.160	2.928	2.883	2.640	-1.128	0.399	-0.964	-1.236	-4.501	-1.400	3.676		
surc	0.35	0.81	0.81	0.86	0.80	0.98	1.00	1.00	1.00	1.00	0.94	0.94	0.80	0.90	0.72	0.71		
DS Depth (m)	0.174	0.405	0.329	0.430	0.558	0.683	0.715	0.754	0.787	0.634	0.656	0.555	0.562	0.359	0.354	0.354		
DS Flow (m3/s)	0.20061	0.67359	1.62980	2.12866	1.38902	1.52744	1.76107	2.08220	2.27323	1.41849	0.33661	-0.47144	-	-1.17023	-0.82194	-		
DS Velocity (m/s)	0.184	0.258	0.774	1.363	0.429	0.396	0.443	0.529	1.108	1.549	0.397	-0.602	-0.967	-0.659	-0.489	-0.268		
Node	-	Ch_Comm-02	Ch_Comm-03	Ch_Comm-05	-	-	Ch_Comm-10	Ch_Comm-11	Ch_Comm-12	Ch_Comm-13	Ch_Comm-14	Ch_Comm-15	-	Ch_Comm-17	Ch_Comm-18	Ch_Comm-19	-	
ground (m AD)	78.500	76.750	76.300	76.230	76.000	75.850	75.690	75.650	75.600	75.550	75.620	75.600	75.700	75.750	76.080	76.180	-	
Head Discharge Tat	-	-	-	-	HD 46	-	-	-	-	HD 46	HD 46	HD 46	HD 46	HD 46	HD 46	HD 46	HD 46	
Number of Gullies	1.000	1.000	1.000	1.000	10.000	1.000	1.000	1.000	1.000	10.000	3.000	0.000	4.000	7.000	9.000	9.000	-	
level (m AD)	78.573	76.924	76.705	76.559	72.024	-	76.384	76.373	76.365	76.354	70.962	71.138	71.453	71.728	72.089	72.630	-	
gully flow (m3/s)	-	-	-	-	0.47502	-	-	-	-	-	0.46700	0.14010	0.00000	0.18680	0.32690	0.42030	0.42030	-
expr:OverlandDepth	-	-	-	-	0.430382	-	-	-	-	-	0.787013	0.633601	0.655615	0.554868	0.630379	0.358805	0.354012	-

Commissioners Street

Proposed Overland Channels - 100 year storm event validation



Link	Ch_Broad-01.1	Ch_Broad-02.1	Ch_Broad-03.5	Ch_Broad-04.1	Ch_Broad-05.1	Ch_Broad-06.1	Ch_Broad-09u.1	-	Ch_Broad-10.2	
length (m)	145.1	99.4	114.0	108.9	96.4	119.9	108.6	33.2	82.9	
Shape ID	OREC	OREC	OREC	OREC	OREC	OREC	OREC	OREC	OREC	
width (mm)	1000	1000	1000	1000	1000	1000	1000	500	500	
height (mm)	500	500	500	500	500	500	500	500	400	
us inv (m AD)	78.500	77.370	76.850	76.320	76.300	76.320	76.280	76.300	77.950	
ds inv (m AD)	77.370	76.850	76.320	76.300	76.320	76.000	76.000	76.280	76.300	
grad (m/m)	0.00779	0.00523	0.00465	0.00018	-0.00021	0.00267	0.00258	0.00060	0.01991	
r.pfc (m3/s)	0.700	0.574	0.541	0.108	-0.114	0.410	0.403	0.074	0.324	
surc	0.36	0.57	1.00	2.00	1.00	0.86	0.86	0.45	0.56	
DS Depth (m)	0.180	0.287	0.680	0.631	0.407	0.430	0.430	0.154	0.223	
DS Flow (m3/s)	-0.00205	0.12771	0.19878	0.28172	0.35994	0.31497	0.04978	0.04778	0.06046	
DS Velocity (m/s)	-0.016	0.483	0.415	0.639	1.350	1.400	0.218	0.920	0.724	
Node	Ch_Broad-01	Ch_Broad-02	Ch_Broad-03	Ch_Broad-04	Ch_Broad-05	Ch_Broad-06	Ch_Comm-06	Ch_Broad-09u	Ch_Broad-09d	Ch_Broad-10
ground (m AD)	78.500	77.370	76.850	76.320	76.300	76.320	76.000	76.280	76.300	77.950
Head Discharge Tat	HD 46	HD 46	HD 46	HD 46	HD 46	HD 46	HD 46	HD 46	HD 46	HD 46
Number of Gullies	0.000	1.000	1.000	1.000	1.000	1.000	10.000	1.000	0.000	0.000
level (m AD)	75.855	72.815	72.757	72.592	72.391	72.172	72.024	71.840	74.008	74.454
gully flow (m3/s)	0.00000	0.04700	0.04670	0.04670	0.04670	0.04684	0.47502	0.04677	-0.00000	0.00000
expr:OverlandDepth	0.000000	0.179866	0.286841	0.679535	0.630534	0.406578	0.430382	0.153739	0.223079	0.132771

Broadview Avenue

Proposed Overland Channels - 100 year storm event validation

APPENDIX I

Model Results – ROW Inlet Control

Appendix I – Port Lands/South of Eastern. Inlet control in proposed Right-of-Ways

* Inlet capacity= 46.7 l/s. Number of Catch basins assume restricted inflow scenario for 100-year storm event.

Node ID	Location	Max 2-yr Inflow (m3/s)	Number of catch basins *
3408917579	Basin Street	0.067	0
3414517673	Basin Street	0.039	0
3420117767	Basin Street	0.045	1
3425317854	Basin Street	0.000	0
3428317905	Basin Street	0.056	0
3430617943	Basin Street	0.022	0
3435918032	Basin Street	0.045	0
3456817789	Bouchette Street	0.038	0
3462717753	Bouchette Street	0.000	0
3465517626	Lakeshore Boulevard	0.000	0
3465717624	Lakeshore Boulevard	0.000	0
3466817615	Booth Avenue	0.023	0
3467117644	Lakeshore Boulevard	0.084	1
3467917723	Lakeshore Boulevard	0.032	0
3479917576	Booth Avenue	0.075	1
3484717561	Booth Avenue	0.037	0
3487916826	Eastern Avenue	0.000	0
3489817546	Booth Avenue	0.083	2
3492716975	Eastern Avenue	0.143	3
3492716976A	Booth Avenue	0.000	0
3494617033	Eastern Avenue	0.040	1
3497117524	Booth Avenue	0.066	1
3498117147	Eastern Avenue	0.000	0
3500017210	Eastern Avenue	0.050	1
3501417255	Eastern Avenue	0.024	1
3501917265	Eastern Avenue	0.000	0
3503817324	Eastern Avenue	0.000	0
3504917352	Eastern Avenue	0.024	1
3505717380	Eastern Avenue	0.049	1
3506917417	Eastern Avenue	0.026	1
3508017491	Eastern Avenue	0.012	0
3508717475	Eastern Avenue	0.000	0
3508817498	Eastern Avenue	0.019	0
Basin-01	Basin Street	0.037	0
Basin-02	Basin Street	0.011	0
Bouch-01	Bouchette Street	0.017	0
Bouch-02	Bouchette Street	0.028	0
Bouch-03	Bouchette Street	0.063	0
Bouch-04	Bouchette Street	0.051	1
Bouch-05	Bouchette Street	0.027	0
Bouch-06	Bouchette Street	0.033	0
Bouch-07	Bouchette Street	0.040	1
Bouch-conn2	Bouchette Street	0.029	1
Broad-conn	Broadview Avenue	0.000	0
Ch_Broad-01	Broadview Avenue	0.000	0
Ch_Broad-02	Broadview Avenue	0.061	1
Ch_Broad-03	Broadview Avenue	0.076	1
Ch_Broad-04	Broadview Avenue	0.071	1

Appendix I :- Port Lands/South of Eastern. Inlet control in proposed Right-of-Ways

* Inlet capacity= 46.7 l/s. Number of Catch basins assume restricted inflow scenario for 100-year storm event.

Node ID	Location	Max 2-yr Inflow (m3/s)	Number of catch basins *
Ch_Broad-05	Broadview Avenue	0.083	1
Ch_Broad-06	Broadview Avenue	0.037	1
Ch_Broad-09d	Broadview Avenue	0.000	0
Ch_Broad-09u	Broadview Avenue	0.047	1
Ch_Broad-10	Broadview Avenue	0.042	0
Ch_Broad-12	Broadview Avenue	0.091	2
Ch_Carlaw-06	Carlaw Avenue	0.381	8
Ch_Carlaw-07	Carlaw Avenue	0.210	0
Ch_Carlaw-08	Carlaw Avenue	0.236	5
Ch_Carlaw-09	Carlaw Avenue	0.078	2
Ch_Carlaw-10	Carlaw Avenue	0.075	0
Ch_Caroline-01	Caroline Avenue	0.027	0
Ch_Caroline-02	Caroline Avenue	0.091	2
Ch_Caroline-03	Caroline Avenue	0.410	8
Ch_Caroline-04	Caroline Avenue	0.041	0
Ch_Caroline-04d	Caroline Avenue	0.000	0
Ch_Cherry-01	Cherry Street	0.135	2
Ch_Cherry-02	Cherry Street	0.043	0
Ch_Cherry-03	Cherry Street	0.022	0
Ch_Comm-06	Commisioners Street	0.507	10
Ch_Comm-13	Commisioners Street	0.500	10
Ch_Comm-14	Commisioners Street	0.146	3
Ch_Comm-15	Commisioners Street	0.000	0
Ch_Comm-16	Commisioners Street	0.217	4
Ch_Comm-17	Commisioners Street	0.342	7
Ch_Comm-18	Commisioners Street	0.428	9
Ch_Comm-19	Commisioners Street	0.424	9
Ch_Don-01	Don Roadway	0.081	1
Ch_Leslie-01	Leslie Street	0.071	0
Ch_Leslie-02	Leslie Street	0.000	0
Ch_Leslie-03	Leslie Street	0.057	1
Ch_Leslie-04	Leslie Street	0.000	0
Ch_Leslie-05	Leslie Street	0.000	0
Ch_Leslie-06	Leslie Street	0.036	1
Ch_Leslie-07	Leslie Street	0.087	1
Ch_Leslie-08	Leslie Street	0.056	0
Ch_Leslie-09	Leslie Street	0.073	1
Ch_Leslie-10	Leslie Street	0.044	0
Ch_Unwin-01	Unwin Avenue	0.040	0
Ch_Unwin-02	Unwin Avenue	0.054	1
Ch_Unwin-03	Unwin Avenue	0.002	0
Ch_Unwin-05	Unwin Avenue	0.091	1
Ch_Unwin-06	Unwin Avenue	0.009	0
Ch_Unwin-07	Unwin Avenue	0.009	0
Ch_Unwin-08	Unwin Avenue	0.081	0
Ch_Unwin-09	Unwin Avenue	0.000	0
Ch_Unwin-10	Unwin Avenue	0.053	1
Ch_Unwin-12	Unwin Avenue	0.000	0

Appendix I :- Port Lands/South of Eastern. Inlet control in proposed Right-of-Ways

* Inlet capacity= 46.7 l/s. Number of Catch basins assume restricted inflow scenario for 100-year storm event.

Node ID	Location	Max 2-yr Inflow (m3/s)	Number of catch basins *
Ch_Unwin-13	Unwin Avenue	0.072	1
Ch_Unwin-14	Unwin Avenue	0.067	0
Ch_Unwin-15	Unwin Avenue	0.085	1
CN65663	Eastern Avenue	0.018	0
LkShore-01	Lakeshore Boulevard	0.000	0
LkShore-02	Lakeshore Boulevard	0.209	4
LkShore-03	Lakeshore Boulevard	0.000	0
LkShore-05	Lakeshore Boulevard	0.146	1
LocalFilmEast-01	Morse Street	0.039	0
LocalFilmEast-02	Morse Street	0.053	0
LocalFilmWest-01	Local - Street 5	0.000	0
LocalFilmWest-02	Local - Street 5	0.072	0
LocalFilmWest-03	Saulters Street	0.000	0
LocalFilmWest-04	Saulters Street	0.093	1
LocalSub1-01	Local - Street 5	0.044	0
LocalSub1-04	Local - Street 5	0.026	0
LocalSub1-05	Local - Street 5	0.043	1
NewFilm-01	Local - Street 6	0.039	0
NewFilm-02	Local - Street 6	0.000	0
NewFilm-03	Local - Street 6	0.041	0
NewFilm-04	Local - Street 6	0.058	0
NewFilm-05	Local - Street 6	0.000	0
NewFilm-06	Local - Street 6	0.063	0
NewFilm-08	Local - Street 6	0.041	0
NewFilm-09	Local - Street 6	0.035	1
NewFilm-15	Local - Street 7	0.138	2
NewFilm-16	Local - Street 7	0.057	1
NewFilm-17	Local - Street 7	0.029	1
NewFilm-18	Local - Street 7	0.089	2
NewFilm-19	Local - Street 7	0.078	0
NewFilm-21	Local - Street 7	0.016	0
NewFilm-22	Local - Street 7	0.069	0
NewFilm-24	Local - Street 7	0.067	0
NewFilm-25	Local - Street 7	0.055	0
NewFilm-26	Local - Street 7	0.041	0
NewFilm-27	Local - Street 7	0.000	0
NewFilm-29	Local - Street 7	0.036	1
NewSub1-01	Local - Street 3	0.122	2
NewSub1-02	Local - Street 3	0.073	1
NewSub1-03	Local - Street 3	0.066	0
NewSub1-04	Local - Street 3	0.116	1
Rail_LowPoint	Broadview Avenue	0.093	2
street-conn03	Street 4	0.049	0
Street3-01	Street 3	0.000	0
Street6-01	Street 6	0.055	1
Street6-02	Street 6	0.000	0

APPENDIX J

Model Results – Lot Storage and Control

Appendix J – Port Lands/South of Eastern. Lot control and storage volumes for Water as Resource alternative.

* Release rate corresponding to 2-yr pre-development conditions

** Storage includes 5mm of initial rainfall retention

Ref. Number	Pilot area	Property/ Subcatchment Name	Area [ha]	Release rate (m3/s)*	100-yr lot storage (m3)**
1	No	1953-2	0.18	Existing - No Control	No Storage
2	No	1954-2	0.42	Existing - No Control	No Storage
3	No	1955-2	0.20	Existing - No Control	No Storage
4	No	1957-2	0.29	Existing - No Control	No Storage
5	No	1958-2	0.73	Existing - No Control	No Storage
6	No	1960-2	0.84	Existing - No Control	No Storage
7	No	1961-2	1.22	Existing - No Control	No Storage
8	No	1963-2	0.75	Existing - No Control	No Storage
9	No	1964-2	2.93	Existing - No Control	No Storage
10	No	1965-2	0.59	Existing - No Control	No Storage
11	No	1966-2	0.81	Existing - No Control	No Storage
12	No	1967-2	2.72	Existing - No Control	No Storage
13	No	1968-2	1.12	Existing - No Control	No Storage
14	No	1969-2	1.38	Existing - No Control	No Storage
15	No	1970-2	1.78	Existing - No Control	No Storage
16	No	1973-2	0.15	Existing - No Control	No Storage
17	No	1976-2	0.33	Existing - No Control	No Storage
18	No	1977-2	0.53	Existing - No Control	No Storage
19	No	1981-2	0.37	Existing - No Control	No Storage
20	No	1982-2	0.25	Existing - No Control	No Storage
21	No	1984-2	0.40	Existing - No Control	No Storage
22	No	1985-2	0.39	Existing - No Control	No Storage
23	No	1986-2	0.33	Existing - No Control	No Storage
24	No	1987-2	0.47	Existing - No Control	No Storage
25	No	1988-2	0.75	Existing - No Control	No Storage
26	No	1989-2	0.72	Existing - No Control	No Storage
27	No	1990-2	0.68	Existing - No Control	No Storage
28	No	1991-2	0.17	Existing - No Control	No Storage
29	No	1992-2	0.38	Existing - No Control	No Storage
30	No	1993-2	0.92	Existing - No Control	No Storage
31	No	1994-2	0.14	Existing - No Control	No Storage
32	No	1996-2	0.78	Existing - No Control	No Storage
33	No	1997-2	0.21	Existing - No Control	No Storage
34	No	1998-2	0.69	Existing - No Control	No Storage
35	No	1999-2	1.22	Existing - No Control	No Storage
36	No	2000-2	0.53	Existing - No Control	No Storage
37	No	2001-2	0.21	Existing - No Control	No Storage
38	No	2002-2	0.21	Existing - No Control	No Storage
39	No	2003-2	0.67	Existing - No Control	No Storage
40	No	2004-2	0.46	Existing - No Control	No Storage
41	No	2005-2	0.15	Existing - No Control	No Storage
42	No	2006-2	0.74	Existing - No Control	No Storage
43	No	2007-2	0.34	Existing - No Control	No Storage
44	No	2008-2	1.10	Existing - No Control	No Storage

Appendix J – Port Lands/South of Eastern. Lot control and storage volumes for Water as Resource alternative.

* Release rate corresponding to 2-yr pre-development conditions

** Storage includes 5mm of initial rainfall retention

Ref. Number	Pilot area	Property/ Subcatchment Name	Area [ha]	Release rate (m3/s)*	100-yr lot storage (m3)**
45	No	2009-2	0.30	Existing - No Control	No Storage
46	No	2010-2	1.63	Existing - No Control	No Storage
47	No	2011-2	0.70	Existing - No Control	No Storage
48	No	2012-2	1.38	Existing - No Control	No Storage
49	No	2013-2	0.35	Existing - No Control	No Storage
50	No	2015-2	0.26	Existing - No Control	No Storage
51	No	2016-2	0.34	Existing - No Control	No Storage
52	No	2017-2	0.58	Existing - No Control	No Storage
53	No	2018-2	0.45	Existing - No Control	No Storage
54	No	2019-2	1.34	Existing - No Control	No Storage
55	No	2020-2	0.90	Existing - No Control	No Storage
56	No	2021-2	2.12	Existing - No Control	No Storage
57	No	2022-2	1.97	Existing - No Control	No Storage
58	No	2023-2	2.39	Existing - No Control	No Storage
59	No	2024-2	3.64	Existing - No Control	No Storage
60	No	2025-2	1.67	Existing - No Control	No Storage
61	No	2026-2	1.55	Existing - No Control	No Storage
62	No	2027-2	1.21	Existing - No Control	No Storage
63	No	2028-2	1.44	Existing - No Control	No Storage
64	No	2131-2	0.35	Existing - No Control	No Storage
65	No	2132-2	2.65	Existing - No Control	No Storage
66	No	2175-2	0.96	Existing - No Control	No Storage
67	No	2176-2	1.93	Existing - No Control	No Storage
68	No	2177-2	3.29	Existing - No Control	No Storage
69	No	2179-2	0.61	Existing - No Control	No Storage
70	No	2180-2	3.45	Existing - No Control	No Storage
71	No	2204-2	0.54	Existing - No Control	No Storage
72	No	2205-2	0.79	Existing - No Control	No Storage
73	No	560_1	1.14	0.0730	384.3
74	No	560_2	1.39	0.0850	471.0
75	No	885 LSBLVD	1.97	Existing - No Control	No Storage
76	No	945 LSBLVD	1.70	Existing - No Control	No Storage
77	No	Canada Post1	2.25	Existing - No Control	No Storage
78	No	Canada Post2	2.51	Existing - No Control	No Storage
80	Yes	Don Green way_south	3.78	0.3010	300.8
81	Yes	Employment_East	3.81	0.1810	1309.8
82	Yes	Employment_West	5.04	0.2200	1753.7
83	No	FilmEast_A1	0.68	0.0480	231.8
84	No	FilmEast_A2	0.68	0.0480	229.0
85	No	FilmEast_A3	0.64	0.0530	222.3
86	No	FilmEast_A4	0.64	0.0480	219.6
87	Yes	FilmEast_A5	0.60	Existing - No Control	No Storage
88	Yes	FilmEast_A6	0.60	Existing - No Control	No Storage
89	Yes	FilmEast_B2	0.32	Existing - No Control	No Storage

Appendix J – Port Lands/South of Eastern. Lot control and storage volumes for Water as Resource alternative.

* Release rate corresponding to 2-yr pre-development conditions

** Storage includes 5mm of initial rainfall retention

Ref. Number	Pilot area	Property/ Subcatchment Name	Area [ha]	Release rate (m3/s)*	100-yr lot storage (m3)**
90	Yes	FilmEast_B3	0.30	Existing - No Control	No Storage
91	Yes	FilmEast_B4	0.32	Existing - No Control	No Storage
92	Yes	FilmEast_B5	0.31	Existing - No Control	No Storage
93	Yes	FilmEast_C	1.31	Existing - No Control	No Storage
94	Yes	FilmEast_D	0.38	Existing - No Control	No Storage
95	No	FilmEast_E	0.48	0.0350	163.0
96	No	FilmEast_F	0.43	0.0320	147.3
97	No	FilmEast_H	0.23	0.0200	19.8
98	No	FilmEast_I	0.44	0.0330	151.8
99	No	FilmEast_J	0.97	0.0640	328.9
100	No	FilmEast_K	0.37	0.0320	31.4
101	Yes	FilmEast_park	0.35	Existing - No Control	No Storage
102	Yes	FilmWest_A	0.68	Existing - No Control	No Storage
103	No	FilmWest_B	0.73	0.0510	247.7
104	No	FilmWest_C	0.77	0.0530	261.5
105	No	FilmWest_D	0.82	0.0560	277.7
106	No	FilmWest_E	0.65	0.0490	219.0
107	No	FilmWest_F	0.99	0.0700	333.8
108	No	FilmWest_G	0.66	0.0510	226.0
109	No	FilmWest_H	0.89	0.0670	301.6
110	Yes	FilmWest_I	0.73	Existing - No Control	No Storage
111	Yes	FilmWest_J	1.08	Existing - No Control	No Storage
112	Yes	FilmWest_K	0.38	Existing - No Control	No Storage
113	Yes	FilmWest_L	0.96	Existing - No Control	No Storage
114	No	FilmWest_M	0.32	0.0270	109.8
115	No	FilmWest_N	0.32	0.0250	110.0
116	No	FilmWest_O	1.85	0.1070	627.9
117	No	FilmWest_P	1.29	0.0950	437.3
118	No	FilmWest_park	0.78	0.0540	53.1
119	No	FilmEast_G	0.33	0.0280	102.3
120	No	Hearn	10.17	0.3520	3002.4
121	No	Leslie Frontage1	3.87	0.1830	1332.2
122	No	Leslie Frontage2	1.60	0.0950	541.6
123	No	McCleary_Park_A	2.64	0.1540	381.6
124	Yes	McCleary_park_B	1.06	Existing - No Control	No Storage
125	Yes	MH_East	1.33	0.0830	449.6
126	No	MH_East_park	0.25	Existing - No Control	No Storage
127	Yes	MH_West	2.43	0.1310	828.0
128	No	MH_West_park	0.37	Existing - No Control	No Storage
129	No	NewStudio	0.79	0.0550	267.7
130	No	Park_Cascades	0.45	0.0380	157.2
131	No	PastoralGatewayWest_par	0.74	Existing - No Control	No Storage
132	No	PastoralGatewayWest_par	0.75	Existing - No Control	No Storage
133	No	PastoralGatewayWest_par	0.32	Existing - No Control	No Storage

Appendix J – Port Lands/South of Eastern. Lot control and storage volumes for Water as Resource alternative.

* Release rate corresponding to 2-yr pre-development conditions

** Storage includes 5mm of initial rainfall retention

Ref. Number	Pilot area	Property/ Subcatchment Name	Area [ha]	Release rate (m3/s)*	100-yr lot storage (m3)**
134	No	PeC	8.51	0.3130	3073.0
135	No	PinewoodStudio_1	1.02	0.0670	343.9
136	No	PinewoodStudio_2	0.76	0.0520	257.2
137	No	PinewoodStudio_3	0.83	0.0570	281.5
138	No	PinewoodStudio_4	0.60	0.0430	202.5
139	No	PinewoodStudio_5	0.69	0.0490	234.3
140	Yes	Port_East	4.66	0.3630	1720.4
141	Yes	Port_West	6.02	0.4560	2137.6
142	No	Showline	1.62	Existing - No Control	No Storage
143	No	South of Commissioners1	4.67	Existing - No Control	No Storage
144	No	South of Commissioners2	1.75	Existing - No Control	No Storage
145	No	South of Commissioners3	6.39	Existing - No Control	No Storage
146	No	SSC East	4.09	0.1910	1407.4
147	No	Subarea1_1	2.75	0.1890	931.4
148	No	Subarea1_10	0.39	0.0300	101.9
149	No	Subarea1_11	0.52	0.0380	138.9
150	No	Subarea1_13	0.83	0.0570	219.1
151	No	Subarea1_14	1.10	0.0710	288.8
152	No	Subarea1_15	1.09	0.0710	286.1
153	No	Subarea1_16	1.25	0.1050	335.5
154	No	Subarea1_17	0.71	0.0500	185.9
155	No	Subarea1_19	0.71	0.0500	186.8
156	No	Subarea1_2	0.88	0.0590	265.9
157	No	Subarea1_20	0.98	0.0650	259.3
158	No	Subarea1_21	0.75	0.0520	197.0
159	No	Subarea1_22	0.65	0.0460	171.5
160	No	Subarea1_23	1.19	0.0860	313.2
161	No	Subarea1_24	0.95	0.0630	251.0
162	No	Subarea1_3	1.49	0.1040	392.7
163	No	Subarea1_4	1.35	0.1090	358.8
164	No	Subarea1_5	0.78	0.0650	209.2
165	No	Subarea1_6	1.04	0.0680	272.2
166	No	Subarea1_7	0.50	0.0370	133.0
167	No	Subarea1_8	0.94	0.0630	246.7
168	No	Subarea1_9	0.61	0.0440	161.5
169	No	Toronto Hydro 1	3.20	Existing - No Control	No Storage
170	No	Toronto Hydro2	2.00	Existing - No Control	No Storage
171	No	TurningBasin_park_1	0.53	Existing - No Control	No Storage
172	No	TurningBasin_park_2	0.50	Existing - No Control	No Storage

APPENDIX K

OMC Estimates Tables

Appendix K - OMC Estimate Tables

Unilever Precinct

Depth	PIPES																BOX CULVERTS				
	Circular Pipe Diameter (mm)																Rectangular (mm x mm)				
	300	375	450	525	600	675	750	825	900	975	1067	1050	1200	1350	1500	1650	1800	1800X900	1800X1200	2550X1800	1950X1200
Length (m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)
Up to 2 m		142.9																			
Up to 3 m	278.8	116.5	601.3	81																	
Up to 4 m	110.9			328.2	163.2																
Up to 5 m					103.1																
Up to 6 m							102.5	42.1							289.4						
Up to 7 m																					
Up to 8 m																					
Up to 9 m																					
Up to 10 m																					

Depth	PIPES UNIT COSTS																BOX CULVERTS UNIT COSTS				
	Circular Pipe Diameter (mm)																Rectangular (mm x mm)				
	300	375	450	525	600	675	750	825	900	975	1067	1050	1200	1350	1500	1650	1800	1800X900	1800X1200	2550X1800	1950X1200
\$/m	\$/m	\$/m	\$/m	\$/m	\$/m	\$/m	\$/m	\$/m	\$/m	\$/m	\$/m	\$/m	\$/m	\$/m	\$/m	\$/m	\$/m	\$/m	\$/m	\$/m	\$/m
Up to 2 m		\$ 806.33																			
Up to 3 m	\$ 829.00	\$ 806.33	\$ 918.46	\$ 943.50				\$ 1,729.03													
Up to 4 m	\$ 829.00			\$ 943.50	\$ 1,292.63																
Up to 5 m					\$ 1,421.89																
Up to 6 m							\$ 2,831.40	\$ 3,189.02							\$ 4,300.69						
Up to 7 m																					
Up to 8 m																					
Up to 9 m																					
Up to 10 m																					

Depth	PIPES SUB TOTAL COSTS																BOX CULVERTS SUB TOTAL COSTS				
	Circular Pipe Diameter (mm)																Rectangular (mm x mm)				
	300	375	450	525	600	675	750	825	900	975	1067	1050	1200	1350	1500	1650	1800	1800X900	1800X1200	2550X1800	1950X1200
\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
Up to 2 m		\$ 115,224.56																			
Up to 3 m	\$ 231,125.20	\$ 93,937.45	\$ 552,270.00	\$ 76,423.50				\$ 219,932.78													
Up to 4 m	\$ 91,936.10			\$ 309,656.70	\$ 210,956.40																
Up to 5 m					\$ 146,596.60																
Up to 6 m							\$ 290,218.50	\$ 134,257.84							\$ 1,244,618.45						
Up to 7 m																					
Up to 8 m																					
Up to 9 m																					
Up to 10 m																					

PIPES AND CHANNELS SUB TOTAL \$ 3,717,154.06

Depth	MAINTENANCE HOLES										
	MH (Landing Platform)					MH					
	1500	1800	2400	3000	3600x2400	1200	1500	1800	2400	3000	3600x2400
No. Unit	No. Unit	No. Unit	No. Unit	No. Unit	No. Unit	No. Unit	No. Unit	No. Unit	No. Unit	No. Unit	
Up to 2 m						2					
Up to 3 m						12	1	2			
Up to 4 m						4	2				
Up to 5 m							1				
Up to 6 m		2		2							
Up to 7 m											
Up to 8 m											
Up to 9 m											
Up to 10 m											

Depth	MAINTENANCE HOLES UNIT COSTS										
	MH (Landing Platform)					MH					
	1500	1800	2400	3000	3600x2400	1200	1500	1800	2400	3000	3600x2400
\$/unit	\$/unit	\$/unit	\$/unit	\$/unit	\$/unit	\$/unit	\$/unit	\$/unit	\$/unit	\$/unit	
Up to 2 m						\$ 12,528.00					
Up to 3 m						\$ 15,318.00	\$ 25,256.50	\$ 33,326.00			
Up to 4 m						\$ 18,630.50	\$ 28,375.00				
Up to 5 m							\$ 32,013.50				
Up to 6 m		\$ 45,408.00		\$ 136,861.14							
Up to 7 m											
Up to 8 m											
Up to 9 m											
Up to 10 m											

Depth	MAINTENANCE HOLES SUB TOTAL COSTS										
	MH (Landing Platform)					MH					
	1500	1800	2400	3000	3600x2400	1200	1500	1800	2400	3000	3600x2400
\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	
Up to 2 m						\$ 25,056.00					
Up to 3 m						\$ 183,816.00	\$ 25,256.50	\$ 66,652.00			
Up to 4 m						\$ 74,522.00	\$ 56,750.00				
Up to 5 m							\$ 32,013.50				
Up to 6 m		\$ 90,816.00		\$ 273,722.28							
Up to 7 m											
Up to 8 m											
Up to 9 m											
Up to 10 m											

MAINTENANCE HOLES SUB TOTAL \$ 828,604.28

Item	OPEN CHANNEL COSTS (provided by Public Work)	
	Item	Cost
	1	Open Channel Landscape costs on Broadview Ave (incl. Concrete Walls, Plant Soils, Trees, Ground Cover Plantings, Stone Cobbel and Inlet Grates)
2		
3		
4		
5		
6		
7		

SUBTOTAL \$ 2,223,435.00

ITEM	INFRASTRUCTURE CONNECTIONS	
	ITEM	COST
1	Connection of new 825mm diameter storm pipe to existing 2400mm diameter maintenance hole on Eastern Avenue	\$ 50,000.00
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
16		
17		
18		

INFRASTRUCTURE CONNECTIONS SUB TOTAL COST	\$ 50,000.00
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SUB TOTAL (PIPE & MH & CONNECTIONS)	\$ 4,595,758.33
ENGINEERING CONTINGENCY (30%)	\$ 1,378,727.50
CONSTRUCTION CONTINGENCY (20%)	\$ 919,151.67
TOTAL (PIPE & CHANNELS & MH & CONNECTIONS)	\$ 6,893,637.50

SUB TOTAL (OPEN CHANNEL)	\$ 2,223,435.00
ENGINEERING CONTINGENCY (30%)	\$ 667,030.50
CONSTRUCTION CONTINGENCY (20%)	\$ 444,687.00
TOTAL (OPEN CHANNEL)	\$ 3,335,152.50

GRAND TOTAL	\$ 10,228,790.00
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Appendix K - OMC Estimate Tables

South of Eastern

Depth	PIPES																BOX CULVERTS					
	Circular Pipe Diameter (mm)																Rectangular (mm x mm)					
	300	375	450	525	600	675	750	825	900	975	1067	1050	1200	1350	1500	1650	1800	1800X900	1800X1200	2550X1800	1950X1200	2100X1350
Length (m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)
Up to 2 m	145.1																					
Up to 3 m						140.4																
Up to 4 m																						
Up to 5 m																						
Up to 6 m																						
Up to 7 m																						
Up to 8 m																						
Up to 9 m																						
Up to 10 m																						
Depth	PIPES UNIT COSTS																BOX CULVERTS UNIT COSTS					
	Circular Pipe Diameter (mm)																Rectangular (mm x mm)					
	300	375	450	525	600	675	750	825	900	975	1067	1050	1200	1350	1500	1650	1800	1800X900	1800X1200	2550X1800	1950X1200	2100X1350
\$/m	\$/m	\$/m	\$/m	\$/m	\$/m	\$/m	\$/m	\$/m	\$/m	\$/m	\$/m	\$/m	\$/m	\$/m	\$/m	\$/m	\$/m	\$/m	\$/m	\$/m	\$/m	\$/m
Up to 2 m	\$ 829.00																					
Up to 3 m						\$ 1,467.19																
Up to 4 m																						
Up to 5 m																						
Up to 6 m																						
Up to 7 m																						
Up to 8 m																						
Up to 9 m																						
Up to 10 m																						
Depth	PIPES SUB TOTAL COSTS																BOX CULVERTS SUB TOTAL COSTS					
	Circular Pipe Diameter (mm)																Rectangular (mm x mm)					
	300	375	450	525	600	675	750	825	900	975	1067	1050	1200	1350	1500	1650	1800	1800X900	1800X1200	2550X1800	1950X1200	2100X1350
\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
Up to 2 m	\$ 120,287.90																					
Up to 3 m						\$ 205,993.13																
Up to 4 m																						
Up to 5 m																						
Up to 6 m																						
Up to 7 m																						
Up to 8 m																						
Up to 9 m																						
Up to 10 m																						

PIPES AND CHANNELS SUB TOTAL \$ 326,281.03

Depth	MAINTENANCE HOLES										
	MH (Landing Platform)					MH					
	1500	1800	2400	3000	3600x2400	1200	1500	1800	2400	3000	3600x2400
No. Unit	No. Unit	No. Unit	No. Unit	No. Unit	No. Unit	No. Unit	No. Unit	No. Unit	No. Unit	No. Unit	
Up to 2 m						2					
Up to 3 m							2				
Up to 4 m											
Up to 5 m											
Up to 6 m											
Up to 7 m											
Up to 8 m											
Up to 9 m											
Up to 10 m											
Depth	MAINTENANCE HOLES UNIT COSTS										
	MH (Landing Platform)					MH					
	1500	1800	2400	3000	3600x2400	1200	1500	1800	2400	3000	3600x2400
\$/unit	\$/unit	\$/unit	\$/unit	\$/unit	\$/unit	\$/unit	\$/unit	\$/unit	\$/unit	\$/unit	
Up to 2 m					\$ 12,528.00						
Up to 3 m						\$ 25,256.50					
Up to 4 m											
Up to 5 m											
Up to 6 m											
Up to 7 m											
Up to 8 m											
Up to 9 m											
Up to 10 m											
Depth	MAINTENANCE HOLES SUB TOTAL COSTS										
	MH (Landing Platform)					MH					
	1500	1800	2400	3000	3600x2400	1200	1500	1800	2400	3000	3600x2400
\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	
Up to 2 m					\$ 25,056.00						
Up to 3 m						\$ 50,513.00					
Up to 4 m											
Up to 5 m											
Up to 6 m											
Up to 7 m											
Up to 8 m											
Up to 9 m											
Up to 10 m											

MAINTENANCE HOLES SUB TOTAL \$ 75,569.00

OPEN CHANNEL COSTS (provided by Public Work)		
Item	Cost	
1 Open Channel Landscape costs on Caroline Ave (incl. Concrete Walls, Plant Soils, Trees, Ground Cover Plantings, Stone Cobbel and Inlet Grates)	\$ 1,149,295.00	
2		
3		
4		
5		
6		
7		

SUBTOTAL \$ 1,149,295.00

INFRASTRUCTURE CONNECTIONS		
ITEM		COST
1		
2		
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18		
INFRASTRUCTURE CONNECTIONS SUB TOTAL COST		\$ -
SUB TOTAL (PIPE & MH & CONNECTIONS)		\$ 401,850.03
ENGINEERING CONTINGENCY (30%)		\$ 120,555.01
CONSTRUCTION CONTINGENCY (20%)		\$ 80,370.01
TOTAL (PIPE & CHANNELS & MH & CONNECTIONS)		\$ 602,775.04
SUB TOTAL (OPEN CHANNEL)		\$ 1,149,295.00
ENGINEERING CONTINGENCY (30%)		\$ 344,788.50
CONSTRUCTION CONTINGENCY (20%)		\$ 229,859.00
TOTAL (OPEN CHANNEL)		\$ 1,723,942.50
GRAND TOTAL		\$ 2,326,717.54

Appendix K - OMC Estimate Tables

Block 4

Depth	PIPES																BOX CULVERTS					
	Circular Pipe Diameter (mm)																Rectangular (mm x mm)					
	300	375	450	525	600	675	750	825	900	975	1067	1050	1200	1350	1500	1650	1800	1800X900	1800X1200	2550X1800	1950X1200	2100X1350
Up to 2 m	Length (m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)
Up to 3 m	168.4																					
Up to 4 m	85.5		92.5	215.4	211.6	37.7																
Up to 5 m						108.9																
Up to 6 m								282.1					132.3									
Up to 7 m												96.4			119.7							
Up to 8 m																						
Up to 9 m																						
Up to 10 m																						
Depth	PIPES UNIT COSTS																BOX CULVERTS UNIT COSTS					
	Circular Pipe Diameter (mm)																Rectangular (mm x mm)					
	300	375	450	525	600	675	750	825	900	975	1067	1050	1200	1350	1500	1650	1800	1800X900	1800X1200	2550X1800	1950X1200	2100X1350
Up to 2 m	\$/m	/m	/m	/m	/m	/m	/m	/m	/m	/m	/m	/m	/m	/m	/m	/m	/m	/m	/m	/m	/m	/m
Up to 3 m	\$ 829.00																					
Up to 4 m	\$ 829.00		\$ 918.46	\$ 943.50	\$ 1,292.63	\$ 1,467.19																
Up to 5 m						\$ 1,467.19																
Up to 6 m								\$ 3,189.02				\$ 4,300.69										
Up to 7 m												\$ 4,730.75			\$ 8,651.50							
Up to 8 m																						
Up to 9 m																						
Up to 10 m																						
Depth	PIPES SUB TOTAL COSTS																BOX CULVERTS SUB TOTAL COSTS					
	Circular Pipe Diameter (mm)																Rectangular (mm x mm)					
	300	375	450	525	600	675	750	825	900	975	1067	1050	1200	1350	1500	1650	1800	1800X900	1800X1200	2550X1800	1950X1200	2100X1350
Up to 2 m	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
Up to 3 m	\$ 139,603.60																					
Up to 4 m	\$ 70,879.50		\$ 84,957.55	\$ 203,229.90	\$ 273,519.45	\$ 55,312.97																
Up to 5 m						\$ 159,776.72																
Up to 6 m								\$ 899,623.17				\$ 568,980.72										
Up to 7 m												\$ 456,044.71			\$ 1,035,584.55							
Up to 8 m																						
Up to 9 m																						
Up to 10 m																						

PIPES AND CHANNELS SUB TOTAL \$ 3,947,512.84

Depth	MAINTENANCE HOLES										
	MH (Landing Platform)					MH					
	1500	1800	2400	3000	3600x2400	1200	1500	1800	2400	3000	3600x2400
Up to 2 m	No. Unit	No. Unit	No. Unit	No. Unit	No. Unit	No. Unit	No. Unit	No. Unit	No. Unit	No. Unit	No. Unit
Up to 3 m						2					
Up to 4 m						2	2	1			
Up to 5 m						4	1		2		
Up to 6 m		1	2								
Up to 7 m			1	1	1						
Up to 8 m											
Up to 9 m											
Up to 10 m											
Depth	MAINTENANCE HOLES UNIT COSTS										
	MH (Landing Platform)					MH					
	1500	1800	2400	3000	3600x2400	1200	1500	1800	2400	3000	3600x2400
Up to 2 m	\$/unit	/unit	/unit	/unit	/unit	/unit	/unit	/unit	/unit	/unit	/unit
Up to 3 m						\$ 12,528.00					
Up to 4 m						\$ 15,318.00					
Up to 5 m						\$ 18,630.50	\$ 28,375.00	\$ 37,142.50			
Up to 6 m		\$ 45,408.00	\$ 73,258.75			\$ 32,013.50		\$ 72,266.25			
Up to 7 m			\$ 78,127.75	\$ 151,253.39	\$ 187,903.00						
Up to 8 m											
Up to 9 m											
Up to 10 m											
Depth	MAINTENANCE HOLES SUB TOTAL COSTS										
	MH (Landing Platform)					MH					
	1500	1800	2400	3000	3600x2400	1200	1500	1800	2400	3000	3600x2400
Up to 2 m	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
Up to 3 m						\$ 25,056.00					
Up to 4 m						\$ 30,636.00					
Up to 5 m						\$ 74,522.00	\$ 56,750.00	\$ 37,142.50			
Up to 6 m		\$ 45,408.00	\$ 146,517.50			\$ 32,013.50		\$ 144,532.50			
Up to 7 m			\$ 78,127.75	\$ 151,253.39	\$ 187,903.00						
Up to 8 m											
Up to 9 m											
Up to 10 m											

MAINTENANCE HOLES SUB TOTAL \$ 1,009,862.14

OPEN CHANNEL COSTS (provided by Public Work)		
Item	Cost	
1 Open Channel Landscape costs on New East West Street 1 (incl. Concrete Walls, Plant Soils, Trees, Ground Cover Plantings, and Inlet Grates)	\$5,698,014.31	
2 Open Channel Landscape costs on Broadview Ave (incl. Concrete Walls, Plant Soils, Trees, Ground Cover Plantings, Stone Cobbel and Inlet Grates)	\$1,829,562.19	
3 Open Channel Landscape costs on Sautler St (incl. Concrete Walls, Plant Soils, Trees, Ground Cover Plantings, and Inlet Grates)	\$124,058.00	
4 Open Channel Landscape costs on Commissioners St (incl. Concrete Walls, Plant Soils, Trees, Ground Cover Plantings, and Inlet Grates)	\$4,547,561.11	
5		
6		
7		

SUBTOTAL \$ 12,199,195.61

INFRASTRUCTURE CONNECTIONS		
ITEM		COST
1		
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18		
INFRASTRUCTURE CONNECTIONS SUB TOTAL COST		\$ -
SUB TOTAL (PIPE & MH & CONNECTIONS)		\$ 4,957,374.98
ENGINEERING CONTINGENCY (30%)		\$ 1,487,212.49
CONSTRUCTION CONTINGENCY (20%)		\$ 991,475.00
TOTAL (PIPE & CHANNELS & MH & CONNECTIONS)		\$ 7,436,062.47
SUB TOTAL (OPEN CHANNEL)		\$ 12,199,195.61
ENGINEERING CONTINGENCY (30%)		\$ 3,659,758.68
CONSTRUCTION CONTINGENCY (20%)		\$ 2,439,839.12
TOTAL (OPEN CHANNEL)		\$ 18,298,793.42
GRAND TOTAL		\$ 25,734,855.88

Appendix K - OMC Estimate Tables

Block 5

Depth	PIPES																BOX CULVERTS					
	Circular Pipe Diameter (mm)																Rectangular (mm x mm)					
	300	375	450	525	600	675	750	825	900	975	1067	1050	1200	1350	1500	1650	1800	1800X900	1800X1200	2550X1800	1950X1200	2100X1350
Up to 2 m																						
Up to 3 m			290.2	192.9																		
Up to 4 m	79.1		82.9				126.8	192.2														
Up to 5 m																						
Up to 6 m																						
Up to 7 m																						
Up to 8 m																131.6						
Up to 9 m																27.2						
Up to 10 m																						
PIPES UNIT COSTS																BOX CULVERTS UNIT COSTS						
Circular Pipe Diameter (mm)																Rectangular (mm x mm)						
300	375	450	525	600	675	750	825	900	975	1067	1050	1200	1350	1500	1650	1800	1800X900	1800X1200	2550X1800	1950X1200	2100X1350	
Up to 2 m																						
Up to 3 m																						
Up to 4 m	\$ 829.00		\$ 918.46	\$ 943.50																		
Up to 5 m							\$ 1,729.03	\$ 2,340.00														
Up to 6 m																						
Up to 7 m																						
Up to 8 m																\$ 9,516.65						
Up to 9 m																\$ 10,468.32						
Up to 10 m																						
PIPES SUB TOTAL COSTS																BOX CULVERTS SUB TOTAL COSTS						
Circular Pipe Diameter (mm)																Rectangular (mm x mm)						
300	375	450	525	600	675	750	825	900	975	1067	1050	1200	1350	1500	1650	1800	1800X900	1800X1200	2550X1800	1950X1200	2100X1350	
Up to 2 m	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
Up to 3 m			\$ 266,537.09	\$ 182,001.15																		
Up to 4 m	\$ 65,573.90		\$ 76,140.33				\$ 219,241.16	\$ 449,748.00														
Up to 5 m																						
Up to 6 m																						
Up to 7 m																						
Up to 8 m																\$ 1,252,391.14						
Up to 9 m																\$ 284,738.17						
Up to 10 m																						

PIPES AND CHANNELS SUB TOTAL \$ 2,796,370.95

Depth	MAINTENANCE HOLES										
	MH (Landing Platform)					MH					
	1500	1800	2400	3000	3600x2400	1200	1500	1800	2400	3000	3600x2400
Up to 2 m											
Up to 3 m						3	2				
Up to 4 m						2		3			
Up to 5 m						1	1				
Up to 6 m											
Up to 7 m				1							
Up to 8 m				1							
Up to 9 m					1						
Up to 10 m											
MAINTENANCE HOLES UNIT COSTS											
MH (Landing Platform)					MH						
1500	1800	2400	3000	3600x2400	1200	1500	1800	2400	3000	3600x2400	
Up to 2 m											
Up to 3 m						\$ 15,318.00	\$ 25,256.50				
Up to 4 m						\$ 18,630.50		\$ 37,142.50			
Up to 5 m						\$ 25,213.00	\$ 32,013.50				
Up to 6 m											
Up to 7 m				\$ 151,253.39							
Up to 8 m				\$ 165,645.64							
Up to 9 m					\$ 226,425.00						
Up to 10 m											
MAINTENANCE HOLES SUB TOTAL COSTS											
MH (Landing Platform)					MH						
1500	1800	2400	3000	3600x2400	1200	1500	1800	2400	3000	3600x2400	
Up to 2 m	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	
Up to 3 m					\$ 45,954.00	\$ 50,513.00					
Up to 4 m					\$ 37,261.00		\$ 111,427.50				
Up to 5 m					\$ 25,213.00	\$ 32,013.50					
Up to 6 m											
Up to 7 m				\$ 151,253.39							
Up to 8 m				\$ 165,645.64							
Up to 9 m					\$ 226,425.00						
Up to 10 m											

MAINTENANCE HOLES SUB TOTAL \$ 845,706.03

OPEN CHANNEL COSTS (provided by Public Work)		
Item	Cost	
1 Open Channel Landscape costs on Sautler St (incl. Concrete Walls, Plant Soils, Trees, Ground Cover Plantings, and Inlet Grates)	\$633,710.40	
2 Open Channel Landscape costs on New East West Street 2 (incl. Concrete Walls, Plant Soils, Trees, Ground Cover Plantings, and Inlet Grates)	\$1,024,459.75	
3 Open Channel Landscape costs on Broadview Ave (incl. Concrete Walls, Plant Soils, Trees, Ground Cover Plantings, Stone Cobbel and Inlet Grates)	\$233,190.33	
4		
5		
6		
7		

SUBTOTAL \$ 1,891,360.48

INFRASTRUCTURE CONNECTIONS		
ITEM		COST
1 Existing 375mm diameter pipe connection to Basin Street 1800mm diameter maintenance hole from Sautler Street		\$ 20,000.00
2 Existing 375mm diameter pipe connection to Basin Street 3000mm diameter maintenance hole from Broadview Avenue		\$ 30,000.00
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13		
14		
15		
16		
17		
18		
INFRASTRUCTURE CONNECTIONS SUB TOTAL COST		\$ 50,000.00
SUB TOTAL (PIPE & MH & CONNECTIONS)		\$ 3,692,076.97
ENGINEERING CONTINGENCY (30%)		\$ 1,107,623.09
CONSTRUCTION CONTINGENCY (20%)		\$ 738,415.39
TOTAL (PIPE & CHANNELS & MH & CONNECTIONS)		\$ 5,538,115.46
SUB TOTAL (OPEN CHANNEL)		\$ 1,891,360.48
ENGINEERING CONTINGENCY (30%)		\$ 567,408.14
CONSTRUCTION CONTINGENCY (20%)		\$ 378,272.10
TOTAL (OPEN CHANNEL)		\$ 2,837,040.72
GRAND TOTAL		\$ 8,375,156.18

Appendix K - OMC Estimate Tables

Block 6

Depth	PIPES															BOX CULVERTS						
	Circular Pipe Diameter (mm)															Rectangular (mm x mm)						
	300	375	450	525	600	675	750	825	900	975	1067	1050	1200	1350	1500	1650	1800	1800X900	1800X1200	2550X1800	1950X1200	2100X1350
Up to 2 m	28.7		96.9																			
Up to 3 m	178.6	241.5	381.4		184.1																	
Up to 4 m			67.1			23.4	91.2															
Up to 5 m							100.8															
Up to 6 m																						
Up to 7 m																						
Up to 8 m													51.4									
Up to 9 m															59.8	332						
Up to 10 m																59.1						

Depth	PIPES UNIT COSTS															BOX CULVERTS UNIT COSTS						
	Circular Pipe Diameter (mm)															Rectangular (mm x mm)						
	300	375	450	525	600	675	750	825	900	975	1067	1050	1200	1350	1500	1650	1800	1800X900	1800X1200	2550X1800	1950X1200	2100X1350
Up to 2 m	\$ 829.00		\$ 918.46																			
Up to 3 m	\$ 829.00	\$ 806.33			\$ 1,292.63																	
Up to 4 m			\$ 918.46			\$ 1,467.19	1,729.03															
Up to 5 m			\$ 1,010.31				\$ 2,574.00															
Up to 6 m																						
Up to 7 m																						
Up to 8 m														\$ 6,262.16								
Up to 9 m															\$ 10,468.32	\$ 12,884.08						
Up to 10 m																\$ 14,172.49						

Depth	PIPES SUB TOTAL COSTS															BOX CULVERTS SUB TOTAL COSTS						
	Circular Pipe Diameter (mm)															Rectangular (mm x mm)						
	300	375	450	525	600	675	750	825	900	975	1067	1050	1200	1350	1500	1650	1800	1800X900	1800X1200	2550X1800	1950X1200	2100X1350
Up to 2 m	\$ 23,792.30		\$ 88,998.77																			
Up to 3 m	\$ 148,059.40	\$ 194,728.70																				
Up to 4 m			\$ 350,300.64		\$ 237,972.26			\$ 157,687.65														
Up to 5 m			\$ 67,791.53			\$ 34,332.19	\$ 259,459.20															
Up to 6 m																						
Up to 7 m																						
Up to 8 m														\$ 321,875.27								
Up to 9 m															\$ 626,005.24	\$ 4,277,514.56						
Up to 10 m																\$ 837,594.04						

PIPES AND CHANNELS SUB TOTAL \$ 7,626,111.76

Depth	MAINTENANCE HOLES										
	MH (Landing Platform)					MH					
	1500	1800	2400	3000	3600x2400	1200	1500	1800	2400	3000	3600x2400
Up to 2 m						2					
Up to 3 m						12		1			
Up to 4 m						1	1				
Up to 5 m								1			
Up to 6 m											
Up to 7 m				1							
Up to 8 m											
Up to 9 m				1	3						
Up to 10 m				2	1						

Depth	MAINTENANCE HOLES UNIT COSTS										
	MH (Landing Platform)					MH					
	1500	1800	2400	3000	3600x2400	1200	1500	1800	2400	3000	3600x2400
Up to 2 m						\$ 12,528.00					
Up to 3 m						\$ 15,318.00		\$ 33,326.00			
Up to 4 m						\$ 18,630.50	\$ 28,375.00				
Up to 5 m								\$ 41,521.50			
Up to 6 m											
Up to 7 m				\$ 151,253.39							
Up to 8 m											
Up to 9 m				\$ 180,037.89	\$ 226,425.00						
Up to 10 m				\$ 194,430.14	\$ 245,686.00						

Depth	MAINTENANCE HOLES SUB TOTAL COSTS										
	MH (Landing Platform)					MH					
	1500	1800	2400	3000	3600x2400	1200	1500	1800	2400	3000	3600x2400
Up to 2 m						\$ 25,056.00					
Up to 3 m						\$ 183,816.00		\$ 33,326.00			
Up to 4 m						\$ 18,630.50	\$ 28,375.00				
Up to 5 m								\$ 41,521.50			
Up to 6 m											
Up to 7 m				\$ 151,253.39							
Up to 8 m											
Up to 9 m				\$ 180,037.89	\$ 679,275.00						
Up to 10 m				\$ 388,860.28	\$ 245,686.00						

MAINTENANCE HOLES SUB TOTAL \$ 1,975,837.55

OPEN CHANNEL COSTS (provided by Public Work)		
Item		Cost
1	Open Channel Landscape costs on New East/West Street (incl. Concrete Walls, Plant Soils, Trees, Ground Cover Plantings, and Inlet Grates)	\$ 564,000.00
2	Open Channel Landscape costs on Carlaw Ave (incl. Concrete Walls, Plant Soils, Trees, Ground Cover Plantings, and Stone Cobbel)	\$ 622,243.66
3	Open Channel Landscape costs on Commissioners St (incl. Concrete Walls, Plant Soils, Trees, Ground Cover Plantings, and Stone Cobbel)	\$ 5,497,242.58
4	Open Channel Landscape costs on New East/West Street 2 (incl. Concrete Walls, Plant Soils, Trees, Ground Cover Plantings, and Inlet Grates)	\$ 3,277,258.26
5	Open Channel Landscape costs on New East/West Street 3 (incl. Concrete Walls, Plant Soils, Trees, Ground Cover Plantings, and Inlet Grates)	\$ 3,077,689.34
6		\$ 389,999.23
7		

SUBTOTAL \$ 13,428,433.07

INFRASTRUCTURE CONNECTIONS		
ITEM		COST
1	New Inlet Grate for One (1) Year Flows from Commissioners Street Open Channel	\$ 368,600.00
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18		

INFRASTRUCTURE CONNECTIONS SUB TOTAL COST	
	\$ 368,600.00

SUB TOTAL (PIPE & MH & CONNECTIONS)	
	\$ 9,970,549.31
ENGINEERING CONTINGENCY (30%)	\$ 2,991,164.79
CONSTRUCTION CONTINGENCY (20%)	\$ 1,994,109.86
TOTAL (PIPE & CHANNELS & MH & CONNECTIONS)	\$ 14,955,823.96

SUB TOTAL (OPEN CHANNEL)	
	\$ 13,428,433.07
ENGINEERING CONTINGENCY (30%)	\$ 4,028,529.92
CONSTRUCTION CONTINGENCY (20%)	\$ 2,685,686.61
TOTAL (OPEN CHANNEL)	\$ 20,142,649.61

GRAND TOTAL	
	\$ 35,098,473.57

Appendix K - OMC Estimate Tables

Block 7

Depth	PIPES																BOX CULVERTS				
	Circular Pipe Diameter (mm)																Rectangular (mm x mm)				
	300	375	450	525	600	675	750	825	900	975	1067	1050	1200	1350	1500	1650	1800	1800X900	1800X1200	2550X1800	1950X1200
Length (m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)
Up to 2 m																					
Up to 3 m		48.1		88.5																	
Up to 4 m					74.4																
Up to 5 m								282.1													
Up to 6 m												237.5		153.6							
Up to 7 m														196.5							
Up to 8 m																					
Up to 9 m																					
Up to 10 m																					
Depth	PIPES UNIT COSTS																BOX CULVERTS UNIT COSTS				
	Circular Pipe Diameter (mm)																Rectangular (mm x mm)				
	300	375	450	525	600	675	750	825	900	975	1067	1050	1200	1350	1500	1650	1800	1800X900	1800X1200	2550X1800	1950X1200
\$/m	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)
Up to 2 m																					
Up to 3 m		\$ 806.33		\$ 943.50																	
Up to 4 m					\$ 1,292.63																
Up to 5 m								\$ 2,899.11													
Up to 6 m												\$ 4,300.69		\$ 5,175.34							
Up to 7 m														\$ 5,692.88							
Up to 8 m																					
Up to 9 m																					
Up to 10 m																					
Depth	PIPES SUB TOTAL COSTS																BOX CULVERTS SUB TOTAL COSTS				
	Circular Pipe Diameter (mm)																Rectangular (mm x mm)				
	300	375	450	525	600	675	750	825	900	975	1067	1050	1200	1350	1500	1650	1800	1800X900	1800X1200	2550X1800	1950X1200
\$	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)
Up to 2 m																					
Up to 3 m		\$ 38,784.47		\$ 83,499.75																	
Up to 4 m					\$ 96,171.30																
Up to 5 m								\$ 817,839.24													
Up to 6 m												\$ 1,021,412.86		\$ 794,932.66							
Up to 7 m														\$ 1,118,650.36							
Up to 8 m																					
Up to 9 m																					
Up to 10 m																					

PIPES AND CHANNELS SUB TOTAL \$ 3,971,290.65

Depth	MAINTENANCE HOLES										
	MH (Landing Platform)					MH					
	1500	1800	2400	3000	3600x2400	1200	1500	1800	2400	3000	3600x2400
No. Unit	No. Unit	No. Unit	No. Unit	No. Unit	No. Unit	No. Unit	No. Unit	No. Unit	No. Unit	No. Unit	
Up to 2 m											
Up to 3 m						3					
Up to 4 m						1					
Up to 5 m											
Up to 6 m			3	1				3	1		
Up to 7 m			2								
Up to 8 m											
Up to 9 m											
Up to 10 m											
Depth	MAINTENANCE HOLES UNIT COSTS										
	MH (Landing Platform)					MH					
	1500	1800	2400	3000	3600x2400	1200	1500	1800	2400	3000	3600x2400
\$/unit	\$/unit	\$/unit	\$/unit	\$/unit	\$/unit	\$/unit	\$/unit	\$/unit	\$/unit	\$/unit	
Up to 2 m											
Up to 3 m						\$ 15,318.00					
Up to 4 m						\$ 18,630.50					
Up to 5 m											
Up to 6 m			\$ 73,258.75	\$ 136,861.14				\$ 41,521.50	\$ 72,266.25		
Up to 7 m			\$ 78,127.75								
Up to 8 m											
Up to 9 m											
Up to 10 m											
Depth	MAINTENANCE HOLES SUB TOTAL COSTS										
	MH (Landing Platform)					MH					
	1500	1800	2400	3000	3600x2400	1200	1500	1800	2400	3000	3600x2400
\$/unit	\$/unit	\$/unit	\$/unit	\$/unit	\$/unit	\$/unit	\$/unit	\$/unit	\$/unit	\$/unit	
Up to 2 m											
Up to 3 m						\$ 45,954.00					
Up to 4 m						\$ 18,630.50					
Up to 5 m											
Up to 6 m			\$ 219,776.25	\$ 136,861.14				\$ 124,564.50	\$ 72,266.25		
Up to 7 m			\$ 156,255.50								
Up to 8 m											
Up to 9 m											
Up to 10 m											

MAINTENANCE HOLES SUB TOTAL \$ 774,308.14

OPEN CHANNEL COSTS (provided by Public Work)		Cost
Item		
1	Open Channel Landscape costs on Commissioners St (incl. Concrete Walls, Plant Soils, Trees, Ground Cover Plantings, Stone Cobbel and Inlet Grates)	\$ 8,363,660.00
2	Open Channel Landscape costs on Caroline Ave (incl. Concrete Walls, Plant Soils, Trees, Ground Cover Plantings, Stone Cobbel and Inlet Grates)	\$ 1,480,165.00
3		
4		
5		
6		
7		

SUBTOTAL \$ 9,843,825.00

ITEM	COST
1	One (1) Year Flow Hydraulic Diversion Structure and connection to structure \$ 370,000.00
2	Oil Grit Separator \$ 3,450,000.00
3	Pump Station (7,500 L/s) \$ 11,250,000.00
4	Greater than One (1) Year Forcemain *** \$ 427,714.00
5	Facility Building Superstructure (3,060m ²) \$ 10,000,000.00
6	Facility Foundation \$ 2,500,000.00
7	Ballasted Flocculation Clarifiers \$ 12,500,000.00
8	Facility and Process Costs (Mechanical, Electrical, Archetctural, Yard Piping and Integration) \$ 34,850,000.00
9	New Outlet to Turning Basin from Open Channel on Commissioners (x2) \$ 2,000,000.00
10	UV Facility \$ 4,000,000.00
11	Upsized Existing Outlet to Turning Basin at Basin Street \$ 1,000,000.00
12	
13	
14	
15	
16	
17	
18	
INFRASTRUCTURE CONNECTIONS SUB TOTAL COST \$ 82,347,714.00	
SUB TOTAL (PIPE & MH & CONNECTIONS) \$ 87,093,312.78	
ENGINEERING CONTINGENCY (30%) \$ 26,127,993.84	
CONSTRUCTION CONTINGENCY (20%) \$ 17,418,662.56	
TOTAL (PIPE & CHANNELS & MH & CONNECTIONS) \$ 130,639,969.18	
SUB TOTAL (OPEN CHANNEL) \$ 9,843,825.00	
ENGINEERING CONTINGENCY (30%) \$ 2,953,147.50	
CONSTRUCTION CONTINGENCY (20%) \$ 1,968,765.00	
TOTAL (OPEN CHANNEL) \$ 14,765,737.50	
GRAND TOTAL \$ 145,405,706.68	

Appendix K - OMC Estimate Tables

Block 8

Depth	PIPES																BOX CULVERTS				
	Circular Pipe Diameter (mm)																Rectangular (mm x mm)				
	300	375	450	525	600	675	750	825	900	975	1067	1050	1200	1350	1500	1650	1800	1800X900	1800X1200	2550X1800	1950X1200
Length (m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)
Up to 2 m																					
Up to 3 m	76.2	96.9																			
Up to 4 m			103.1	91.9																	
Up to 5 m																					
Up to 6 m																					
Up to 7 m																					
Up to 8 m																					
Up to 9 m																					
Up to 10 m																					
Depth	PIPES UNIT COSTS																BOX CULVERTS UNIT COSTS				
	Circular Pipe Diameter (mm)																Rectangular (mm x mm)				
	300	375	450	525	600	675	750	825	900	975	1067	1050	1200	1350	1500	1650	1800	1800X900	1800X1200	2550X1800	1950X1200
\$/m	\$/m	\$/m	\$/m	\$/m	\$/m	\$/m	\$/m	\$/m	\$/m	\$/m	\$/m	\$/m	\$/m	\$/m	\$/m	\$/m	\$/m	\$/m	\$/m	\$/m	\$/m
Up to 2 m																					
Up to 3 m	\$ 829.00	\$ 806.33																			
Up to 4 m			\$ 918.46	\$ 943.50																	
Up to 5 m																					
Up to 6 m																					
Up to 7 m																					
Up to 8 m																					
Up to 9 m																					
Up to 10 m																					
Depth	PIPES SUB TOTAL COSTS																BOX CULVERTS SUB TOTAL COSTS				
	Circular Pipe Diameter (mm)																Rectangular (mm x mm)				
	300	375	450	525	600	675	750	825	900	975	1067	1050	1200	1350	1500	1650	1800	1800X900	1800X1200	2550X1800	1950X1200
\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
Up to 2 m																					
Up to 3 m	\$ 63,169.80	\$ 78,133.38																			
Up to 4 m			\$ 94,693.23	\$ 86,707.65																	
Up to 5 m																					
Up to 6 m																					
Up to 7 m																					
Up to 8 m																					
Up to 9 m																					
Up to 10 m																					

PIPES AND CHANNELS SUB TOTAL \$ 322,704.05

Depth	MAINTENANCE HOLES										
	MH (Landing Platform)					MH					
	1500	1800	2400	3000	3600x2400	1200	1500	1800	2400	3000	3600x2400
No. Unit	No. Unit	No. Unit	No. Unit	No. Unit	No. Unit	No. Unit	No. Unit	No. Unit	No. Unit	No. Unit	
Up to 2 m											
Up to 3 m						2					
Up to 4 m						2					
Up to 5 m											
Up to 6 m											
Up to 7 m											
Up to 8 m											
Up to 9 m											
Up to 10 m											
Depth	MAINTENANCE HOLES UNIT COSTS										
	MH (Landing Platform)					MH					
	1500	1800	2400	3000	3600x2400	1200	1500	1800	2400	3000	3600x2400
\$/unit	\$/unit	\$/unit	\$/unit	\$/unit	\$/unit	\$/unit	\$/unit	\$/unit	\$/unit	\$/unit	
Up to 2 m											
Up to 3 m						\$ 15,318.00					
Up to 4 m						\$ 18,630.50					
Up to 5 m											
Up to 6 m											
Up to 7 m											
Up to 8 m											
Up to 9 m											
Up to 10 m											
Depth	MAINTENANCE HOLES SUB TOTAL COSTS										
	MH (Landing Platform)					MH					
	1500	1800	2400	3000	3600x2400	1200	1500	1800	2400	3000	3600x2400
\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	
Up to 2 m											
Up to 3 m						\$ 30,636.00					
Up to 4 m						\$ 37,261.00					
Up to 5 m											
Up to 6 m											
Up to 7 m											
Up to 8 m											
Up to 9 m											
Up to 10 m											

MAINTENANCE HOLES SUB TOTAL \$ 67,897.00

OPEN CHANNEL COSTS (provided by Public Work)		
Item	Cost	
1 Open Channel Landscape costs on Leslie St (incl. Concrete Walls, Plant Soils, Ground Cover Plantings)	\$ 1,782,795.00	
2		
3		
4		
5		
6		
7		
SUBTOTAL	\$ 1,782,795.00	

INFRASTRUCTURE CONNECTIONS		
ITEM		COST
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
16		
17		
18		
INFRASTRUCTURE CONNECTIONS SUB TOTAL COST		\$ -
SUB TOTAL (PIPE & MH & CONNECTIONS)		\$ 390,601.05
ENGINEERING CONTINGENCY (30%)		\$ 117,180.32
CONSTRUCTION CONTINGENCY (20%)		\$ 78,120.21
TOTAL (PIPE & CHANNELS & MH & CONNECTIONS)		\$ 585,901.58
SUB TOTAL (OPEN CHANNEL)		\$ 1,782,795.00
ENGINEERING CONTINGENCY (30%)		\$ 534,838.50
CONSTRUCTION CONTINGENCY (20%)		\$ 356,559.00
TOTAL (OPEN CHANNEL)		\$ 2,674,192.50
GRAND TOTAL		\$ 3,260,094.08

Appendix K - OMC Estimate Tables

Block 9

Depth	PIPES																BOX CULVERTS					
	Circular Pipe Diameter (mm)																Rectangular (mm x mm)					
	300	375	450	525	600	675	750	825	900	975	1067	1050	1200	1350	1500	1650	1800	1800x900	1800x1200	2550x1800	1950x1200	2100x1350
Length (m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)
Up to 2 m																						
Up to 3 m	112.6																					
Up to 4 m		91.8	111.6																			
Up to 5 m					256																	
Up to 6 m							123.4															
Up to 7 m							117.8															
Up to 8 m																						
Up to 9 m																						
Up to 10 m																						
Depth	PIPES UNIT COSTS																BOX CULVERTS UNIT COSTS					
	Circular Pipe Diameter (mm)																Rectangular (mm x mm)					
	300	375	450	525	600	675	750	825	900	975	1067	1050	1200	1350	1500	1650	1800	1800x900	1800x1200	2550x1800	1950x1200	2100x1350
\$/m	\$/m	\$/m	\$/m	\$/m	\$/m	\$/m	\$/m	\$/m	\$/m	\$/m	\$/m	\$/m	\$/m	\$/m	\$/m	\$/m	\$/m	\$/m	\$/m	\$/m	\$/m	
Up to 2 m																						
Up to 3 m	\$ 829.00																					
Up to 4 m		\$ 806.33	\$ 918.46																			
Up to 5 m					\$ 1,421.89																	
Up to 6 m							\$ 2,574.00															
Up to 7 m							\$ 2,831.40															
Up to 8 m																						
Up to 9 m																						
Up to 10 m																						
Depth	PIPES SUB TOTAL COSTS																BOX CULVERTS SUB TOTAL COSTS					
	Circular Pipe Diameter (mm)																Rectangular (mm x mm)					
	300	375	450	525	600	675	750	825	900	975	1067	1050	1200	1350	1500	1650	1800	1800x900	1800x1200	2550x1800	1950x1200	2100x1350
\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	
Up to 2 m																						
Up to 3 m	\$ 93,345.40																					
Up to 4 m		\$ 74,021.09	\$ 102,500.14																			
Up to 5 m					\$ 364,003.20																	
Up to 6 m							\$ 317,631.60															
Up to 7 m							\$ 333,538.92															
Up to 8 m																						
Up to 9 m																						
Up to 10 m																						

PIPES AND CHANNELS SUB TOTAL \$ 1,285,040.35

Depth	MAINTENANCE HOLES										
	MH (Landing Platform)						MH				
	1500	1800	2400	3000	3600x2400	1200	1500	1800	2400	3000	3600x2400
No. Unit	No. Unit	No. Unit	No. Unit	No. Unit	No. Unit	No. Unit	No. Unit	No. Unit	No. Unit	No. Unit	
Up to 2 m											
Up to 3 m						1					
Up to 4 m						5					
Up to 5 m							4				
Up to 6 m	2										
Up to 7 m											
Up to 8 m											
Up to 9 m											
Up to 10 m											
Depth	MAINTENANCE HOLES UNIT COSTS										
	MH (Landing Platform)						MH				
	1500	1800	2400	3000	3600x2400	1200	1500	1800	2400	3000	3600x2400
\$/unit	\$/unit	\$/unit	\$/unit	\$/unit	\$/unit	\$/unit	\$/unit	\$/unit	\$/unit	\$/unit	
Up to 2 m											
Up to 3 m						\$ 15,318.00					
Up to 4 m						\$ 18,630.50					
Up to 5 m							\$ 32,013.50				
Up to 6 m	\$ 37,364.50										
Up to 7 m											
Up to 8 m											
Up to 9 m											
Up to 10 m											
Depth	MAINTENANCE HOLES SUB TOTAL COSTS										
	MH (Landing Platform)						MH				
	1500	1800	2400	3000	3600x2400	1200	1500	1800	2400	3000	3600x2400
\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	
Up to 2 m											
Up to 3 m						\$ 15,318.00					
Up to 4 m						\$ 93,152.50					
Up to 5 m							\$ 128,054.00				
Up to 6 m	\$ 74,729.00										
Up to 7 m											
Up to 8 m											
Up to 9 m											
Up to 10 m											

MAINTENANCE HOLES SUB TOTAL \$ 311,253.50

OPEN CHANNEL COSTS (provided by Public Work)		
	Item	Cost
1	Open Channel Landscape costs on Unwin Ave (incl. Concrete Walls, Plant Soils, Ground Cover Plantings)	\$ 6,381,570.00
2	Open Channel Landscape costs on Leslie St (incl. Concrete Walls, Plant Soils, Ground Cover Plantings)	\$ 120,450.00
3		
4		
5		
6		
7		
SUBTOTAL		\$ 6,502,020.00

INFRASTRUCTURE CONNECTIONS		
	ITEM	COST
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
16		
17		
18		

INFRASTRUCTURE CONNECTIONS SUB TOTAL COST \$ -

SUB TOTAL (PIPE & MH & CONNECTIONS)	\$ 1,596,293.85
ENGINEERING CONTINGENCY (30%)	\$ 478,888.16
CONSTRUCTION CONTINGENCY (20%)	\$ 319,258.77
TOTAL (PIPE & CHANNELS & MH & CONNECTIONS)	\$ 2,394,440.78

SUB TOTAL (OPEN CHANNEL)	\$ 6,502,020.00
ENGINEERING CONTINGENCY (30%)	\$ 1,950,606.00
CONSTRUCTION CONTINGENCY (20%)	\$ 1,300,404.00
TOTAL (OPEN CHANNEL)	\$ 9,753,030.00

GRAND TOTAL \$ 12,147,470.78

Appendix K - OMC Estimate Tables

Block 10

Depth	PIPES																BOX CULVERTS				
	Circular Pipe Diameter (mm)																Rectangular (mm x mm)				
	300	375	450	525	600	675	750	825	900	975	1067	1050	1200	1350	1500	1650	1800	1800X900	1800X1200	2550X1800	1950X1200
Length (m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)
Up to 2 m	198.4																				
Up to 3 m																					
Up to 4 m																					
Up to 5 m																					
Up to 6 m																					
Up to 7 m							278.2	260.1													
Up to 8 m																					
Up to 9 m																					
Up to 10 m																					
Depth	PIPES UNIT COSTS																BOX CULVERTS UNIT COSTS				
	Circular Pipe Diameter (mm)																Rectangular (mm x mm)				
	300	375	450	525	600	675	750	825	900	975	1067	1050	1200	1350	1500	1650	1800	1800X900	1800X1200	2550X1800	1950X1200
\$/m	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)
Up to 2 m	\$ 806.33																				
Up to 3 m																					
Up to 4 m																					
Up to 5 m																					
Up to 6 m																					
Up to 7 m																					
Up to 8 m																					
Up to 9 m																					
Up to 10 m																					
Depth	PIPES SUB TOTAL COSTS																BOX CULVERTS SUB TOTAL COSTS				
	Circular Pipe Diameter (mm)																Rectangular (mm x mm)				
	300	375	450	525	600	675	750	825	900	975	1067	1050	1200	1350	1500	1650	1800	1800X900	1800X1200	2550X1800	1950X1200
\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
Up to 2 m	\$ 159,975.87																				
Up to 3 m																					
Up to 4 m																					
Up to 5 m																					
Up to 6 m																					
Up to 7 m																					
Up to 8 m																					
Up to 9 m																					
Up to 10 m																					

PIPES AND CHANNELS SUB TOTAL \$ 1,938,852.05

Depth	MAINTENANCE HOLES										
	MH (Landing Platform)					MH					
	1500	1800	2400	3000	3600x2400	1200	1500	1800	2400	3000	3600x2400
No. Unit	No. Unit	No. Unit	No. Unit	No. Unit	No. Unit	No. Unit	No. Unit	No. Unit	No. Unit	No. Unit	
Up to 2 m											
Up to 3 m						2					
Up to 4 m											
Up to 5 m											
Up to 6 m	2										
Up to 7 m	2		3								
Up to 8 m											
Up to 9 m											
Up to 10 m											
Depth	MAINTENANCE HOLES UNIT COSTS										
	MH (Landing Platform)					MH					
	1500	1800	2400	3000	3600x2400	1200	1500	1800	2400	3000	3600x2400
\$/unit	\$/unit	\$/unit	\$/unit	\$/unit	\$/unit	\$/unit	\$/unit	\$/unit	\$/unit	\$/unit	
Up to 2 m											
Up to 3 m						\$ 15,318.00					
Up to 4 m											
Up to 5 m											
Up to 6 m	\$ 37,364.50										
Up to 7 m	\$ 40,674.50		\$ 78,127.75								
Up to 8 m											
Up to 9 m											
Up to 10 m											
Depth	MAINTENANCE HOLES SUB TOTAL COSTS										
	MH (Landing Platform)					MH					
	1500	1800	2400	3000	3600x2400	1200	1500	1800	2400	3000	3600x2400
\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	
Up to 2 m											
Up to 3 m						\$ 30,636.00					
Up to 4 m											
Up to 5 m											
Up to 6 m	\$ 74,729.00										
Up to 7 m	\$ 81,349.00		\$ 234,383.25								
Up to 8 m											
Up to 9 m											
Up to 10 m											

MAINTENANCE HOLES SUB TOTAL \$ 421,097.25

OPEN CHANNEL COSTS (provided by Public Work)		
Item	Cost	
1 Open Channel Landscape costs on Broadview Ave (incl. Concrete Walls, Plant Soils, Trees, Ground Cover Plantings, Stone Cobbel and Inlet Grates)	\$ 680,975.00	
2 Open Channel Landscape costs on Unwin Ave (incl. Concrete Walls, Plant Soils, Ground Cover Plantings)	2,725,240.00	
3		
4		
5		
6		
7		

SUBTOTAL 3,406,215.00

INFRASTRUCTURE CONNECTIONS		
ITEM		COST
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
16		
17		
18		
INFRASTRUCTURE CONNECTIONS SUB TOTAL COST		\$ -
SUB TOTAL (PIPE & MH & CONNECTIONS)		\$ 2,359,949.30
ENGINEERING CONTINGENCY (30%)		\$ 707,984.79
CONSTRUCTION CONTINGENCY (20%)		\$ 471,989.86
TOTAL (PIPE & CHANNELS & MH & CONNECTIONS)		\$ 3,539,923.95
SUB TOTAL (OPEN CHANNEL)		\$ 3,406,215.00
ENGINEERING CONTINGENCY (30%)		\$ 1,021,864.50
CONSTRUCTION CONTINGENCY (20%)		\$ 681,243.00
TOTAL (OPEN CHANNEL)		\$ 5,109,322.50
GRAND TOTAL		\$ 8,649,246.45

Appendix K - OMC Estimate Tables

Block 11

Depth	PIPES															BOX CULVERTS						
	Circular Pipe Diameter (mm)															Rectangular (mm x mm)						
	300	375	450	525	600	675	750	825	900	975	1067	1050	1200	1350	1500	1650	1800	1800x900	1800x1200	2550x1800	1950x1200	2100x1350
Up to 2 m	Length (m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)
Up to 3 m						310.3							10									
Up to 4 m		204.4							397													
Up to 5 m																						
Up to 6 m																						
Up to 7 m																						
Up to 8 m								160.4		207.6												
Up to 9 m																						
Up to 10 m																						
Depth	PIPES UNIT COSTS															BOX CULVERTS UNIT COSTS						
	Circular Pipe Diameter (mm)															Rectangular (mm x mm)						
	300	375	450	525	600	675	750	825	900	975	1067	1050	1200	1350	1500	1650	1800	1800x900	1800x1200	2550x1800	1950x1200	2100x1350
Up to 2 m	\$/m	\$/m	\$/m	\$/m	\$/m	\$/m	\$/m	\$/m	\$/m	\$/m	\$/m	\$/m	\$/m	\$/m	\$/m	\$/m	\$/m	\$/m	\$/m	\$/m	\$/m	\$/m
Up to 3 m													3,554.29									
Up to 4 m		\$ 806.33						\$ 1,729.03		\$ 2,717.00												
Up to 5 m																						
Up to 6 m																						
Up to 7 m																						
Up to 8 m									\$ 3,977.96		\$ 4,145.49											
Up to 9 m																						
Up to 10 m																						
Depth	PIPES SUB TOTAL COSTS															BOX CULVERTS SUB TOTAL COSTS						
	Circular Pipe Diameter (mm)															Rectangular (mm x mm)						
	300	375	450	525	600	675	750	825	900	975	1067	1050	1200	1350	1500	1650	1800	1800x900	1800x1200	2550x1800	1950x1200	2100x1350
Up to 2 m	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
Up to 3 m													\$ 35,542.86									
Up to 4 m		\$ 164,813.85						\$ 536,518.40		\$ 1,078,649.00												
Up to 5 m																						
Up to 6 m																						
Up to 7 m																						
Up to 8 m									\$ 638,064.74		\$ 860,604.67											
Up to 9 m																						
Up to 10 m																						

PIPES AND CHANNELS SUB TOTAL \$ 3,314,193.51

Depth	MAINTENANCE HOLES										
	MH (Landing Platform)					MH					
	1500	1800	2400	3000	3600x2400	1200	1500	1800	2400	3000	3600x2400
Up to 2 m	No. Unit	No. Unit	No. Unit	No. Unit	No. Unit	No. Unit	No. Unit	No. Unit	No. Unit	No. Unit	No. Unit
Up to 3 m											
Up to 4 m						2		3		4	
Up to 5 m											
Up to 6 m											
Up to 7 m											
Up to 8 m		2	2								
Up to 9 m											
Up to 10 m											

Depth	MAINTENANCE HOLES UNIT COSTS										
	MH (Landing Platform)					MH					
	1500	1800	2400	3000	3600x2400	1200	1500	1800	2400	3000	3600x2400
Up to 2 m	\$/unit	\$/unit	\$/unit	\$/unit	\$/unit	\$/unit	\$/unit	\$/unit	\$/unit	\$/unit	\$/unit
Up to 3 m											
Up to 4 m						\$ 18,630.50		\$ 33,326.00		\$ 37,142.50	
Up to 5 m											
Up to 6 m											
Up to 7 m											
Up to 8 m		\$ 53,063.00	\$ 85,089.92								
Up to 9 m											
Up to 10 m											

Depth	MAINTENANCE HOLES SUB TOTAL COSTS										
	MH (Landing Platform)					MH					
	1500	1800	2400	3000	3600x2400	1200	1500	1800	2400	3000	3600x2400
Up to 2 m	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
Up to 3 m											
Up to 4 m						\$ 37,261.00		\$ 99,978.00		\$ 148,570.00	
Up to 5 m											
Up to 6 m											
Up to 7 m											
Up to 8 m		\$ 106,126.00	\$ 170,179.83								
Up to 9 m											
Up to 10 m											

MAINTENANCE HOLES SUB TOTAL \$ 562,114.83

Item	OPEN CHANNEL COSTS (provided by Public Work)	
	Item	Cost
1	Open Channel Landscape costs on Don Valley Parkway (incl. Concrete Walls, Plant Soils, Trees, Ground Cover Plantings and Stone Cobble)	\$ 319,612.10
2	Open Channel Landscape costs on Unwin Ave (incl. Concrete Walls, Plant Soils, and Ground Cover Plantings)	\$ 15,557,504.86
3		
4		
5		
6		
7		

SUBTOTAL \$ 15,877,116.96

ITEM	INFRASTRUCTURE CONNECTIONS	
	ITEM	COST
1	One (1) Year Flow Hydraulic Diversion Structure and connection to structure	\$ 1,404,000.00
2	Oil Grit Separator	\$ 1,012,000.00
3	Pump Station (2,200 L/s)	\$ 3,300,000.00
4	Greater than One (1) Year Forcemain ***	\$ 35,542.90
5	Facility Building Superstructure (1,795m ²)	\$ 5,900,000.00
6	Facility Foundation	\$ 1,475,000.00
7	Biological Flocculation Clarifiers	\$ 7,375,000.00
8	Facility and Process Costs (Mechanical, Electrical, Archetctural, Yard Piping and Integration)	\$ 20,561,500.00
9	UV Facility	\$ 2,360,000.00
10	New Outlet to ship channel (x2)	\$ 2,000,000.00
11		
12		
13		
14		
15		
16		
17		
18		

INFRASTRUCTURE CONNECTIONS SUB TOTAL COST \$ 45,423,042.90

SUB TOTAL (PIPE & MH & CONNECTIONS)	\$ 49,299,351.25
ENGINEERING CONTINGENCY (30%)	\$ 14,789,805.37
CONSTRUCTION CONTINGENCY (20%)	\$ 9,859,870.25
TOTAL (PIPE & CHANNELS & MH & CONNECTIONS)	\$ 73,949,026.87

SUB TOTAL (OPEN CHANNEL)	\$ 15,877,116.96
ENGINEERING CONTINGENCY (30%)	\$ 4,763,135.09
CONSTRUCTION CONTINGENCY (20%)	\$ 3,175,423.39
TOTAL (OPEN CHANNEL)	\$ 23,815,675.44

GRAND TOTAL \$ 97,764,702.31

Appendix K - OMC Estimate Tables

Block 12

Depth	PIPES																BOX CULVERTS				
	Circular Pipe Diameter (mm)																Rectangular (mm x mm)				
	300	375	450	525	600	675	750	825	900	975	1067	1050	1200	1350	1500	1650	1800	1800X900	1800X1200	2550X1800	1950X1200
Length (m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)
Up to 2 m																					
Up to 3 m	146.6	211																			
Up to 4 m																					
Up to 5 m																					
Up to 6 m																					
Up to 7 m																					
Up to 8 m																					
Up to 9 m																					
Up to 10 m																					
Depth	PIPES UNIT COSTS																BOX CULVERTS UNIT COSTS				
	Circular Pipe Diameter (mm)																Rectangular (mm x mm)				
	300	375	450	525	600	675	750	825	900	975	1067	1050	1200	1350	1500	1650	1800	1800X900	1800X1200	2550X1800	1950X1200
\$/m	\$/m	\$/m	\$/m	\$/m	\$/m	\$/m	\$/m	\$/m	\$/m	\$/m	\$/m	\$/m	\$/m	\$/m	\$/m	\$/m	\$/m	\$/m	\$/m	\$/m	\$/m
Up to 2 m																					
Up to 3 m	\$ 829.00	\$ 806.33																			
Up to 4 m																					
Up to 5 m																					
Up to 6 m																					
Up to 7 m																					
Up to 8 m																					
Up to 9 m																					
Up to 10 m																					
Depth	PIPES SUB TOTAL COSTS																BOX CULVERTS SUB TOTAL COSTS				
	Circular Pipe Diameter (mm)																Rectangular (mm x mm)				
	300	375	450	525	600	675	750	825	900	975	1067	1050	1200	1350	1500	1650	1800	1800X900	1800X1200	2550X1800	1950X1200
\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
Up to 2 m																					
Up to 3 m	\$ 121,531.40	\$ 170,135.63																			
Up to 4 m																					
Up to 5 m																					
Up to 6 m																					
Up to 7 m																					
Up to 8 m																					
Up to 9 m																					
Up to 10 m																					

PIPES AND CHANNELS SUB TOTAL \$ 291,667.03

Depth	MAINTENANCE HOLES										
	MH (Landing Platform)						MH				
	1500	1800	2400	3000	3600x2400	1200	1500	1800	2400	3000	3600x2400
No. Unit	No. Unit	No. Unit	No. Unit	No. Unit	No. Unit	No. Unit	No. Unit	No. Unit	No. Unit	No. Unit	
Up to 2 m						4					
Up to 3 m											
Up to 4 m											
Up to 5 m											
Up to 6 m											
Up to 7 m											
Up to 8 m											
Up to 9 m											
Up to 10 m											
Depth	MAINTENANCE HOLES UNIT COSTS										
	MH (Landing Platform)						MH				
	1500	1800	2400	3000	3600x2400	1200	1500	1800	2400	3000	3600x2400
\$/unit	\$/unit	\$/unit	\$/unit	\$/unit	\$/unit	\$/unit	\$/unit	\$/unit	\$/unit	\$/unit	
Up to 2 m					\$ 12,528.00						
Up to 3 m											
Up to 4 m											
Up to 5 m											
Up to 6 m											
Up to 7 m											
Up to 8 m											
Up to 9 m											
Up to 10 m											
Depth	MAINTENANCE HOLES SUB TOTAL COSTS										
	MH (Landing Platform)						MH				
	1500	1800	2400	3000	3600x2400	1200	1500	1800	2400	3000	3600x2400
\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	
Up to 2 m					\$ 50,112.00						
Up to 3 m											
Up to 4 m											
Up to 5 m											
Up to 6 m											
Up to 7 m											
Up to 8 m											
Up to 9 m											
Up to 10 m											

MAINTENANCE HOLES SUB TOTAL \$ 50,112.00

OPEN CHANNEL COSTS (provided by Public Work)		
Item		Cost
1	Open Channel Landscape costs on Cherry St (incl. Concrete Walls, Plant Soils, Trees, Ground Cover Plantings, Stone Cobbel and Inlet Grates)	\$ 2,109,983.04
2		
3		
4		
5		
6		
7		

SUBTOTAL \$ 2,109,983.04

INFRASTRUCTURE CONNECTIONS		
ITEM		COST
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
16		
17		
18		

INFRASTRUCTURE CONNECTIONS SUB TOTAL COST	\$ -
SUB TOTAL (PIPE & MH & CONNECTIONS)	\$ 341,779.03
ENGINEERING CONTINGENCY (30%)	\$ 102,533.71
CONSTRUCTION CONTINGENCY (20%)	\$ 68,355.81
TOTAL (PIPE & CHANNELS & MH & CONNECTIONS)	\$ 512,668.55
SUB TOTAL (OPEN CHANNEL)	\$ 2,109,983.04
ENGINEERING CONTINGENCY (30%)	\$ 632,994.91
CONSTRUCTION CONTINGENCY (20%)	\$ 421,996.61
TOTAL (OPEN CHANNEL)	\$ 3,164,974.56
GRAND TOTAL	\$ 3,677,643.11

Appendix K - OMC Estimate Tables

Summary of Block Costs		
No.	Block	Cost
1	Unilever Precinct	\$ 10,228,790.00
2	South of Eastern	\$ 2,326,717.54
3	Block 4	\$ 25,734,855.88
4	Block 5	\$ 8,375,156.18
5	Block 6	\$ 35,098,473.57
6	Block 7	\$ 145,405,706.68
7	Block 8	\$ 3,260,094.08
8	Block 9	\$ 12,147,470.78
9	Block 10	\$ 8,649,246.45
10	Block 11	\$ 97,764,702.31
11	Block 12	\$ 3,677,643.11

ALL BLOCKS TOTAL	\$ 352,668,856.55
------------------	-------------------

Appendix K - OMC Estimate Tables

Compiled Critical Infrastructure

Depth	PIPES																BOX CULVERTS					
	Circular Pipe Diameter (mm)																Rectangular (mm x mm)					
	300	375	450	525	600	675	750	825	900	975	1067	1050	1200	1350	1500	1650	1800	1800x900	1800x1200	2550x1800	1950x1200	2100x1350
Up to 2 m																						
Up to 3 m																						
Up to 4 m																						
Up to 5 m																						
Up to 6 m																						
Up to 7 m													132.3	153.6		119.7						
Up to 8 m												218.7	196.5		51.4	131.6						
Up to 9 m																59.8	406.3					
Up to 10 m																59.1						
PIPES UNIT COSTS																	BOX CULVERTS UNIT COSTS					
Depth	Circular Pipe Diameter (mm)																Rectangular (mm x mm)					
	300	375	450	525	600	675	750	825	900	975	1067	1050	1200	1350	1500	1650	1800	1800x900	1800x1200	2550x1800	1950x1200	2100x1350
Up to 2 m																						
Up to 3 m																						
Up to 4 m																						
Up to 5 m																						
Up to 6 m																						
Up to 7 m																						
Up to 8 m																						
Up to 9 m																						
Up to 10 m																						
PIPES SUB TOTAL COSTS																	BOX CULVERTS SUB TOTAL COSTS					
Depth	Circular Pipe Diameter (mm)																Rectangular (mm x mm)					
	300	375	450	525	600	675	750	825	900	975	1067	1050	1200	1350	1500	1650	1800	1800x900	1800x1200	2550x1800	1950x1200	2100x1350
Up to 2 m																						
Up to 3 m																						
Up to 4 m																						
Up to 5 m																						
Up to 6 m																						
Up to 7 m																						
Up to 8 m																						
Up to 9 m																						
Up to 10 m																						

PIPES AND CHANNELS SUB TOTAL \$ 12,985,791.32

Depth	MAINTENANCE HOLES										
	MH (Landing Platform)					MH					
	1500	1800	2400	3000	3600x2400	1200	1500	1800	2400	3000	3600x2400
Up to 2 m											
Up to 3 m											
Up to 4 m											
Up to 5 m											
Up to 6 m			2	1							
Up to 7 m			3	3	1						
Up to 8 m				1							
Up to 9 m					4						
Up to 10 m					1						
MAINTENANCE HOLES UNIT COSTS											
Depth	MH (Landing Platform)					MH					
	1500	1800	2400	3000	3600x2400	1200	1500	1800	2400	3000	3600x2400
Up to 2 m											
Up to 3 m											
Up to 4 m											
Up to 5 m											
Up to 6 m											
Up to 7 m											
Up to 8 m											
Up to 9 m											
Up to 10 m											
MAINTENANCE HOLES SUB TOTAL COSTS											
Depth	MH (Landing Platform)					MH					
	1500	1800	2400	3000	3600x2400	1200	1500	1800	2400	3000	3600x2400
Up to 2 m											
Up to 3 m											
Up to 4 m											
Up to 5 m											
Up to 6 m											
Up to 7 m											
Up to 8 m											
Up to 9 m											
Up to 10 m											

MAINTENANCE HOLES SUB TOTAL \$ 2,476,456.69

OPEN CHANNEL COSTS (provided by Public Work)		
Item	Cost	
1 Open Channel Landscape costs on Commissioners St (incl. Concrete Walls, Plant Soils, Trees, Ground Cover Plantings, and Stone Cobbel)	\$ 566,152.13	
2 Open Channel Landscape costs on Carlaw Ave (incl. Concrete Walls, Plant Soils, Trees, Ground Cover Plantings, and Stone Cobbel)	\$ 119,914.06	
3 Open Channel Landscape costs on Broadway Avenue (incl. Concrete Walls, Plant Soils, Trees, Ground Cover Plantings, Stone Cobbel and Inlet Grates)	\$ 3,255,556.21	
4		
5		
6		
7		
SUBTOTAL	\$ 3,941,622.40	

INFRASTRUCTURE CONNECTIONS		
ITEM		COST
NORTH OF SHIP CHANNEL		
1 One (1) Year Flow Hydraulic Diversion Structure and connection to structure		\$ 360,000.00
2 Oil Grit Separator		\$ 3,450,000.00
3 Pump Station (7,500 L/s)		\$ 11,250,000.00
4 Greater than One (1) Year Forcemain ***		\$ 430,000.00
5 Facility Building Superstructure (3,060m2)		\$ 10,000,000.00
6 Facility Foundation		\$ 2,500,000.00
7 Ballasted Flocculation Clarifiers		\$ 12,500,000.00
8 Facility and Process Costs (Mechanical, Electrical, Archetctural, Yard Piping and Integration)		\$ 34,850,000.00
9 New Outlet to Turning Basin from Open Channel on Commissioners (x2)		\$ 2,000,000.00
10 UV Facility		\$ 4,000,000.00
11 Upsized Existing Outlet to Turning Basin at Basin Street		\$ 1,000,000.00
12 New Outlet from the SWQTF to Turning Basin		\$ 1,000,000.00
SOUTH OF SHIP CHANNEL		
13 One (1) Year Flow Hydraulic Diversion Structure and connection to structure		\$ 1,404,000.00
14 Oil Grit Separator		\$ 1,012,000.00
15 Pump Station (2,200 L/s)		\$ 3,300,000.00
16 Greater than One (1) Year Forcemain ***		\$ 35,500.00
17 Facility Building Superstructure (1,795m2)		\$ 5,900,000.00
18 Facility Foundation		\$ 1,475,000.00
19 Biological Flocculation Clarifiers		\$ 7,375,000.00
20 Facility and Process Costs (Mechanical, Electrical, Archetctural, Yard Piping and Integration)		\$ 20,561,500.00
21 UV Facility		\$ 2,360,000.00
22 New Outlet to ship channel (x2)		\$ 2,000,000.00

INFRASTRUCTURE CONNECTIONS SUB TOTAL COST \$ 128,763,000.00

SUB TOTAL (PIPE & MH & CONNECTIONS)	\$ 144,225,248.00
ENGINEERING CONTINGENCY (30%)	\$ 43,267,574.40
CONSTRUCTION CONTINGENCY (20%)	\$ 28,845,049.60
TOTAL (PIPE & CHANNELS & MH & INFRASTRUCTURE CONNECTIONS)	\$ 216,337,872.01

SUB TOTAL (OPEN CHANNEL)	\$ 3,941,622.40
ENGINEERING CONTINGENCY (30%)	\$ 1,182,486.72
CONSTRUCTION CONTINGENCY (20%)	\$ 788,324.48
TOTAL (OPEN CHANNEL)	\$ 5,912,433.59

GRAND TOTAL \$ 222,250,305.60

**Port Lands and South of
Eastern
Technical Memo #1
Existing Conditions –
Stormwater Management**

January 2015

13-8520

Submitted by

**Dillon Consulting
Limited**

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1.0 INTRODUCTION

The City of Toronto initiated this Transportation and Servicing Master Plan (TSMP) as an integrated planning study with the Port Lands Planning Framework and South of Eastern Strategic. The TSMP will identify the municipal servicing infrastructure required to support revitalization and will supplement the sanitary sewer network analysis completed through the development of the Waterfront Sanitary Master Servicing Plan. The TSMP will consider the recommendations of the recently completed Don River and Central Waterfront Project EA and is being coordinated with other EAs currently underway within and adjacent to the study area. The TSMP will support planning work underway in the Port Lands and South of Eastern Area, identify the major street and transit network required to support revitalization of the Port Lands and continued economic growth in South of Eastern while ensuring a high-quality public realm, and identify the servicing infrastructure to supplement previous EAs and support development.

Technical Memo #1 includes a description of existing conditions and addresses constraints/opportunities for new infrastructure inside and external to the Study Area, within the context of the Official Plan policies and the objectives for the Project.

Technical Memo #1 for Servicing contains a description of existing conditions set up for the stormwater model. This was done for practical purposes in that a single firm is conducting the modeling for water, wastewater and stormwater. Given that stormwater is not a wastewater, we have separated the servicing and stormwater sections for Technical Memo #1.

2.0 BACKGROUND

The Don Mouth Naturalization and Port Lands Flood Protection Project Environmental Assessment (DMNP EA), as well as the Lower Don Lands Master Plan (LDL MP), study areas are adjacent to the Port Lands and South of Eastern TSMP study area. TSMP is being carried out subsequent to these projects, and as such, the final approvals for the DMNP EA and the LDL MP impact the works of this EA. **Figure 1** shows the limits of the study area. The *Don Mouth Naturalization and Port Lands Flood Protection Project Environmental Assessment* (DMNP EA) is investigating the naturalization of the mouth of the Don River and the removal of flood risk from 230 hectares (ha) of land south and east of the existing Keating Channel. The study area for the DMNP EA is very similar to the Lower Don Lands Master Plan study area; however, it also includes the Don Narrows up to Riverdale Park. The purpose of the DMNP EA is to make an ecologically functional river mouth, remove flood risk and provide opportunities to revitalize the Port Lands area of Toronto's waterfront.

Figure 1: Study Area



Source: Dillon Consulting

The preferred alternative of the DMNP EA centres the new river mouth in the middle of the Lower Don Lands study area, south of the Keating Channel. The low flow channel will be approximately 15 m wide and 1.5 m deep with an associated floodplain of 150 to 200 m wide. The Keating Channel is retained but restricted from the redirected river mouth flows during normal conditions. During large flood events, flows will be diverted through three separate flow paths. This first is the new primary naturalized river valley that continues south along the Don Roadway to Commissioners St. where it turns west to the Inner Harbour along south of the Commissioners road alignment. The second flow path continues west through the Keating Channel as before, after flood waters reach a certain level where they are able to overtop new weirs that will be installed at the east end of the Keating Channel and over weirs constructed on the upstream side of the western two of the three new bays added to Lakeshore Blvd.. The third flow path provides additional flood relief during very large events through what is known as the Don Greenway. The Don Greenway provides the largest connected wetland habitat in the naturalized area of the mouth of the Don and will be connected hydraulically with lake levels through the Ship Channel.

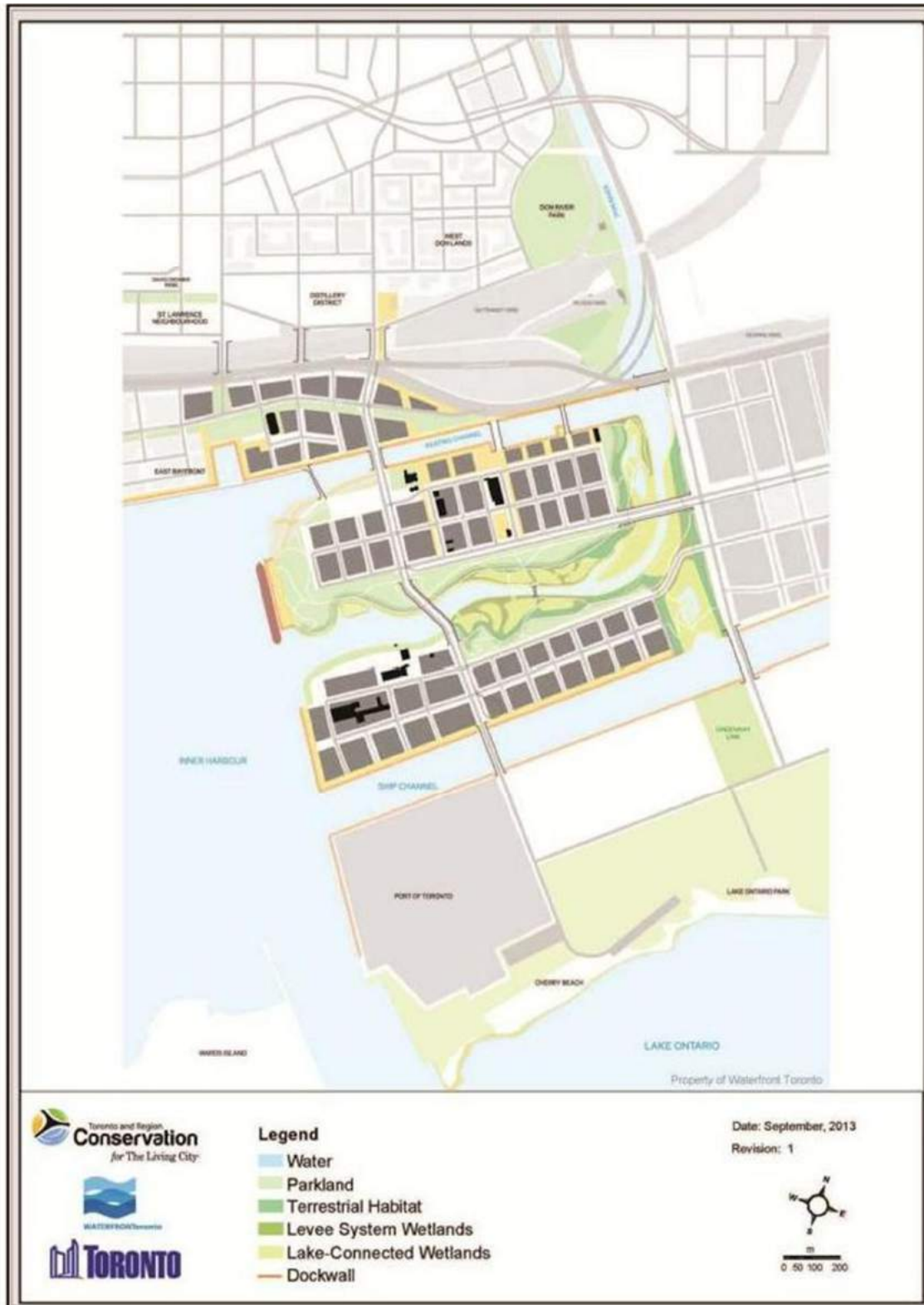
In addition to flood protection features, the DMNP EA includes sediment, ice and debris management, as well as hydraulic conveyance requirements for each bridge crossing. The Lower Don Lands EA includes the recommended locations for the design and location of infrastructure. **Figure 2** shows the preferred alternative for the DMNP EA.

The DMNP EA provides the basis for addressing the existing flooding that is occurring within the Port Lands and the South of Eastern area. **Figure 4** shows the Regulatory Flood Spill Zones for the Lower Don River. Currently, the Port Lands and South of Eastern area are impacted during a Regional Storm. This flooding has a direct impact on the ability to redevelop portions of the Port Lands with mixed-use development.. The preferred alternative identified in the DMNP EA will eliminate flooding south of CN Rail line and open up the area for future development.

The preferred alternative provides the boundary conditions and the criteria for the stormwater management issues for the Port Land and the South of Eastern Area. The boundary conditions that need to be considered for the Port Lands and South of Eastern project include the following:

- The CN Railway will serve as a boundary where flooding will not spill over to the South of Eastern area and into the Port Lands. Consideration will need to be given to the Eastern Avenue Underpass and the potential for flooding under a Regulatory Flood scenario to make its way through.
- Flood Protection Land Form north of Lake Shore Boulevard – This is a structurally designed features, which will prevent any flows from spilling to the east in the South of Eastern Area. These areas are not permitted to have any construction activity on them, but they set the boundary for elevations for any proposed grading.

Figure 2: Proposed Works for the Don River



Source: City of Toronto, DMNP EA & LDL MP EA Study, Meeting Presentation October 2013

- Valley Wall Feature – Some limited construction may be permitted on this feature and the Don Roadway will be constructed on top. These will establish boundary conditions grading and servicing and allow for additional construction activity for the Port Lands.
- The DMNP EA also states that stormwater generated east of the Don Roadway will be directed east or south, rather than west back into the new naturalized river mouth.
- Existing SSO located on the East side of the Don River in the area of Lake Shore Boulevard will either be installed with backflow preventer valves or removed with new stormwater systems established to divert flows east of the Don Roadway.
- Any infrastructure that is to cross the future naturalized mouth of the Don shall be designed such that it does not provide a flow path to allow flood waters to circumvent the constructed flood protection measures.

The Lower Don Lands Environmental Assessment Master Plan Addendum and Environmental Study Report, (2014), will include EA approvals for street and transit network, including crossings (i.e., bridges), as well as water, wastewater and stormwater infrastructure. The Stormwater Management plan in the LDL EA addresses similar criteria that are being applied in the Port Lands and South of Eastern TSMP study area. Since the Lower Don Lands study area, is located at the mouth of the Don River, any proposed changes in the system that may affect the quantity of runoff will not impact any property downstream of the study area, therefore, the management of stormwater for quantity control is not an issue. Stormwater quantity control is not required at a watershed level, but may be required as per Toronto's Wet Weather Flow Management Guidelines (WWFMG) to avoid basement flooding issues/conveyance issues in conveying flows to the outlet. In addition, storm water will generally will be directed away from the new river mouth, which will require major system drainage designs along roadways. The Stormwater Management plan focuses on addressing quality target requirements. The preferred alternative includes utilizing a number of end-of-pipe quality tanks throughout the Lower Don Lands area and Keating Precinct. The proposed stormwater tanks have been sized based on the MOE Stormwater Management Guidelines and will meet the minimum MOE requirement of 80% removal efficiency due to the need for UV treatment.

As per the requirements for discharge directly to Lake Ontario, the allowable bacteria count to the lake must not exceed 100 counts per 100 ml, which is the Provincial Water Quality Objective for E. Coli. and as a result, treatment of the runoff prior to the lake is necessary. It is anticipated that the high removal efficiency from the tanks will achieve the low turbidity necessary for UV treatment of the stormwater without any additional water quality treatment processes. Integration of the West Don Lands with the Lower Don Lands will take place with the combination of the UV treatment facility. For the proposed water quality facility and sedimentation system, this will be determined at the preliminary and detailed design phase. .

The Lower Don Lands EA establishes the following for the Port Lands and the South of Eastern TSMP:

- Street network connectivity - The proposed street layout for the Port Lands and South of Eastern TSMP study area will need to tie into the Lower Don Lands street network.
- Water and sanitary servicing - Future servicing for the Port Lands and South of Eastern Area will need to be considered in cooperation with demands from the LDL study area .
- Stormwater management and servicing – Primary consideration will be given to potential opportunities for stormwater discharge from the Port Lands and South of Eastern TSMP study area to be treated by existing or planned UV treatment facilities. However, other options will be considered as well.

In addition to the above studies, the following reports and documents have also been reviewed from a stormwater management perspective to understand the existing conditions and identify opportunities in the Port Lands and South of Eastern TSMP study area:

- Lower Don River West Remedial Flood Protection Project Class EA, 2005
- East Bayfront Class EA Master Plan, 2006
- Toronto & Region Remedial Action Plan (RAP) Progress Report, 2007
- Central Waterfront Secondary Plan, as amended by OPA 388 in 2010
- East Bayfront Class EA Master Plan Addendum Stormwater Collection, 2009
- Keating Channel Precinct Plan, 2010
- Port Lands Acceleration Initiative (PLAI), 2012
- Port Lands Profile, 2013
- East Bayfront Class EA Master Plan for Water Quality Report, 2013
- Lower Don Lands Environmental Assessment Master Plan Addendum & Environmental Study Report, 2014

3.0 OVERVIEW OF EXISTING DRAINAGE CONDITIONS

For the Port Lands and the South of Eastern TSMP study area, there are two primary drainage issues that will be addressed in this EA. This section deals with:

1. Existing Drainage Issues from the Don River Watershed.
2. Existing Drainage Issues for the Port Lands and South of Eastern area.

3.1 Existing Drainage Issues from the Don River Watershed

The entire watershed area or drainage basin of the Don River is 360 km². It is the most heavily urbanized major watershed in the Toronto Region Conservation Authority's (TRCA) jurisdiction. Although the headwaters of the Don arise from the ground water rich Oak Ridges Moraine, the majority of the river drains through the Peel Plain, a relatively impervious till. Discharge contributions through this zone are almost entirely from surface run-off due to the primarily impervious till comprising this area. The river also crosses the Iroquois Beach, the former shoreline of glacial Lake Iroquois, which is very sandy and results in both recharge and discharge of groundwater (LDL MP).

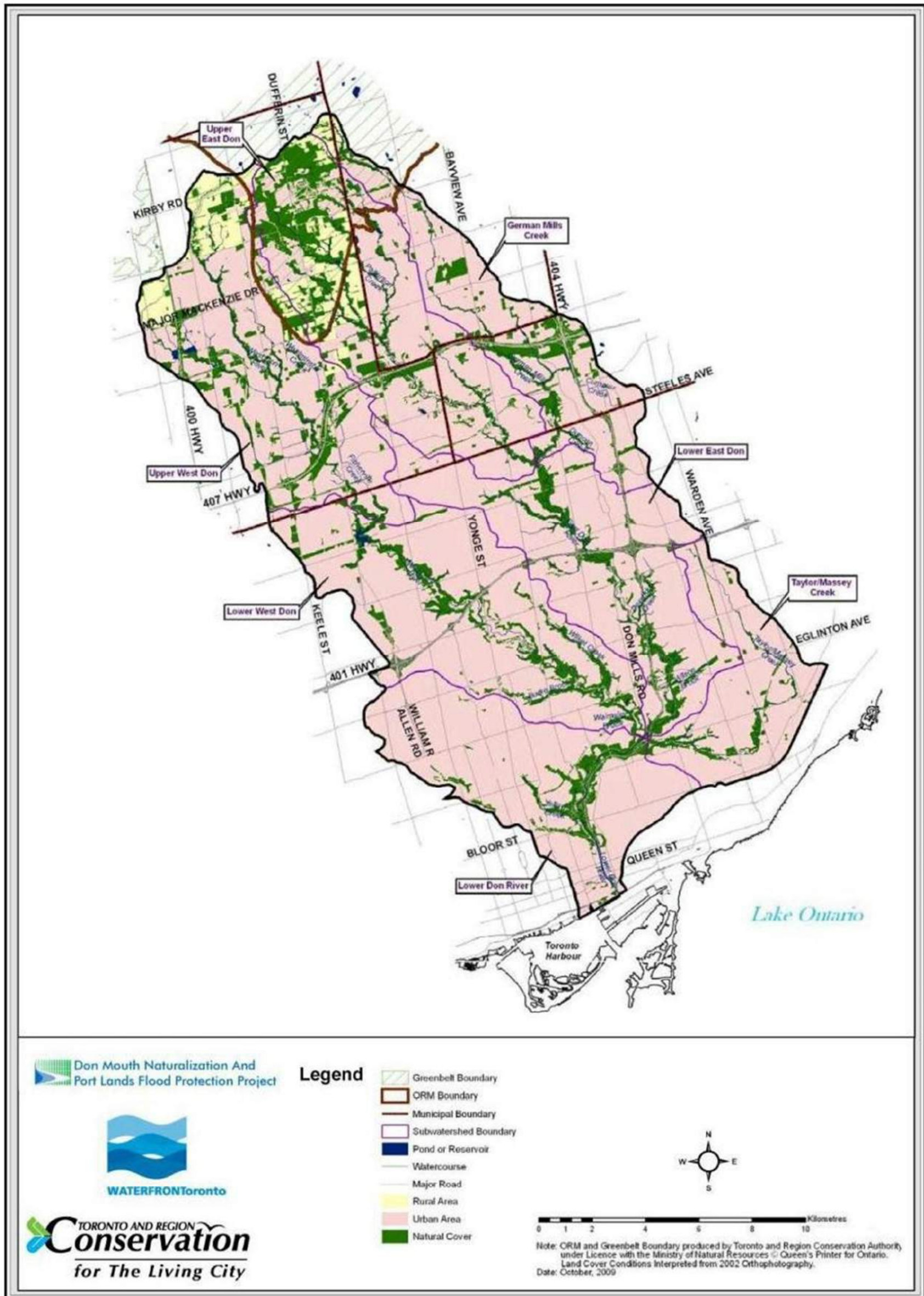
The Don Watershed possesses a dendritic drainage pattern that flows southward for 38km from the Oak Ridges Moraine to the Inner Harbour of Toronto. The Don River possesses two major branches (the East and West Don), each consisting of many smaller sub-watershed systems, such as but not limited to Taylor Massey Creek, Wilket Creek, Patterson Creek and Pomona Creek (**Figure 3**). The Lower Don subwatershed is located downstream of the confluence of the East and West Branches. This subwatershed includes all of the Don Narrows until reaching the Keating Channel. Prior to settlement and development of the City of Toronto, the lands along the lakefront were composed of forest and marsh habitats. The river was sustained by underground aquifers in its headwaters, as well as by rainfall and snowmelt that infiltrated the soils of the region's vast forests. Sheltered stretches of shoreline were lined with stands of emergent vegetation and much of the near shore was comprised of sand, gravel and stone (DMNP EA, 2013).

The final 4 km of the river (south of Bloor Street) ends at Lake Shore Boulevard as it enters the Keating Channel, the Inner Harbour and Lake Ontario. Currently, the Port Lands and the South of Eastern area forms part of the Don River watershed with spilling of the flows from the Regional Storm into these areas. Within the TSMP study area, the Don River from Riverdale Park downstream to the Keating Channel has been significantly altered as a result of adjacent land uses. Along this lower 4 km section, the river is relatively straight (the channel banks largely consist of vertical steel sheet pile walls; lacks discernible grade, and has little natural connectivity to the floodplain (DMNP EA, 2014).

The river in this lower area averages 40 metres in width and, depending upon lake levels, exhibits an approximate depth of one to two metres. South of Lake Shore Boulevard, the Don River enters into the Keating Channel. The Keating Channel extends approximately 0.7 km in length, varies between 37 metres and 60 metres in width and has depths between 2 metres and 5 metres depending upon lake levels and the degree of sediment accumulation in the channel (LDL MP, 2010).

During a period of approximately 5 years, from the mid-1970s to early 1980s when dredging activities were halted in the Keating Channel, sediment deposition resulted in the bed of the Keating Channel being higher than water levels in many locations during mean Lake level and baseflow conditions. The channel banks consist of vertical steel sheet pile walls (LDL MP, 2010).

Figure 3: Don River Watershed



Source: Don Mouth Naturalization and Port Land Protection Project, October 2009

3.1.1. Flooding Issues

Flood protection for the lower Don River is a key component of Toronto's waterfront revitalization. Flows in the Don River have changed significantly since pre-settlement times. The watershed is now over 80% urbanized, and approximately 70% of this area was developed before stormwater management controls were a requirement of development. Discharge in the Don River increases rapidly due to precipitation resulting in turbid, sediment-laden water, erosion of the stream banks, scouring and deposition, and smothering in-stream habitat features.

As the city developed, the lower portions of the Don River have undergone straightening, extension and redirection culminating with the development of the Port Lands and the Keating Channel. Under normal flow conditions, the influence of water levels from Lake Ontario extends up the river to beyond Gerrard Street. As a consequence, the hydrology of the river is complex and affected by the Lake throughout the study area. Flooding within the area of the Lower Don River has a written history dating back to the mid-1870s, beginning first with ice jams and late fall flooding. However with rapid development of the headwaters over the last few decades and the corresponding increase in stormwater responsiveness, floods can occur at any time during the year (LDL MP, 2010).

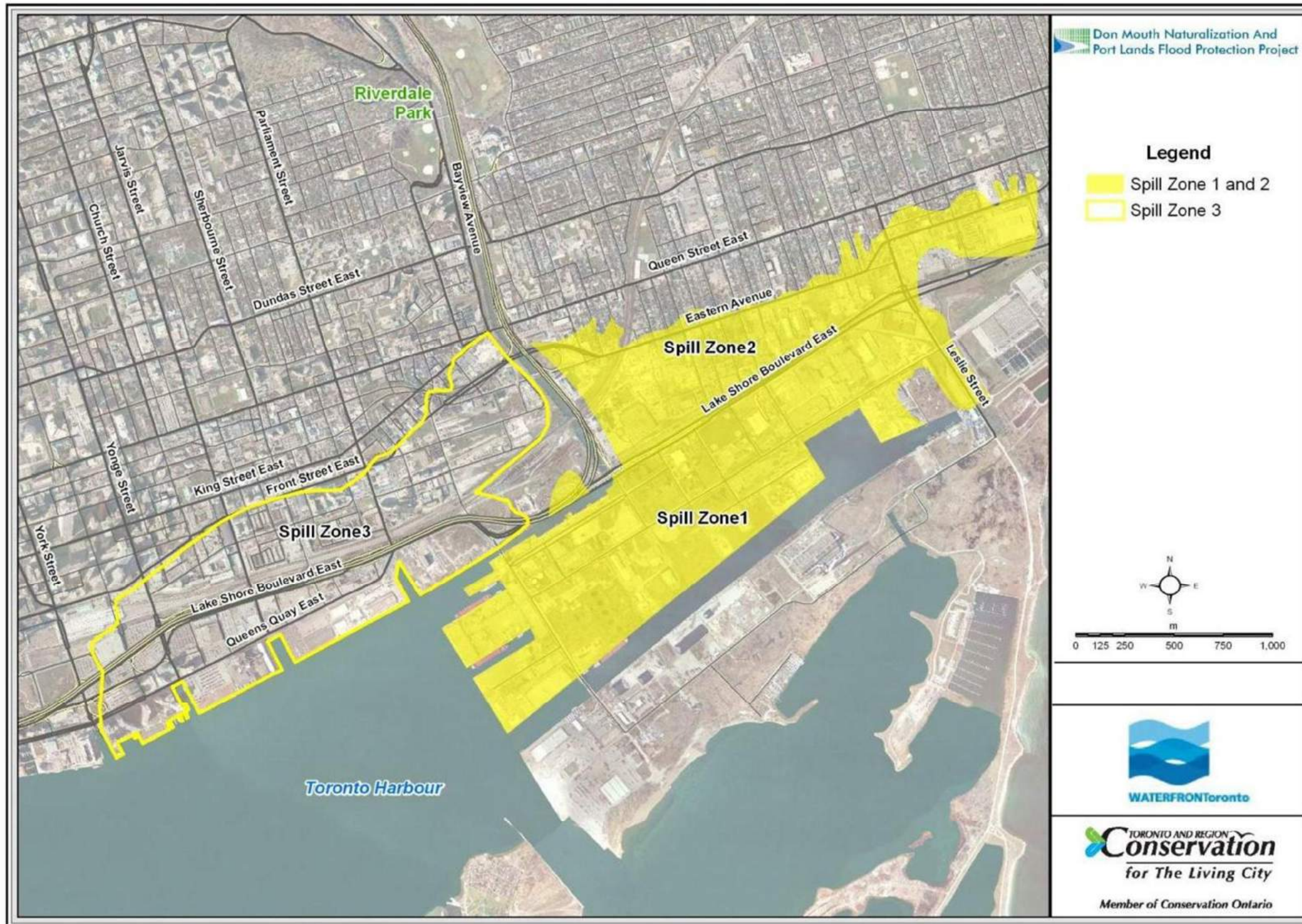
The Keating Channel EA Study (1983) identified three different Spill Zones for the Lower Don River (**Figure 4**). The Keating Channel EA assessed the need for and consequences of dredging the Keating Channel. The study concluded that to avoid an additional increase in flood risk to the surrounding areas of the Lower Don River, annual maintenance dredging and disposal activities were necessary to offset sediment infilling of the Channel. This would also serve to reduce the volume of contaminated sediment in the Channel. The Keating Channel EA continues to govern dredging activities in the Channel and disposal of the dredged material. However, some areas are still at risk of flooding despite dredging of the Keating Channel on a regular basis. These zones are: Spill Zone 1 – the Port Lands, Spill Zone 2 – east of the Don River and north of Lakeshore Boulevard, and Spill Zone 3 – the lands west of the Don River. A portion of the Port Lands and South of Eastern study area falls within Spill Zones 1 and 2. The Lower Don River West Remedial Flood Protection Project and its associated EA address the area of Spill Zone 3. The DMNP addresses the alleviation of flood risk for Spill Zones 1 and 2 (DMNP EA, 2014).

In the DMNP EA study area, there exists a valley feature upstream of Queen Street that is narrow but is sufficiently deep to be able to contain the majority of the high discharge rates produced during the Regulatory Flood. South of Queen Street within the DMNP study area, there is no valley. It is characterized as a broad, wide, low-lying area comprised of lake-fill, providing no containment of the Regulatory Flood. Previously, the elevated embankment of CN Rail's Kingston Subdivision intensifies flooding in this area such that it forces floodwaters further west and restricts flows under the embankment through the existing north-south road underpasses (e.g., Spill Zone 3, Figure 4). In a Regulatory Flood event, water would spill west into the downtown core of the city, and south and eastward through the Port Lands and South of Eastern community. Since the implementation of the Lower Don River West Remedial

Flood Protection Project Class EA. The extension of the railway bridge over the Don River by 21m to the west, led by TRCA and Waterfront Toronto in 2007, combined with the near completion of the Flood Protection Landform in the West Don Lands, led by Waterfront Toronto, Infrastructure Ontario and TRCA, has eliminated flooding from the Don River to the west (Spill Zone 3). Flooding still remains through Spill Zones 1 and 2. This will be addressed as part of the DMNP EA.

The DMNP EA (2014) documents that south of the Kingston Subdivision, floodwaters under the Regulatory Flood continue to exceed channel capacity, spilling south of the Keating Channel and east of the Don River. These waters combine with flows originating through the Eastern Avenue underpass of the Kingston Subdivision, and merge to form Spill Zones 1 and 2 (Figure 4). The Port Lands, which is situated mostly in Spill Zone 1, is mainly comprised of industrial and vacant lands whereas the South of Eastern area, Spill Zone 2, is comprised of residential and commercial land uses.

Figure 4: Regulatory Flood Spill Zones for the Lower Don River



Source: Don Mouth Naturalization and Port Lands Flood Protection Project

3.1.2. Water Quality

The water quality of the Lower Don River has been characterized in studies such as the Don River Watershed Wet Weather Flow Management Master Plan (2003) and the Toronto Area Watershed Management Study (Pitt and McLean, 1986). The Don River often exceeds the Provincial Water Quality Objectives (PWQO) for many substances, especially during wet weather. Contaminants routinely found in wet weather samples include E. coli bacteria, heavy metals (e.g., zinc, copper), suspended sediment, nutrients, and seasonally, chlorides and pesticides. The major sources of these pollutants are runoff from roads and residential, industrial and commercial land uses through the storm sewers, the effluent of the North Toronto Sewage Treatment Plant and combined sewer overflows (CSOs) along Taylor/Massey Creek and the Lower Don, and spills from industrial and commercial lands (LDL MP, 2010).

Suspended sediment may be derived from watershed sources carried to the river, such as from construction sites, from winter de-icing and from in-stream erosion. When the sediment carried in suspension arrives at the Lower Don, the velocity changes result in it being dropped out of suspension and deposited on the bed of the river or in the Keating Channel. Bottom sediments have been sampled in Toronto Harbour since the 1970s. It was identified early on that highly contaminated sediments existed in the Keating Channel and in the near-by combined sewer outlets. Since the 1970s, significant reductions in the concentration of metals in at the bottom of the channel have been accomplished by the implementation of pollution prevention programs, and sewer by-laws. These measures have led to cleaner sediments being deposited compared to the historic build-up (Toronto & Region RAP, 2007).

3.2 Existing Stormwater management issues for the Port Lands and South of Eastern area

Water quality for the Lakefront is similar to the discharges from the Don River; there are concerns due to the existing combined sewers that have the potential to spill directly into the lake untreated. The Don River and Central Waterfront EA, was planned to capture and treat polluted stormwater and raw sewage from combined sewer overflows before they enter the lakefront. As a result, the investigations called for the upgrades to the City's critical sanitary trunk sewer infrastructure to improve operations and service future growth.

It is the City's objective to reduce Combined Sewer Overflows (CSO) and mitigate the amount of pollution entering local water bodies, such as the Don River and Toronto Inner Harbour. As part of the Port Lands and South of Eastern TSMP EA, a key objective will be to reduce the amount of combined sewers and have the storm sewer discharge directly to the lake with the appropriate treatment. Since it is not possible to eliminate all combined sewers, the City plans to capture flows from CSOs from the higher frequency, low magnitude storm events by storing them in large tanks and then treating them at the Ashbridge's Bay Treatment facility before discharging directly to the open water of Lake Ontario. For less frequent, higher magnitude storm events, only a portion of the CSO flows will be diverted and treated, the remaining will continue to be discharged to their existing receiving bodies of the Don River and Inner Harbour.

However, during these larger flood events, the CSO discharges will have the benefit of partial diversion and increased dilution of flows.

Typical stormwater related issues exist within the Port Lands and South of Eastern TSMP study area. , There is little infrastructure south of the shipping channel and as a result, all stormwater runoff is ponded in low lying areas or conveyed via overland flow routes via the Ship Channel or directly to Lake Ontario. North of the Ship Channel, drainage is directed from the north to the south. There is some infrastructure that has been designed and placed to meet the immediate needs of each development. Little to no stormwater management measures exists to meet the requirements of the Toronto WWFMG.

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The existing stormwater issues within the Port Lands and South of Eastern TSMP study area results from the limited infrastructure. South of the Ship Channel, stormwater runoff typically drains through any available overland flow routes to the Shipping Channel or directly to Lake Ontario. During heavy rainfall, ponding in low lying areas typically occur. North of the Shipping Channel, drainage is from the north to the south. There is some infrastructure that has been designed and placed to meet the immediate needs of each development. Little to no stormwater management measures exists to meet the requirements of the Toronto's WWFMG.

The South of Eastern area has been identified in the City's Basement Flooding Protection Program as part of Study Area 32 experiencing chronic basement flooding. The Class EA Study for Area 32 identified a number of sewer upgrade projects to mitigate current basement flooding risks. While the South of Eastern portion of the study area has no combined sewers, the planned sewer upgrades within Area 32 (along Eastern Avenue and to the north of Eastern Avenue) may cause a potential hydraulic impact.

3.3 Existing Stormwater Servicing and Facilities

The existing servicing infrastructure is limited within the Port Lands and South of Eastern TSMP EA. As shown on **Figure 5**, there is a network of local storm sewers ranging in size from 300-900mm diameter. The storm sewers discharge to adjacent water bodies. There is also a network of existing combined and sanitary sewers. The combined sewers are primarily located north of Eastern Avenue and outside the study area. Currently these combined sewers overflow to the Don River itself and have little influence upon the Port Lands and South of Eastern Area.

In the South of Eastern area, west of Leslie Street, the minor system is conveyed towards the south into the Port Lands, discharging into the Turning Basin. North of Lake Shore Boulevard,

adjacent to the Don River, storm servicing ranges from 300mm to 600mm diameter pipes, which outlet to the River. Minor system flows east of Leslie Street are conveyed south and outlets at Ashbridges Bay.

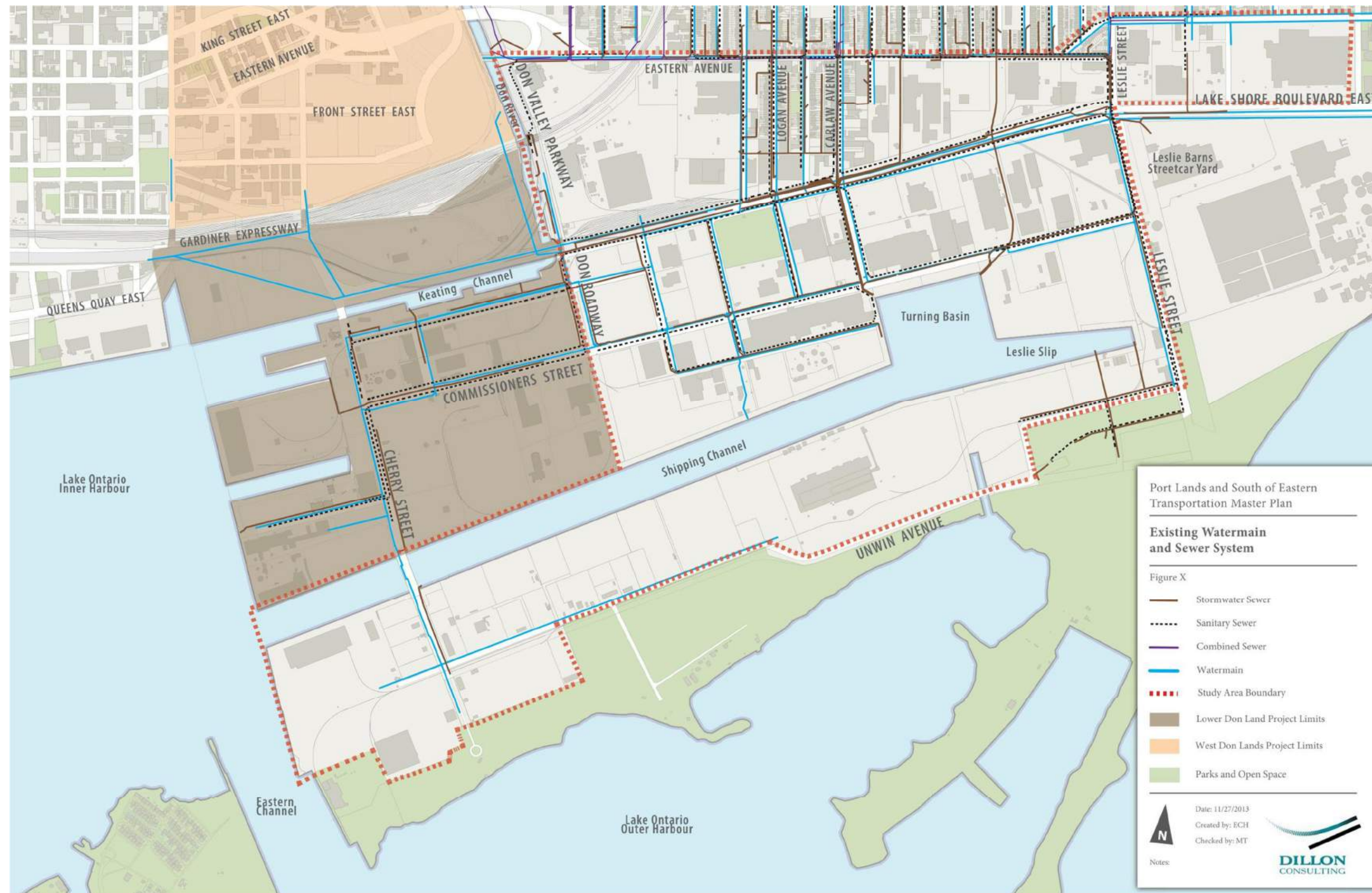
Servicing infrastructure south of the Ship Channel is limited to storm drainage relying on open ditches, informal ponding, infiltration and overland flow discharging directly into the lake.

As there is limited servicing capacity within the Port Lands, it is expected that the area will require new services with a well-distributed storm servicing network that is integrated with the final flood protection works to support revitalization.

The adjacent Lower Don Lands area has a basic separate stormwater collection system that consists of short run sewers that discharge directly to the surrounding water bodies including the Keating Channel, the Ship Channel and the Inner Harbour. There are no stormwater quantity control facilities, and there is no treatment of stormwater for quality. Most of the existing stormwater infrastructure was constructed between the 1920s and the 1940s.

Among the limited sewer outlets in the Lower Don Lands, there is a 1,350 mm X 1,350 mm CSO outlet at Cherry Street and Lake Shore Boulevard. This CSO outlet is a concrete box culvert structure. The area tributary to this outlet consists of approximately 40% of the existing West Don Lands precinct area, and a significant area north of the West Don Lands. There are stormwater inputs to the Cherry St. CSO from the Lower Don Lands, primarily from Lakeshore Boulevard (LDL MP, 2010).

Figure 5: Network of Storm Sewers



Source: Dillon Consulting

4.0 STORMWATER MANAGEMENT CRITERIA

Both stormwater quantity and quality management must be addressed for any proposed works within the City of Toronto. The Stormwater Management criteria for the Port Lands and South of Eastern study area are based on the following:

- Toronto Wet Weather Flow Management Guidelines (WWFMG);
- Toronto Green Development Standards;
- Ministry of the Environment Stormwater Management Planning and Design Manual (2003); and
- TRCA requirements.

The Stormwater Management criteria established from the above include the following:

- Water quantity;
- Water balance;
- Water quality; and
- Disinfection for discharge to lake.

Quantity controls are intended to control peak flows from a proposed development in order to mitigate downstream impacts. Appropriate Stormwater Management Controls in the TSMP study area will be designed to collect and convey flows under the following conditions:

- Minor System flows – runoff from rainfall events that can be contained within the storm sewer system (i.e., flows resulting from rainfall events equal to or less than the 2-year design storm event) which will be directed to a management facility and then discharged to a receiving watercourse.
- Major System flows – flows exceeding the capacity of the sewer system which will be conveyed via an overland flow route to a receiving watercourse, away from the Don River. This will be dependent on the site location and confirmation with the WWFMG.

Water balance is the capture and management of stormwater runoff at or near its source in an attempt to preserve the natural or pre-development hydrologic conditions (i.e., surface runoff, infiltration, and evapotranspiration). Water balance is typically assessed on a seasonal or annual basis and consists of runoff volume source controls such as green roofs, bioretention cells, permeable pavement, soakaway pits, grass channels, dry swales, street tree plantings/tree clusterings, and rainwater harvesting systems (i.e., rain barrels and cisterns). For the Project Study Area, the water balance target is a minimum of 5 mm of onsite retention.

Water quality treatment controls are intended to reduce total loading and/or peak concentration of targeted pollutants. For the Port Lands and South of Eastern TSMP study area, the water quality targets include the consideration of Total Suspended Solids (TSS) and E.Coli. The WWFMG's water quality target is the long-term average removal of 80 % of Total Suspended Solids (TSS) on an annual loading basis from all runoff leaving the proposed development site based on the post-development level of imperviousness. This long-term

average of removal of 80% of TSS requirements is consistent with the “enhanced protection” recommended in the current MOE SWM Planning & Design Manual (March 2003).

For discharges directly to the Lake or Toronto Waterfront, the WWFMG water quality target for E. Coli is the following:

- a) Wet Weather Periods: E. coli < 1000/100 mL during swimming season (June 1 to September 30)
- b) Dry Weather Periods: E. coli < 100/100 mL during swimming season.

General provisions include the provision of disinfection treatment (i.e., ultraviolet light radiation or equivalent) for storm runoff from the development site, which discharges through either a new or an existing outfall directly to the Lake or Waterfront areas.

5.0 BOUNDARY CONDITIONS

The Province of Ontario currently uses the rainfall from Hurricane Hazel centered over the Don Watershed to define the limits of flooding, known as the Regulatory Flood. Past studies in the area, such as the Lower Don River West Remedial Flood Protection Project Class EA and the Don Mouth Naturalization and Port Lands Flood Protection Project EA, have examined the hydraulics of the Don River at its mouth through the use of computer modelling. These models have been used to predict the expected response of the river, in terms of flows, velocities, and water levels, to flood events including the Regulatory Flood. The results of past hydraulic analyses lead to the following conclusions:

- The flooding depth within the Don River channel at Lake Shore Boulevard is approximately 5.5 metres, and almost 1.5 metres deeper north of TSMP study area at Queen Street;
- Flood depths greater than 1 metre would be expected within the area immediately adjacent to the river, and immediately north of the CN Rail line;
- The lands bounded by the Don River to the east, Cherry Street to the west, the CN Rail line to the north, and Lake Shore Boulevard to the south (i.e., 480 Lake Shore Boulevard) remain generally unaffected by the Regulatory Flood levels.
- Immediately north of the Kingston Subdivision, floodwater depths are calculated to be in excess of 3 metres at the peak flood depth. Given the relatively uniform topography and the widespread extent of flooding south of the Kingston Subdivision, depths are for the most part less than 1 metre, with some areas exceeding 1 metre, primarily associated with the Unilever site and along Lake Shore Boulevard East.

The boundary conditions that will be applied to the Port Lands and South of Eastern study area will be largely based on the DMNP EA. As part of the DMNP EA, a three-dimensional hydraulic and sediment transport model, known as Delft3D was used to evaluate hydraulic conditions and flood flows under existing conditions at the mouth of the Don. The following was determined (DMNP EA, 2014):

- For evaluation of conveyance of the regulatory flow, the upstream end of the Keating Channel is set to a height of 71.6 m for the upstream spill elevation, and a height of 75.25 m for the fixed, side-spill elevation;
- For flows below the 100-year return period, no scour was assumed to take place beneath the CN Bridge;
- For flows above the 100-year return period, up to the regulatory flow, the channel was conservatively assumed to scour to a depth of 70.0 m;
- The regulatory flow hydrograph supplied by TRCA was used as the upstream boundary input; and,
- A lake level of 75.2 m, approximately the 2-year return period lake level without surge, or the June (summer high) lake level with a probability of exceedance of 25 %, was used at the downstream lake boundary. This is elevated over the mean lake level in the area of 74.7 m, and it was selected to provide a slightly conservative estimate of flood conveyance, and is consistent with the TRCA flood plain mapping initial conditions at the Lake for all rivers and streams mapped.

The Stormwater Management controls recommended for implementation in the Port Lands and South of Eastern TSMP study area will be subject to boundary conditions, for both major and minor system flows, and are largely based on the DMNP EA (2014), the Lower Don Lands Master Plan (2014), and lake levels. As these two projects move towards completion, the boundary conditions may alter, thus potentially affecting the details of the Stormwater Management design alternatives proposed for the Port Lands and South of Eastern TSMP study area. Any modifications required to design alternatives proposed will be upon completion of final approvals of adjacent area studies, as well as the discretion of the City of Toronto.

6.0 NEXT STEPS AND EVALUATION CRITERIA

For the Port Lands and South of Eastern study area, the current storm sewers within the project limits have not been assessed for their capacity to address the future development, however, it is expected that due to the proposed changes to the land use for the area, and the need to address both stormwater management quality and quantity issues, the existing storm sewer system will not be adequate to meet the future needs. Therefore, it is expected that all the existing storm sewers within the study area will be replaced. All new storm sewers will be sized in accordance with the WWFMG, such that these systems will convey runoff equal to the 2-year pre-development flow rate. Therefore, the allowable release rate from any portion of a site draining to the municipal storm sewer system is the 2-year pre-development flow rate based on a runoff coefficient value of 0.50 (WWFMG, Section 2.2.3.8).

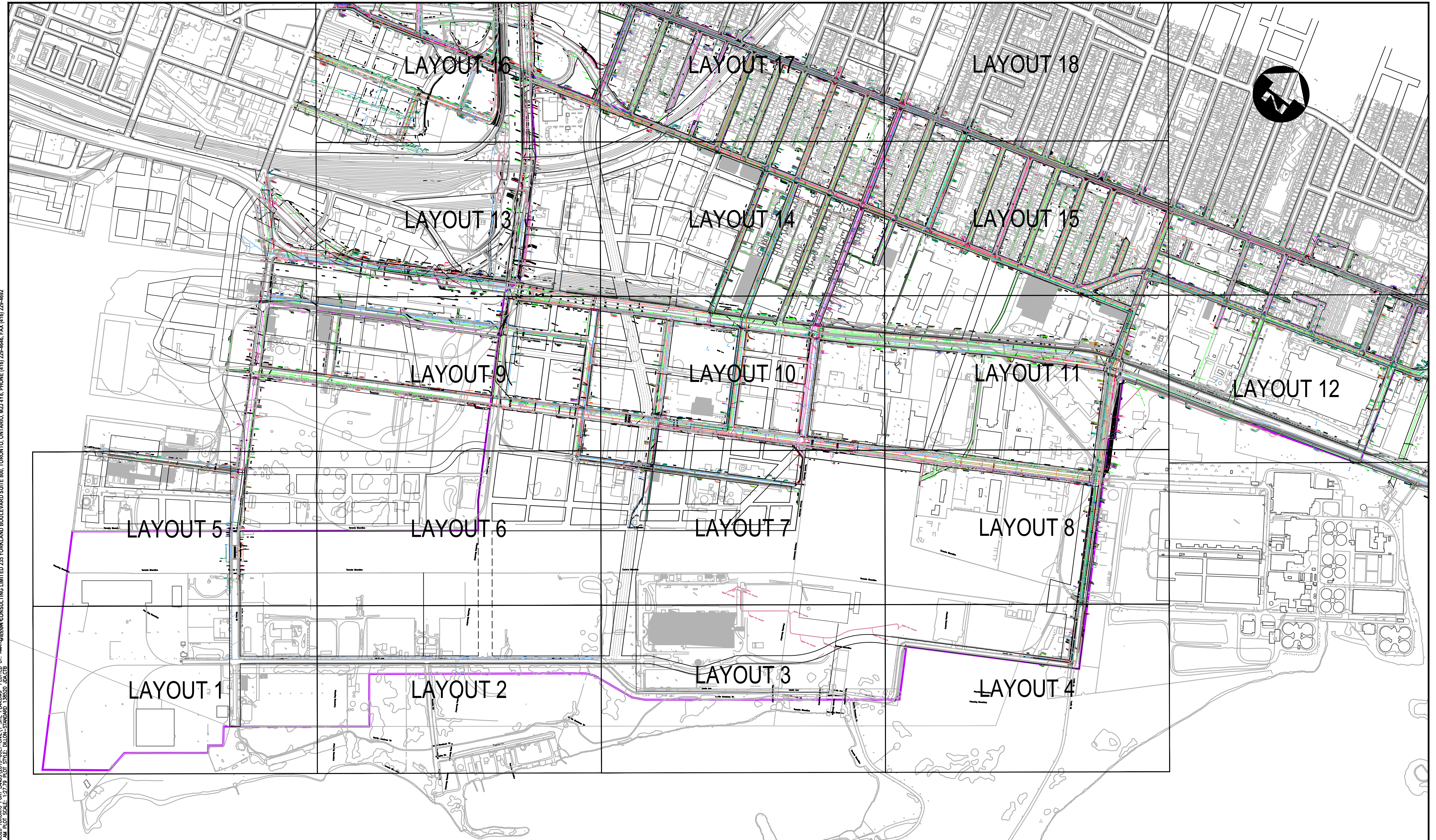
The proposed redevelopment of the Port Lands and South of Eastern areas within the City of Toronto provides an opportunity to address the degraded stormwater quality due to urbanization, in addition to assessing the impact of uncontrolled peak flows which may impact surrounding areas.

The treatment of stormwater runoff can employ a number of techniques and methods. The current trend is to develop a Stormwater Management plan with technologies that replicate

natural hydrologic and environmental processes rather than rely on end-of-pipe Stormwater Management ponds. Utilizing a Best Management Practice (BMP) may employ natural means and may attract plants and animals which are drawn to the natural system as well as more replicate natural hydrologic response characteristics. BMPs are individual types of stormwater treatment devices or procedures that can provide quality and quantity treatment. The specific goal of the BMP is to provide treatment of stormwater runoff from an urban setting. This runoff can contain a considerable amount of pollutants and contaminants that are detrimental to the natural environment.

To satisfy the criteria for this EA, the Stormwater Management strategy for the Port Lands and South of Eastern TSMP study area will need to consider source, conveyance and end-of-pipe controls. Source controls include the lot level Stormwater Management features described under water balance above. Conveyance controls include Stormwater Management measures along roadways and pathways such as infiltration basins/galleries, exfiltration trenches, enhanced ditches/swales and oil and grit separator (OGS) units. End-of-pipe controls typically include Stormwater Management detention facilities such as underground tanks or surface ponds designed to address any water quality and quantity targets.

APPENDIX G:
EXISTING UTILITIES



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PORT LANDS NETWORK.DWG	CITY OF TORONTO - RECEIVED 2014
ENBRIDGE_PIPELINE.DWG	CH2M HILL - RECEIVED OCT. 29, 2015



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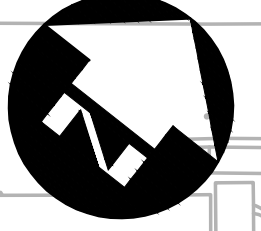
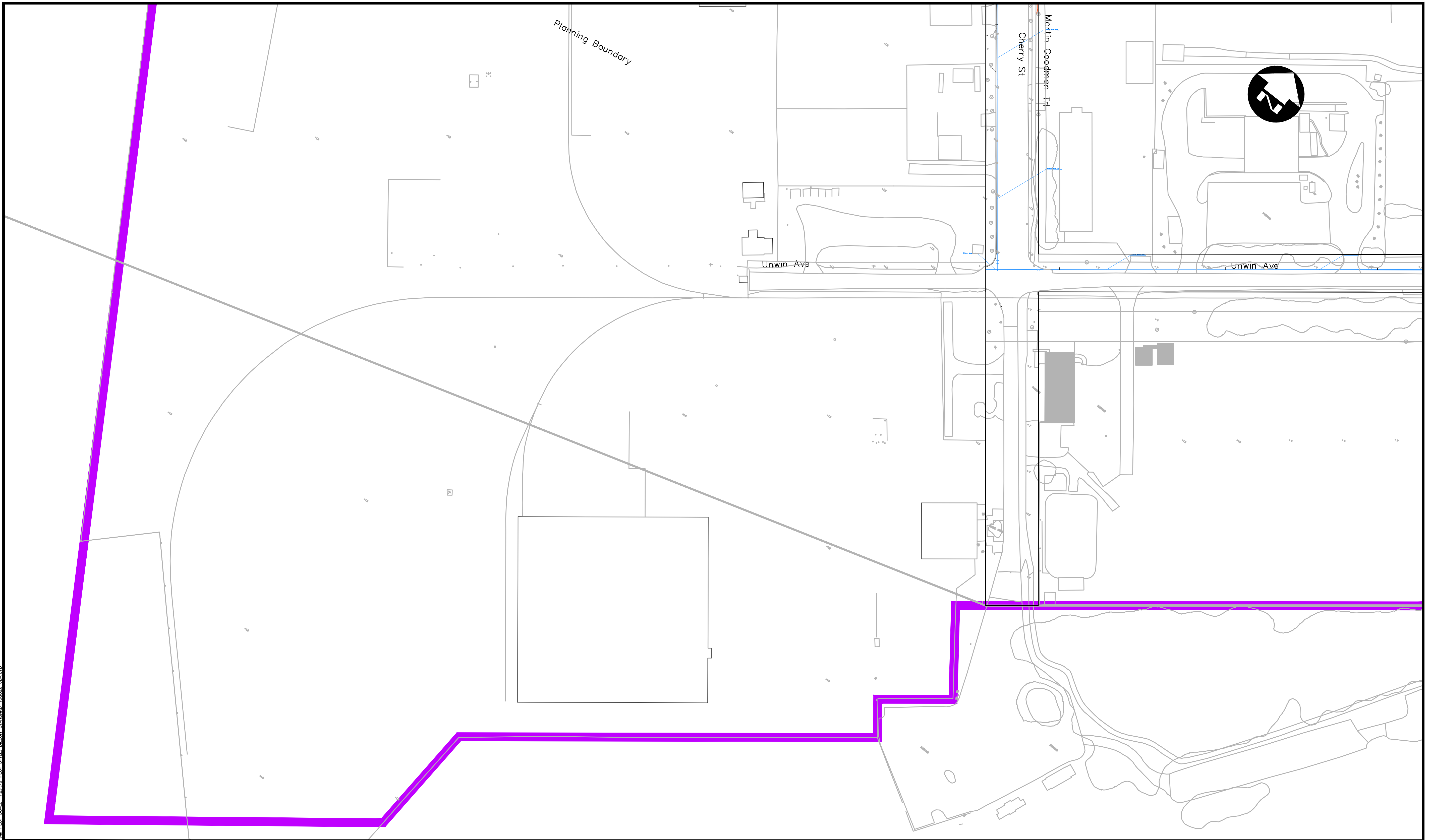
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**PORT LANDS AND SOUTH OF EASTERN
 TRANSPORTATION AND SERVICING MASTER PLAN**

LAYOUT 1

PROJECT NO.
13-8520
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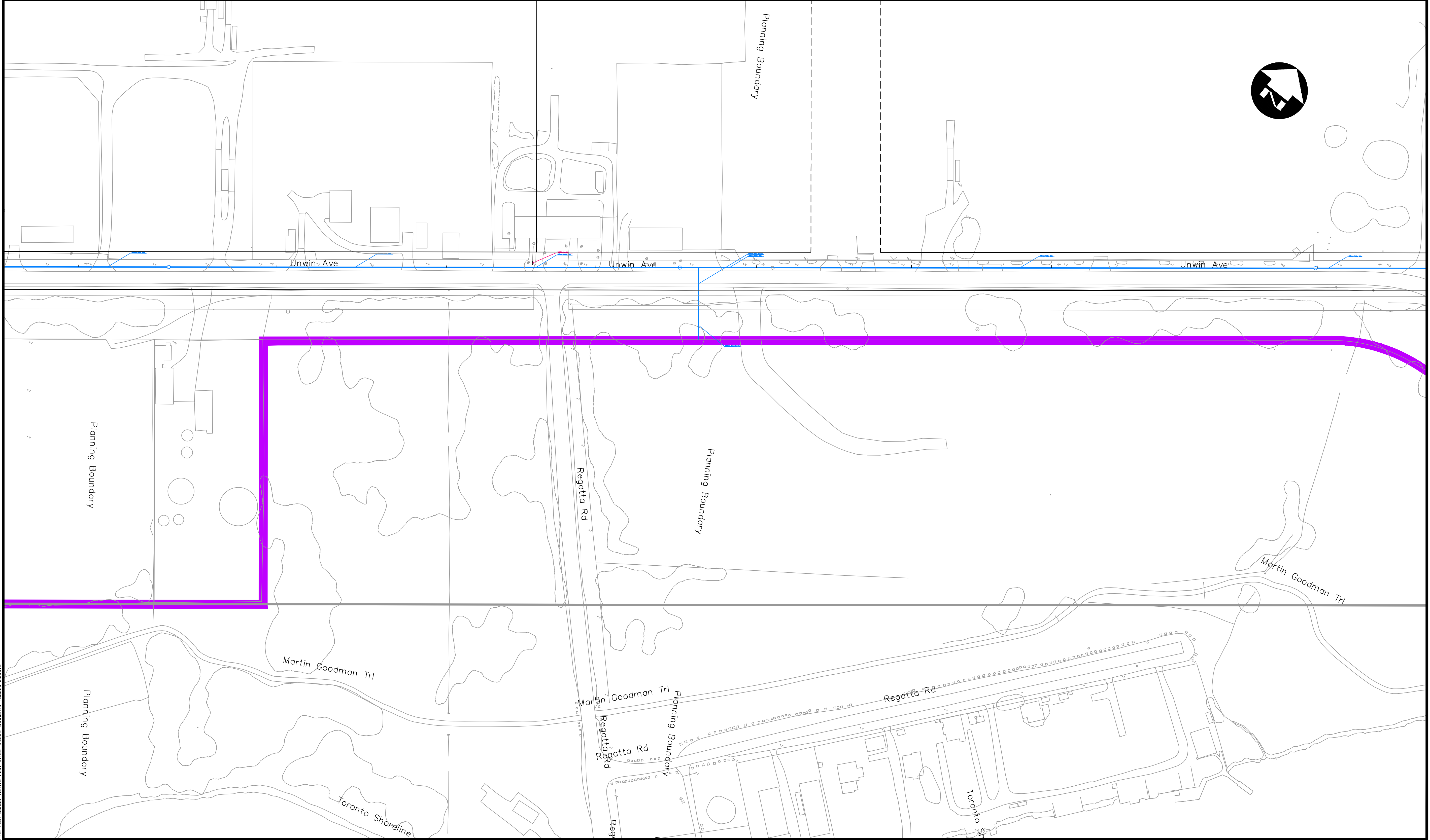
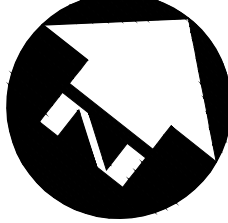
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| Site Boundary | Bell Underground |
| Combined Sewer | Watermain |
| HydroOne | Telus |
| Storm Sewer | Gas |
| Sanitary Sewer | Cable |
| Toronto Hydro | Steam |



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DESIGN	REVIEWED BY	PORT LANDS AND SOUTH OF EASTERN TRANSPORTATION AND SERVICING MASTER PLAN	PROJECT NO.
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SCALE			01



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- █ Combined Sewer
- █ HydroOne
- █ Storm Sewer
- █ Sanitary Sewer
- █ Toronto Hydro
- █ Bell Underground
- █ Watermain
- █ Telus
- █ Gas
- █ Cable
- █ Steam



DESIGN	REVIEWED BY		
JDA			
DATE	CHECKED BY		
JUNE 2016			
SCALE			
1:1000			
No.	ISSUED FOR	DATE	BY

PORT LANDS AND SOUTH OF EASTERN TRANSPORTATION AND SERVICING MASTER PLAN		PROJECT NO. 138520
LAYOUT 2		SHEET NO. 02

FILENAME: \\A:\PROJECTS\BARTT\3\138520 TORONTO PORT LANDS\2015-JULY-DMA\EXISTING UTILITIES.DWG, PLOTTED BY: AMEDON@DILLON CONSULTING LIMITED 235 YORKLAND BOULEVARD SUITE 800, TORONTO, ONTARIO, M2J 1Y6, PHONE (416) 229-4646, FAX (416) 229-4892
 PLOT DATE: 2016-06-18 @ 11:11:31 AM PLOT SCALE: 1:27.78 PLOT STYLE: DILLON-STANDARD 138520.DWT



Conditions of Use

Verify elevations and/or dimensions on drawing prior to use. Report any discrepancies to Dillon Consulting Limited.
 Do not scale dimensions from drawing.
 Do not modify drawing, re-use it, or use it for purposes other than those intended at the time of its preparation without prior written permission from Dillon Consulting Limited.

- █ Site Boundary
- █ Combined Sewer
- █ Storm Sewer
- █ Sanitary Sewer
- █ Toronto Hydro
- █ Bell Underground
- █ Watermain
- █ Telus
- █ Gas
- █ Cable
- █ Steam

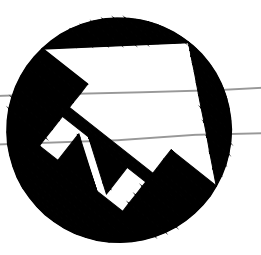
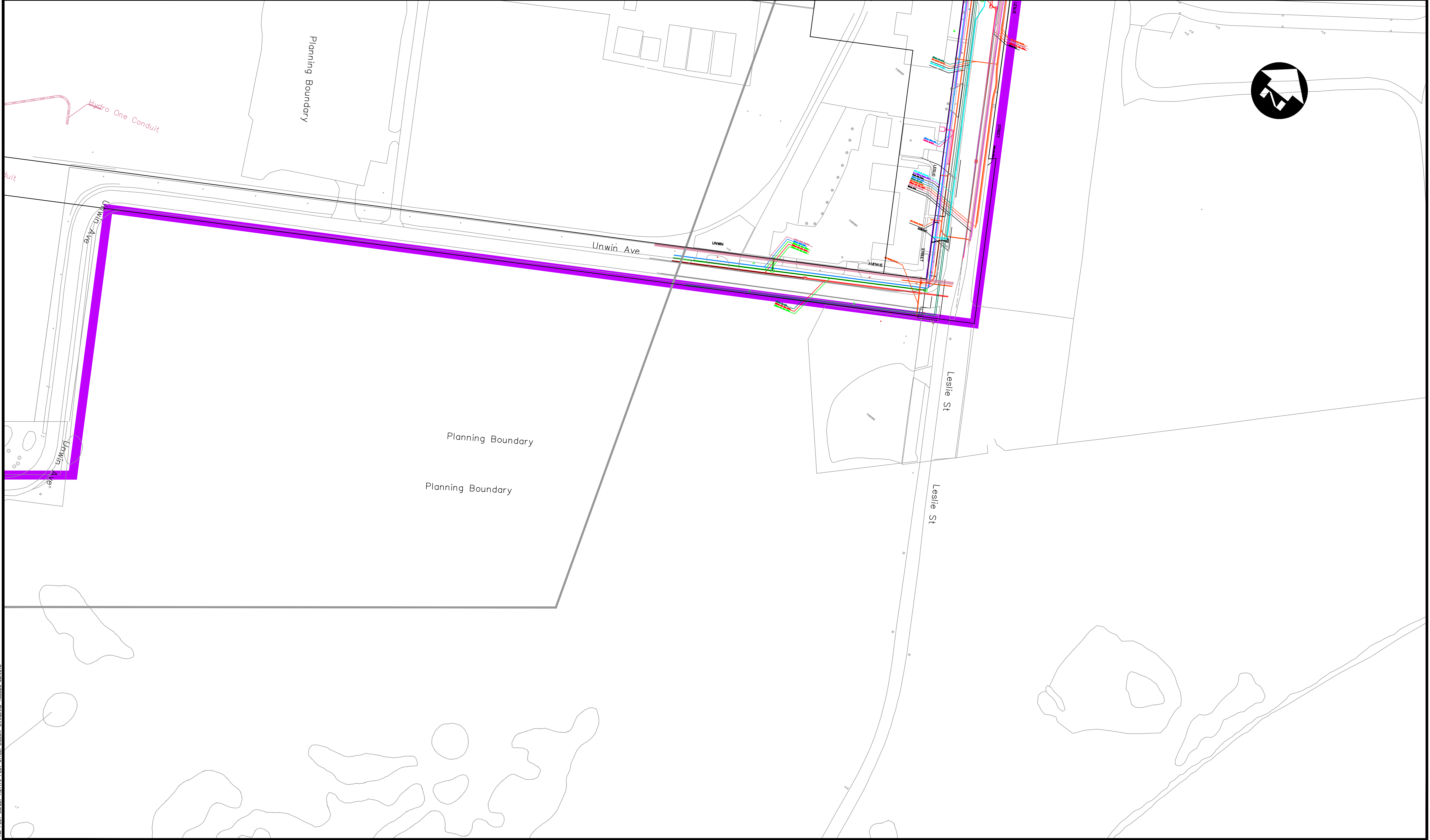


DESIGN	REVIEWED BY
DRAWN	CHECKED BY
DATE	JUNE 2016
SCALE	1:1000
ISSUED FOR	DATE
BY	

PORT LANDS AND SOUTH OF EASTERN TRANSPORTATION AND SERVICING MASTER PLAN

LAYOUT 3

PROJECT NO. **138520**
 SHEET NO. **03**



FILE NAME: H:\PROJECTS\BARTT\138520 TORONTO PORT LANDS\2015-JULY-DMA\EXISTING UTILITIES.DWG PLOTTED BY: AMEDW@SRCONSULTING LIMITED 235 YORKLAND BOULEVARD SUITE 800, TORONTO, ONTARIO, M2J 1Y6, PHONE (416) 229-4646, FAX (416) 229-4692
 PLOT DATE: 2016-06-18 @ 11:11:46 AM PLOT SCALE: 1:27.79 PLOT STYLE: DILLON-STANDARD 138520.DWG

Conditions of Use
 Verify elevations and/or dimensions on drawing prior to use. Report any discrepancies to Dillon Consulting Limited.
 Do not scale dimensions from drawing.
 Do not modify drawing, re-use it, or use it for purposes other than those intended at the time of its preparation without prior written permission from Dillon Consulting Limited.

Site Boundary	Bell Underground
Combined Sewer	Watermain
HydroOne	Telus
Storm Sewer	Gas
Sanitary Sewer	Cable
Toronto Hydro	Steam



No.	ISSUED FOR	DATE	BY

DESIGN	REVIEWED BY
DRAWN JDA	CHECKED BY
DATE JUNE 2016	
SCALE 1:1000	

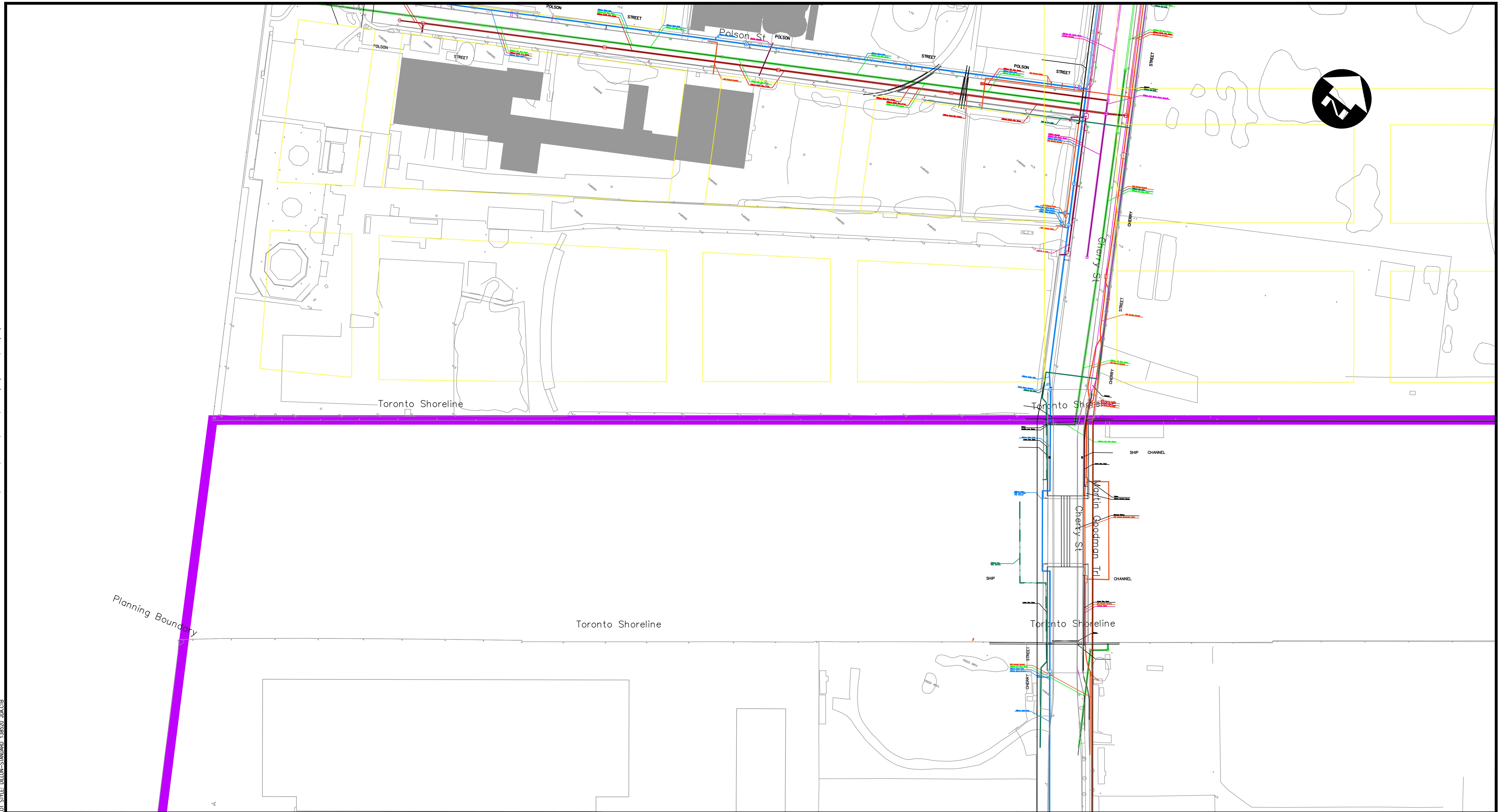
**PORT LANDS AND SOUTH OF EASTERN
 TRANSPORTATION AND SERVICING MASTER PLAN**

LAYOUT 4

PROJECT NO.
138520

SHEET NO.
04

FILENAME: \\A:\PROJECTS\BARTT\138520 TORONTO PORT JANIS\2015-07-09\EXISTING UTILITIES.DWG, PLOTTED BY: AMEOW@DILLON CONSULTING LIMITED 235 YORKLAND BOULEVARD SUITE 800, TORONTO, ONTARIO, M2J 1Y6, PHONE (416) 229-4646, FAX (416) 229-4892
 PLOT DATE: 2016-06-18 @ 11:22:01 AM, PLOT SCALE: 1:1250, AM, PLOT STYLE: DILLON-STANDARD, 138520.DWG,CTE



Conditions of Use

Verify elevations and/or dimensions on drawing prior to use.
 Report any discrepancies to Dillon Consulting Limited.
 Do not scale dimensions from drawing.
 Do not modify drawing, re-use it, or use it for purposes other than those intended at the time of its preparation without prior written permission from Dillon Consulting Limited.

- █ Site Boundary
- █ Combined Sewer
- █ HydroOne
- █ Storm Sewer
- █ Sanitary Sewer
- █ Toronto Hydro
- █ Bell Underground
- █ Watermain
- █ Telus
- █ Gas
- █ Cable
- █ Steam



No.	ISSUED FOR	DATE	BY

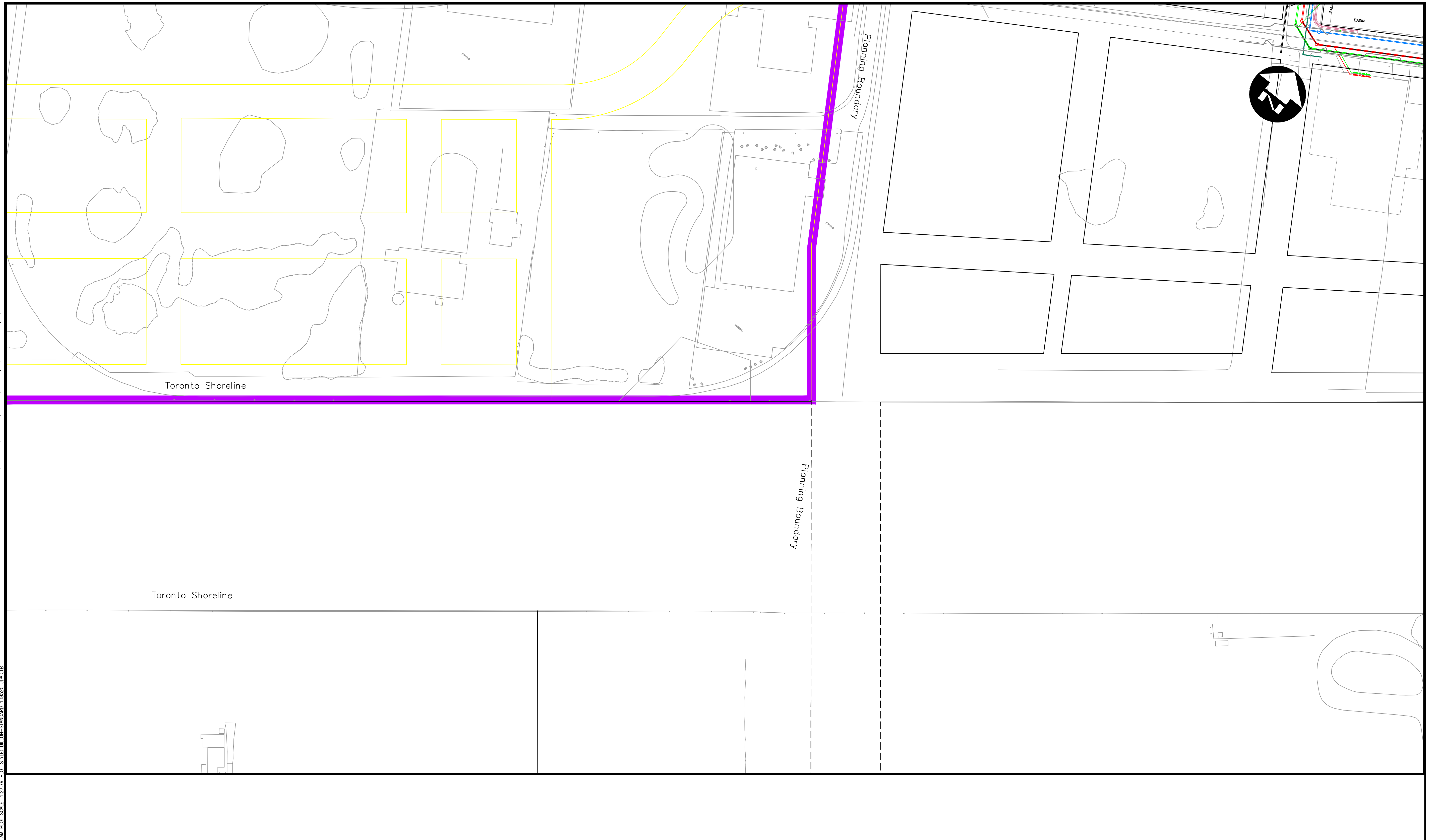
DESIGN	REVIEWED BY
DRAWN	CHECKED BY
DATE	JUNE 2016
SCALE	1:1000

**PORT LANDS AND SOUTH OF EASTERN
 TRANSPORTATION AND SERVICING MASTER PLAN**

LAYOUT 5

PROJECT NO.	138520
SHEET NO.	05

FILENAME: \\A:\PROJECTS\BARTLY\138520 TORONTO PORT LANDS\2015-JULY-DMA\EXISTING UTILITIES.DWG PLOTTED BY: AMED\BRSR\BRTLY\138520 TORONTO, ONTARIO, CANADA 235 YORKLAND BOULEVARD SUITE 800 TORONTO, ONTARIO, M2J 1Y6, PHONE (416) 229-4646, FAX (416) 229-4892
 PLOT DATE: 2016-06-18 @ 11:12:16 AM PLOT SCALE: 1:127.28 AN PLOT STYLE: DILLOM-STANDARD 138520.DWT



<p>Conditions of Use</p> <p>Verify elevations and/or dimensions on drawing prior to use. Report any discrepancies to Dillon Consulting Limited.</p> <p>Do not scale dimensions from drawing.</p> <p>Do not modify drawing, re-use it, or use it for purposes other than those intended at the time of its preparation without prior written permission from Dillon Consulting Limited.</p>	<ul style="list-style-type: none"> Site Boundary Combined Sewer HydroOne Storm Sewer Sanitary Sewer Toronto Hydro Bell Underground Watermain Telus Gas Cable Steam 	 <p>DILLON CONSULTING</p>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th>No.</th> <th>ISSUED FOR</th> <th>DATE</th> <th>BY</th> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </table>	No.	ISSUED FOR	DATE	BY																													<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td>DESIGN</td> <td>REVIEWED BY</td> </tr> <tr> <td>DRAWN</td> <td>CHECKED BY</td> </tr> <tr> <td>DATE</td> <td>JUNE 2016</td> </tr> <tr> <td>SCALE</td> <td>1:1000</td> </tr> </table>	DESIGN	REVIEWED BY	DRAWN	CHECKED BY	DATE	JUNE 2016	SCALE	1:1000	<p>PORT LANDS AND SOUTH OF EASTERN TRANSPORTATION AND SERVICING MASTER PLAN</p> <p>LAYOUT 6</p>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td>PROJECT NO.</td> <td>138520</td> </tr> <tr> <td>SHEET NO.</td> <td>06</td> </tr> </table>	PROJECT NO.	138520	SHEET NO.	06
				No.	ISSUED FOR	DATE	BY																																											
DESIGN	REVIEWED BY																																																	
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PROJECT NO.	138520																																																	
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<p style="text-align: center;">PORT LANDS AND SOUTH OF EASTERN TRANSPORTATION AND SERVICING MASTER PLAN</p>																																																		



FILENAME: H:\PROJECTS\PORT LANDS\TORONTO PORT LANDS\2015-07-01\EXISTING UTILITIES.DWG, PLOTTED BY: AMEOW@DILLON CONSULTING LIMITED 235 YORKLAND BOULEVARD SUITE 800, TORONTO, ONTARIO, M2J 1Y6, PHONE (416) 229-4646, FAX (416) 229-4892
 PLOT DATE: 2016-06-18 @ 11:22:21 AM, PLOT SCALE: 1:127.28, PLOT STYLE: DILLON-STANDARD, 138520.DWG

Conditions of Use

Verify elevations and/or dimensions on drawing prior to use.
 Report any discrepancies to Dillon Consulting Limited.
 Do not scale dimensions from drawing.
 Do not modify drawing, re-use it, or use it for purposes other than those intended at the time of its preparation without prior written permission from Dillon Consulting Limited.

- Site Boundary
- Combined Sewer
- HydroOne
- Storm Sewer
- Sanitary Sewer
- Toronto Hydro
- Bell Underground
- Watermain
- Telus
- Gas
- Cable
- Steam



No.	ISSUED FOR	DATE	BY

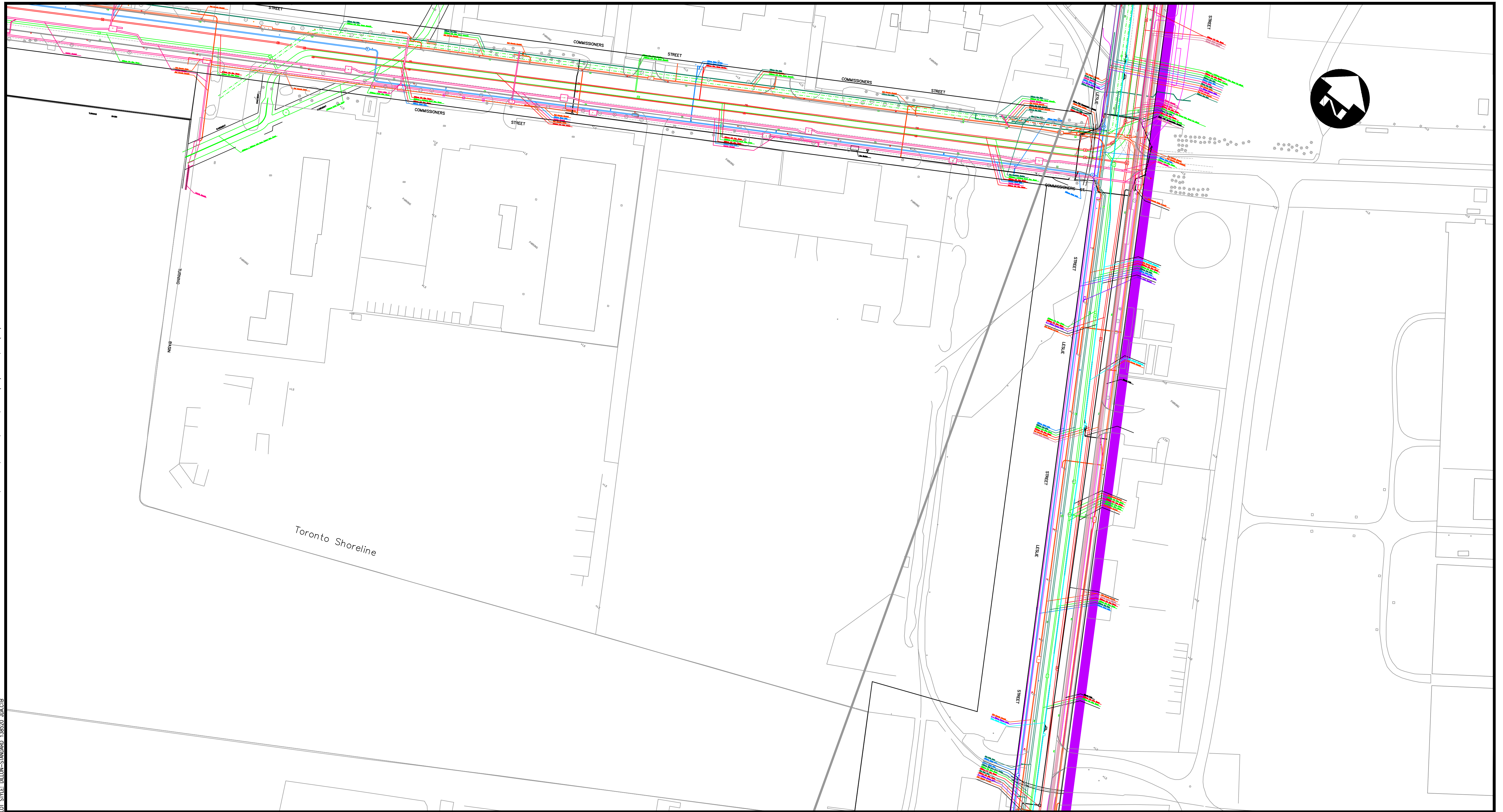
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JDA	
DATE	JUNE 2016
SCALE	1:1000

**PORT LANDS AND SOUTH OF EASTERN
 TRANSPORTATION AND SERVICING MASTER PLAN**

LAYOUT 7

PROJECT NO. 138520
 SHEET NO. **07**

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 PLOT DATE: 2016-06-18 @ 11:12:46 AM PLOT SCALE: 1:127.28 PLOT STYLE: DILLOM-STANDARD 138520.DWT



Conditions of Use

Verify elevations and/or dimensions on drawing prior to use.
 Report any discrepancies to Dillon Consulting Limited.
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- Site Boundary
- Combined Sewer
- HydroOne
- Storm Sewer
- Sanitary Sewer
- Toronto Hydro
- Bell Underground
- Watermain
- Telus
- Gas
- Cable
- Steam



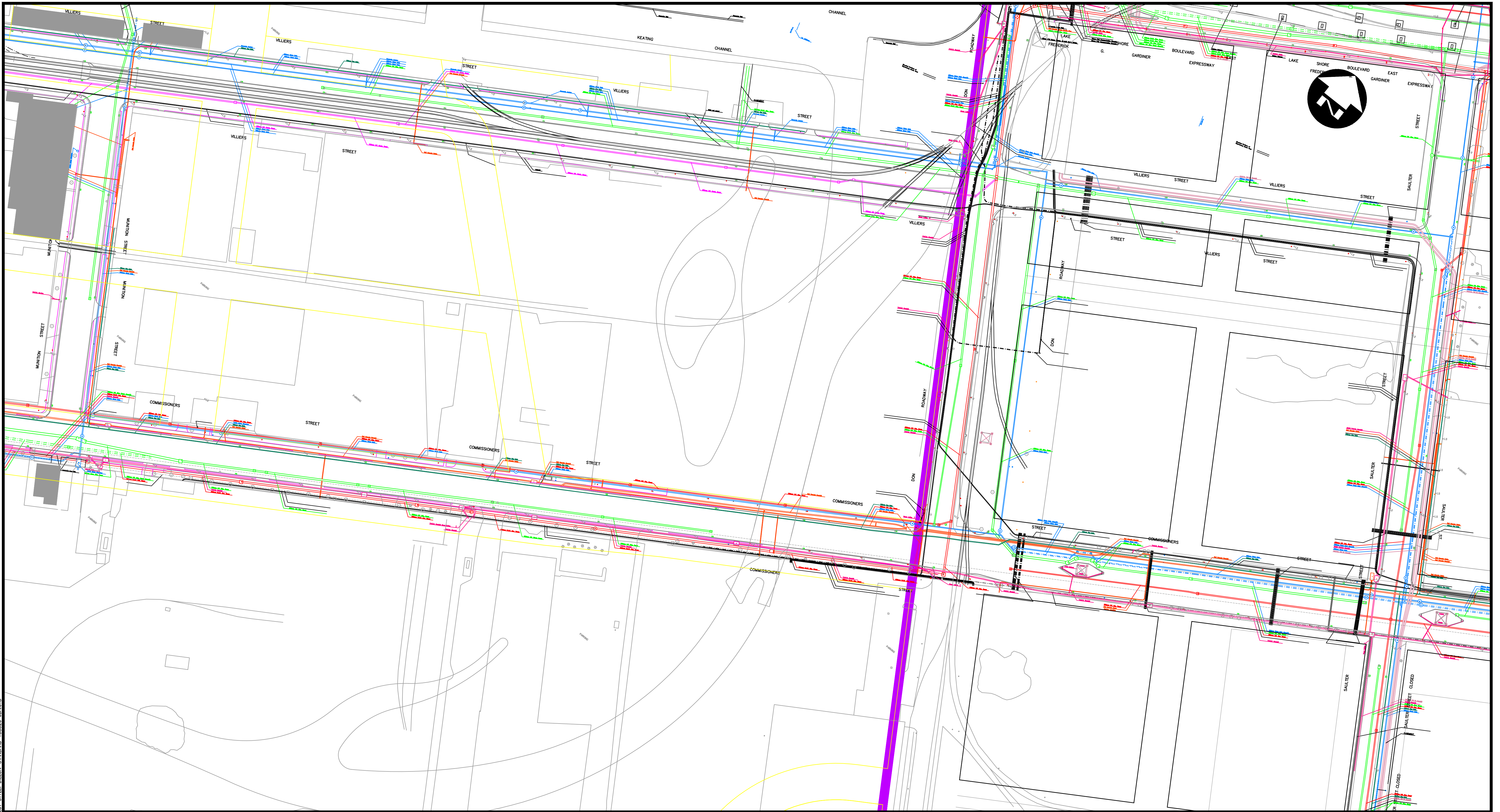
	DESIGN	REVIEWED BY
	DRWN	CHECKED BY
	JDA	
	DATE	JUNE 2016
	SCALE	1:1000
No.	ISSUED FOR	DATE BY

PORT LANDS AND SOUTH OF EASTERN
 TRANSPORTATION AND SERVICING MASTER PLAN

LAYOUT 8

PROJECT NO.
 138520
 SHEET NO.
08

FILE NAME: H:\PROJECTS\BARTY\138520 TORONTO PORT LANDS\2015-11\15-DMA\EXISTING UTILITIES.DWG, PLOTTED BY: AMEDW@DILLON CONSULTING LIMITED 235 YORKLAND BOULEVARD SUITE 800, TORONTO, ONTARIO, M2J 1Y6, PHONE (416) 229-4646, FAX (416) 229-4892
 PLOT DATE: 2016-06-18 @ 11:33:01 AM, PLOT SCALE: 1:1000, PLOT STYLE: DILLON-STANDARD, 138520.dwg.ctb



Conditions of Use

Verify elevations and/or dimensions on drawing prior to use.
 Report any discrepancies to Dillon Consulting Limited.
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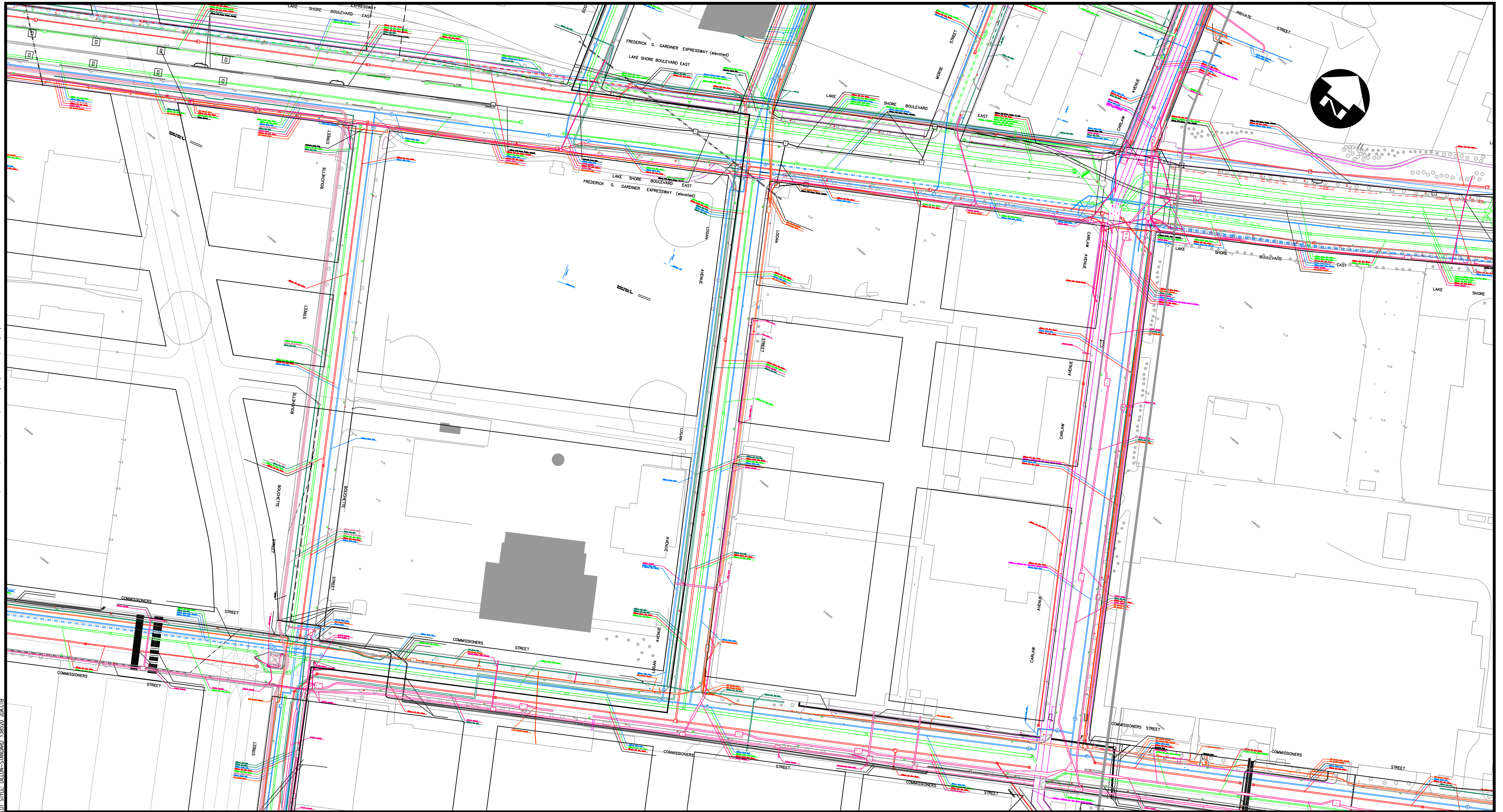
- █ Site Boundary
- █ Combined Sewer
- █ Storm Sewer
- █ Sanitary Sewer
- █ Toronto Hydro
- █ Bell Underground
- █ Watermain
- █ HydroOne
- █ Telus
- █ Gas
- █ Cable
- █ Steam



DESIGN	REVIEWED BY
DRAWN	CHECKED BY
DATE	JUNE 2016
SCALE	1:1000
No.	ISSUED FOR
	DATE
	BY

PORT LANDS AND SOUTH OF EASTERN TRANSPORTATION AND SERVICING MASTER PLAN	PROJECT NO. 138520
LAYOUT 9	SHEET NO. 09

FILE NAME: H:\PROJECTS\BARTY\138520 TORONTO PORT LANDS\2015-11\15-DMA-EXISTING UTILITIES.DWG, PLOTTED BY: AMEN@DILLONCONSULTING LIMITED 235 YORKLAND BOULEVARD SUITE 800, TORONTO, ONTARIO, M2J 1Y6, PHONE (416) 729-4646, FAX (416) 729-4892
 PLOT DATE: 2016-06-18 @ 11:13:16 AM, PLOT SCALE: 1:127.9, PLOT STYLE: DILLOM-STANDARD, 138520.DWG



Conditions of Use

Verify elevations and/or dimensions on drawing prior to use.
 Report any discrepancies to Dillon Consulting Limited.
 Do not scale dimensions from drawing.
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- Site Boundary
- Combined Sewer
- HydroOne
- Storm Sewer
- Sanitary Sewer
- Toronto Hydro
- Bell Underground
- Watermain
- Telus
- Gas
- Cable
- Steam



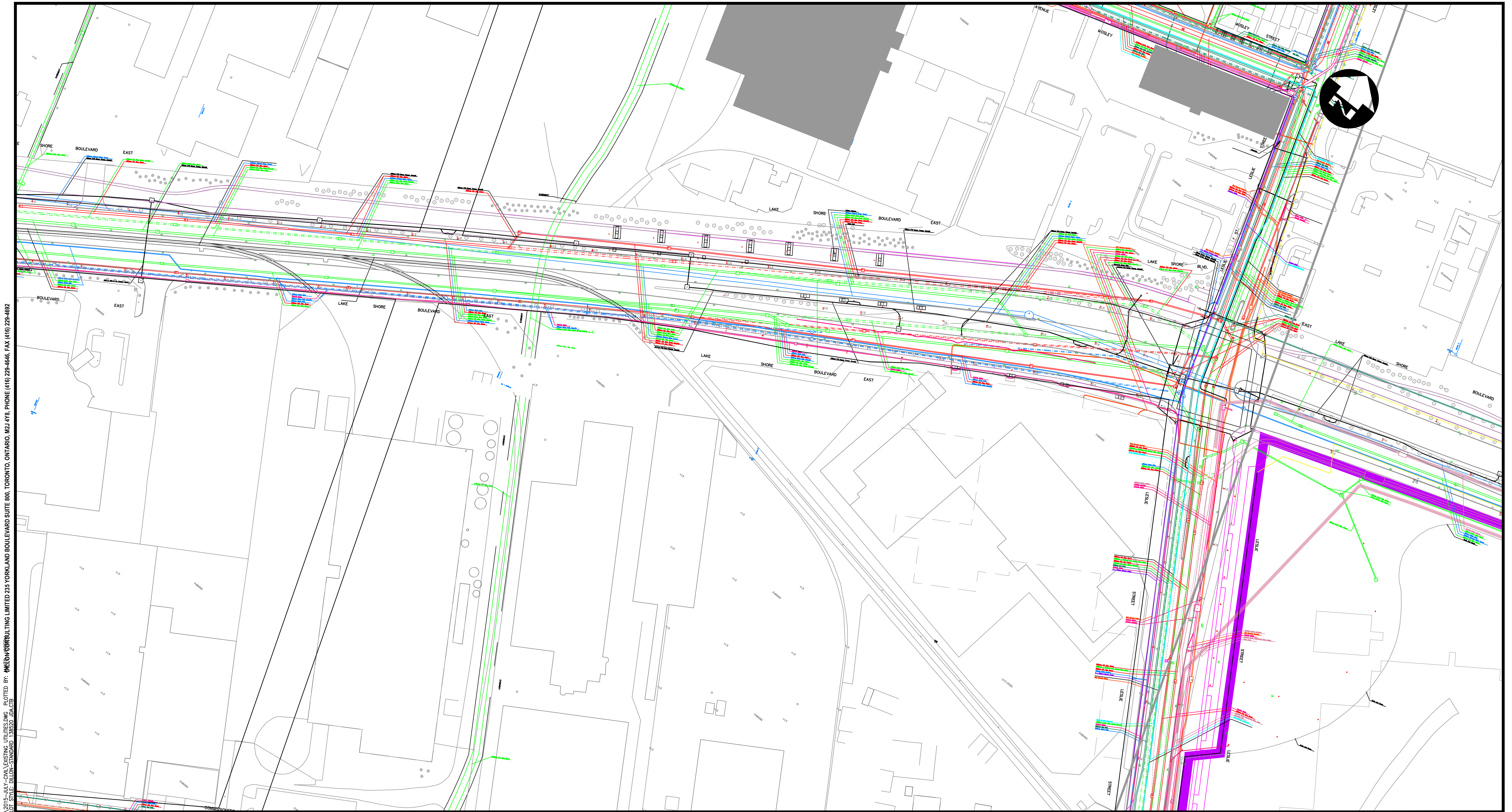
DESIGN	REVIEWED BY
DRAWN	CHECKED BY
DATE	JUNE 2016
SCALE	1:1000
ISSUED FOR	DATE
BY	

PORT LANDS AND SOUTH OF EASTERN
 TRANSPORTATION AND SERVICING MASTER PLAN

LAYOUT 10

PROJECT NO.
 138520

SHEET NO.
 10



FILENAME: \\A:\PROJECTS\PORT LANDS\2015-07-15-DMA\EXISTING UTILITIES.DWG, PLOTTED BY: AMEN@DILLON CONSULTING LIMITED 235 YORKLAND BOULEVARD SUITE 800, TORONTO, ONTARIO, M2J 1Y6, PHONE (416) 729-4646, FAX (416) 229-4892
 PLOT DATE: 2016-06-18 @ 11:33:31 AM, PLOT SCALE: 1:38520, STANDARD: 138520, DWGDATE:

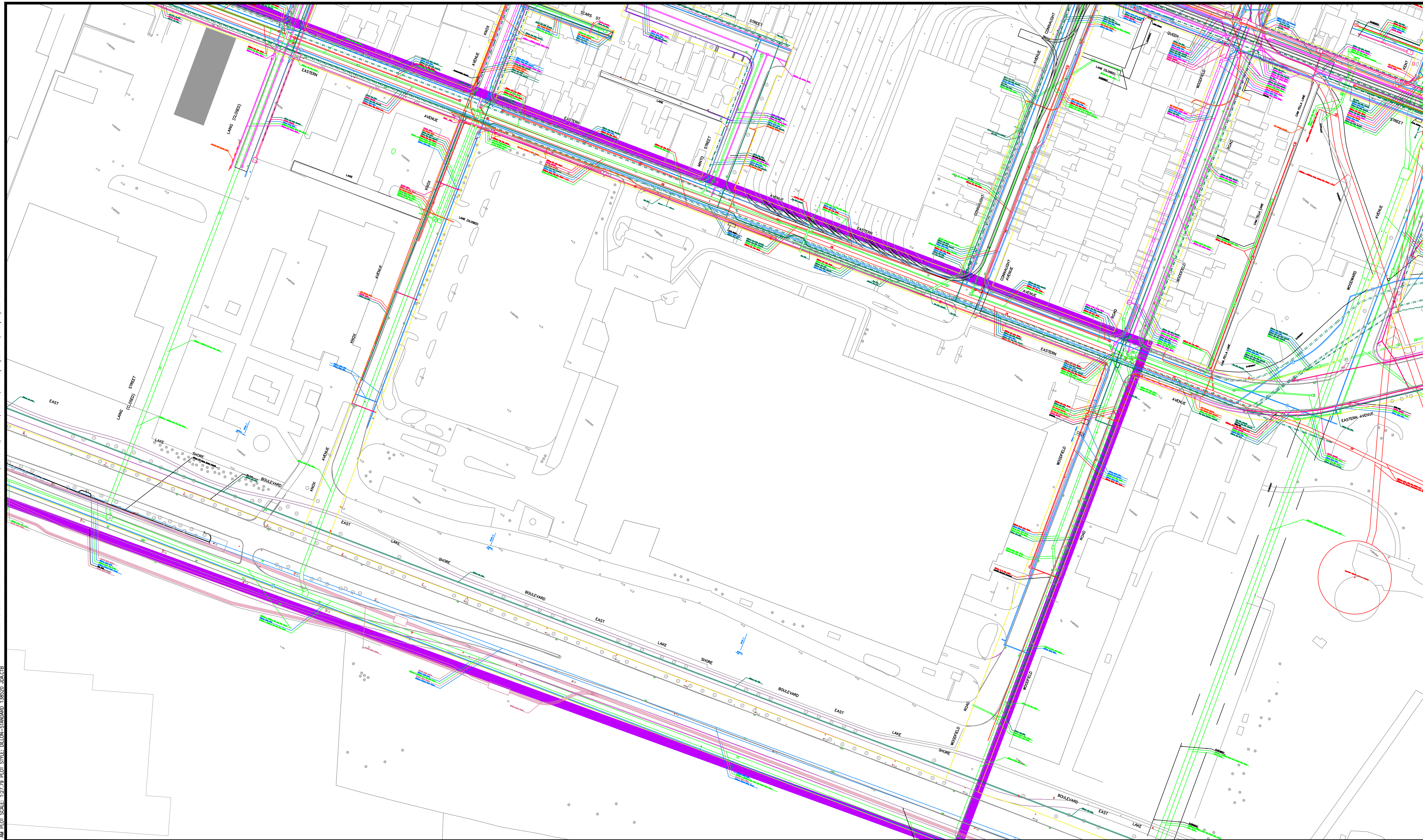
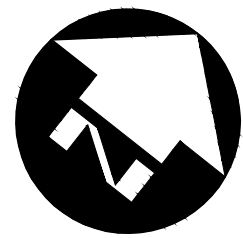
Conditions of Use
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- Site Boundary
- Combined Sewer
- Storm Sewer
- Sanitary Sewer
- Toronto Hydro
- Bell Underground
- Watermain
- Telus
- Gas
- Cable
- Steam



DESIGN	REVIEWED BY
DRAWN	CHECKED BY
DATE	JUNE 2016
SCALE	1:1000
No.	ISSUED FOR
	DATE
	BY

PORT LANDS AND SOUTH OF EASTERN TRANSPORTATION AND SERVICING MASTER PLAN	PROJECT NO. 138520
LAYOUT 11	SHEET NO. 11



FILENAME: M:\PROJECTS\PORT LANDS\2015-JULY-DWG\EXISTING UTILITIES.DWG - PLOTTED BY: MKI\W\B\B\CONSULTING LIMITED 235 YORKLAND BOULEVARD SUITE 800, TORONTO, ONTARIO, M2J 4T8, PHONE (416) 229-6646, FAX (416) 229-4832
 PLOT DATE: 2016-08-18 @ 11:33:47 AM PLOT SCALE: 1:2779 PLOT STYLE: DILLOM - STANDARD 138520.DWT

Conditions of Use
 Verify elevations and/or dimensions on drawing prior to use.
 Report any discrepancies to Dillon Consulting Limited.
 Do not scale dimensions from drawing.
 Do not modify drawing, re-use it, or use it for purposes other than those intended at the time of its preparation without prior written permission from Dillon Consulting Limited.

- █ Site Boundary
- █ Combined Sewer
- █ HydroOne
- █ Storm Sewer
- █ Sanitary Sewer
- █ Toronto Hydro
- █ Bell Underground
- █ Watermain
- █ Telus
- █ Gas
- █ Cable
- █ Steam



DESIGN	REVIEWED BY
DRAWN	CHECKED BY
DATE	JUNE 2016
SCALE	1:1000
NO.	ISSUED FOR
	DATE
	BY

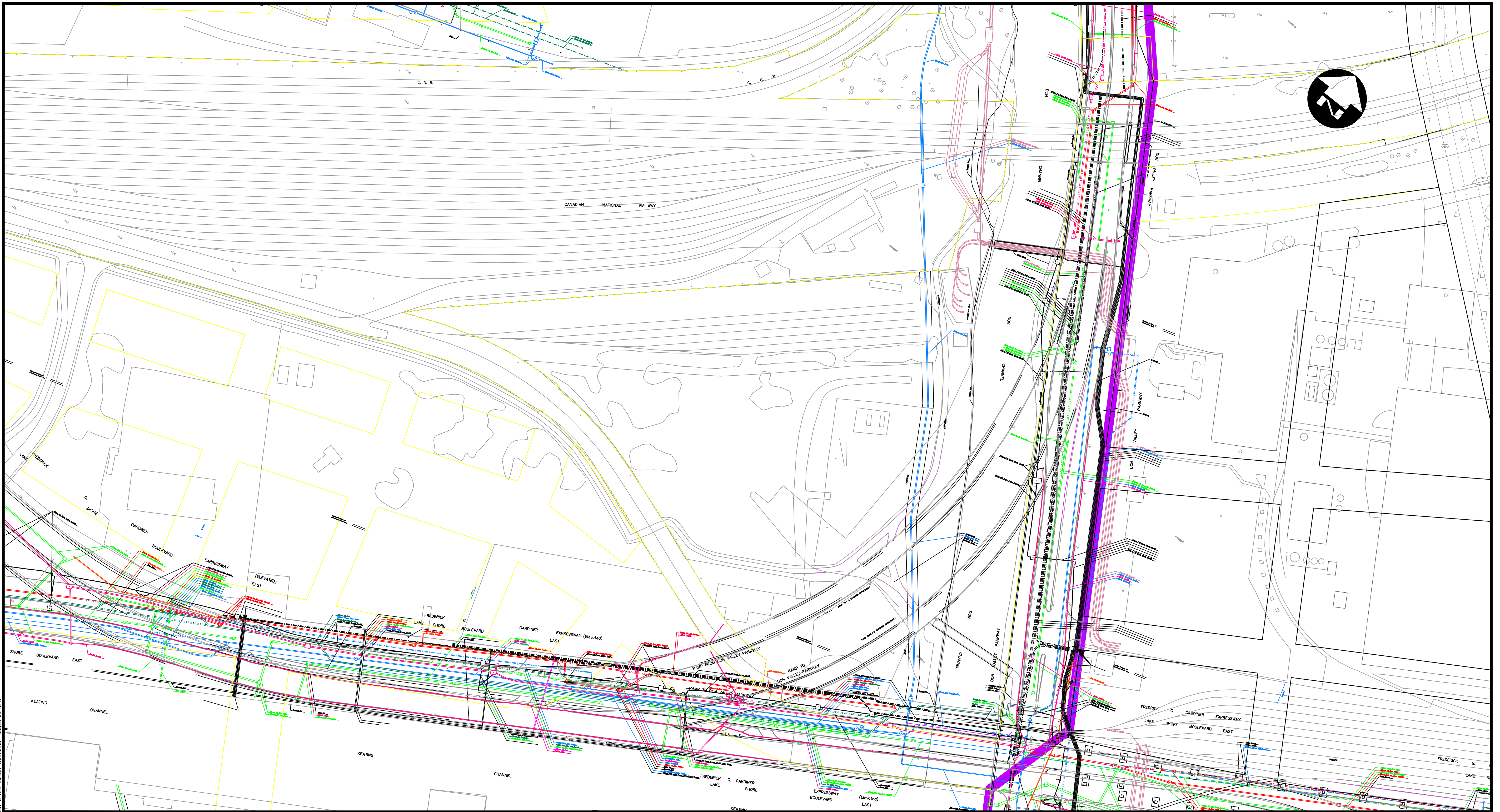
PROJECT NO.	138520
SHEET NO.	12

**PORT LANDS AND SOUTH OF EASTERN
 TRANSPORTATION AND SERVICING MASTER PLAN**

LAYOUT 12

12

FILENAME: \\A:\PROJECTS\BARTLY\138520 TORONTO PORT LANDS\2015-11-17-DWG\EXISTING UTILITIES.DWG, PLOTTED BY: AMEDON@DILLON CONSULTING LIMITED 235 YORKLAND BOULEVARD SUITE 800, TORONTO, ONTARIO, M2J 1Y6, PHONE (416) 229-4646, FAX (416) 229-4892
 PLOT DATE: 2016-08-18 @ 11:43:01 AM, PLOT SCALE: 1:1250, STANDARD: 138520.DWG



Conditions of Use
 Verify elevations and/or dimensions on drawing prior to use.
 Report any discrepancies to Dillon Consulting Limited.
 Do not scale dimensions from drawing.
 Do not modify drawing, re-use it, or use it for purposes other than those intended at the time of its preparation without prior written permission from Dillon Consulting Limited.

- Site Boundary
- Combined Sewer
- HydroOne
- Storm Sewer
- Sanitary Sewer
- Toronto Hydro
- Bell Underground
- Watermain
- Telus
- Gas
- Cable
- Steam



DESIGN	REVIEWED BY
DRAWN	CHECKED BY
DATE	JUNE 2016
SCALE	1:1000
ISSUED FOR	
DATE	
BY	

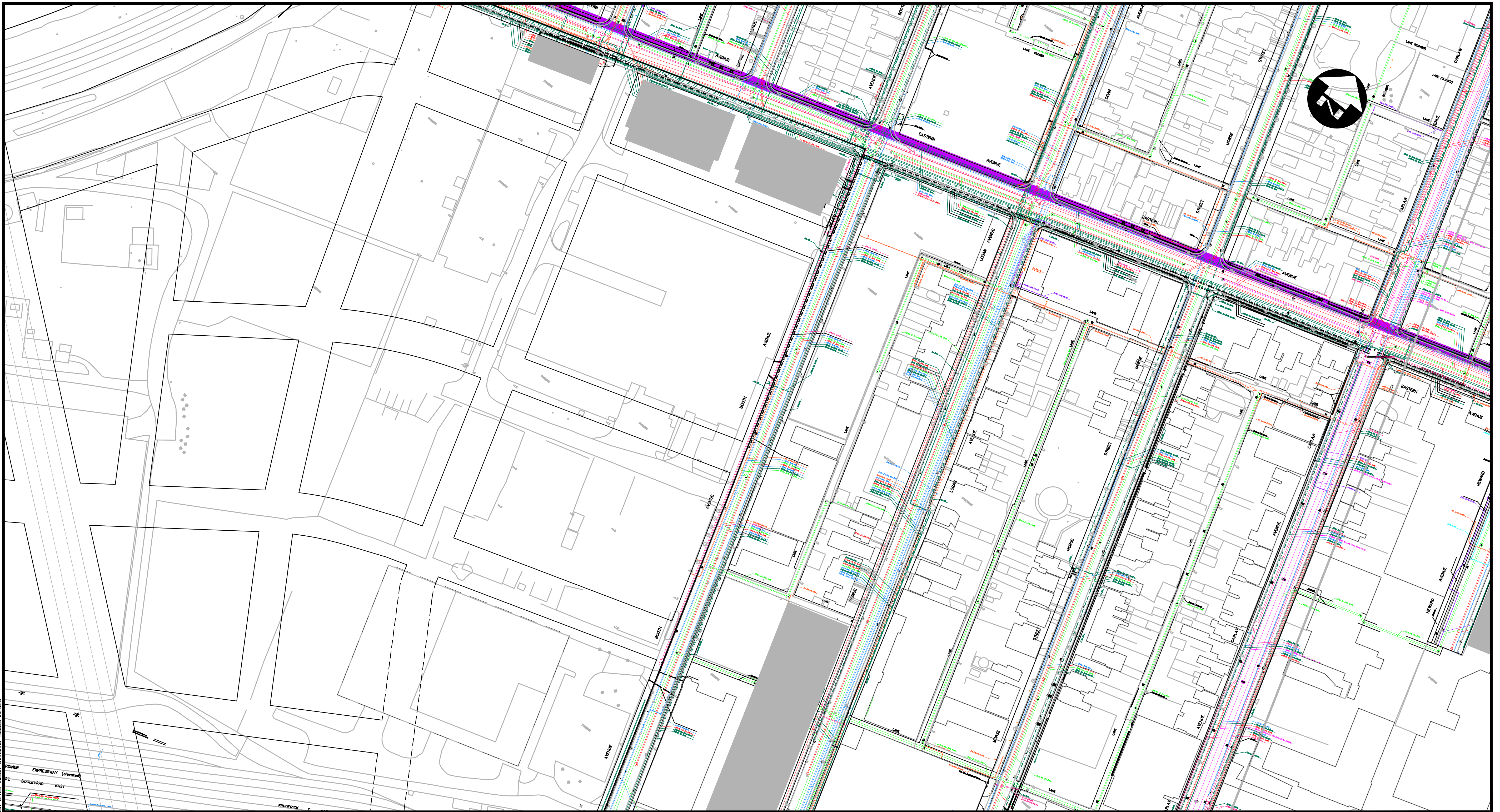
**PORT LANDS AND SOUTH OF EASTERN
 TRANSPORTATION AND SERVICING MASTER PLAN**

LAYOUT 13

PROJECT NO.
138520

SHEET NO.
13

FILENAME: H:\PROJECTS\PORTLAND\138520 TORONTO PORTLANDS SOUTH OF EASTERN TRANSPORTATION AND SERVICING MASTER PLAN.DWG, PLOTTED BY: AMEDAWBERCONSULTING LIMITED 235 YORKLAND BOULEVARD SUITE 800, TORONTO, ONTARIO, M2J 1Y6, PHONE (416) 229-4646, FAX (416) 229-4692
 PLOT DATE: 2016-06-18 @ 11:14:17 AM, PLOT SCALE: 1:3520, UNITS: MILLIMETERS



Conditions of Use

Verify elevations and/or dimensions on drawing prior to use.
 Report any discrepancies to Dillon Consulting Limited.
 Do not scale dimensions from drawing.
 Do not modify drawing, re-use it, or use it for purposes other than those intended at the time of its preparation without prior written permission from Dillon Consulting Limited.

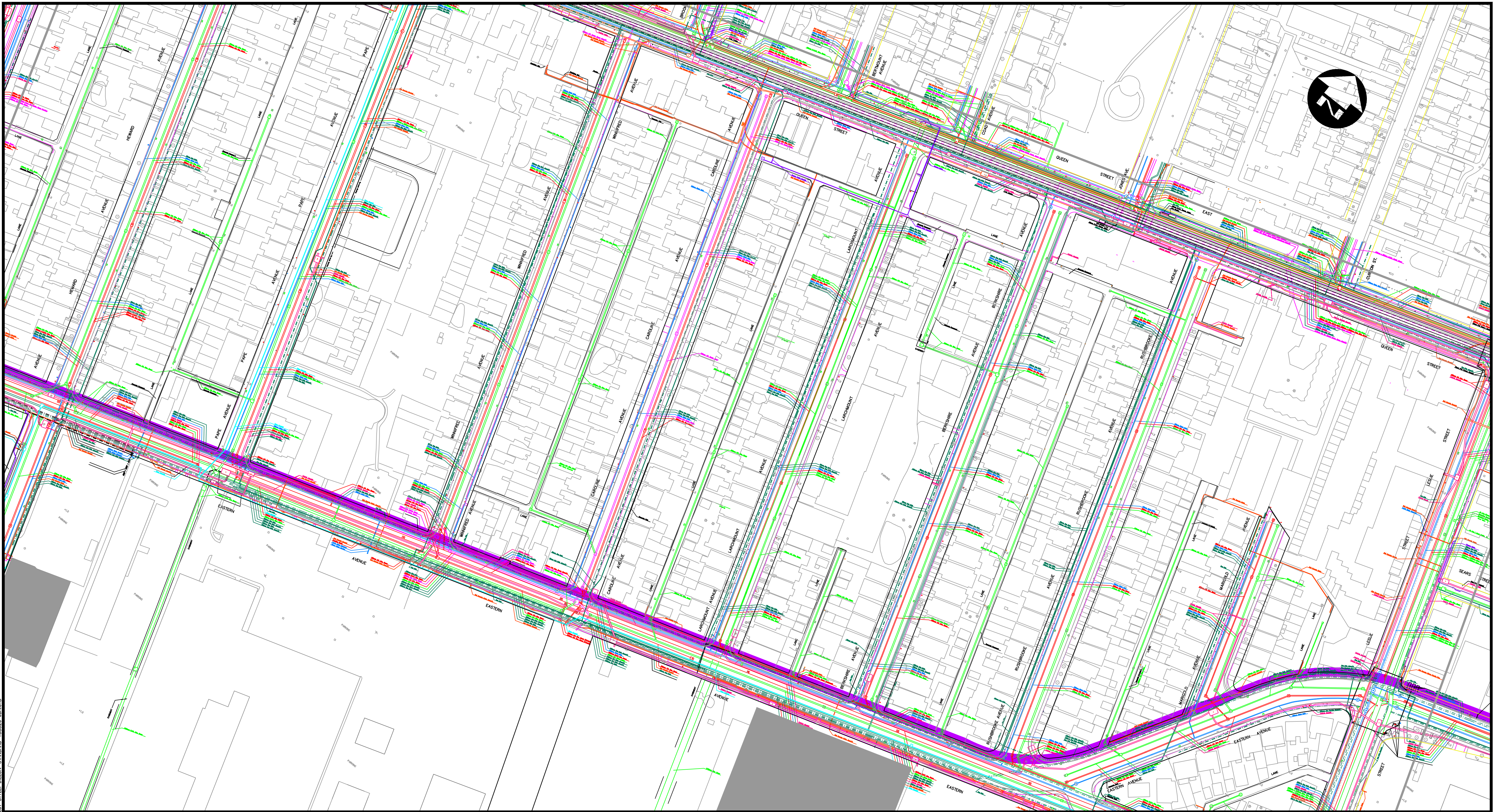
- █ Site Boundary
- █ Combined Sewer
- █ Storm Sewer
- █ Sanitary Sewer
- █ Toronto Hydro
- █ Bell Underground
- █ Watermain
- █ Telus
- █ Gas
- █ Cable
- █ Steam



DESIGN	REVIEWED BY
DRAWN	CHECKED BY
DATE	JUNE 2016
SCALE	1:1000
NO.	ISSUED FOR
DATE	BY

PORT LANDS AND SOUTH OF EASTERN TRANSPORTATION AND SERVICING MASTER PLAN	PROJECT NO. 138520
LAYOUT 14	SHEET NO. 14

FILE NAME: H:\PROJECTS\BARTY\138520 TORONTO PORT LANDS\2015-JULY-2016\EXISTING UTILITIES.DWG, PLOTTED BY: AMEDWP@SRBLLTING LIMITED 235 YORKLAND BOULEVARD SUITE 800, TORONTO, ONTARIO, M2J 1Y6, PHONE (416) 229-4646, FAX (416) 229-4892
 PLOT DATE: 2016-08-18 @ 11:44:52 AM PLOT SCALE: 1:1250 STANDARD 138520.DWG



Conditions of Use

Verify elevations and/or dimensions on drawing prior to use.
 Report any discrepancies to Dillon Consulting Limited.
 Do not scale dimensions from drawing.
 Do not modify drawing, re-use it, or use it for purposes other than those intended at the time of its preparation without prior written permission from Dillon Consulting Limited.

- Site Boundary
- Combined Sewer
- Storm Sewer
- Sanitary Sewer
- Toronto Hydro
- Bell Underground
- Watermain
- Telus
- Gas
- Cable
- Steam



No.	ISSUED FOR	DATE	BY

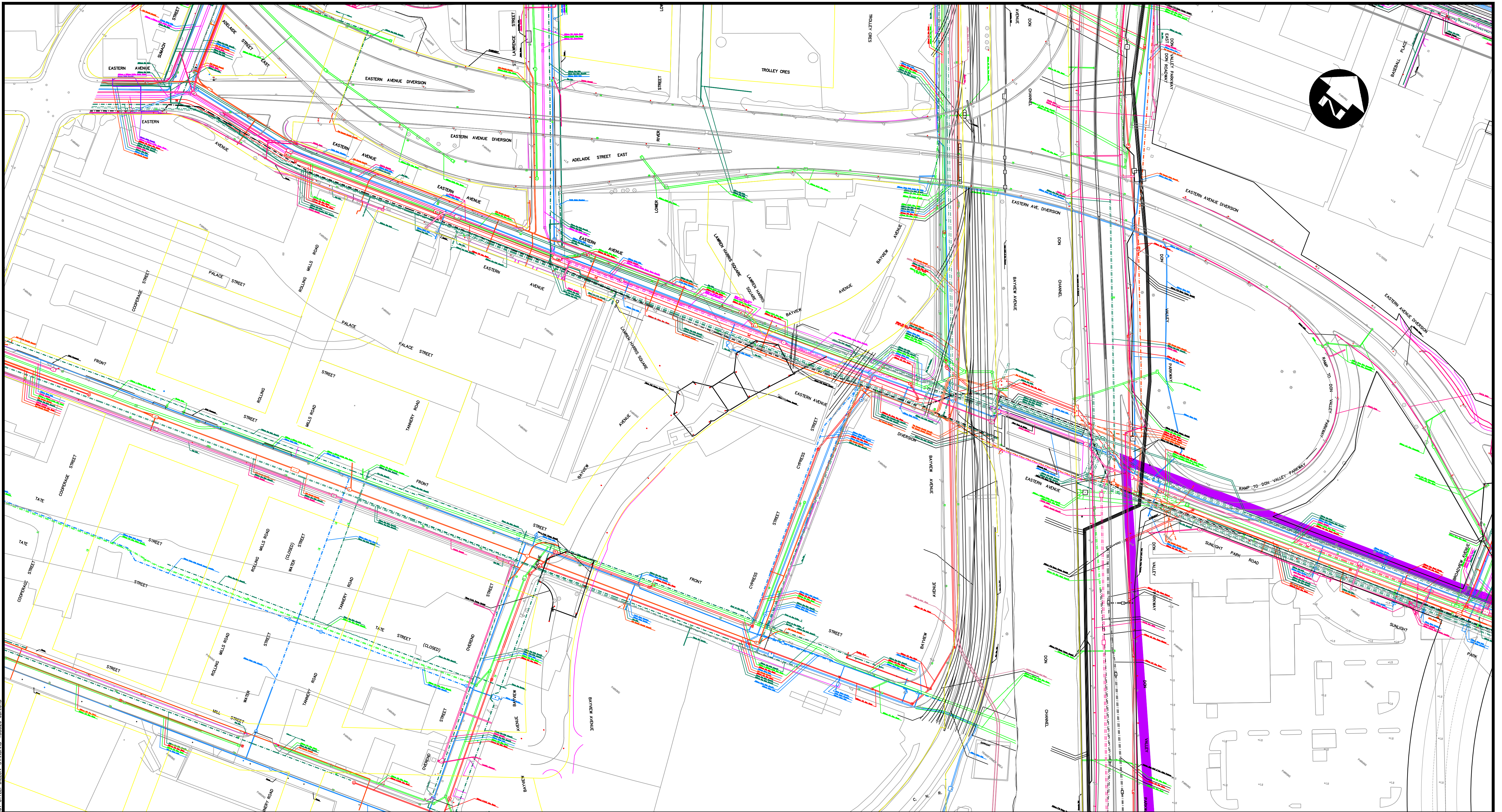
DESIGN	REVIEWED BY
JDA	
DATE	JUNE 2016
SCALE	1:1000

**PORT LANDS AND SOUTH OF EASTERN
 TRANSPORTATION AND SERVICING MASTER PLAN**

LAYOUT 15

PROJECT NO.	138520
SHEET NO.	15

FILENAME: \\A:\PROJECTS\BARTY\138520 TORONTO PORT LANDS\2015-07-01\EXISTING UTILITIES.DWG, PLOTTED BY: AMEOW@DILLON CONSULTING LIMITED 235 YORKLAND BOULEVARD SUITE 800, TORONTO, ONTARIO, M2J 1Y8, PHONE (416) 729-4646, FAX (416) 229-4892
 PLOT DATE: 2016-06-18 @ 11:44:48 AM, PLOT SCALE: 1:127.29, PLOT STYLE: DILLOM-STANDARD, 138520.DWG



Conditions of Use

Verify elevations and/or dimensions on drawing prior to use.
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- Site Boundary
- Combined Sewer
- Storm Sewer
- Sanitary Sewer
- Toronto Hydro
- Bell Underground
- Watermain
- Telus
- Gas
- Cable
- Steam

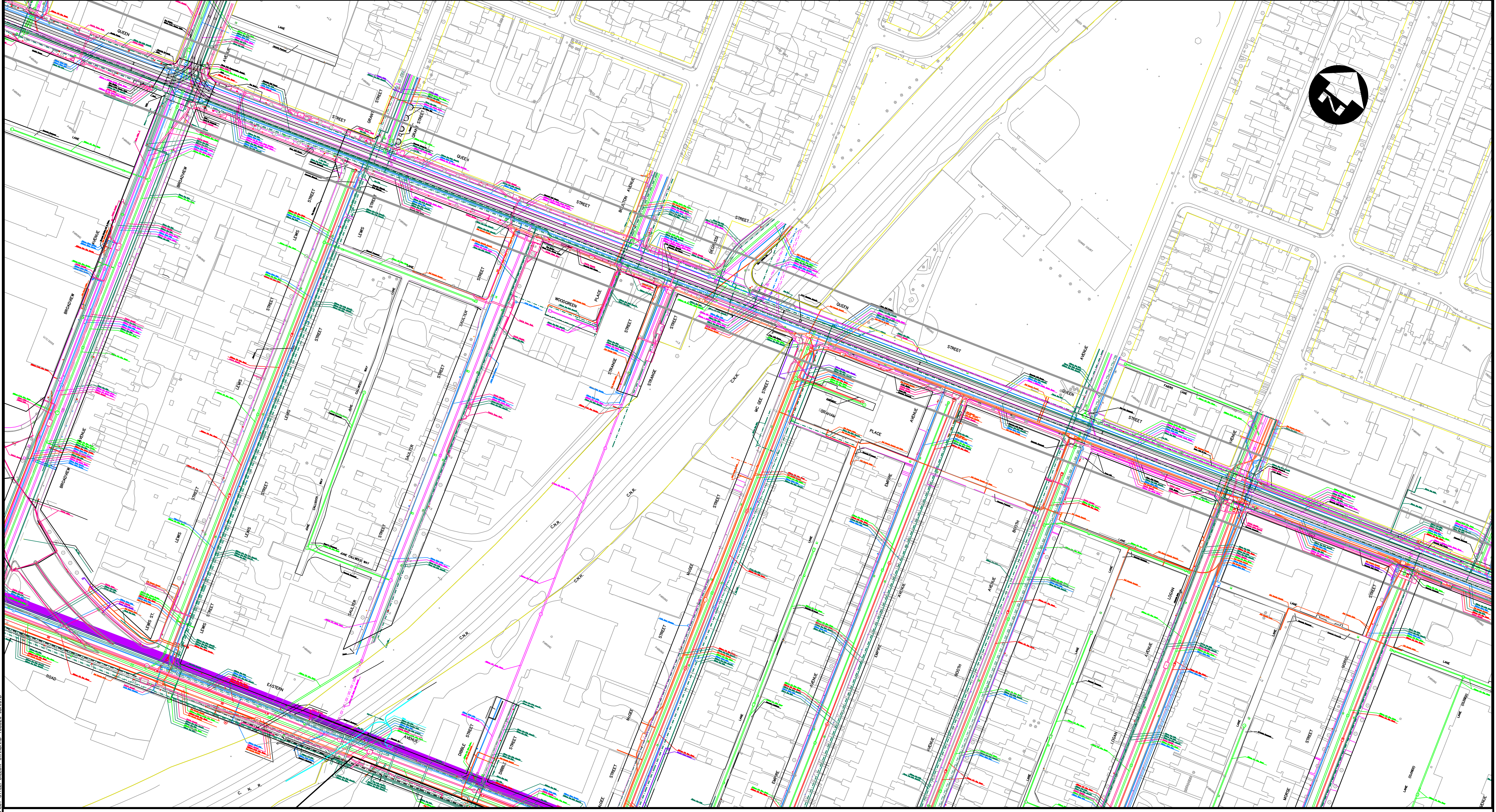


	DESIGN	REVIEWED BY	
	DRWN	CHECKED BY	
	JDA		
	DATE		JUNE 2016
	SCALE		1:1000
No.	ISSUED FOR	DATE	BY

**PORT LANDS AND SOUTH OF EASTERN
 TRANSPORTATION AND SERVICING MASTER PLAN**

LAYOUT 16

PROJECT NO.
138520
 SHEET NO.
16



FILENAME: H:\PROJECTS\BARTY\138520 TORONTO PORT LANDS\2015-11-17-DWG\EXISTING UTILITIES.DWG PLOTTED BY: AMENOW@DILLON CONSULTING LIMITED 235 YORKLAND BOULEVARD SUITE 800, TORONTO, ONTARIO, M2J 1V8, PHONE (416) 729-4646, FAX (416) 229-4892
 PLOT DATE: 2016-06-18 @ 11:14:58 AM PLOT SCALE: 1:1250 STANDARD 138520.DWG

Conditions of Use

Verify elevations and/or dimensions on drawing prior to use.
 Report any discrepancies to Dillon Consulting Limited.
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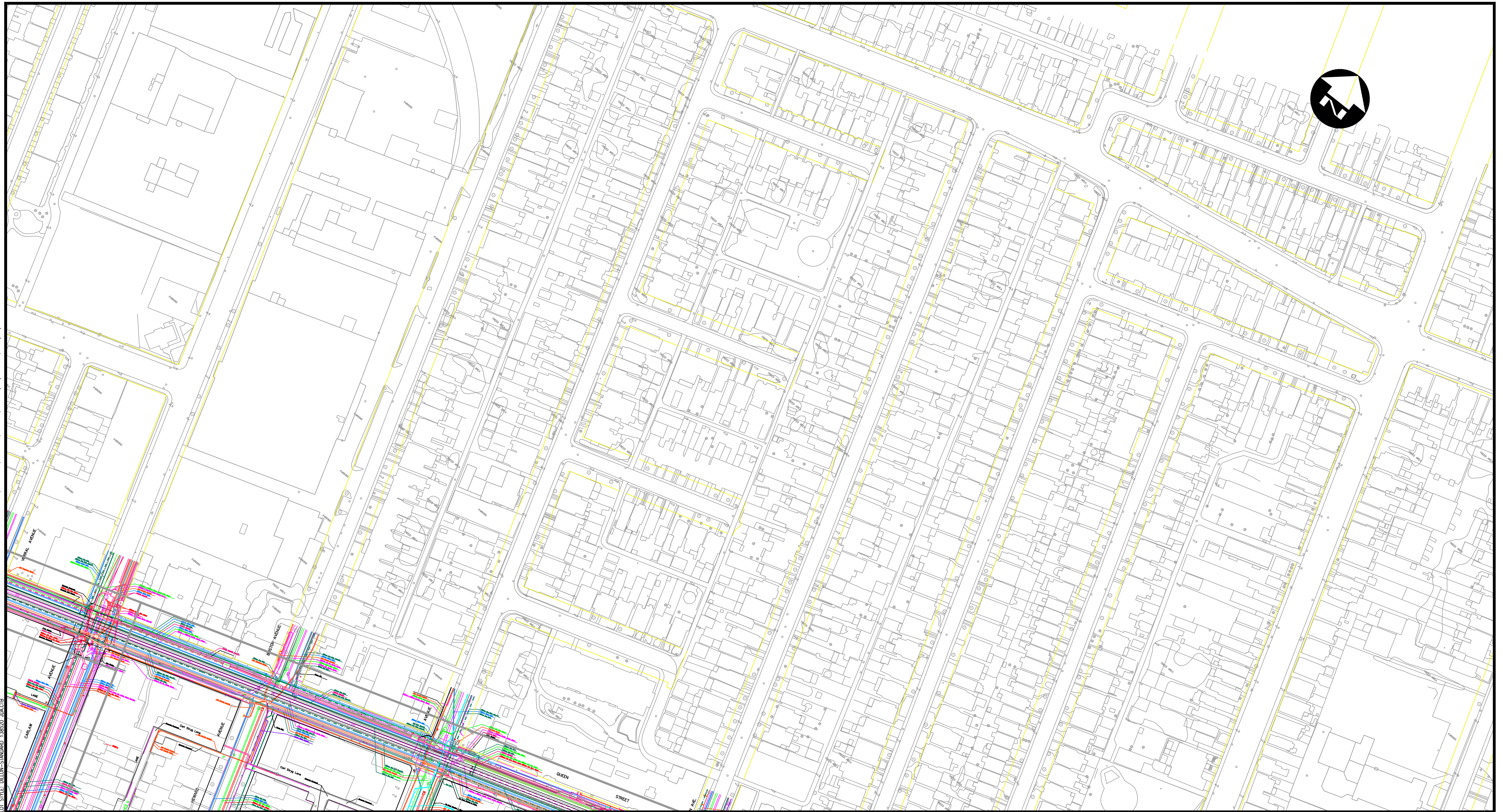
- Site Boundary
- Combined Sewer
- Storm Sewer
- Sanitary Sewer
- Toronto Hydro
- Bell Underground
- Watermain
- Telus
- Gas
- Cable
- Steam



	DESIGN	REVIEWED BY
	DRWN	CHECKED BY
	JDA	
	DATE	JUNE 2016
	SCALE	1:1000
No.	ISSUED FOR	DATE BY

PORT LANDS AND SOUTH OF EASTERN TRANSPORTATION AND SERVICING MASTER PLAN	PROJECT NO. 138520
LAYOUT 17	SHEET NO. 17

FILENAME: \\A:\PROJECTS\BARTLEY\138520 TORONTO PORT LANDS\2015-11-17-DMA\EXISTING UTILITIES.DWG, PLOTTED BY: AMEOW@DILLONCONSULTING LIMITED 235 YORKLAND BOULEVARD SUITE 800, TORONTO, ONTARIO, M2J 1Y6, PHONE (416) 229-4646, FAX (416) 229-4692
 PLOT DATE: 2016-06-18 @ 11:15:12 AM, PLOT SCALE: 1:127.28, E-SCALE: 1:38520, UNITS: METERS



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DESIGN	REVIEWED BY
DRWN JDA	CHECKED BY
DATE JUNE 2016	
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PORT LANDS AND SOUTH OF EASTERN TRANSPORTATION AND SERVICING MASTER PLAN	PROJECT NO. 138520
LAYOUT 18	SHEET NO. 18

APPENDIX H:

**DETAILED DESCRIPTION
OF ALTERNATIVES**

1-A. DON ROADWAY



Extend Broadview Avenue by connecting to the Don Roadway in the Port Lands (Don Roadway south of Lake Shore addressed in the Lower Don Lands EA) by widening the existing rail bridge to the east and providing two vehicular lanes in each direction with dedicated transit and create a vibrant multi-modal corridor (maximum 40m ROW). Existing access to/from the DVP is removed. Potential to connect to a new lift bridge across the Ship Channel.

1-B.1 SAULTER (UNDER)



Extend Broadview Avenue under the rail embankment with two vehicular lanes in each direction, dedicated transit and create a vibrant multi-modal corridor by connecting to Saultier Street as far as Commissioners Street in the Film Studio District (maximum 40m ROW).

1-B.2 REALIGNED SAULTER (UNDER) AND NEW NORTH SOUTH STREET



Extend Broadview Avenue under the rail embankment by realigning Saultier Street diagonally through the Unilever Precinct and Film Studio District and create a vibrant multi-modal corridor with one vehicular lane in each direction and dedicated transit (maximum 35 m ROW). Potential to connect to a new lift bridge across the Ship Channel. Broadview extension is paired with a new north-south street between Eastern Avenue and Lake Shore Boulevard with one vehicular lane in each direction (maximum 23m ROW).

1-C.1 BOUCHETTE (UNDER)



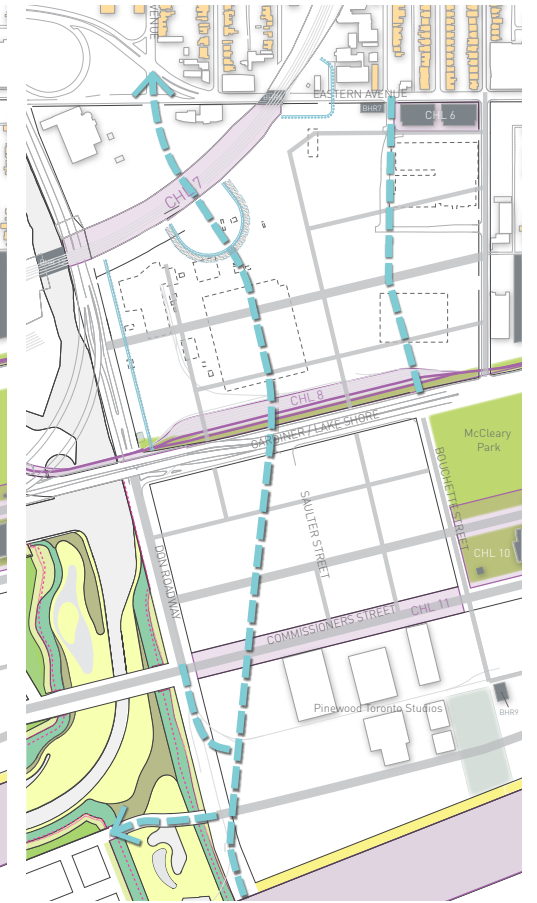
Extend Broadview Avenue under the rail embankment and create a vibrant multi-modal corridor by connecting to Bouchette Street in the Film Studio District with two vehicular lanes in each direction and dedicated transit (maximum 40m ROW). Potential to connect to a new lift bridge across the Ship Channel.

1-D.1 EXTEND BETWEEN DON ROADWAY AND SAULTER (UNDER)



Extend Broadview Avenue under the rail embankment and create a vibrant multi-use corridor by connecting to a new north-south street through the Film Studio District to a Basin Street extension with two vehicular lanes in each direction and dedicated transit (maximum 40m ROW).

1-D.2 EXTEND DIAGONALLY BETWEEN DON ROADWAY AND SAULTER (UNDER) WITH A NEW NORTH-SOUTH STREET



Extend Broadview Avenue under the rail embankment by realigning Saultier Street diagonally through the Unilever Precinct and Film Studio District, with modifications to the location of the Basin Street bridge and Don Roadway south of Commissioners Street, to create a vibrant multi-modal corridor with one vehicular lane in each direction and dedicated transit (maximum 35 m ROW). Potential to connect to a new lift bridge across the Ship Channel. Broadview extension is paired with a new north-south street between Eastern Avenue and Lake Shore Boulevard with one vehicular lane in each direction (maximum 23m ROW).



Port Lands and South of Eastern Transportation and Servicing Master Plan

Broadview Extension Alternatives Sub Area 1

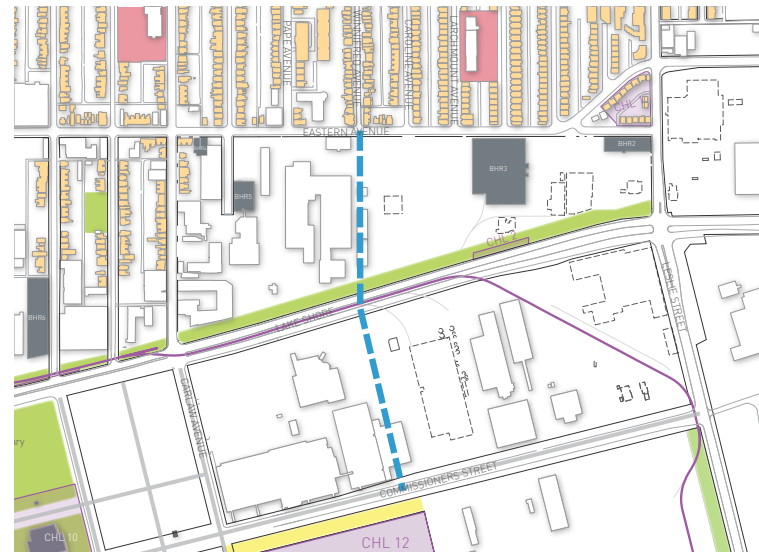
- Alternative
- Parks and Open Spaces
- Building to Remain
- Conceptual Local Street
- Water's Edge Promenades
- Existing Residential
- Heritage Building/Structure
- Hydro Infrastructure
- Community Infrastructure
- Cultural Heritage Landscape
- Buildings with Redevelopment Po
- Valley Wall Feature (conceptual)

DO NOTHING



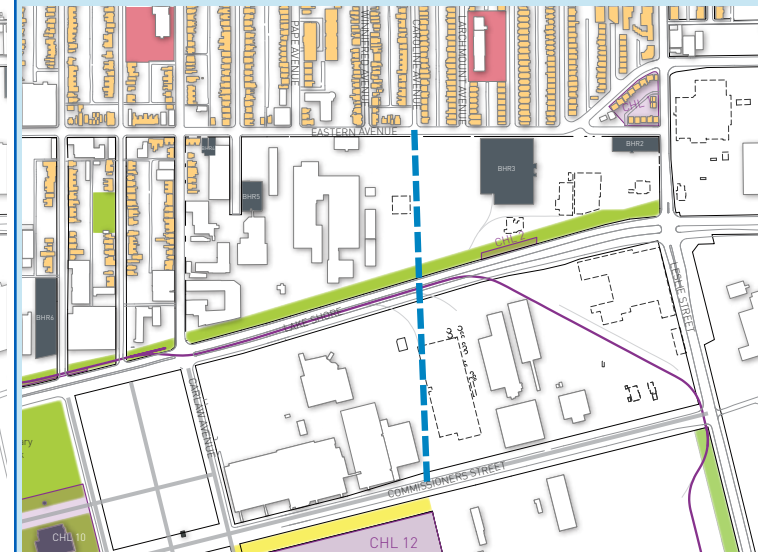
No new north-south connection is provided between Carlaw Avenue and Leslie Street

2-A. WINNIFRED



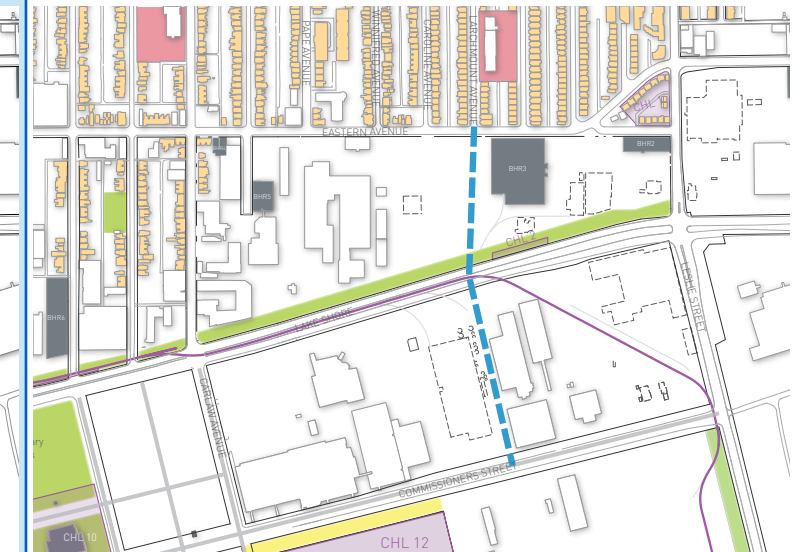
Create a two-way multi-modal connection from Eastern Avenue to Commissioners Street at Winnifred Avenue with one vehicular lane in each direction (23m ROW)

2-B. CAROLINE



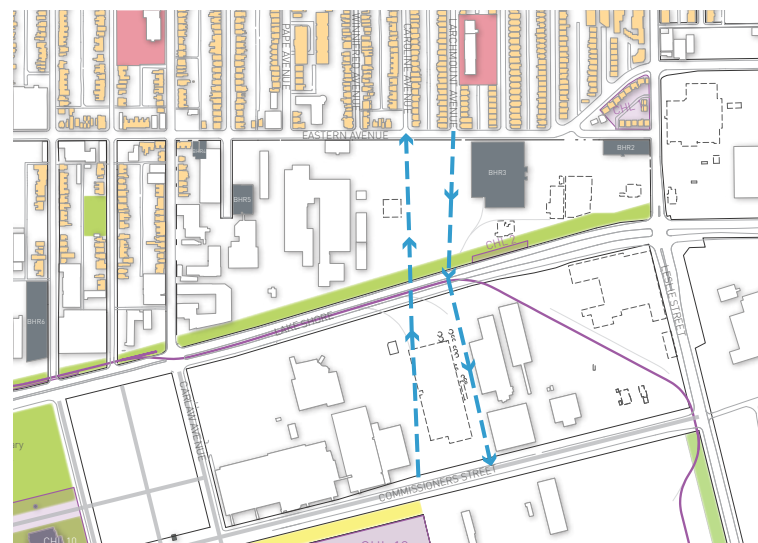
Create a two-way multi-modal connection from Eastern Avenue to Commissioners Street at Caroline Avenue with one vehicular lane in each direction (23m ROW)

2-C. LARCHMOUNT



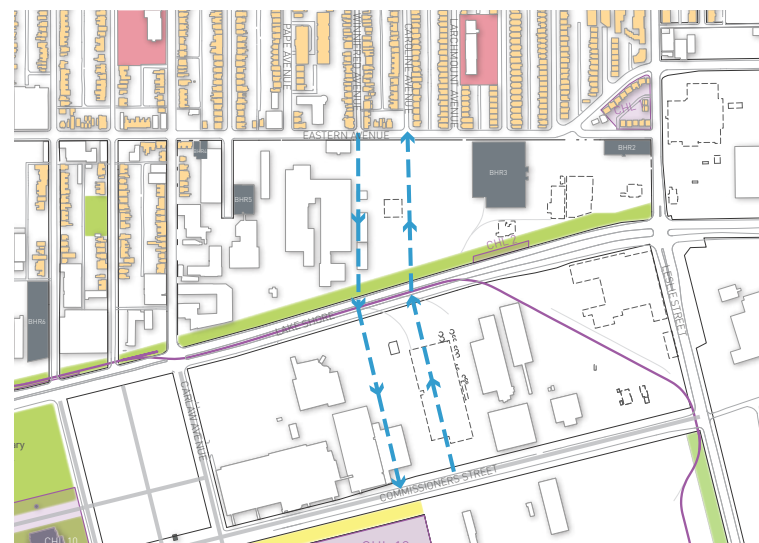
Create a two-way multi-modal connection from Eastern Avenue to Commissioners Street at Larchmount Avenue with one vehicular lane in each direction (23m ROW)

2-D.1 ONE-WAY PAIR (CAROLINE + LARCHMOUNT)



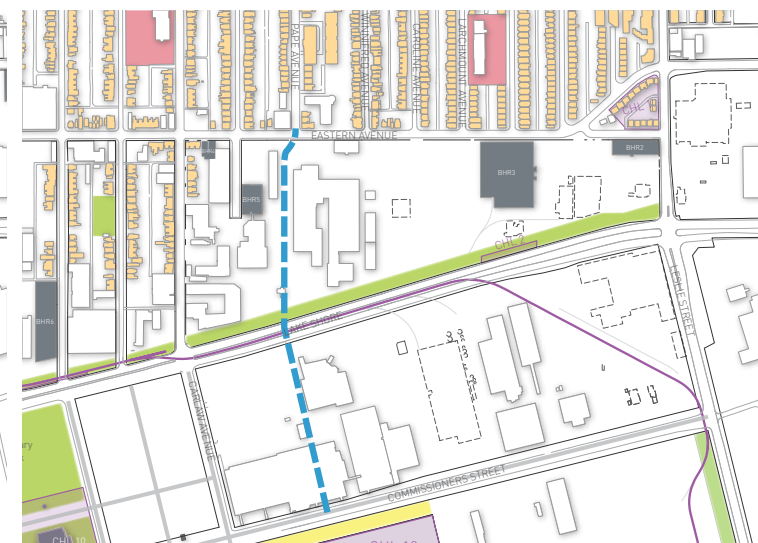
Create a one-way multi-modal northbound connection at Caroline Avenue (16.5m ROW) and one-way multi-modal southbound connection at Larchmount Avenue (16.5m ROW) from Eastern Avenue to Commissioners Street (contra flow to existing)

2-D.2 ONE-WAY PAIR (CAROLINE + WINNIFRED)

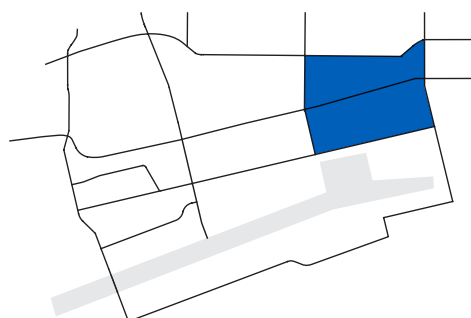


Create a one-way multi-modal northbound connection at Caroline Avenue (16.5m ROW) and one-way multi-modal southbound connection at Winnifred Avenue (16.5m ROW) from Eastern Avenue to Commissioners Street (contra flow to existing)

2-E. PAPE



Create a two-way multi-modal extension of Pape Street from Eastern Avenue to Commissioners Street with one vehicular lane in each direction (23m ROW)



Port Lands and South of Eastern Transportation and Servicing Master Plan

North-South Connection Alternatives Sub Area 2

- Alternative
- Conceptual Local Street
- Heritage Building/Structure (BHR #)
- Cultural Heritage Landscape (CHL #)
- Parks and Open Spaces
- Water's Edge Promenades
- Hydro Infrastructure
- Buildings with Redevelopment Po
- Building to Remain
- Existing Residential
- Community Infrastructure

3-A. WIDEN CHERRY



Widen Cherry Street from the planned condition in the Lower Don Lands EA south of the new river valley to Unwin Avenue to provide a four-lane (two-lanes in each direction) multi-modal street (minimum 42 m ROW north of the Ship Channel and 36m ROW south of the Ship Channel). The alternative would also require either the removal/relocation of the Bascule bridge and a new four lane lift bridge; or retention of existing bridge with a new structure constructed adjacent to the existing bridge.

3-B. DON ROADWAY



Create a new two-lane (one lane in each direction) multi-modal street with a new two lane lift bridge that protects for transit across the Ship Channel at the Don Roadway to Unwin Avenue (26 metre wide lift bridge and protect for a 35m ROW for the street).

3-C. BROADVIEW



Create a new two-lane (one lane in each direction) multi-modal crossing with a new two lane lift bridge that protects for transit across the Ship Channel in the vicinity of the existing Bouchette Street to Unwin Avenue (26 metre wide lift bridge and protect for a 35m ROW for the street).

3-D. WIDEN LESLIE














Provide two additional vehicular travel lanes in the existing right-of-way for a total of four vehicular lanes and maintain multi-modal access (26m ROW south of Commissioners).



Port Lands and South of Eastern Transportation and Servicing Master Plan

Ship Channel Connection Alternatives

Sub Area 3

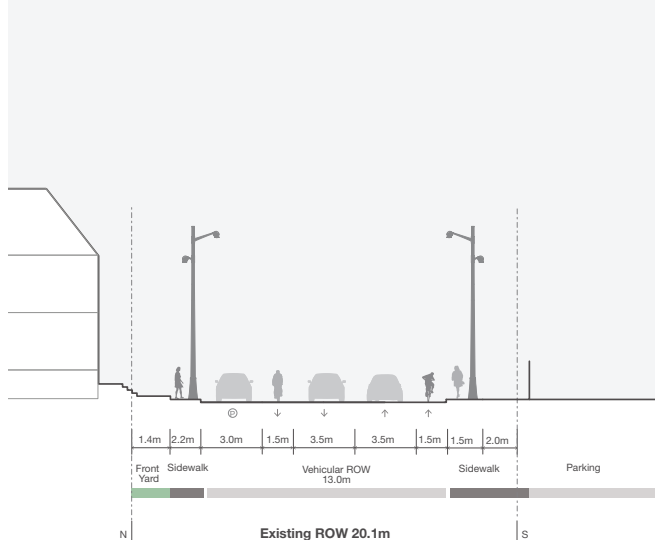
-  Alternative
-  Conceptual Local Street
-  Heritage Building/Structure
-  Cultural Heritage Landscape
-  Parks and Open Spaces
-  Water's Edge Promenades
-  Hydro Infrastructure
-  Buildings with Redevelopment Po
-  Building to Remain
-  Existing Residential
-  Community Infrastructure

4-A.1 DO NOTHING

BROADVIEW TO LOGAN



LOGAN TO LESLIE



Maintain Eastern Avenue in its current configuration:

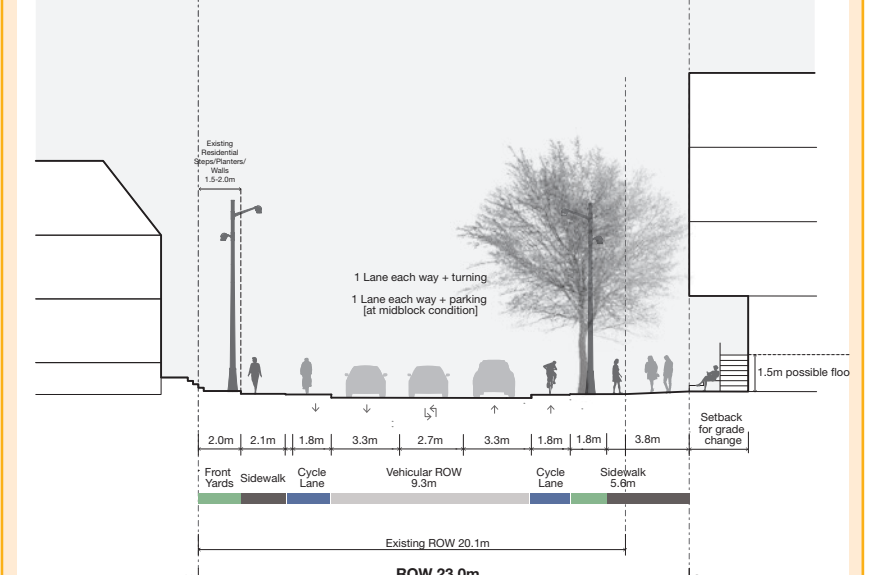
- two vehicular lanes in each direction from Broadview to Logan;
- one vehicular lane in each direction with on-street cycling from Logan to Leslie; and
- two vehicular lanes in each direction east of Leslie Street.

4-A.2 CONSISTENTLY PROVIDE FOUR VEHICULAR LANES

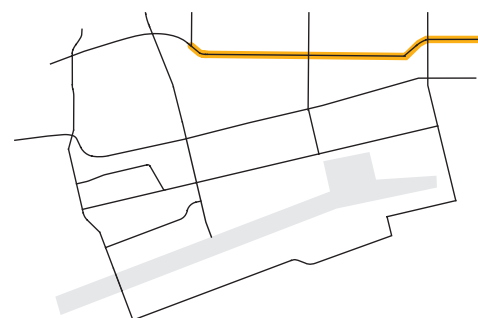
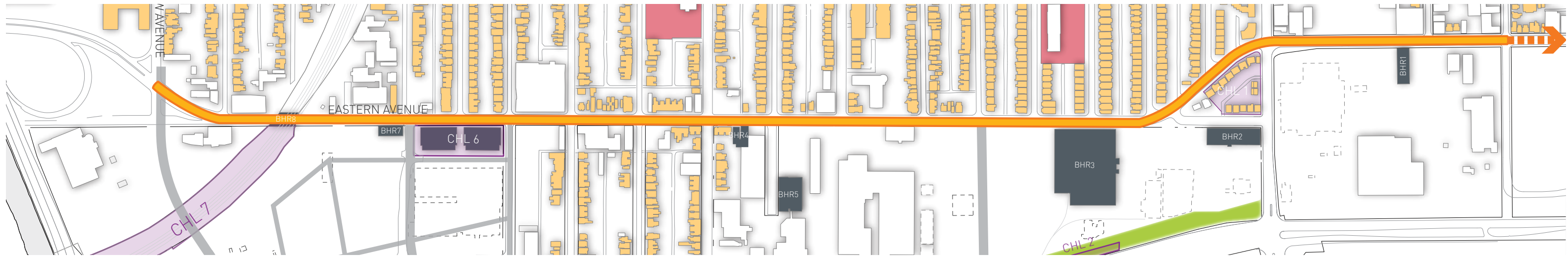


Provide four vehicular lanes consistently through the study area (two lanes in each direction), remove on-street cycling lanes between Logan and Leslie, and generally maintain current pedestrian clearways. Enhancements to pedestrian amenity is achieved through a right-of-way widening on the south side of Eastern Avenue as properties with redevelopment potential redevelop.

4-A.3 URBANIZE



Create a multi-modal street by providing two vehicular lanes consistently through the study area (one lane in each direction), improving efficiency and consistency of vehicular lanes and enhancing pedestrian/cyclist amenity. Further enhancements to pedestrian/cyclist amenity is achieved through a right-of-way widening on the south side of Eastern Avenue as properties with redevelopment potential redevelop.



Port Lands and South of Eastern
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Eastern Avenue Alternatives Sub Area 4

BHR #	Heritage Building/Structure	Hydro Infrastructure	Community Infrastructure
CHL #	Cultural Heritage Landscape	Buildings with Redevelopment Potential	
Parks and Open Spaces		Building to Remain	
Water's Edge Promenades		Existing Residential	

4-B.1 DO NOTHING

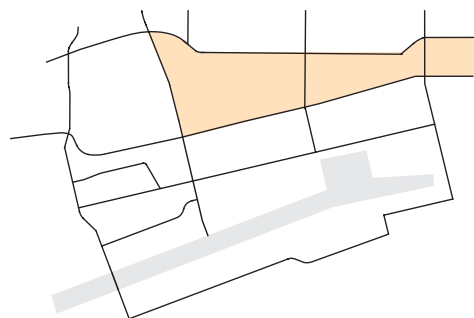


No new mid-block east-west collector street is provided between the Don Roadway and Bouchette/Booth. Servicing and access for the Unilever Precinct is provided through a network of local streets and the Broadview Extension. No connection is provided to the Don Roadway.

4-B.2 NEW EAST-WEST CONNECTION IN UNILEVER PRECINCT



Provide a new east-west multi-modal collector street (23m ROW) through the Unilever Precinct with two-lanes of vehicular capacity (one lane in each direction). The alignment of the east-west street would be confirmed in Phase 3 (Alternative Designs) of the Municipal Class EA process and once design of Valley Wall Feature/Flood Protection Landform adjacent to the Don Roadway has been confirmed.

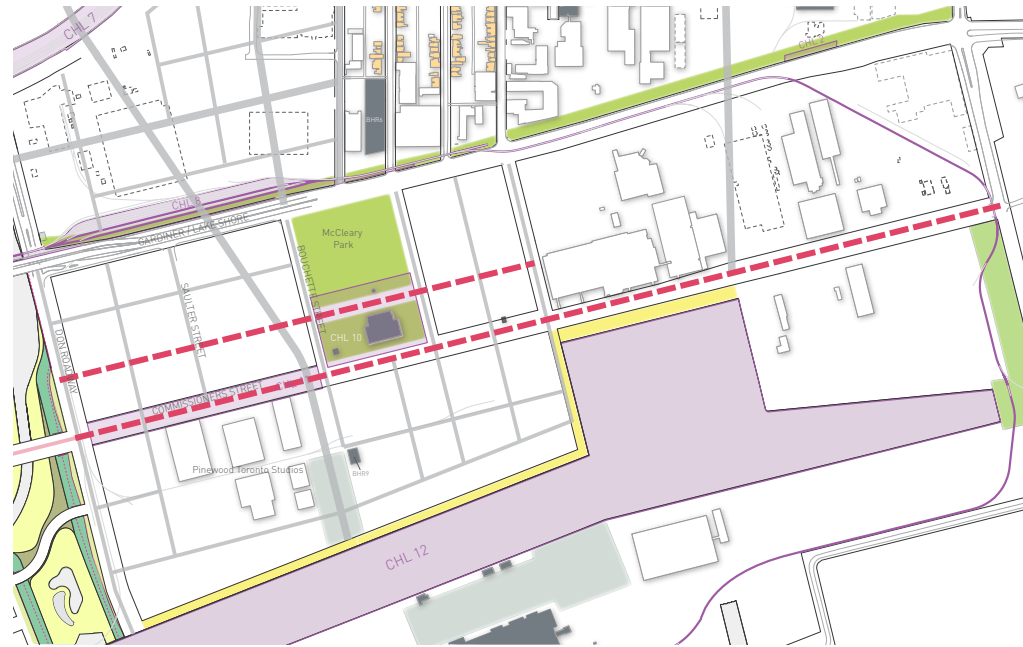


Port Lands and South of Eastern Transportation and Servicing Master Plan

Mid-Block East-West Alternatives Sub Area 4

- | | | |
|-----------------------------------|--|----------------------------------|
| Alternative | Parks and Open Spaces | Building to Remain |
| Conceptual Local Street | Water's Edge Promenades | Existing Residential |
| BHR # Heritage Building/Structure | Hydro Infrastructure | Community Infrastructure |
| CHL # Cultural Heritage Landscape | Buildings with Redevelopment Potential | Valley Wall Feature (conceptual) |

5-A. NEW EAST-WEST

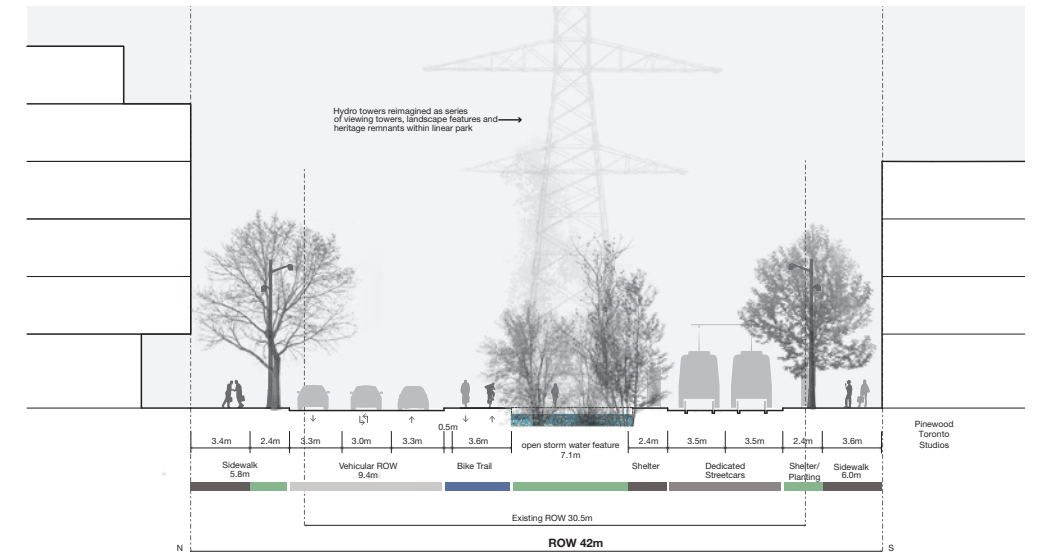


Create a new east-west multi-modal street with a maximum ROW of 23 metres through the Film Studio District north of Commissioners Street with one vehicular lane in each direction and Maintain + Enhance Commissioners Street (5-B.2).

5-B.1 URBANIZE COMMISSIONERS



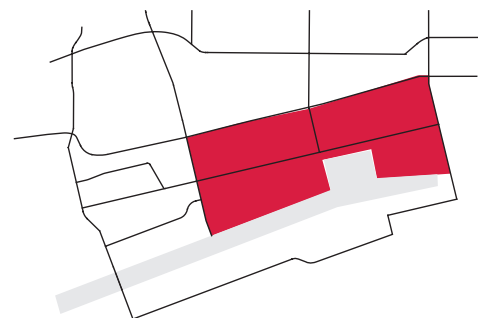
Create a multi-modal corridor with one vehicular travel lane in each direction, transit in a dedicated right-of-way, enhanced pedestrian amenity, separated cycling facilities and a wide integrated stormwater management/landscaped median (maximum 42m ROW)



5-B.2 MAINTAIN + ENHANCE



Maintain two vehicular travel lanes in each direction, introduce transit in a dedicated right-of-way, enhanced pedestrian amenity, separated two-way cycle track with an integrated stormwater feature (maximum 42m ROW)

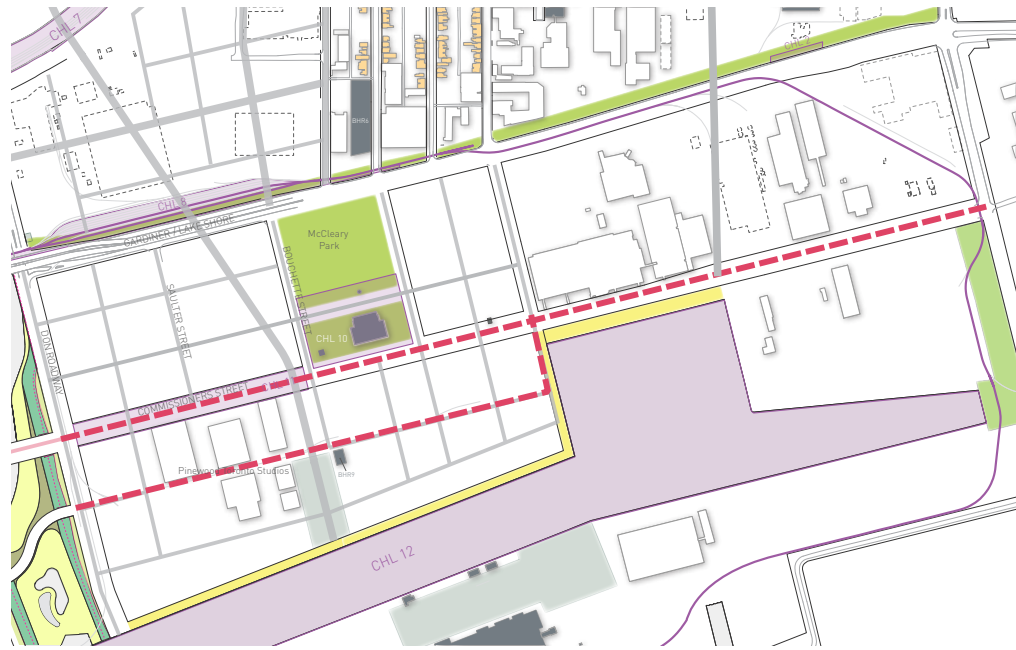


**Port Lands and South of Eastern
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**East-West Connection Alternatives
Sub Area 5**

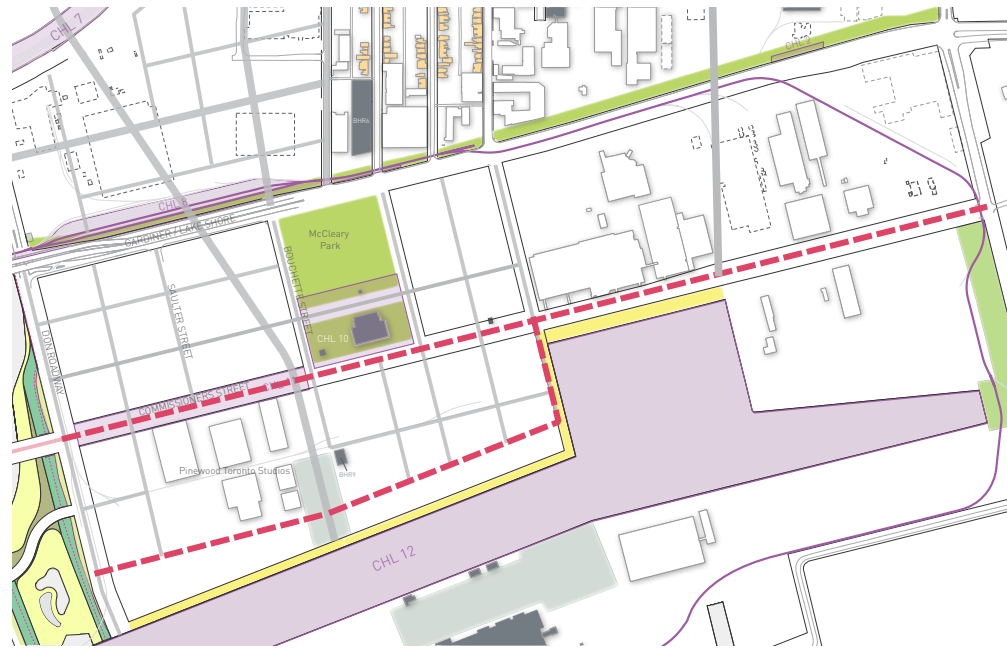
- Alternative
- Parks and Open Spaces
- Building to Remain
- Conceptual Local Street
- Water's Edge Promenades
- Existing Residential
- BHR # Heritage Building/Structure
- Hydro Infrastructure
- Community Infrastructure
- CHL # Cultural Heritage Landscape
- Buildings with Redevelopment Potential

5-C.1 EXTENDED BASIN



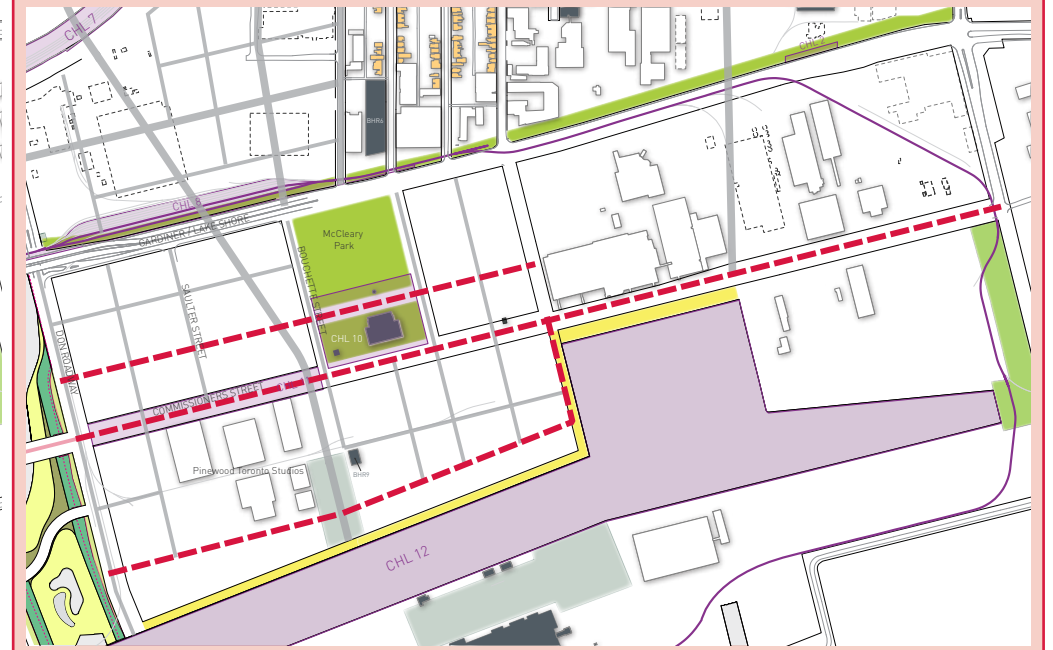
Extend Basin Street westward to the Don Roadway and connect to Carlaw Avenue with one vehicular lane in each direction and pedestrian and cyclist amenity (maximum 20m ROW), and Maintain + Enhance Commissioners Street (5-B.2).

5-C.2 REALIGNED AND EXTENDED BASIN

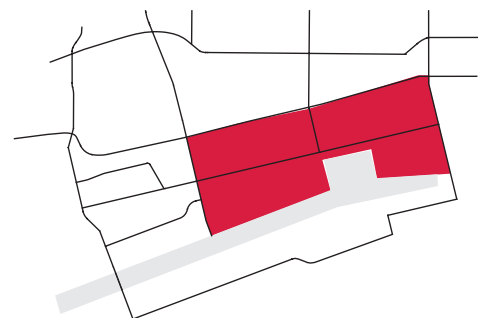


Realign Basin Street south of Pinewood Toronto Studios and create a multi-modal corridor with one vehicular travel in each direction and pedestrian and cyclist amenity (maximum 20m ROW), and Maintain + Enhance Commissioners Street (5-B.2).

5-D. MULTIPLE CONNECTIONS



Provide multiple multi-modal connections consisting of an Urbanized Commissioners Street (5-B.1) with a Realigned and Extended Basin Street (5-C.2) and New East-West Street north of Commissioners Street (5-A.).



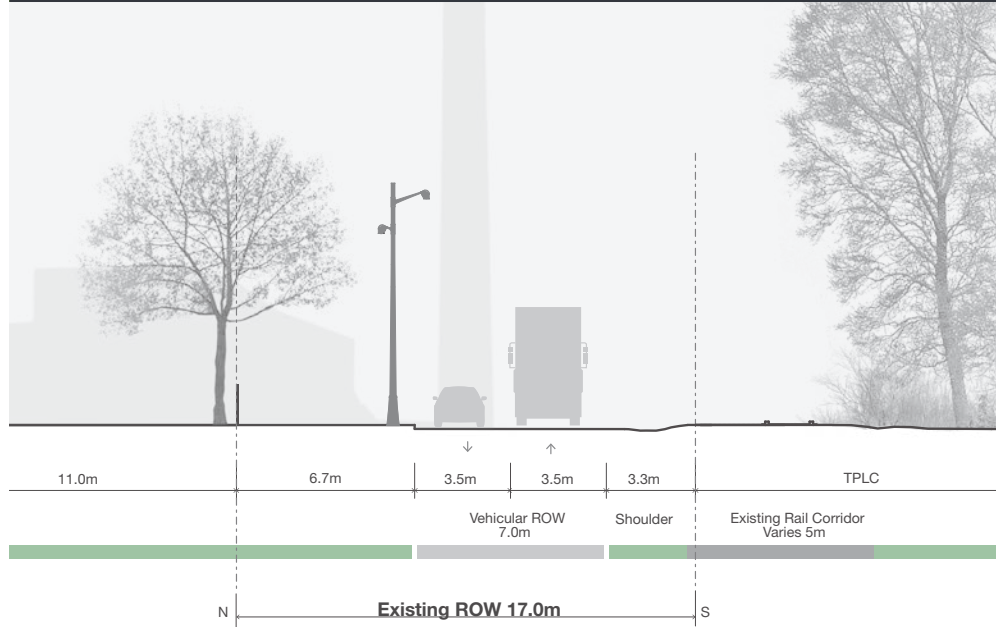
Port Lands and South of Eastern Transportation and Servicing Master Plan

East-West Connection Alternatives

Sub Area 5

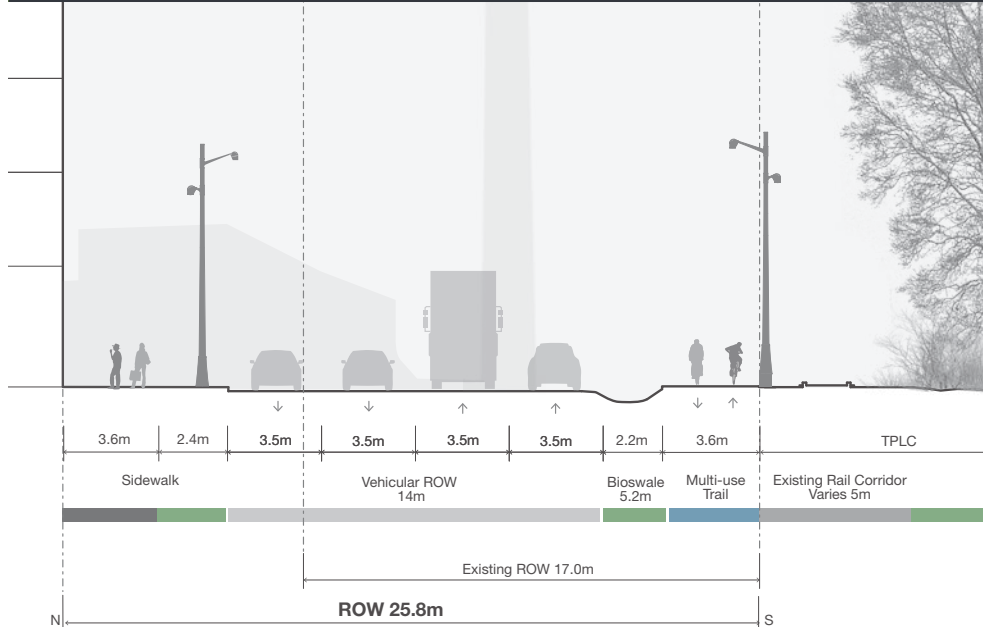
- Alternative
- Conceptual Local Street
- Parks and Open Spaces
- Water's Edge Promenades
- Heritage Building/Structure
- Hydro Infrastructure
- Cultural Heritage Landscape
- Buildings with Redevelopment Potential
- Building to Remain
- Existing Residential
- Community Infrastructure

6-A. MAINTAIN WITH AN IMPROVED BAILEY BRIDGE



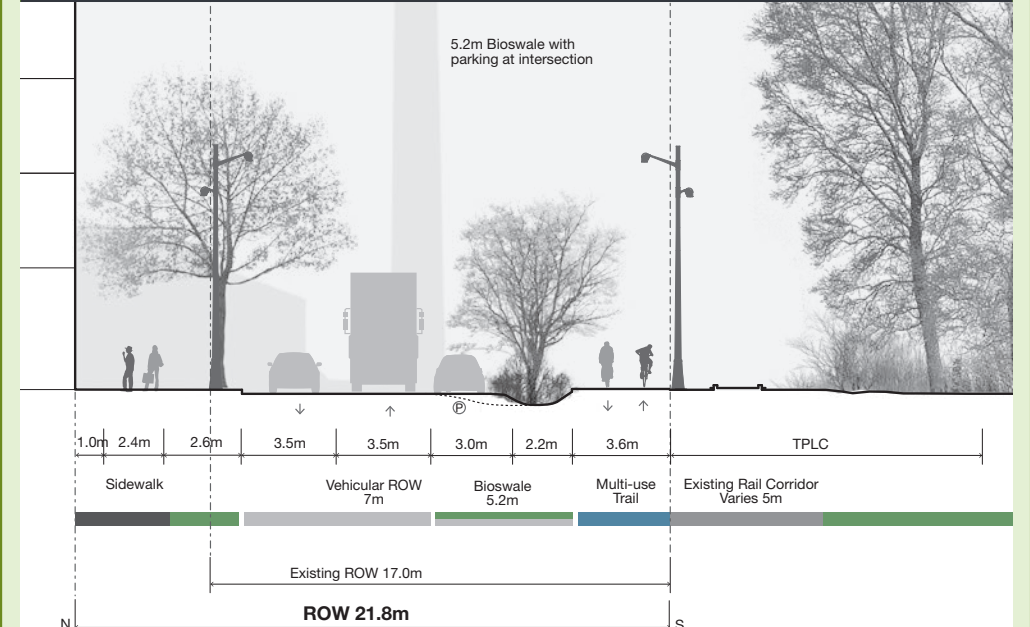
Maintain the existing alignment and capacity and improve the existing one-lane Bailey Bridge by providing a two-lane bridge across the circulating channel.

6-B. REALIGN AND ADD ADDITIONAL VEHICULAR LANES

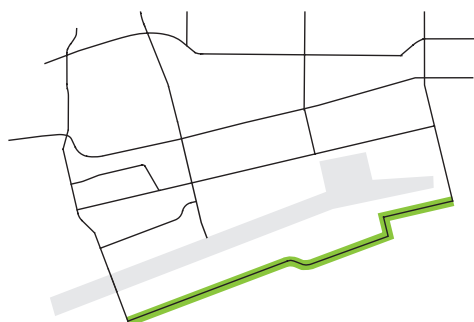
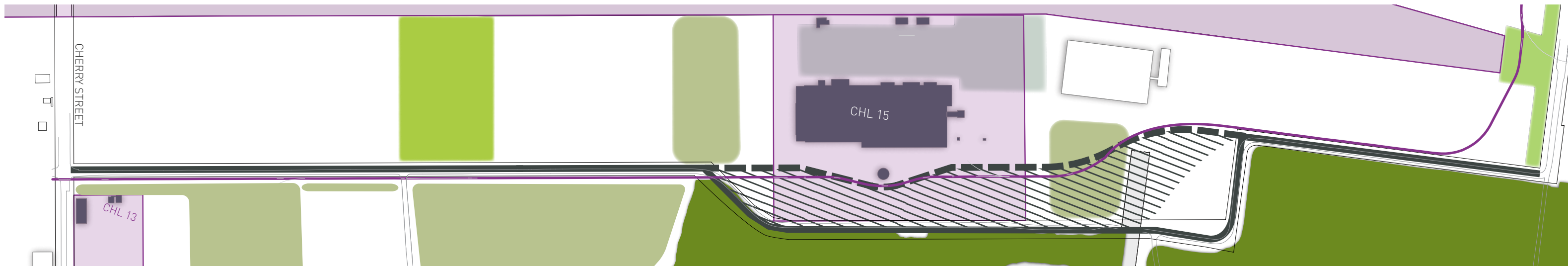


Realign Unwin Avenue and provide two-lanes of traffic in each direction (four lanes total) with improved pedestrian and cycling amenity and some integrated stormwater management. Alignment in the vicinity of the Hearn/PEC to be confirmed in Phase 3 of the Municipal Class EA process.

6-C. REALIGN AND URBANIZE



Realign Unwin Avenue and provide one-lane of traffic in each direction (two-lanes total) while optimizing carrying capacity and providing enhanced pedestrian and cyclist amenity and integrated stormwater management. Alignment in the vicinity of the Hearn/PEC to be confirmed in Phase 3 of the Municipal Class EA process.

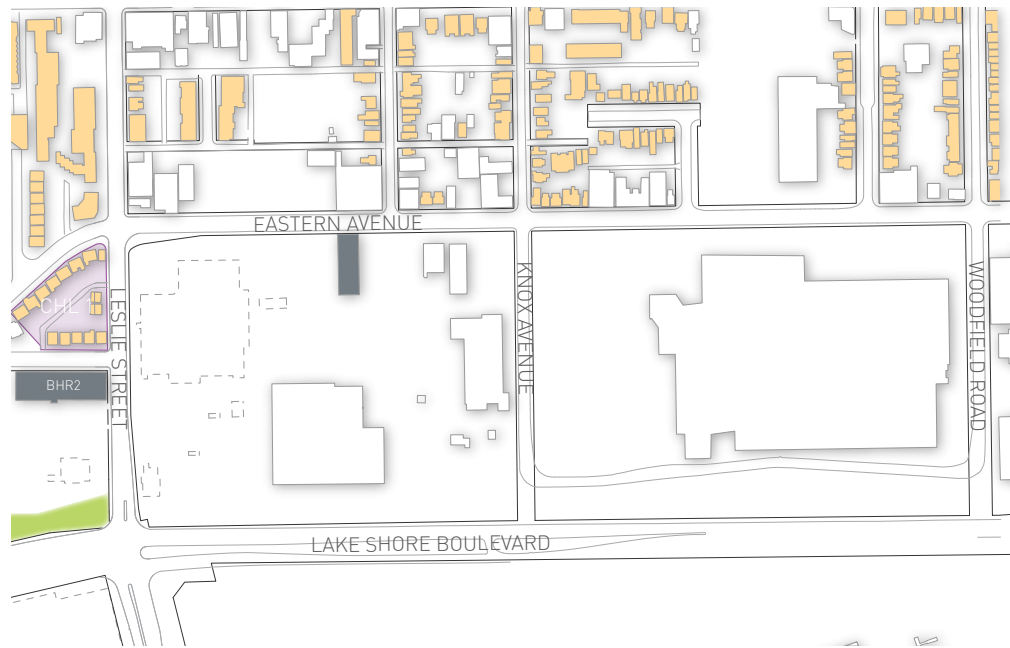


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Unwin Avenue Alternatives
Sub Area 6

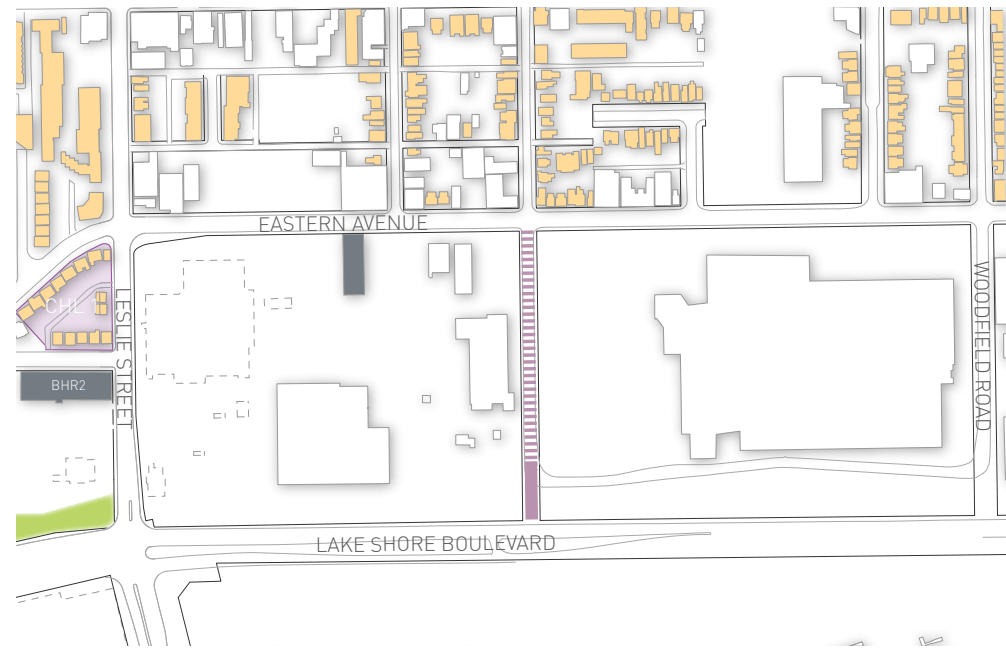
- Existing Alignment
- Realignment Option
- Realignment Zone
- Conceptual Local Street
- Heritage Building/Structure
- Cultural Heritage Landscape
- Parks and Open Spaces
- Water's Edge Promenades
- Hydro Infrastructure
- Existing Residential
- Community Infrastructure
- Environmentally Sensitive Areas
- Existing Natural Cover

DO NOTHING



Knox Avenue and Woodfield Avenue are maintained in their current configuration.

EXTEND KNOX AVENUE

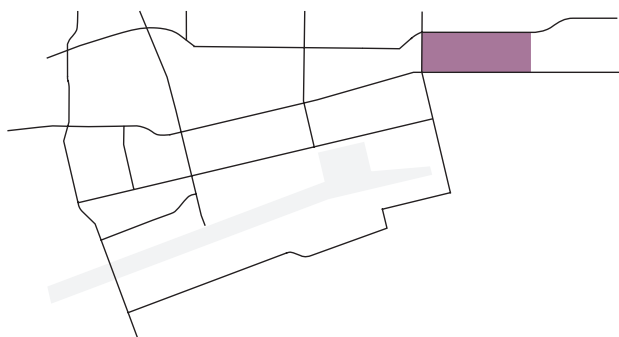


Knox Avenue is extended to Lake Shore Boulevard as a complete, multi-modal street with two vehicular lanes (20m ROW)

EXTEND WOODFIELD ROAD



Woodfield Road is extended to Lake Shore Boulevard as a complete, multi-modal street with two vehicular lanes (20m ROW)



Port Lands and South of Eastern Transportation and Servicing Master Plan

Woodfield/Knox

Upgrade to a Complete Street

Extend to Lake Shore

BHR # Heritage Building/Structure

CHL # Cultural Heritage Landscape

Parks and Open Spaces

Water's Edge Promenades

Hydro Infrastructure

Buildings with Redevelopment Potential

Building to Remain

Existing Residential

Community Infrastructure

APPENDIX I:
EVALUATION TABLES

TRANSPORTATION

TRANSPORTATION ALTERNATIVE SOLUTIONS AND EVALUATIONS

Note: The evaluations and evaluation summaries have been updated since the November 2015 consultation as a result of addressing stakeholder and agency comments.

EVALUATION OF ALTERNATIVE SOLUTIONS - SUB AREA 1: BROADVIEW EXTENSION

OBJECTIVE	CRITERIA	DESCRIPTION	MEASURE	1-A DON ROADWAY	1-B.1 SAULTER (UNDER)	1-B.2 REALIGNED SAULTER (UNDER) and NEW NORTH-SOUTH STREET	1-C.1 BOUCHETTE (UNDER)	1-D.1 EXTEND BETWEEN DON ROADWAY AND SAULTER	1-D.2 EXTEND DIAGONALLY BETWEEN DON ROADWAY AND SAULTER (UNDER) WITH A NEW NORTH-SOUTH STREET	
CREATING AN INTERESTING AND DYNAMIC URBAN MIX	Creation of new, vibrant mixed use communities and employment areas.	Does the alternative facilitate vibrant neighbourhoods and employment areas?	1 Vibrant new neighbourhoods/employment growth.	● Supports the mix of uses but access for all modes is limited and/or constrained. Provides limited service/access for development in the Unilever Precinct. Grade separation to accommodate flood protection east of Don Roadway has the potential to restrict connections and achieving an animated public realm. Poor pedestrian environment with Don Roadway running parallel to DVP ramps.	● Supports the mix of uses. Enhances access and permeability for all modes to Commissioners Street only. The width of the vehicular area impacts the character and scale of the pedestrian and cycling environment and crossing distances.	● Supports the mix of uses. Enhances access and permeability through the sub area to the Ship Channel for all modes. Establishes a greatly enhanced pedestrian and cycling environment with minimal crossing distances. Creates a new main street centrally located within the Unilever Precinct and through the Film Studio District with an additional connection offering the potential for four new urban frontages that would support a grade-related urban mix.	● Supports the mix of uses. Enhances access and permeability to and through the area to the Ship Channel for all modes. Creates a new main street centrally located within the Unilever Precinct and through the Film Studio District with the potential for urban frontages to support grade-related urban mix. However, the width of the vehicular area impacts the character and scale of the pedestrian and cycling environment and crossing distances.	● Supports the mix of uses. Enhances access and permeability for all modes to a Basin Street extension. Creates a new main street biased on the western edge of the Unilever Precinct and Film Studio District with potential for urban frontages along the majority of the length of the street to support a grade-related urban mix. However, the width of the vehicular area impacts the character and scale of the pedestrian and cycling environment and crossing distances.	● Supports the mix of uses. Enhances access and permeability through the sub area to the Ship Channel for all modes. Establishes a greatly enhanced pedestrian and cycling environment with minimal crossing distances. Creates a new main street centrally located within the Unilever Precinct, but biased to the west in the Film Studio District connecting to the Don Greenway. With the additional connection, four new urban frontages would be created to support a vibrant, grade-related urban mix.	
		Are viable development blocks created?	2 Viable development blocks.	● Grade separation to accommodate flood protection results in limited ability to connect east west streets and service/provide access to the Unilever Precinct. Highly irregular lot configuration through the BMW site.	● Good developability along both sides of Broadview Extension. Optimally sized and configured blocks. The wet side of the required Broadview VWF will be in a floodplain and require restrictive zoning to parkland/passive use.	● Good developability along the Broadview Extension and new north-south street. Majority of development blocks are typical. Two small blocks east of the alignment and north of Commissioners are not optimal. Diagonal alignment creates some irregularity in the size and configuration of development blocks. Diagonals present challenges from a building constructability perspective, but can be addressed through public realm and building design. The wet side of the required Broadview VWF will be in a floodplain and require restrictive zoning to parkland/passive use.	● Curvilinear alignment through the Unilever precinct creates irregularity in the block configuration. Some potential to address through the public realm and building design. Good developability in the Film Studio District and ability to achieve typically configured development blocks. The wet side of the required Broadview VWF will be in a floodplain and require restrictive zoning to parkland/passive use.	● Good developability and configuration of development blocks along the east side of the extension and south of Lake Shore Blvd. The wet side of the required Broadview VWF will be in a floodplain and require restrictive zoning to parkland/passive use. The proximity of the VWF to the FPL/VWF adjacent to the Don roadway will restrict developability between the extension and the Don Roadway.	● Good developability along the Broadview Extension and new north-south street. Creates optimum blocks in the Unilever Precinct. Broadview bisects lands south of Commissioners and requires a new T-intersection, creating less than optimal blocks and reduces developable lands. Diagonal alignment creates some irregularity in the size and configuration of blocks through the Film Studio district and presents challenges from a building constructability perspective, but can be addressed through public realm and building design. The wet side of the required Broadview VWF will be in a floodplain and require restrictive zoning to parkland/passive use.	
	Necessary vehicular capacity to support the anticipated mix of uses in the Port Lands and South of Eastern area while minimizing rights-of-way widths.	Can the alternative provide the necessary vehicular capacity and municipal services needed to support development?	3 Necessary capacity is provided while minimizing ROW widths and providing pedestrian and cycling amenities.	● The alternative achieves the necessary two-lanes of vehicular capacity in each direction. Multi-modal functions can be accommodated in the ROW, but creating a vibrant pedestrian realm is limited and access to DVP would be restricted without modifications to the underpass structure at the rail embankment and the removal of the existing ramps to the DVP from Lakeshore Boulevard.	● The alternative achieves the necessary two-lanes of vehicular capacity in each direction. Multi-modal functions can be accommodated in the ROW.	● The alternative achieves the necessary two-lanes of vehicular capacity in each direction in two separate streets. Enhanced multi-modal functions can be accommodated while minimizing ROW widths.	● The alternative achieves the necessary two-lanes of vehicular capacity in each direction. Multi-modal functions can be accommodated in the ROW.	● The alternative achieves the necessary two-lanes of vehicular capacity in each direction. Multi-modal functions can be accommodated in the ROW.	● The alternative achieves the necessary two-lanes of vehicular capacity in each direction. Multi-modal functions can be accommodated in the ROW.	● The alternative achieves the necessary two-lanes of vehicular capacity in each direction in two separate streets. Enhanced multi-modal functions can be accommodated while minimizing ROW widths. Challenging intersection configuration at Don Roadway and Basin requiring coordinated signal operations, shorter cycle length and/or greater flexibility in signal timing to reduce queue lengths and manage potential for spillback. Don/Broadview intersection must be signalized to manage left turn conflicts with streetcar tracks. Northbound left must be fully protected, presenting the potential for queue spillback. Short signal spacing in the area of Commissioners, Don Roadway and Broadview could be a challenge for signal coordination and queue management.
		Will vehicular rights-of-ways be minimized while creating a high quality pedestrian environment?	4 Percentage of ROW dedicated to active transportation.	● 37% dedicated to active transportation.	● 37% dedicated to active transportation.	● 60% dedicated to active transportation.	● 37% dedicated to active transportation.	● 37% dedicated to active transportation.	● 60% dedicated to active transportation.	
	Existing/planned neighbourhoods.	Does the alternative provide opportunities for improvements for existing neighbourhoods?	5 Opportunities for improvement.	● Limited improvements. Configuration and proximity to major interregional linkages would discourage walking between the city, Unilever Precinct and the Port Lands. Unconducive to support short local trips given limited ability to support street retail activity due to flood protection requirements and single-sided nature of retail corridor. Public transit limited to periphery of the area.	● Improves walking/cycling opportunities for short local trips (one new street) to Commissioners Street and street-related retail activity for access to daily needs. Improved access to/from the Port Lands and to transit service.	● Greatly enhanced walking/cycling opportunities with two new streets for short local trips and street-related retail activity for access to daily needs. Improved access to/from the Port Lands and to transit service.	● Enhanced walking/cycling opportunities for short local trips (one new street), improved potential for street-related retail activity for access to daily needs. Improved access to/from the Port Lands and to transit service.	● Enhanced walking/cycling opportunities for short local trips (one new street), improved potential for street-related retail activity for access to daily needs. Improved access to/from the Port Lands and to transit service.	● Greatly enhanced walking/cycling opportunities with two new streets for short local trips and street-related retail activity for access to daily needs. Improved access to/from the Port Lands and to transit service.	
		Does the alternative minimize potential impacts to existing and planned neighbourhoods?	6 Number of existing residential units potentially displaced.	NA Not applicable. No residential units in the sub area.	NA Not applicable. No residential units in the sub area.	NA Not applicable. No residential units in the sub area.	NA Not applicable. No residential units in the sub area.	NA Not applicable. No residential units in the sub area.	NA Not applicable. No residential units in the sub area.	
		Likelihood of non-local traffic in residential area and ability to manage traffic infiltration.	7 Minimal additional infiltration expected. Broadview Avenue to the north is an existing minor arterial.	● Minimal additional infiltration expected. Broadview Avenue to the north is an existing minor arterial.	● Minimal additional infiltration expected. Broadview Avenue to the north is an existing minor arterial.	● Minimal additional infiltration expected. Broadview Avenue to the north is an existing minor arterial. New north-south street between Lake Shore and Eastern is not continuous north of Eastern. Potential for infiltration is anticipated to be low.	● Minimal additional infiltration expected. Broadview Avenue to the north is an existing minor arterial.	● Minimal additional infiltration expected. Broadview Avenue to the north is an existing minor arterial.	● Minimal additional infiltration expected. Broadview Avenue to the north is an existing minor arterial.	
	CONNECT THE PORT LANDS TO THE CITY	Existing businesses and industry and opportunities for new businesses and industry.	8 Displacement of businesses and industry.	● Alignment bi-sects BMW property north of the rail embankment impacting the existing surface parking area and creates irregular lot configuration. No existing buildings/structures associated with existing businesses/industry anticipated to remain are impacted.	● Alignment bi-sects BMW property north of the rail embankment impacting the existing surface parking area. Bisection is biased to the east of the property leaving the majority of the property largely unaffected. No existing buildings/structures associated with existing businesses/industry anticipated to remain are impacted.	● Alignment bisects BMW property north of the rail embankment impacting the existing surface parking area. Impacts to existing Cinespace studios on Booth Street with new north-south street (note: acquired by First Gulf for redevelopment). Impacts to Pinewood Toronto Studios leased lands in the Film Studio District. Existing studio operations and truck manoeuvres able to be accommodated. No existing buildings/structures associated with existing businesses/industry anticipated to remain are impacted.	● Alignment bi-sects BMW property north of the rail embankment impacting the existing surface parking area. Alignment borders Pinewood Studios property in the south, and requires additional property potentially impacting truck manoeuvres. No existing buildings/structures associated with existing businesses/industry anticipated to remain are impacted. Impacts to existing Cinespace studios on Booth Street (note: acquired by First Gulf for redevelopment).	● Alignment bi-sects BMW property north of the rail embankment impacting the existing surface parking area. Alignment crosses Pinewood Studios property in the south. No existing buildings/structures associated with existing businesses/industry anticipated to remain are impacted.	● Broadview alignment bisects BMW property north of the rail embankment impacting the existing surface parking area. Impacts to existing Cinespace studios on Booth Street (note: acquired by First Gulf for redevelopment). Impacts to vacant option lands in the Film Studio District. No existing buildings/structures associated with existing businesses/industry anticipated to remain are impacted.	

● VERY POOR ● POOR ● GOOD ● VERY GOOD

EVALUATION OF ALTERNATIVE SOLUTIONS - SUB AREA 1: BROADVIEW EXTENSION

OBJECTIVE	CRITERIA	DESCRIPTION	MEASURE	1-A DON ROADWAY	1-B.1 SAULTER (UNDER)	1-B.2 REALIGNED SAULTER (UNDER) and NEW NORTH-SOUTH STREET	1-C.1 BOUCHETTE (UNDER)	1-D.1 EXTEND BETWEEN DON ROADWAY AND SAULTER	1-D.2 EXTEND DIAGONALLY BETWEEN DON ROADWAY AND SAULTER (UNDER) WITH A NEW NORTH-SOUTH STREET
CONNECT THE PORT LANDS TO THE CITY	Existing businesses and industry and opportunities for new businesses and industry.	Does the alternative support the establishment of new businesses and industry?	9 Access to infrastructure.	● Limited access for the Unilever Precinct and Film Studio District. Access to DVP eliminated, reducing accessibility of entire area.	● Good access to infrastructure to support the establishment of new businesses. Connection is centrally located within the Unilever Precinct and supports intensification within this area. Terminates at Commissioners Street in the Film Studio District and is located to the west providing less access for business in the balance of the area.	● Provides enhanced access to support the establishment of new businesses with multiple connections and continuous street, centrally located within the Unilever Precinct and Film Studio District to the Ship Channel. Potential for additional continuous connection at new north-south street with removal of Gardiner on/off ramps.	● Good access to infrastructure to support the establishment of new businesses and centrally located through the Unilever Precinct and Film Studio District supporting employment intensification. Configuration through the Unilever Precinct poses some challenges.	● Good access provided to support redevelopment of the Unilever Precinct. Street is biased to the west providing less access for new businesses in the balance of the area.	● Good access to infrastructure to support the establishment of new businesses. Connection is centrally located within the Unilever Precinct and supports employment intensification. Through the Film Studio District, the extension is biased to the west, providing less access for the balance of the area. South of Commissioners the Don Roadway realignment provides direct connection to Pinewood Toronto Studios and more direct access to Gardiner/Lake Shore and DVP. Potential to create an additional continuous north-south street to the Ship Channel with the removal of the Gardiner on/off-ramps.
		Does the alternative support dedicated truck routes and goods movement?	10 Facilitates dedicated truck routes to/from Lake Shore Boulevard and the DVP.	● Existing goods movement routes significantly impacted with elimination of access to DVP at the Don Roadway. Limited access to the Unilever Precinct.	● Redundancy provided in network for alternative routing and increased access for trucks. Limited ability to facilitate reliable dedicated truck routes. Some ability to facilitate operational redundancy in the event of scheduled maintenance or emergency situations.	● Enhanced redundancy provided in network for alternative routing and increased access for trucks with multiple connections. Potential to connect Lakeshore to south of Ship Channel and facilitate the creation of dedicated truck routes. Good potential to support operational redundancy in the event of scheduled maintenance or emergency situations.	● Redundancy provided in network for alternative routing and increased access for trucks. Potential to connect Lakeshore to south of Ship Channel and facilitate the creation of dedicated truck routes with the removal of the Gardiner on/off ramps. Good potential to support operational redundancy in the event of scheduled maintenance or emergency situations.	● Redundancy provided in network for alternative routing and increased access for trucks. Potential to connect Lakeshore to south of Ship Channel and facilitate the creation of dedicated truck routes. Some ability to facilitate operational redundancy in the event of scheduled maintenance or emergency situations.	● Enhanced redundancy provided in network for alternative routing and increased access for trucks with multiple connections. Potential to connect Lakeshore to south of Ship Channel and facilitate the creation of dedicated truck routes. Good potential to support operational redundancy in the event of scheduled maintenance or emergency situations.
	Better connect the Port Lands with the South of Eastern area and the rest of the city.	Does the alternative better connect the area for all users and services?	11 Connectivity.	● Better connects the area by connecting to Broadview, but no new connections created into the Port Lands. Maintains existing connection.	● New/enhanced connection with acceptable spacing to other connections and access for all users to Commissioners Street.	● Multiple new connections and streets, with excellent spacing between the Don Roadway and Broadview Extension. Provides enhanced connectivity for all users and connects through to the water's edge with potential to connect across the Ship Channel. Spacing between the Broadview extension and the new north-south street may enable a new signalized intersection in the future with the removal of the Gardiner on/off ramps.	● New/enhanced connection with acceptable spacing to other connections and access for all users. Connects through to the water's edge with potential to connect across the Ship Channel with the removal of the Gardiner on/off ramps.	● New connection but with challenging intersection spacing across Lakeshore given proximity to the Don Roadway.	● Multiple new connections and streets provide enhanced connectivity with potential to connect across the Ship Channel. Close spacing to the Don Roadway south of Commissioners limits ability for achieving enhanced connectivity for the study area. Provides good connectivity for existing film studios. Spacing between the Broadview extension and the new north-south street may enable a new signalized intersection in the future with the removal of the Gardiner on/off ramps.
		Does the alternative provide the ability to achieve a fine-grained network of streets (local, secondary and major)?	12 Facilitates achieving an appropriate hierarchy and rhythm of public streets.	● Does not provide the ability to achieve a distributed hierarchy of streets - street biased to perimeter of the Unilever Precinct requiring increased reliance on local streets. Does not provide for a distributed fine-grained network of streets.	● Ability to achieve an evenly distributed network of streets through the Unilever Precinct and south of Lake Shore to Commissioners.	● Ability to achieve an evenly distributed network of streets through the Unilever Precinct and the Film Studio District. Two streets and centrally located enables achieving a distributed fine-grained network of streets.	● Ability to achieve an evenly distributed network of streets through the Unilever Precinct and the Film Studio District.	● Does not promote an evenly distributed network of streets. Street is biased towards the west, and closely spaced to the Don Roadway limiting the ability to achieve a distributed fine-grained network of streets.	● Ability to achieve an evenly distributed network of streets through the Unilever Precinct and the Film Studio District. Two streets and centrally located enables achieving a distributed fine-grained network of streets.
		Does the alternative provide enhanced connections to major destinations for all modes?	13 Enhanced direct connections to destinations.	● Connection providing direct access to Don River Valley and Don Roadway south of Lake Shore. Multi-modal connection provides enhanced connection to the Unilever Precinct, Don River, Don Greenway, and Lake Shore Boulevard East Trail. This alternative requires the closure of the existing access and egress ramps for DVP, significantly impacting regional access to the Port Lands Area. Maintains opportunity for potential connectivity across the Ship Channel.	● Connection providing access to Unilever Precinct and potential for major office destination. Multi-modal connection provides improved access to Lake Shore Boulevard East Trail, major destinations in the Port Lands - Commissioners Street, Pinewood Toronto Studios.	● Potential to create a city-spine that provides access to multiple destinations north of the study area - Riverdale Park, Broadview Subway station. Multiple connections and multi-modal streets provide enhanced connections to future office destination in the Unilever precinct, Lake Shore Boulevard East Trail, film studios in the Film Studio District, water's edge and Ship Channel. Potential to increase connectivity across the Ship Channel to the Hearn, major parkland and Outer Harbour.	● Potential to create a city-spine that provides access to multiple destinations north of the study area - Riverdale Park, Broadview Subway station. Provides enhanced connection to future office destination in the Unilever precinct, Lake Shore Boulevard East Trail, film studios in the Film Studio District, water's edge and Ship Channel. Potential to increase connectivity across the Ship Channel to the Hearn, major parkland and Outer Harbour.	● Provides enhanced access to multiple destinations north of the study area - Riverdale Park, Broadview Subway station, but no ability for a connection across the Ship Channel. Connection and multi-modal street provides enhanced connection to major office destination in the Unilever Precinct, and Lake Shore Boulevard East Trail.	● Potential to create a city-spine that provides access to multiple destinations north of the study area - Riverdale Park, Broadview Subway station. Multiple connections and multi-modal streets provide enhanced connections to future office destination in the Unilever precinct, Lake Shore Boulevard East Trail, film studios in the Film Studio District, water's edge and Ship Channel and future Don Greenway Park and estuary. Potential to increase connectivity across the Ship Channel to major parkland and Outer Harbour.
	Redundancy in the network.	14 Redundancy in network.	● Alternative provides limited north-south redundancy and results in removal of access to DVP. Don Roadway provides space for flood conveyance in a flood event but all access would be restricted further limiting redundancy in the network.	● Provides some redundancy in the network. Flood risk mitigation would preclude access from the north during a regulatory event. Access to the Unilever Precinct maintained from Lake Shore for emergency access.	● Provides enhanced redundancy in the network with multiple connections and extension of Broadview to the Ship Channel. Flood risk mitigation would preclude access from the north during a regulatory event. Access to the Unilever Precinct maintained from Lake Shore for emergency services.	● Provides some redundancy in the network, including the potential to extend the connection to the Ship Channel. Flood risk mitigation would preclude access from the north during a regulatory event. Access to the Unilever Precinct maintained from Lake Shore for emergency services.	● Provides some redundancy in the network by introducing a new connection in and through the area for alternate routing. Flood risk mitigation would preclude access from the north during a regulatory event. Access to the Unilever Precinct maintained from Lake Shore for emergency services.	● Provides enhanced redundancy in the network with multiple connections and extension of Broadview to the Ship Channel, though bias to the west limits potential for redundancy. Flood risk mitigation would preclude access from the north during a regulatory event. Access to the Unilever Precinct maintained from Lake Shore for emergency services.	
	Existing physical barriers.	15 Nature and extent of physical barriers.	● Alternative is constrained by natural and man made features. Achieving a multi-modal street requires modifications to the existing underpass structure at the rail embankment and removal of the existing ramps to the DVP. Flood protection requirements associated with the DMNP EA limit access. Requires modification to the Harbour Lead Line as a result of ROW widening at Lakeshore. Reconfiguration of existing intersection at Lakeshore and the Don Roadway challenging if existing Gardiner piers were maintained.	● Alternative requires a new grade separated structure under the existing rail embankment and crossing the existing Keating Yard. Achieving transit likely requires reducing the number of rail spurs in the yard to one. Access would be maintained. Challenges at Lake Shore if existing Gardiner piers were maintained, but achievable.	● Alternative requires a new grade separated structure under the existing rail embankment and crossing the existing Keating Yard. Achieving transit likely requires reducing the number of rail spurs in the yard to one. Access would be maintained. Challenges at Lake Shore if existing Gardiner piers were maintained, but achievable.	● Alternative requires a new grade separated structure under the existing rail embankment and crossing the existing Keating Yard. Achieving transit likely requires reducing the number of rail spurs in the yard to one. Access would be maintained. Gardiner on/off ramps currently terminate at Bouchette and require removal as contemplated in the Gardiner East EA.	● Alternative requires a new grade separated structure under the existing rail embankment and crossing the existing Keating Yard. Achieving transit likely requires reducing the number of rail spurs in the yard to one. Access would be maintained. Significant constraints with proximity to the Don Roadway crossing of Lakeshore.	● Alternative requires a new grade separated structure under the existing rail embankment and crossing the existing Keating Yard. Achieving transit likely requires reducing the number of rail spurs in the yard to one. Access would be maintained. Challenges at Lake Shore if existing Gardiner piers were maintained, but achievable. Challenging intersection configuration at Commissioners/Don Roadway and Basin and requires realigning Basin west of the Don Roadway through high-quality wetlands.	
	Opportunities for linking natural habitat and open spaces and improving biodiversity.	16 Opportunities to provide direct linkages between areas of natural habitat and/or open spaces.	● Provides a connection abutting the Don River and connects to the Don Roadway south of Lake Shore to the future Don Greenway and the Ship Channel. Potential to connect across the Ship Channel.	● No opportunities to provide direct linkages between areas of natural habitat and/or open space except to potential local parks.	● Provides connections to Commissioners Hub/McCleary Park and Ship Channel. Potential to connect across the Ship Channel.	● Provides connections to Commissioners Hub/McCleary park and Ship Channel. Potential to connect across the Ship Channel.	● No opportunities to provide direct linkages between areas of natural habitat and/or open space except to potential local parks.	● Provides connection to the future Don Greenway and Ship Channel and potential to connect across the Ship Channel.	

EVALUATION OF ALTERNATIVE SOLUTIONS - SUB AREA 1: BROADVIEW EXTENSION

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CONNECT THE PORT LANDS TO THE CITY	Opportunities for linking natural habitat and open spaces and improving biodiversity.	What opportunities does the alternative provide to contribute to urban biodiversity?	17 Urban biodiversity.	● Potential to incorporate bioswales, understory planting and establish a mature tree canopy within the ROW. Potential to create a liminal linkage to Ship Channel and a potential connection across the Ship Channel. Proximity to DVP not ideal.	● Potential to incorporate bioswales, understory planting, and establish a mature tree canopy. Connection terminates at Commissioner Street limiting extent of achieving a liminal linkage.	● Potential to incorporate bioswales, understory planting and establish a mature tree canopy within the ROW. Potential to create a liminal linkage to Ship Channel and a potential connection across the Ship Channel.	● Potential to incorporate bioswales, understory planting and establish a mature tree canopy within the ROW. Potential to create a liminal linkage to Ship Channel and a potential connection across the Ship Channel.	● Potential to incorporate bioswales, understory planting, and establish a mature tree canopy.	● Potential to incorporate bioswales, understory planting and establish a mature tree canopy within the ROW. Potential to create a liminal linkage to Ship Channel and a potential connection across the Ship Channel.	
	LEVERAGE ASSETS	Cultural heritage resources.	Are there cultural heritage resources that might be affected by an alternative and what is the nature of the impact?	18 Nature and extent of potential impacts.	● Minor, site-specific alteration to the setting of CHL 7 with expansion the existing underpass/bridge structure. Although irreversible and permanent, the alteration is low-magnitude, maintains historical function and does not impact heritage attributes typically associated with rail corridors. Irreversible and permanent, site-specific alteration to BHR 12 (Bridge - Don River Crossing) with expansion of the existing underpass/bridge structure. The magnitude of physical alterations to the bridge are not known at this stage. Minor site-specific alteration to the setting of CHL 14 required to accommodate the widening of the existing ROW across the rail line. The alteration is very low-magnitude as the ROW already crosses the rail line and does not impact heritage attributes typically associated with rail corridors.	● Site-specific alteration to the setting of CHL 7 with Broadview extension under the rail embankment. The irreversible/permanent alteration is low magnitude. It maintains historical function and does not impact heritage attributes typically associated with rail corridors. Site-specific alteration to the setting of CHL 8 with a new street through the yard. The irreversible/permanent alteration is medium magnitude but does not impact heritage attributes typically associated with individual rail corridors and the historical function of the rail yard remains unchanged. No impacts to CHL 11.	● Site-specific alteration to the setting of CHL 7 with Broadview extension under the rail embankment. The irreversible/permanent alteration is low magnitude. It maintains historical function and does not impact heritage attributes typically associated with rail corridors. Site-specific alteration to the setting of CHL 8 with a new street through the yard. The irreversible/permanent alteration is medium magnitude but does not impact heritage attributes typically associated with individual rail corridors and the historical function of the rail yard remains unchanged. No negative impacts to BHR 7 and CHL 6 anticipated.	● Site-specific alteration to the setting of CHL 7 with Broadview extension under the rail embankment. The irreversible/permanent alteration is low magnitude. It maintains historical function and does not impact heritage attributes typically associated with rail corridors. Site-specific alteration to the setting of CHL 8 with a new street through the yard. The irreversible/permanent alteration is medium magnitude but does not impact heritage attributes typically associated with individual rail corridors and the historical function of the rail yard remains unchanged. Alteration required to CHL 11 to accommodate ROW width. Minor alteration required to CHL 10 with removal of one or more mature trees. Potential displacement or destruction of BHR 9 depending on final design.	● Site-specific alteration to the setting of CHL 7 with Broadview extension under the rail embankment. The irreversible/permanent alteration is low magnitude. It maintains historical function and does not impact heritage attributes typically associated with rail corridors. Site-specific alteration to the setting of CHL 8 with a new street through the yard. The irreversible/permanent alteration is medium magnitude but does not impact heritage attributes typically associated with individual rail corridors and the historical function of the rail yard remains unchanged. No impacts to CHL 11.	● Site-specific alteration to the setting of CHL 7 with Broadview extension under the rail embankment. The irreversible/permanent alteration is low magnitude. It maintains historical function and does not impact heritage attributes typically associated with rail corridors. Site-specific alteration to the setting of CHL 8 with a new street through the yard. The irreversible/permanent alteration is medium magnitude but does not impact heritage attributes typically associated with individual rail corridors and the historical function of the rail yard remains unchanged. No negative impacts to BHR 7 and CHL 6 anticipated.
Can any potential impacts be mitigated?			19 Ability to mitigate impacts.	● High potential to mitigate impacts to CHL 7 and CHL 14 given the nature of impacts. Potential mitigation measure(s) to CHL 7 and CHL 14 include documentation of existing conditions in advance of construction. Some potential to mitigate impacts to BHR 12. Alterations to BHR 12 could be designed to minimize impacts to heritage attributes. Previous alterations to the structure might diminish its heritage value, depending on the level of previous alterations. More detailed Cultural Heritage Assessment/HIA required.	● High potential to mitigate impacts to CHL 7 given the nature of impacts. Potential mitigation measure(s) to CHL 7 include documentation of existing conditions in advance of construction activities. Some potential to mitigate impacts to CHL 8. Potential mitigation measure(s) to CHL 8 include street layout design of the ROW that is sympathetic and is physically and visually compatible with CHL 8. No mitigation measures needed for CHL 11 as impacts are avoided.	● High potential to mitigate impacts to CHL 7 given the nature of impacts. Potential mitigation measure(s) to CHL 7 include documentation of existing conditions in advance of construction activities. Some potential to mitigate impacts to CHL 8. Potential mitigation measure(s) to CHL 8 include street layout design of the ROW that is sympathetic and is physically and visually compatible with CHL 8. No mitigation measures needed for BHR 7 and CHL 6 as impacts are avoided.	● High potential to mitigate impacts to CHL 7 given the nature of impacts. Potential mitigation measure(s) to CHL 7 include documentation of existing conditions in advance of construction activities. Some potential to mitigate impacts to CHL 8. Potential mitigation measure(s) to CHL 8 include street layout design of the ROW that is sympathetic and is physically and visually compatible with CHL 8. Some potential to mitigate impacts to CHL 10, CHL 11 and BHR 9: Design could be configured to bypass and avoid impacts to these resources.	● High potential to mitigate impacts to CHL 7 given the nature of impacts. Potential mitigation measure(s) to CHL 7 include documentation of existing conditions in advance of construction activities. Some potential to mitigate impacts to CHL 8. Potential mitigation measure(s) to CHL 8 include street layout design of the ROW that is sympathetic and is physically and visually compatible with CHL 8. No mitigation measures needed for CHL 11 as impacts are avoided.	● High potential to mitigate impacts to CHL 7 given the nature of impacts. Potential mitigation measure(s) to CHL 7 include documentation of existing conditions in advance of construction activities. Some potential to mitigate impacts to CHL 8. Potential mitigation measure(s) to CHL 8 include street layout design of the ROW that is sympathetic and is physically and visually compatible with CHL 8. No mitigation measures needed for BHR 7 and CHL 6 as impacts are avoided.	
Are there opportunities that introducing new streets provide to frame and celebrate heritage resources?			20 Potential opportunities.	● Potential opportunity to highlight rail at crossings through streetscape elements and materiality.	● Potential opportunity to highlight rail at crossings through streetscape elements and materiality. Street terminates near transmission towers which provides oblique view to cultural heritage landscape.	● Multiple opportunities: Street aligned to capture view on axis with Hearn stack - significant opportunity. Provides enhanced public access to heritage buildings on Eastern Avenue with opportunity to showcase buildings with increased frontages. Street intersects on Commissioners and alignment provides oblique views of transmission towers. Provides access to Ship Channel/dockwall. Potential opportunity to highlight rail at crossings through streetscape elements and materiality.	● Some opportunities: - Relocated transmission tower provides oblique view; - Provides access to Ship Channel/dockwall; - Potential opportunity to highlight rail at crossings through streetscape elements and materiality; - Frames CHL 10.	● Provides enhanced public access to heritage buildings on Eastern Avenue with opportunity to showcase buildings with increased frontages. Street intersects on Commissioners and alignment provides oblique views of transmission tower. Provides access to Ship Channel/dockwall. Potential opportunity to highlight rail at crossings through streetscape elements and materiality.		
Archaeological resources and traditional uses of Aboriginal people.		Are there archaeological resources that might be affected by an alternative and what is the nature of the impact?	21 Nature and extent of potential impacts.	● No impacts anticipated to archaeological resources or traditional uses by Aboriginal people.	● No impacts anticipated to archaeological resources or traditional uses by Aboriginal people.	● No impacts anticipated to archaeological resources or traditional uses by Aboriginal people.	● No impacts anticipated to archaeological resources or traditional uses by Aboriginal people.	● No impacts anticipated to archaeological resources or traditional uses by Aboriginal people.	● No impacts anticipated to archaeological resources or traditional uses by Aboriginal people.	● No impacts anticipated to archaeological resources or traditional uses by Aboriginal people.
		Ability to mitigate.	22 Ability to mitigate.	NA Not applicable. No mitigation required.	NA Not applicable. No mitigation required.	NA Not applicable. No mitigation required.	NA Not applicable. No mitigation required.	NA Not applicable. No mitigation required.	NA Not applicable. No mitigation required.	NA Not applicable. No mitigation required.
Existing/ planned parks and open spaces.		Does the alternative create an opportunity to enhance existing/planned parks and open spaces?	23 Opportunities to enhance.	● Limited opportunities to enhance existing parks/open spaces	● Limited opportunities to enhance existing parks/open spaces	● Limited opportunities to enhance existing parks/open spaces	● Limited opportunities to enhance existing parks/open spaces	● Limited opportunities to enhance existing parks/open spaces	● Limited opportunities to enhance existing parks/open spaces	● Limited opportunities to enhance existing parks/open spaces (note: additional greenspace potential addressed in measure 25 given that Don Greenway will be future natural heritage)
		Is there potential for temporary or permanent impacts to existing parks and open spaces?	24 Nature and extent of potential impacts.	● No impacts to existing/planned parks and open spaces.	● Minimal impact to Lake Shore Boulevard East Trail.	● Minimal impact to Lake Shore Boulevard East Trail (Note: The alignment does not impact existing McCleary Park).	● Minimal impact to Lake Shore Boulevard East Trail.	● Minimal impact to Lake Shore Boulevard East Trail.	● Minimal impact to Lake Shore Boulevard East Trail.	● Minimal impact to Lake Shore Boulevard East Trail.
Compatibility with the natural environment.		Does the alternative create an opportunity to enhance natural heritage and terrestrial resources (existing and planned)?	25 Opportunities for net environmental gains.	● Potential opportunities for environmental gains associated with Don River should the construction have consideration for the break-wall with in-water habitat.	● Limited opportunities for net environmental gains	● Limited opportunities for net environmental gains	● Limited opportunities for net environmental gains	● Limited opportunities for net environmental gains	● Limited opportunities for net environmental gains	● Potential for additional green space adjacent to the future Don Greenway with configuration of Don Roadway, Broadview and Basin Street Extension. However, results in the need to realign the Basin Street bridge across the Don Greenway, bisecting future high-quality wetlands.

EVALUATION OF ALTERNATIVE SOLUTIONS - SUB AREA 1: BROADVIEW EXTENSION

OBJECTIVE	CRITERIA	DESCRIPTION	MEASURE	1-A DON ROADWAY	1-B.1 SAULTER (UNDER)	1-B.2 REALIGNED SAULTER (UNDER) and NEW NORTH-SOUTH STREET	1-C.1 BOUCHETTE (UNDER)	1-D.1 EXTEND BETWEEN DON ROADWAY AND SAULTER	1-D.2 EXTEND DIAGONALLY BETWEEN DON ROADWAY AND SAULTER (UNDER) WITH A NEW NORTH-SOUTH STREET
LEVERAGE ASSETS	Compatibility with the natural environment.	Is there potential for temporary or permanent impacts to natural heritage and terrestrial resources (existing and planned)?	26 Nature and extent of potential impacts.	● Potential impacts during construction associated with the Don River break-wall and aquatic habitat.	● No impacts to the existing natural cover north of Commissioners Street between Saulter Street and Don Roadway as these areas will be removed by the Valley Wall Feature required by the approved DMNP EA.	● Minimal impacts with alignment directly over existing natural cover north of Commissioners Street between Bouchette Street and Saulter Street. Potential impacts are considered minimal due to the limited ecological form and function that this area provides. Opportunities to incorporate understory and tree planting in the design of the streets.	● Minimal impacts with alignment directly over existing natural cover along Bouchette Street. Potential impacts are considered minimal due to the limited ecological form and function that this area provides. Opportunities to incorporate understory and tree planting in the design of the streets.	● No impacts to the existing natural cover north of Commissioners Street between Saulter Street and Don Roadway as these areas will be removed by the Valley Wall Feature required by the approved DMNP EA.	● Requirement to relocate the Basin Street bridge west of the Don Roadway will reduce the size of high-quality wetlands identified in the DMNP EA. Opportunities to incorporate understory and tree planting in the design of the streets.
		Is there potential for adverse effects to water quality aquatic species?	27 Minimizes the potential for an adverse effect on water quality and aquatic species.	● Potential impacts during construction associated Don River break-wall and aquatic habitat.	● No impacts related to water quality or aquatic species.	● No impacts related to water quality or aquatic species.	● No impacts related to water quality or aquatic species.	● No impacts related to water quality or aquatic species.	● Potential impacts to aquatic species through reducing wetland in DMNP EA.
		Are there any impacts to groundwater?	28 Impacts or improvements to groundwater.	● Expansion / Replacement of existing structure will require excavation to groundwater level. Potentially raise road north of Go Rail to mitigate flooding. Therefore, potentially above groundwater table.	● Tunneling under the rail embankment has the potential to interact with groundwater. Consideration may need to be given to treatment of groundwater prior to discharge.	● Tunneling under the rail embankment has the potential to interact with groundwater. Consideration may need to be given to treatment of groundwater prior to discharge.	● Tunneling under the rail embankment has the potential to interact with groundwater. Consideration may need to be given to treatment of groundwater prior to discharge.	● Tunneling under the rail embankment has the potential to interact with groundwater. Consideration may need to be given to treatment of groundwater prior to discharge.	● Tunneling under the rail embankment has the potential to connect with potentially contaminated materials and groundwater that will need to be managed and released. Consideration may need to be given to treatment of groundwater prior to discharge. Proximity of intersections south of Commissioners to VFW may impact on groundwater flow.
	Visual connections.	Does the alternative provide visual connections to the study area's assets and important features?	29 Nature of any visual connections.	● Some corridors/vistas. Views to Don River valley, future Don Greenway and estuary and visual connections to the Ship Channel.	● Limited corridors/vistas. Street terminates near transmission towers. Provides oblique view while nearing terminus.	● Multiple corridors and vistas: - Visual axis aligned with Hearn stack; - Alignment provides views to transmission towers; - Axial view to Ship Channel with view termini; - South of Commissioners - views to Sun Oil building	● Some corridors and vistas: - View to the Ship Channel south of Lake Shore; - View to the Hearn at the Ship Channel only. Ability to see stack above development; - provides lateral views of Commissioners Transfer Station and Sun Oil building.	● Limited corridors/vistas: - street passes by transmission towers - provides momentary view; - potential to preserve axial view to Ship Channel if new development is configured appropriately.	● Provides a view corridor to the Ship Channel, however the Ship Channel is narrow with a lack of view termini.
DEVELOP A HIGH QUALITY PUBLIC REALM	Complete street principles and street character.	Can the alternative achieve the complete street principles established and the desired street character?	30 Ability to achieve the complete street principles and desired street character.	● Complete street principles are attainable. However, pedestrian realm limited.	● Complete street principles are attainable. However, pedestrian realm limited.	● Complete street principles are attainable. Multiple links provides the ability to maintain narrower ROWs to provide an enhanced pedestrian/cycling environment.	● Complete street principles are attainable. However, pedestrian realm limited.	● Complete street principles are attainable. However, pedestrian realm limited.	● Complete street principles are attainable. Multiple links provides the ability to maintain narrower ROWs to provide an enhanced pedestrian/cycling environment.
	Cycling routes.	Does the alternative provide for safe and continuous cycling routes?	31 Linear km of new, physically separated, continuous, high-quality cycle track.	● .6 km. - continuous cycle track that connects Eastern to Don Roadway. VWF and Flood protection and rail underpass will require design elements to achieve consistent cycling track from Lakeshore to Eastern Avenue. Design may necessitate dedicated lane within ROW rather than raised separated cycle track.	● 0.9km - continuous raised cycle track that connects Eastern to Commissioners.	● 1.3 km of continuous cycle track to water's edge from Eastern Avenue to the Ship Channel. New north-south street between Eastern and Lake Shore provides the opportunity for an additional 500m length of cycle track between Eastern and Lake Shore.	● 1.3km of continuous cycle track to water's edge from Eastern Avenue to the Ship Channel subject to removal of Gardiner on/off ramps as contemplated in the Gardiner East EA.	● 1.2km - continuous cycle track that terminates at Basin extension.	● 1.3 km of continuous cycle track to water's edge from Eastern Avenue to the Ship Channel. New north-south street between Eastern and Lake Shore provides the opportunity for an additional 500m length of cycle track between Eastern and Lake Shore.
			32 Completes or provides linkages to existing/future cycling network.	● Provides enhanced linkages to Eastern Avenue, the Lower Don Recreational Trail and Commissioners Street. Potential to connect across the Ship Channel to the trail system south of Unwin Avenue.	● Provides enhanced linkages to Eastern Avenue, the Lower Don Recreational Trail and connects to Commissioners Street.	● Provides enhanced linkages to Eastern Avenue, the Lake Shore Boulevard East Trail, Lower Don Recreational Trail and connects to Commissioners Street. Provides linkage to water's edge promenade and potential to connect across the Ship Channel to the trail system south of Unwin Avenue.	● Provides enhanced linkages to Eastern Avenue, the Lake Shore Boulevard East Trail, Lower Don Recreational Trail and connects to Commissioners Street. Provides linkage to water's edge promenade and potential to connect across the Ship Channel to the trail system south of Unwin Avenue with the removal of the Gardiner on/off ramps as contemplated in the Gardiner East EA.	● Provides enhanced linkages to Eastern Avenue, the Lower Don Recreational Trail and connects to Commissioners through to a Basin Street extension.	● Provides enhanced linkages to Eastern Avenue, the Lake Shore Boulevard East Trail, Lower Don Recreational Trail and connects to Commissioners Street. Provides linkage to water's edge promenade and potential to connect across the Ship Channel to the trail system south of Unwin Avenue.
	Place-making opportunities.	Does the alternative provide opportunities for place-making or creating unique opportunities?	33 Place-making opportunities.	● Limited opportunities with proximity of DVP ramps and requirement for VWF.	● Limited opportunities. Ability to create a central feature through the Unilever Precinct with active, animated development.	● Multiple opportunities to contribute to place-making along the length of the route. Ability to create a central feature through the Unilever Precinct and Film Studio District with active, animated development. Potential to create a new gate feature for Pinewood on east side of secure perimeter. Diagonal alignment can contribute to interesting built form and intentional public realm enhancements through chamfering of buildings or other building design approaches. Opportunity to relocate Basin Transmission Station and create a green corridor and better water's edge promenade condition.	● Good opportunities to contribute to place-making along the length of the route and subject to removal of Gardiner on/off ramps as contemplated in Gardiner East EA. Ability to create a central feature through the Unilever Precinct and Film Studio District with active, animated development. Potential to create a new gate feature for Pinewood on east side of secure perimeter. Opportunity to relocate Basin Transmission Station and create a green corridor and better water's edge promenade condition.	● Limited opportunities. Potential for active, animated development and to create a new main street through the McCleary District and Media City.	● Multiple opportunities. Ability to create a central feature through the Unilever Precinct and McCleary District with active, animated development. Potential to create a new gate feature for Pinewood on west side of secure perimeter. Diagonal alignment can contribute to interesting built form and intentional public realm enhancements through chamfering of buildings or other building design approaches. South of Commissioners, adjacent to the future Don Greenway with opportunities for additional green space adjacent to the Greenway and terminates at the Ship Channel.
34 Water as a feature.			● Provides visual access to Don River, future Don Greenway and Ship Channel. Ability to integrate water as a feature into cross-section.	● No visual access to water. Ability to integrate water as a feature in cross-section.	● Potential to provide visual and physical access to water's edge. Ability to integrate water as a feature in cross-section.	● Provides visual and physical access to water's edge. Ability to integrate water as a feature in cross-section.	● Potential to provide visual access to water's edge if new development is configured appropriately. Ability to integrate water as a feature in cross-section.	● Provides visual and physical access to water's edge. Ability to integrate water as a feature in cross-section.	

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DEVELOP A HIGH QUALITY PUBLIC REALM	Health and safety.	Does the alternative have the potential to improve existing unsafe conditions?	35 Improves existing unsafe conditions and maintains minimum design standards and criteria.	● Horizontal alignment from Eastern to south of rail will require low design speed to accommodate auto and rail safely. Additional potential safety concerns include: - location of signalized intersections along Lakeshore (Don Roadway, Carlaw, Leslie) unchanged, but with increased activity associated with growth existing problems / operational issues at these intersections will be magnified; - new intersection /access to Don Roadway problematic north of Lake Shore; - intersection of Broadview / Eastern geometrics problematic need to be considered in design; - geometry/alignment north of rail corridor (back to back curves) requires low design speed.	● Design criteria for structures and roadway can be met. Direct road alignment (ideal intersections at Lakeshore and Commissioners at 90 degrees). Potential safety concerns: - intersection spacing to the Don Roadway is 240m at Lake Shore with potential for a high degree of activity which may lead to gridlock and weaving. - geometrics for intersection of Broadview / Eastern need be considered in design. Potential benefits: - New signalized intersection at Lakeshore provides opportunity for enhanced pedestrian/cycling crossing.	● Design criteria for structure and roadway can be met. The skewed approaches at Lakeshore and Commissioners (70 degrees intersection) workable but less than optimum for auto and transit. Geometrics for intersection of Broadview / Eastern need to be considered in design. New signalized intersection at Lakeshore provides opportunity for enhanced pedestrian/cycling crossing.	● Design criteria for structure and roadway can be met. Alignment under rail structure curvilinear and not optimum. Intersection approaches at Commissioners and Lakeshore are acceptable. Location of signalized intersections along Lakeshore (Don Roadway, Carlaw, Leslie) unchanged, but with increased activity associated with growth existing problems / operational issues at these intersections will be magnified. Geometrics for intersection of Broadview / Eastern need be considered in design.	● While the design criteria for structures and roadway can be met (i.e. Direct road alignment reflects ideal 90 degree approaches to intersections at Lakeshore and Commissioners), the resultant intersection spacing along Lake Shore creates a safety and operational concern, minimizing the effectiveness of the intersection. Geometrics for intersection of Broadview / Eastern need be considered in design. New signalized intersection at Lakeshore provides opportunity for enhanced pedestrian/cycling crossing.	● Design criteria for structure and roadway can be met. The skewed approaches at Lakeshore and Commissioners (70 degrees intersection) workable but less than optimum for auto and transit. Intersection spacing at Commissioners is less than desirable for transit. South of Commissioners, intersection spacing is less than desired for anticipated vehicle flows and for transit accommodation (dedicated signal phasing). Geometrics for intersection of Broadview / Eastern need be considered in design. New signalized intersection at Lakeshore provides opportunity for enhanced pedestrian/cycling crossing.
	Opportunities for innovation.	Can innovative features be accommodated in the design of the alternative?	36 Ability to provide innovative features in the design of the alternative.	● 40 metre ROW with 4 lanes of traffic/dedicated transit provides limitations for incorporating innovative features at detailed design.	● 40 metre ROW with 4 lanes of traffic/dedicated transit provides limitations for incorporating innovative features at detailed design.	● 35 metre ROW with two vehicular lanes and new north-south street enables opportunities to incorporate innovative features at detailed design.	● 40 metre ROW with 4 lanes of traffic/dedicated transit provides limitations for incorporating innovative features at detailed design.	● 40 metre ROW with 4 lanes of traffic/dedicated transit provides limitations for incorporating innovative features at detailed design.	● 35 metre ROW with two vehicular lanes and new north-south street enables opportunities to incorporate innovative features at detailed design.
CONTRIBUTE TO THE SUSTAINABLE FUTURE OF THE CITY	Transit accommodation.	How easily can dedicated transit, or where appropriate surface transit routes in mixed traffic, be accommodated?	37 Ability to, and implications of, connecting with adjacent transit network.	● Alternative only viable with modifications to the underpass structure at the rail embankment and the removal of the existing ramps to the DVP from LSB. Transit service is possible with modifications to existing grade separated structure while still conforming with TTC guidelines for lateral and vertical clearances. Potential challenges in accommodating streetcar in separate ROW through Lake Shore intersection existing Gardiner piers were maintained.	● Modifications required to accommodate transit across Keating Rail Yard. Number of existing tracks need to be reduced to one track. Challenges if existing Gardiner piers were maintained, but workable.	● Modifications required to accommodate transit across Keating Rail Yard. Number of existing tracks need to be reduced to one track. Challenges if existing Gardiner piers were maintained, but workable.	● Modifications required to accommodate transit across Keating Rail Yard. Number of existing tracks need to be reduced to one track. Transit accommodated with the removal of the Gardiner on/off ramps as contemplated in the Gardiner East EA.	● Modifications required to accommodate transit across Keating Rail Yard. Number of existing tracks need to be reduced to one track. Challenges if existing Gardiner piers were maintained, but workable.	● Modifications required to accommodate transit across Keating Rail Yard. Number of existing tracks need to be reduced to one track. Challenges if existing Gardiner piers were maintained, but workable.
		Is transit service optimally located to serve future land use and maximize ridership potential?	38 Is transit service optimally located?	● Transit service is oriented to the west side of the Port Lands, leaving much of the Film District and points east outside of typically desired walking distance to service.	● Transit service is oriented to the west side of the Port Lands, leaving much of the Film District and points east outside of typically desired walking distance to service and terminates at Commissioners Street.	● Transit service is centrally located, providing maximum coverage of future development areas and minimizing walking distance.	● Transit service is centrally located, providing maximum coverage of future development areas and minimizing walking distance.	● Transit service is oriented to the west side of the Port Lands, leaving much of the Film District and points east outside of typically desired walking distance to service.	● Transit service is oriented to the west side of the Port Lands, leaving much of the Film District and points east outside of typically desired walking distance to service.
	Flood risk potential.	Would the alternative potentially create a flood risk potential? Can flood risk potential be mitigated through design?	39 Flood risk potential created and ability to mitigate flood risk.	● Existing Don Roadway provides flood conveyance during major flood events. Widening existing grade separate structure may provide additional conveyance opportunities. No additional flood risk created. Would be subject to more frequent flooding due to proximity to the river and lower elevation. Lands to the north of the rail embankment will remain at risk due to flooding at around the 1:350 year event. Current climate change forecasts call for an increased amount of high intensity, short duration storm events which are the primary trigger for flooding on the Don River watershed. This alternative provides the ability to reduce flood risk.	● New grade separated structure would create a hydraulic connection from the area north of the rail embankment that will continue to be in the flood plain. Ability to mitigate flood risk through grading south of the rail embankment. Lands to the north of the rail embankment will remain at risk due to flooding at around the 1:350 year event.	● New grade separated structure would create a hydraulic connection from the area north of the rail embankment that will continue to be in the flood plain. Ability to mitigate flood risk through grading south of the rail embankment. Lands to the north of the rail embankment will remain at risk due to flooding at around the 1:350 year event.	● New grade separated structure would create a hydraulic connection from the area north of the rail embankment that will continue to be in the flood plain. Ability to mitigate flood risk through grading south of the rail embankment. Lands to the north of the rail embankment will remain at risk due to flooding at around the 1:350 year event.	● New grade-separated structure would create a hydraulic connection from the area north of the rail embankment that will continue to be in the floodplain. Ability to mitigate flood risk through grading south of the rail embankment, though proximity of WWF/FPLS north of Lake shore may present geotechnical challenges. Lands to the north of the rail embankment will remain at risk due to flooding at around the 1:350 year event.	● New grade separated structure would create a hydraulic connection from the area north of the rail embankment that will continue to be in the flood plain. Ability to mitigate flood risk through grading south of the rail embankment. Lands to the north of the rail embankment will remain at risk due to flooding at around the 1:350 year event.
	Noise and air quality.	Does the alternative contribute to improved noise and air quality conditions?	40 Improved noise and air quality conditions.	● Accommodates active transportation and dedicated transit to support reduced reliance on the automobile. There are proposed sensitive receptors in the McCleary District. Typical noise levels of an urbanized environment anticipated.	● Accommodates active transportation and dedicated transit to support reduced reliance on the automobile. There are proposed sensitive receptors in the McCleary District. Typical noise levels of an urbanized environment anticipated.	● Accommodates active transportation and dedicated transit to support reduced reliance on the automobile. There are proposed sensitive receptors in the McCleary District. Typical noise levels of an urbanized environment anticipated.	● Accommodates active transportation and dedicated transit to support reduced reliance on the automobile. There are proposed sensitive receptors in the McCleary District. Typical noise levels of an urbanized environment anticipated.	● Accommodates active transportation and dedicated transit to support reduced reliance on the automobile. There are proposed sensitive receptors in the McCleary District. Typical noise levels of an urbanized environment anticipated.	● Accommodates active transportation and dedicated transit to support reduced reliance on the automobile. There are proposed sensitive receptors in the McCleary District. Typical noise levels of an urbanized environment anticipated.
	Resiliency and climate change.	Can the alternative be designed for maximum longevity and reduced greenhouse gas emissions?	41 Promotes reduction of greenhouse gas (e.g. through LID, minimizing pumping stations or potential to reduce congestion points).	● Provides transit and active transportation solutions. Operational issues expected on the southbound approach to the Lake Shore intersection, which has the potential to result in congestion and increased emissions.	● Provides transit and active transportation solutions and distributed network with good spacing has the potential to reduce congestion points.	● Provides transit and active transportation solutions and distributed network with good spacing has the potential to reduce congestion points.	● Provides transit and active transportation solutions and distributed network with good spacing has the potential to reduce congestion points.	● Provides transit and active transportation solutions. Operational issues may arise on Lake Shore between Don Roadway and the new connection due to irregular intersection spacing, which has the potential for increased congestion and emissions. 130 m spacing is less than desired in terms of traffic flow and will require specific consideration of shorter cycles and coordination to accommodate the forecast volumes to minimize congestion. Likewise for the 130m spacing along Commissioners.	● Provides transit and active transportation solutions. Operational issues may arise on Lake Shore between Don Roadway and the new connection due to irregular intersection spacing, which has the potential for increased congestion and emissions. 215 m spacing is less than desired in terms of traffic flow given role and function of Lake Shore/Don Roadway and will require specific consideration of shorter cycles and coordination to accommodate the forecast volumes to minimize congestion. Likewise for the spacing at Commissioners/Basin.

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IMPLEMENTATION	Compatibility with City, provincial planning policies and Waterfront Toronto/TRCA objectives/frameworks	Does the alternative support achieving City planning policies?	42 Supports the growth intention of the Official Plan, Central Waterfront Secondary Plan and precinct plans.	●	●	●	●	●	●
		Does the alternative address Waterfront Toronto objectives/frameworks?	43 Supports addressing Waterfront Toronto/TRCA objectives/frameworks.	●	●	●	●	●	●
		Does the alternative support achieving provincial planning policies and guidelines?	44 Supports achieving provincial planning policies and guidelines.	●	●	●	●	●	●
	Consistency with approved area Environmental Assessments.	Does the alternative impact approved Environment Assessment projects?	45 Extent and nature of impacts on planned infrastructure with approved Environmental Assessments.	●	●	●	●	●	●
		Is the alternative possible to construct and what are the key technical challenges?	46 Key technical challenges.	●	●	●	●	●	●
		Is the alternative cost effective to build?	47 Preliminary construction costs, excluding property, decontamination, and below-grade utilities.	●	●	●	●	●	●
	Engineering feasibility and construction cost.	Can the alternative be phased to offset initial costs and provide infrastructure in lock-step with development?	48 Ability to phase implementation and adapt to changes in phasing and timing of development.	●	●	●	●	●	●
		Is it possible to protect for future expansion and intensification?	49 Adaptability to future land use changes and intensification.	●	●	●	●	●	●

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IMPLEMENTATION	Existing municipal infrastructure and utilities.	Are there potential conflicts with existing utilities or challenges in re-location (temporary or permanent)?	50 Extent and nature of utility impacts.	<p>Typical Utilities located at intersections (Lakeshore and Don Roadway, & Eastern and New Don Roadway ROW):</p> <ul style="list-style-type: none"> - Gas mains (live and abandoned) - Bell Conduits & infrastructure - Toronto Hydro Infrastructure (Below grade) - HydroOne High voltage conduit. <p>Base assumption for all alternatives that overhead hydro transmission wires on Commissioners Street will be undergrounded.</p>	<p>Typical Utilities located at intersections (Commissioners and Saultter, Lakeshore and Saultter, Eastern and Broadway):</p> <ul style="list-style-type: none"> - Gas mains (live) - Bell Conduits & infrastructure - Toronto Hydro Infrastructure (Below grade) - HydroOne High voltage conduit. <p>Base assumption for all alternatives that overhead hydro transmission wires on Commissioners Street will be undergrounded.</p>	<p>Typical Utilities located at intersections (Basin and new ROW, Commissioners and new ROW, Lakeshore and new ROW, Eastern and new ROW):</p> <ul style="list-style-type: none"> - Gas mains (live and abandoned) - Bell Conduits & infrastructure - Toronto Hydro Infrastructure (Below grade) - HydroOne High voltage conduit. <p>Requires relocation of the Basin Transmission Substation.</p> <p>Base assumption for all alternatives that overhead hydro transmission wires on Commissioners Street will be undergrounded.</p>	<p>Typical Utilities located at intersections (Basin and Bouchette, Commissioners and Bouchette, Lakeshore and Bouchette, Eastern and new Bouchette ROW):</p> <ul style="list-style-type: none"> - Gas mains (live and abandoned) - Bell Conduits & infrastructure - Toronto Hydro Infrastructure (Below grade) - HydroOne High voltage conduit. <p>Requires relocation of the Basin Transmission Substation.</p> <p>Base assumption for all alternatives that overhead hydro transmission wires on Commissioners Street will be undergrounded.</p>	<p>Typical Utilities located at intersections (Commissioners and new ROW, Villiers and new ROW, Lakeshore and new ROW, Eastern and new ROW):</p> <ul style="list-style-type: none"> - Gas mains (live and abandoned) - Bell Conduits & infrastructure - Combined Sewers - Toronto Hydro Infrastructure (Below grade) - HydroOne High voltage conduit. <p>Base assumption for all alternatives that overhead hydro transmission wires on Commissioners Street will be undergrounded.</p>	<p>Typical Utilities located at intersections (Commissioners and Saultter, Lakeshore and Saultter, Eastern and Broadway):</p> <ul style="list-style-type: none"> - Gas mains (live) - Bell Conduits & infrastructure - Toronto Hydro Infrastructure (Below grade) - Hydro One High voltage conduit. <p>Base assumption for all alternatives that overhead hydro transmission wires on Commissioners Street will be undergrounded.</p>
	Would the alternative have an impact on existing municipal infrastructure to remain?	51 Nature and extent of potential impacts.	<p>Existing stormwater management systems north of the Lakeshore in the vicinity of the GO rail embankment, will be altered by new grading and flood management system to accommodate widening of existing underpass. Typical Municipal infrastructure located at intersections (Lakeshore and Don Roadway, and Eastern and New Don Roadway ROW):</p> <p>Sanitary Sewers & Structures, Storm Sewers & Structures (live & abandoned), Watermain & Water Structures (live & abandoned), Combined Sewers; Alignment of Infrastructure under Don Roadway and Lakeshore intersection, relatively complex. Minor municipal infrastructure relocations are anticipated and could be more complex depending on ultimate road alignment. The Eastern underpass Valley Wall Feature is not included within this EA.</p>	<p>Existing stormwater management systems north of the Lakeshore in the vicinity of the GO rail embankment, will be altered by new grading and flood management system to accommodate underpass through the rail embankment. Typical Municipal infrastructure located at intersections (Commissioners and Saultter, Lakeshore and Saultter, Eastern and Broadway):</p> <p>Sanitary Sewers & Structures (live & abandoned), Storm Sewers & Structures (live & abandoned), Watermain & Water Structures (live & abandoned), Combined Sewers; Minor Municipal infrastructure relocations anticipated depending on ultimate road alignment. The Eastern underpass Valley Wall Feature is not included within this EA.</p>	<p>Existing stormwater management systems north of the Lakeshore in the vicinity of the GO rail embankment, will be altered by new grading and flood management system to accommodate underpass through the rail embankment. Typical Municipal Infrastructure located at intersections (Basin and new ROW, Commissioners and new ROW, Lakeshore and new ROW, Eastern and new ROW):</p> <p>Sanitary Sewers (live & abandoned) & Structures, Storm Sewers & Structures (live & abandoned), Watermain & Water Structures (live & abandoned), Combined Sewers. Minor Municipal infrastructure relocations anticipated depending on ultimate road alignment.</p>	<p>Existing stormwater management systems north of the Lakeshore in the vicinity of the GO rail embankment, will be altered by new grading and flood management system to accommodate underpass through the rail embankment. Typical Municipal Infrastructure located at intersections (Commissioners and new ROW, Villiers and new ROW, Lakeshore and new ROW, Eastern and new ROW):</p> <p>Sanitary Sewers (live & abandoned) & Structures, Storm Sewers & Structures (live & abandoned), Watermain & Water Structures (live & abandoned), Combined Sewers. Minor Municipal infrastructure relocations anticipated depending on ultimate road alignment. The Eastern underpass Valley Wall Feature is not included within this EA.</p>	<p>Existing stormwater management systems north of the Lakeshore in the vicinity of the GO rail embankment, will be altered by new grading and flood management system to accommodate underpass through the rail embankment. Typical Municipal Infrastructure located at intersections (Commissioners and new ROW, Villiers and new ROW, Lakeshore and new ROW, Eastern and new ROW):</p> <p>Sanitary Sewers (live & abandoned) & Structures, Storm Sewers & Structures (live & abandoned), Watermain & Water Structures (live & abandoned), Combined Sewers. Minor Municipal infrastructure relocations anticipated depending on ultimate road alignment. The Eastern underpass Valley Wall Feature is not included within this EA.</p>		
	Property acquisition costs.	52 Approximate number of hectares of privately owned lands required to be acquired with existing development anticipated to remain.	<p>Approximately 10,000m² of privately owned land required from BMW site.</p> <p>Remainder of privately owned land needed for extension located through 21 Don Roadway site (approximately 5,000 m²). Connection supports intensification contemplated in the Unilever Precinct.</p>	<p>Approximately 5,225m² of privately owned land required from BMW site. Approximately 12,000 m² required through 21 Don Roadway site. Connection supports intensification contemplated in the Unilever Precinct . 1,300 m² required from privately owned land in the Film Studio District. Attainable through ROW widening.</p>	<p>Approximately 7,600 m² of privately owned land required from BMW, Greyhound site and 120 Bouchette.</p> <p>Approximately 13,500m² required through 21 Don Roadway and Cinespace (recently acquired by First Gulf for redevelopment). Approximately 7,800 m² of municipally owned land with options/long-term leases required from 300 Commissioners Street and Pinewood Toronto Studios. Approximately 4,485 m² of provincially owned land with opportunities identified for lands elsewhere to accommodate the relocation.</p>	<p>Approximately 10,000m² of privately owned land required from BMW site and Cinespace (recently acquired by First Gulf for redevelopment). 11,500m² required through the 21 Don Roadway site. Connection supports intensification contemplated in Unilever precinct. Approximately 5,000m² required through ROW widenings from 120 Bouchette, 300 Commissioners and Pinewood Toronto Studios. Approximately 6,400m² of provincially owned land with opportunities for lands elsewhere to compensate and accommodate the relocation.</p>	<p>Approximately 5,400m² of privately owned land required from BMW site.</p> <p>Remainder of privately owned land needed for extension located through redevelopment sites - 21 Don Roadway site (12,150m²) and TWSDI (8,900m²).</p>	<p>Approximately 5,000m² of privately owned land required from BMW site. Approximately 13,500m² required through 21 Don Roadway and Cinespace (recently acquired by First Gulf for redevelopment). Approximately 10,000 m² municipally owned land with options/long-term leases from Pinewood Toronto Studios/TWSDI lands.</p>	
Maintenance and operations.	53 Level of maintenance required.	<p>Typical maintenance effort except that there will be added flood warning and monitoring as well as clean-up in the event of flooding for the flood management system. Integrating LID measures into the road networks may result in non-typical maintenance and operational requirements.</p>	<p>Typical maintenance effort except that there will be added flood warning and monitoring as well as clean-up in the event of flooding for the flood management system and to accommodate the underpass through the rail embankment. Integrating LID measures into the road networks may result in non-typical maintenance and operational requirements, which the City does not currently have practices for.</p>	<p>Typical maintenance effort except that there will be added flood warning and monitoring as well as clean-up in the event of flooding for the flood management system and to accommodate the underpass through the rail embankment. Integrating LID measures into the road networks may result in non-typical maintenance and operational requirements, which the City does not currently have practices for.</p>	<p>Typical maintenance effort except that there will be added flood warning and monitoring as well as clean-up in the event of flooding for the flood management system and to accommodate the underpass through the rail embankment. Integrating LID measures into the road networks may result in non-typical maintenance and operational requirements, which the City does not currently have practices for.</p>	<p>Typical maintenance effort except that there will be added flood warning and monitoring as well as clean-up in the event of flooding for the flood management system and to accommodate the underpass through the rail embankment. Integrating LID measures into the road networks may result in non-typical maintenance and operational requirements, which the City does not currently have practices for.</p>			

EVALUATION OF ALTERNATIVE SOLUTIONS - SUB AREA 2: ALTERNATIVES EAST OF CARLAW AND WEST OF LESLIE

OBJECTIVE	CRITERIA	DESCRIPTION	MEASURE	DO NOTHING	2-A WINNIFRED	2-B. CAROLINE	2-C. LARCHMOUNT	2-D.1 ONE-WAY PAIR (CAROLINE and LARCHMOUNT)	2-D.2 ONE-WAY PAIR (CAROLINE and WINNIFRED)	2-E. PAPE		
CREATING AN INTERESTING AND DYNAMIC URBAN MIX	Creation of new, vibrant mixed use communities and employment areas.	Does the alternative facilitate vibrant neighbourhoods and employment areas?	1 Vibrant new neighbourhoods/ employment growth.	● No change from existing condition with this alignment resulting in no potential to create a vibrant place.	● Supports mix of uses and provides additional amenity to support employment growth. Enhances access and permeability to and through the area for all modes. Establishes an enhanced pedestrian and cycling environment that connects the Port Lands and South of Eastern area back to the city. The alternative would create the opportunity for urban frontages through the South of Eastern area. There are potential limitations to achieving urban frontages on both sides through the Port Lands as there are existing buildings to remain along the west side including at Eastern Avenue. No existing buildings are expected to be affected.	● Supports mix of uses and provides additional amenity to support employment growth. Enhances access and permeability to and through the area for all modes. Establishes an enhanced pedestrian and cycling environment that connects the Port Lands and South of Eastern area back to the city. Creates a new two-sided street offering the potential for new urban frontages to support vibrant, grade-related urban mix.	● Supports mix of uses. Enhances access and permeability to and through the area for all modes. Establishes an enhanced pedestrian and cycling environment that connects the Port Lands and South of Eastern area back to the city. Creates a new two-sided street with the potential for active, urban frontages through the South of Eastern area with limitations for achieving active, animated urban street frontages on both sides in the Port Lands due to existing uses anticipated to remain.	● Supports mix of uses. Enhances access and permeability through the area for all modes. Establishes an enhanced pedestrian and cycling environment north and south of Lake Shore Blvd but presents a challenging intersection configuration for cyclists and pedestrians to cross Lake Shore. Multiple streets create four new urban frontages with good development potential with some limitations on all sides of the streets due to existing buildings.	● Supports mix of uses. Enhances access and permeability through the area for all modes. Establishes an enhanced pedestrian and cycling environment north and south of Lake Shore Blvd but presents a challenging intersection configuration for cyclists and pedestrians to cross Lake Shore. Multiple streets create four new urban frontages with good development potential with some limitations on all sides of the streets due to existing buildings.	● Supports mix of uses, but limited pedestrian amenity or active uses at grade north of Lake Shore. The alignment of the alternative creates a new two-sided street with limited potential for new urban frontages on both sides of the street due to existing development to remain.		
		Are viable development blocks created?	2 Viable development blocks.	● Maintains existing lot configuration and does break up larger sites into smaller development blocks resulting in increased reliance on accesses from major streets.	● Breaks up larger sites and provides good block size and configuration for employment growth.	● North of Lake Shore breaks up larger sites while maintaining good developability that supports continued employment growth. South of Lake Shore, angle of alternative creates irregular shaped lots of a sufficient size to accommodate employment growth.	● Generally maintains existing lot fabric. Does not divide larger sites into development blocks.	● Breaks up larger sites with the two connections resulting in a typical Toronto block width capable of facilitating employment growth north of Lake Shore. Configuration of streets south of Lake Shore results in irregular lot fabric. Sites of a sufficient size to accommodate employment growth.	● Breaks up larger sites with the two connections resulting in a typical Toronto block width capable of facilitating employment growth.	● Generally maintains existing lot fabric north of Lake Shore with the street connecting between existing buildings anticipated to remain. South of Lake Shore, breaks up larger sites due to existing development anticipated to remain along Eastern.		
	Necessary vehicular capacity to support the anticipated mix of uses in the Port Lands and South of Eastern area while minimizing rights-of-way widths.	Can the alternative provide the necessary vehicular capacity and municipal services needed to support development?	3 Necessary capacity is provided while minimizing ROW widths and providing pedestrian and cycling amenities.	● The alternative does not achieve the necessary lanes of vehicular capacity in each direction.	● The alternative achieves the necessary lanes of vehicular capacity in each direction, with minimal ROW widths, while achieving a high-quality pedestrian environment.	● The alternative achieves the necessary lanes of vehicular capacity in each direction, with minimal ROW widths, while achieving a high-quality pedestrian environment.	● The alternative achieves the necessary lanes of vehicular capacity in each direction, with minimal ROW widths, while achieving a high-quality pedestrian environment.	● The alternative achieves the necessary lanes of vehicular capacity in each direction, with minimal ROW widths, while achieving a high-quality pedestrian environment.	● The alternative achieves the necessary lanes of vehicular capacity in each direction, with minimal ROW widths, while achieving a high-quality pedestrian environment.	● The alternative achieves the necessary lanes of vehicular capacity in each direction, with minimal ROW widths, while achieving a high-quality pedestrian environment.	● The alternative achieves the necessary lanes of vehicular capacity in each direction, with minimal ROW widths, but a high-quality pedestrian environment is potentially constrained in the vicinity of Eastern due to existing development.	
		Will vehicular rights-of-ways be minimized while creating a high quality pedestrian environment?	4 Percentage of ROW dedicated to active transportation.	● 0% dedicated to active transportation given that existing conditions are maintained.	● 59% dedicated to active transportation.	● 59% dedicated to active transportation.	● 59% dedicated to active transportation.	● 59% dedicated to active transportation.	● 59% dedicated to active transportation.	● 59% dedicated to active transportation.	● 59% dedicated to active transportation.	
	Existing/planned neighbourhoods.	Does the alternative provide opportunities for improvements for existing neighbourhoods?	5 Opportunities for improvement.	● No opportunities for improvements to existing neighbourhoods.	● Provides walking/cycling opportunities to encourage walking and cycling for short local trips. Introduces potential for improved retail at grade for animation and amenity and supports employment opportunities. Opportunity for place-making at the Turning Basin park where the street alignment terminates.	● Enhanced walking/cycling opportunities to encourage walking and cycling for short local trips and wider city connections. Introduces potential for improved retail at grade for animation and amenity and supports employment opportunities. Opportunity for place-making at the Turning Basin park where the street alignment terminates.	● Enhanced walking/cycling opportunities to encourage walking and cycling for short local trips and wider city connections. Introduces potential for improved retail at grade for animation and amenity and supports employment opportunities. Alignment does not provide new opportunities for place-making.	● Enhanced walking/cycling opportunities to encourage walking and cycling for short local trips. Wider city connections are challenging for all users due to close intersection spacing at Lake Shore. Introduces potential for improved retail at grade for animation and amenity and supports employment opportunities. Opportunity for place-making at the Turning Basin park where one of the streets terminates.	● Enhanced walking/cycling opportunities to encourage walking and cycling for short local trips. Wider city connections are challenging for all users due to close intersection spacing at Lake Shore. Introduces potential for improved retail at grade for animation and amenity and supports employment opportunities. Opportunity for place-making at the Turning Basin park where one of the streets terminates.	● Enhanced walking/cycling opportunities to encourage walking and cycling for short local trips. Wider city connections are challenging for all users due to close intersection spacing at Lake Shore. Introduces potential for improved retail at grade for animation and amenity and supports employment opportunities. Opportunity for place-making at the Turning Basin park where one of the streets terminates.	● Enhanced walking/cycling opportunities to encourage walking and cycling for short local trips and wider city connections. Limited potential for improved retail at grade for animation and amenity and supports employment opportunities. Opportunity for place-making at the Turning Basin park where one of the streets terminates.	
		Does the alternative minimize potential impacts to existing and planned neighbourhoods?	6 Number of existing residential units potentially displaced.	● No existing residential units displaced.	● No existing residential units displaced.	● No existing residential units displaced.	● No existing residential units displaced.	● No existing residential units displaced.	● No existing residential units displaced.	● No existing residential units displaced.	● No existing residential units displaced.	● No existing residential units displaced.
			7 Likelihood of non-local traffic in residential area and ability to manage traffic infiltration.	● Lack of north-south connectivity could contribute to traffic infiltration in existing neighbourhoods. Implementation of traffic calming measures possible on existing local neighbourhood streets.	● Some potential for traffic infiltration from vehicles travelling north from the Port Lands or Lake Shore. Some potential for implementing traffic calming measures.	● Some potential for traffic infiltration from vehicles travelling north from the Port Lands or Lake Shore. Some potential for implementing traffic calming measures.	● Some potential for traffic infiltration from vehicles travelling on Queen destined for Lake Shore. Some potential for implementing traffic calming measures.	● Minimal additional infiltration expected. One-way contra-flow pairs would provide additional north-south connectivity opposite existing residential streets potentially limiting further infiltration. potential for implementing traffic calming measures.	● Minimal additional infiltration expected. One-way contra-flow pairs would provide additional north-south connectivity opposite existing residential streets potentially limiting further infiltration. potential for implementing traffic calming measures.	● Limited additional infiltration expected directly north of Eastern. Pape Avenue to the north is a wider ROW with a different role and function than typical residential streets. potential for implementing traffic calming measures.		

EVALUATION OF ALTERNATIVE SOLUTIONS - SUB AREA 2: ALTERNATIVES EAST OF CARLAW AND WEST OF LESLIE

OBJECTIVE	CRITERIA	DESCRIPTION	MEASURE	DO NOTHING	2-A WINNIFRED	2-B. CAROLINE	2-C. LARCHMOUNT	2-D.1 ONE-WAY PAIR (CAROLINE and LARCHMOUNT)	2-D.2 ONE-WAY PAIR (CAROLINE and WINNIFRED)	2-E. PAPE
CREATING AN INTERESTING AND DYNAMIC URBAN MIX	Existing businesses and industry and opportunities for new businesses and industry.	Is there potential for impacts to businesses and industry, such as displacement or reductions in parking?	8 Displacement of businesses and industry.	● No impacts to existing business or industry.	● Considerable impacts to existing business and industry. Alternative would require the demolition of existing buildings in the process of being repurposed for film related uses north of Lake Shore and would require demolition of a portion of the Toronto Hydro Service Centre complex.	● No impacts to existing business or industry anticipated to remain.	● No impacts to existing business or industry anticipated to remain.	● No impacts to existing business or industry anticipated to remain.	● Considerable impacts to existing business and industry. Alternative would require the demolition of existing buildings in the process of being repurposed for film related uses north of Lake Shore and would require demolition of a portion of the Toronto Hydro Service Centre complex.	● Significant impacts to existing business and industry. The alternative would impact the existing studio operation and secure access. It would impact the existing Subaru dealership and would require demolition of the Toronto Hydro Service Centre office building.
		Does the alternative support the establishment of new businesses and industry?	9 Access to infrastructure.	● Alternative does not support the establishment of new business or industry or provide amenity for area workers.	● Alternative supports new businesses and industry providing good reasonably central access and amenity for area workers.	● Alternative supports new businesses and industry providing good centrally located access and amenity for area workers.	● Alternative supports new businesses and industry providing good reasonably central access and amenity for area workers.	● Alternative supports new businesses and industry providing good centrally located access and amenity for area workers.	● Alternative supports new businesses and industry providing good centrally located access and amenity for area workers.	● While the alternative improves access in and through the area, it does not support the establishment of new business and industry. Alternative bisects between existing sites with development to remain and has significant impacts on existing business and industry.
		Does the alternative support dedicated truck routes and goods movement?	10 Facilitates dedicated truck routes to/from Lake Shore Boulevard and the DVP.	● Maintains existing conditions resulting in increased traffic on existing routes.	● Provides additional capacity within the network with the potential to reduce traffic on routes more desirable for trucking.	● Provides additional capacity within the network with the potential to reduce traffic on routes more desirable for trucking.	● Provides additional capacity within the network with the potential to reduce traffic on routes more desirable for trucking.	● Provides additional capacity within the network with the potential to reduce traffic on routes more desirable for trucking.	● Provides additional capacity within the network with the potential to reduce traffic on routes more desirable for trucking.	● Provides additional capacity within the network with the potential to reduce traffic on routes more desirable for trucking.
CONNECT THE PORT LANDS TO THE CITY	Better connect the Port Lands with the South of Eastern area and the rest of the city.	Does the alternative better connect the area for all users and services?	11 Connectivity.	● Maintains the existing condition as such does not better connect.	● Better connects the area and reasonably central location within the sub area. Intersection spacing along Lake Shore is approximately 525 metres from Leslie Street and 330 metres to Carlaw Avenue.	● Central location within the sub area maximizes potential and better connects the area for all users and services. Intersection spacing is approximately 420 metres to Leslie Street and 440 metres to Carlaw Avenue.	● Better connects the area and reasonably central location within the sub area. Intersection spacing along Lake Shore is approximately 360 metres to Leslie and 500 metres to Carlaw Avenue.	● Central location within the sub area with two connections provides good pedestrian/cycling connectivity. Spacing at Lake Shore and other major streets would not enable signalized intersections potentially precluding access across Lake Shore.	● Central location within the sub area with two connections provides good pedestrian/cycling connectivity. Spacing at Lake Shore and other major streets would not enable signalized intersections potentially precluding access across Lake Shore.	● Better connects the area, however, spacing within the sub area is not ideal. Intersection spacing is approximately 200 metres to Carlaw Avenue and 685 metres to Leslie Street.
		Does the alternative provide the ability to achieve a fine-grained network of streets (local, secondary and major)?	12 Facilitates achieving an appropriate hierarchy and rhythm of public streets.	● Does not contribute to achieving a fine-grained network of streets. Maintains the existing street configuration within the area.	● Alternative is well located to support a well distributed hierarchy of local streets within the area.	● Alternative is optimally located to support a well distributed hierarchy of local streets within the area.	● Alternative is well located to support a well distributed hierarchy of local streets within the area.	● Multiple connections support a well distributed hierarchy of local streets within the area. Some limitations with one-way functionality.	● Multiple connections support a well distributed hierarchy of local streets within the area. Some limitations with one-way functionality.	● Alternative provides limited ability for a well-distributed network of streets.
		Does the alternative provide enhanced connections to major destinations for all modes?	13 Enhanced direct connections to destinations.	● No improvements to walking/cycling destinations.	● Increases pedestrian and cycling connectivity from residential area north of Eastern Avenue to Commissioners Street and the Turning Basin. Improves walking and cycling distances to existing planned destinations in the Port Lands such as Tommy Thompson Park and the planned expansion to McCLeary Park.	● Increases pedestrian and cycling connectivity from residential area north of Eastern Avenue to Commissioners Street and the Turning Basin. Improves walking and cycling distances to existing planned destinations in the Port Lands such as Tommy Thompson Park and the planned expansion to McCLeary Park.	● Increases pedestrian and cycling connectivity from residential area north of Eastern Avenue to Commissioners Street and the Turning Basin. Improves walking and cycling distances to existing planned destinations east and west of the alternative in the Port Lands such as Tommy Thompson Park and the planned expansion to McCLeary Park.	● Increases pedestrian and cycling connectivity from residential area north of Eastern Avenue to Commissioners Street and the Turning Basin. Improves walking and cycling distances to existing planned destinations in the Port Lands such as Tommy Thompson Park and the planned expansion to McCLeary Park.	● Increases pedestrian and cycling connectivity from residential area north of Eastern Avenue to Commissioners Street and the Turning Basin. Improves walking and cycling distances to existing planned destinations in the Port Lands such as Tommy Thompson Park and the planned expansion to McCLeary Park.	● Increases pedestrian and cycling connectivity from residential area north of Eastern Avenue to Commissioners Street and the Turning Basin. Improves walking and cycling distances to existing planned destinations in the Port Lands such as Tommy Thompson Park and the planned expansion to McCLeary Park.
	Redundancy in the network.	14 Redundancy in network.	● Maintains the existing condition and as such provides no additional redundancy in the network. Continued reliance on Carlaw Avenue and Leslie Street.	● Provides enhanced redundancy in the network with new north-south connection to Lake Shore and to Commissioners.	● Provides enhanced redundancy in the network with new north-south connection to Lake Shore and to Commissioners.	● Provides enhanced redundancy in the network with new north-south connection to Lake Shore and to Commissioners.	● Provides enhanced redundancy in the network with new north-south connections to Lake Shore and to Commissioners.	● Provides enhanced redundancy in the network with new north-south connections to Lake Shore and to Commissioners.	● Provides enhanced redundancy in the network with new north-south connection to Lake Shore and to Commissioners, but located in close proximity to Carlaw Avenue.	

EVALUATION OF ALTERNATIVE SOLUTIONS - SUB AREA 2: ALTERNATIVES EAST OF CARLAW AND WEST OF LESLIE

OBJECTIVE	CRITERIA	DESCRIPTION	MEASURE	DO NOTHING	2-A WINNIFRED	2-B. CAROLINE	2-C. LARCHMOUNT	2-D.1 ONE-WAY PAIR (CAROLINE and LARCHMOUNT)	2-D.2 ONE-WAY PAIR (CAROLINE and WINNIFRED)	2-E. PAPE
CONNECT THE PORT LANDS TO THE CITY	Existing physical barriers.	Is the alternative impacted by physical barriers? i.e.: - rail (Harbour Lead Line, GO Line and active routes in the Port Lands - Lake Shore to Leslie to Unwin). - Existing over/underpasses - Existing on/off ramps or other Gardiner components - Ship Channel	15 Nature and extent of physical barriers.	● No physical barriers are impacted.	● Requires crossing the existing rail corridor and modifications to the existing median on Lake Shore Boulevard.	● Requires crossing the existing rail corridor and modifications to the existing median on Lake Shore Boulevard. The rail spur in most frequent use would not be impacted by turning movements and would enable easier traffic/train control at railroad crossings.	● Gardiner piers public art installation, requires crossing the existing rail corridor . Depending on intersection design potential for queuing across all three rail spurs, and modifications to the existing median on Lake Shore.	● Gardiner piers public art installation, requires two crossings of the existing rail corridor and modifications to the existing median on Lake Shore Boulevard.	● Requires two crossings of the existing rail corridor and modifications to the existing median on Lake Shore Boulevard.	● Requires crossing the existing rail corridor and modifications to the existing median on Lake Shore Boulevard.
	Opportunities for linking natural habitat and open spaces and improving biodiversity.	What opportunities does the alternative provide direct linkages between natural habitat and existing/planned open spaces?	16 Opportunities to provide direct linkages between natural habitat and/or open spaces.	● No opportunities to provide direct linkages between natural and open space areas.	● Provides connection between Water's Edge Promenade and multi-use trail on north side of Lakeshore.	● Provides connection between Water's Edge Promenade and multi-use trail on north side of Lakeshore.	● Provides connection between the multi-use trail on Lake Shore to Commissioners Street provide indirect connections to open space areas.	● Provides connection between Water's Edge Promenade and multi-use trail on north side of Lakeshore.	● Provides connection between Water's Edge Promenade and multi-use trail on north side of Lakeshore.	● Provides connection between Water's Edge Promenade and multi-use trail on north side of Lakeshore.
		What opportunities does the alternative provide to contribute to urban biodiversity?	17 Urban biodiversity.	● No opportunities.	● Potential to incorporate bioswales, understory planting, and establish a mature tree canopy. Potential for liminal linkage to Turning Basin and Commissioners Street.	● Potential to incorporate bioswales, understory planting, and establish a mature tree canopy. Potential for liminal linkage to Turning Basin and Commissioners Street.	● Potential to incorporate bioswales, understory planting, and establish a mature tree canopy. Potential for liminal linkage to Turning Basin and Commissioners Street.	● Potential to incorporate bioswales, understory planting, and establish a mature tree canopy. Connection terminates at Commissioner Street and Water's Edge Promenade with western road only.	● Potential to incorporate bioswales, understory planting, and establish a mature tree canopy. Connection terminates at Commissioner Street and Water's Edge Promenade with western road only.	● Potential to incorporate bioswales, understory planting, and establish a mature tree canopy. Connection terminates at Commissioner Street and Water's Edge Promenade.
LEVERAGE ASSETS	Cultural heritage resources.	Are there cultural heritage resources that might be affected by an alternative and what is the nature of the impact?	18 Nature and extent of potential impacts.	● No impacts to identified cultural heritage resources.	● Irreversible and permanent alteration to the setting of CHL 14 through the introduction of a new ROW crossing the rail line; the rail line and function remain unchanged.	● Irreversible and permanent alteration to the setting of CHL 14 through the introduction of a new ROW crossing the rail line; the rail line and function remain unchanged.	● Irreversible and permanent alteration to the setting of CHL 14 through the introduction of a new ROW crossing the rail line; the rail line and function remain unchanged.	● Irreversible and permanent alteration to the setting of CHL 14 through the introduction of new ROWs crossing the rail line; the rail line and function remain unchanged.	● Irreversible and permanent alteration to the setting of CHL 14 through the introduction of new ROWs crossing the rail line; the rail line and function remain unchanged.	● Irreversible and permanent alteration to the setting of CHL 14 through the introduction of a new ROW crossing the rail line; the rail line and function remain unchanged.
		Can any potential impacts be mitigated?	19 Ability to mitigate impacts.	● No mitigation measures needed.	● High potential to mitigate. Potential mitigation measure(s) to CHL 14 include documentation of existing conditions in advance of construction activities.	● High potential to mitigate. Potential mitigation measure(s) to CHL 14 include documentation of existing conditions in advance of construction activities.	● High potential to mitigate. Potential mitigation measure(s) to CHL 14 include documentation of existing conditions in advance of construction activities.	● High potential to mitigate. Potential mitigation measure(s) to CHL 14 include documentation of existing conditions in advance of construction activities.	● High potential to mitigate. Potential mitigation measure(s) to CHL 14 include documentation of existing conditions in advance of construction activities.	● High potential to mitigate. Potential mitigation measure(s) to CHL 14 include documentation of existing conditions in advance of construction activities.
		Are there opportunities that introducing new streets provide to frame and celebrate heritage resources?	20 Potential opportunities.	● Maintains existing conditions. No opportunities to frame or celebrate heritage resources.	● New street links directly to the Turning Basin - an important cultural heritage destination with potential to integrate port heritage into a new 'blue square' park.	● New street links directly to the Turning Basin - an important cultural heritage destination with potential to integrate port heritage into a new 'blue square' park.	● New street opens up second frontage for heritage building on Eastern Avenue.	● New street links directly to the Turning Basin - an important cultural heritage destination with potential to integrate port heritage into a new 'blue square' park. New street opens up second frontage for heritage building on Eastern Avenue Both links limit access for some users because of one-way directionality of streets.	● New street links directly to the Turning Basin - an important cultural heritage destination with potential to integrate port heritage into a new 'blue square' park.	● New street links directly to the Turning Basin - an important cultural heritage destination with potential to integrate port heritage into a new 'blue square' park.
	Archaeological resources and traditional uses of Aboriginal people.	Are there archaeological resources that might be affected by an alternative and what is the nature of the impact?	21 Nature and extent of potential impacts.	● No impacts anticipated to archaeological resources or traditional uses by Aboriginal people.	● No impacts anticipated to archaeological resources or traditional uses by Aboriginal people.	● No impacts anticipated to archaeological resources or traditional uses by Aboriginal people.	● No impacts anticipated to archaeological resources or traditional uses by Aboriginal people.	● No impacts anticipated to archaeological resources or traditional uses by Aboriginal people.	● No impacts anticipated to archaeological resources or traditional uses by Aboriginal people.	● No impacts anticipated to archaeological resources or traditional uses by Aboriginal people.
			22 Ability to mitigate.	NA Not applicable.	NA Not applicable.	NA Not applicable.	NA Not applicable.	NA Not applicable.	NA Not applicable.	NA Not applicable.
	Existing/planned parks and open spaces.	Does the alternative create an opportunity to enhance existing/planned parks and open spaces?	23 Opportunities to enhance.	● No opportunities to enhance parks and open spaces in the sub area.	● No opportunities to enhance parks and open spaces in the sub area.	● No opportunities to enhance parks and open spaces in the sub area.	● No opportunities to enhance parks and open spaces in the sub area.	● No opportunities to enhance parks and open spaces in the sub area.	● No opportunities to enhance parks and open spaces in the sub area.	● No opportunities to enhance parks and open spaces in the sub area.
Is there potential for temporary or permanent impacts to existing parks and open spaces?		24 Nature and extent of potential impacts.	● No impacts to existing parks and open spaces.	● Minimal impact to Lake Shore Boulevard East Trail.	● Minimal impact to Lake Shore Boulevard East Trail.	● Minimal impact to Lake Shore Boulevard East Trail.	● Minimal impact to Lake Shore Boulevard East Trail.	● Minimal impact to Lake Shore Boulevard East Trail.	● Minimal impact to Lake Shore Boulevard East Trail.	

EVALUATION OF ALTERNATIVE SOLUTIONS - SUB AREA 2: ALTERNATIVES EAST OF CARLAW AND WEST OF LESLIE

OBJECTIVE	CRITERIA	DESCRIPTION	MEASURE	DO NOTHING	2-A WINNIFRED	2-B. CAROLINE	2-C. LARCHMOUNT	2-D.1 ONE-WAY PAIR (CAROLINE and LARCHMOUNT)	2-D.2 ONE-WAY PAIR (CAROLINE and WINNIFRED)	2-E. PAPE	
LEVERAGE ASSETS	Compatibility with the natural environment.	Does the alternative create an opportunity to enhance natural heritage and terrestrial resources (existing and planned) and improve opportunities for biodiversity through understory and tree planting?	25 Opportunities for net environmental gains.	NA No existing environmental features. No opportunities for net environmental gains.	NA No existing environmental features. No opportunities for net environmental gains.	NA No existing environmental features. No opportunities for net environmental gains.	NA No existing environmental features. No opportunities for net environmental gains.	NA No existing environmental features. No opportunities for net environmental gains.	NA No existing environmental features. No opportunities for net environmental gains.	NA No existing environmental features. No opportunities for net environmental gains.	
		Is there potential for temporary or permanent impacts to natural heritage and terrestrial resources (existing and planned)?	26 Nature and extent of potential impacts.	● No potential impacts to natural or heritage resources.	● No potential impacts to natural or heritage resources.	● No potential impacts to natural or heritage resources.	● No potential impacts to natural or heritage resources.	● No potential impacts to natural or heritage resources.	● No potential impacts to natural or heritage resources.	● No potential impacts to natural or heritage resources.	● No potential impacts to natural or heritage resources.
		Is there potential for adverse effects to water quality aquatic species?	27 Minimizes the potential for an adverse effect on water quality and aquatic species.	● No anticipated impacts identified.	● No anticipated impacts identified.	● No anticipated impacts identified.	● No anticipated impacts identified.	● No anticipated impacts identified.	● No anticipated impacts identified.	● No anticipated impacts identified.	● No anticipated impacts identified.
		Are there any impacts to groundwater?	28 Impacts or improvements to groundwater.	● No anticipated impacts identified.	● No anticipated impacts identified.	● No anticipated impacts identified.	● No anticipated impacts identified.	● No anticipated impacts identified.	● No anticipated impacts identified.	● No anticipated impacts identified.	● No anticipated impacts identified.
	Visual connections.	Does the alternative provide visual connections to the study area's assets and important features?	29 Nature of any visual connections.	● No visual connections.	● Alignment creates an axial view to the Turning Basin 'Blue Square' and across the Ship Channel, south of Lake Shore.	● Alignment creates a visual connection to the Turning Basin 'and across the Ship Channel.	● Alignment provides an oblique view of the heritage resource north of Lake Shore.	● Alignment creates a visual connection to the Turning Basin 'and across the Ship Channel.	● Alignment creates an axial view to the Turning Basin 'Blue Square' and across the Ship Channel, south of Lake Shore.	● Alignment creates an axial view to the Turning Basin 'Blue Square' and across the Ship Channel, south of Lake Shore.	
DEVELOP A HIGH QUALITY PUBLIC REALM	Complete street principles and street character.	Can the alternative achieve the complete street principles established and the desired street character?	30 Ability to achieve the complete street principles and desired street character.	● Complete street principles and desired street character is not achievable.	● Complete street principles are attainable. ROW provides an enhanced pedestrian environment and cycling facilities alongside multi-modal vehicular access.	● Complete street principles are attainable. ROW provides an enhanced pedestrian environment and cycling facilities alongside multi-modal vehicular access.	● Complete street principles are attainable. ROW provides an enhanced pedestrian environment and cycling facilities alongside multi-modal vehicular access.	● Complete street principles are attainable. ROW provides an enhanced pedestrian environment and cycling facilities but limited opportunity for stormwater integration and great trees.	● Complete street principles are attainable. ROW provides an enhanced pedestrian environment and cycling facilities but limited opportunity for stormwater integration and great trees.	● Complete street principles achievable for majority of alternative. Tight spacing between the Subaru dealership and Revival studios may limit the ability to achieve continuous wide pedestrian clearways and separate cycle tracks.	
	Cycling routes.	Does the alternative provide for safe and continuous cycling routes?	31 Linear km of new, physically separated, continuous, high-quality cycling track.	● No new cycling track provided.	● 0.6km of continuous cycle track is provided.	● 0.6km of continuous cycle track is provided.	● 0.6km of continuous cycle track is provided.	● 1.2 km of continuous cycle track provided, however, provides the same functionality as typical two way cycle track.	● 1.2 km of continuous cycle track provided, however, provides the same functionality as typical two way cycle track.	● Potential for 0.8km of continuous cycle track however spacing may be difficult between the existing Subaru dealership and Revival studios to achieve continuous width/route without impacting the existing Subaru dealership.	
			32 Completes or provides linkages to existing/future cycling network.	● While there is an existing connection to Logan at Queen, no new opportunities for cycling facilities are provided for access areas to south in the Port Lands.	● Dedicated facilities accommodated in ROW width and ability to connect to Jones with contra flow lanes north of Eastern and travel on Queen for approximately 290 metres. Provides additional access to Lake Shore trail and proposed cycling facilities on Commissioners Street and Eastern Avenue.	● Dedicated facilities accommodated in ROW width and ability to connect to Jones with contra flow lanes north of Eastern and travel on Queen for approximately 210 metres. Provides additional access to Lake Shore trail and proposed cycling facilities on Commissioners Street and Eastern Avenue.	● Dedicated facilities accommodated in ROW width and ability to connect to Jones with contra flow lanes north of Eastern and travel on Queen for approximately 125 metres. Provides additional access to Lake Shore trail and proposed cycling facilities on Commissioners Street and Eastern Avenue. Close proximity to Logan.	● One way pairs result in two closely located intersections with Lake Shore Blvd. As these intersections provide access to, from, and across Lake Shore, signal control will be required. Geometry and efficiency of intersections complicated by close spacing. More difficult to accommodate dedicated cycling (phasing time require lane designations).	● One way pairs result in two closely located intersections with Lake Shore Blvd. As these intersections provide access to, from, and across Lake Shore, signal control will be required. Geometry and efficiency of intersections complicated by close spacing. More difficult to accommodate dedicated cycling (phasing time require lane designations).	● Dedicated facilities accommodated in ROW width and ability to connect to Jones with contra flow lanes north of Eastern and travel on Queen for approximately 410 metres. Provides additional access to Lake Shore trail and proposed cycling facilities on Commissioners Street and Eastern Avenue.	
	Place-making opportunities.	Does the alternative provide opportunities for place-making or creating unique opportunities?	33 Alternative terminates at a place.	● Maintains existing condition resulting in no opportunities for place-making.	● New street terminates at the Turning Basin 'blue square' park.	● New street terminates at the Turning Basin 'blue square' park.	● No substantive opportunities. Provides new frontage for a potential heritage resource.	● New street terminates at the Turning Basin 'blue square' park but provides access to only some users.	● New street terminates at the Turning Basin 'blue square' park but provides access to only some users.	● New street terminates at the Turning Basin 'blue square' park.	
			34 Water as a feature.	● Maintains existing condition resulting in no opportunities for interaction with water.	● Opportunity within the new street ROW to use storm water to grow great trees. Street alignment provides direct access to Turning Basin.	● Opportunity within the new street ROW to use storm water to grow great trees. Street alignment provides direct access to Turning Basin.	● Opportunity within the new street ROW to use storm water to grow great trees.	● Opportunity within the new street ROW to use storm water to grow great trees and Caroline would terminate at the Turning Basin.	● Opportunity within the new street ROW to use storm water to grow great trees and Caroline would terminate at the Turning Basin.	● Opportunity within the new street ROW to use storm water to grow great trees. Street alignment provides direct access to Turning Basin 'Blue Square' and Ship Channel.	

EVALUATION OF ALTERNATIVE SOLUTIONS - SUB AREA 2: ALTERNATIVES EAST OF CARLAW AND WEST OF LESLIE

OBJECTIVE	CRITERIA	DESCRIPTION	MEASURE	DO NOTHING	2-A WINNIFRED	2-B. CAROLINE	2-C. LARCHMOUNT	2-D.1 ONE-WAY PAIR (CAROLINE and LARCHMOUNT)	2-D.2 ONE-WAY PAIR (CAROLINE and WINNIFRED)	2-E. PAPE
DEVELOP A HIGH QUALITY PUBLIC REALM	Health and safety.	Does the alternative have the potential to improve existing unsafe conditions?	35 Improves existing unsafe conditions and maintains minimum design standards and criteria.	● Potential for increased curb cuts along Eastern and Lake Shore resulting in additional pedestrian/vehicular conflicts.	● Introduction of new full moves intersection at Eastern, Lake Shore, and Commissioners will increase potential for turning movement collisions. These are mitigated through appropriate control and design. There is an increased risk to health and safety for cyclists using the Lake Shore East Trail as there is a need to cross new street. Design criteria for structures and roadway can be met.	● Introduction of new full moves intersection at Eastern, Lake Shore, and Commissioners will increase potential for turning movement collisions. These are mitigated through appropriate control and design. There is an increased risk to health and safety for cyclists using the Lake Shore East Trail as there is a need to cross new street. Design criteria for structures and roadway can be met.	● Introduction of new full moves intersection at Eastern, Lake Shore, and Commissioners will increase potential for turning movement collisions. These are mitigated through appropriate control and design. There is an increased risk to health and safety for cyclists using the Lake Shore East Trail as there is a need to cross new street. Design criteria for structures and roadway can be met.	● One-way pairs introduce multiple partial movement intersections at Eastern, Lake Shore, and Commissioners will increase potential for turning movement collisions. These are mitigated through appropriate control and design. Frequency of intersection and turning movements not optimal or desirable. There is an increased risk to health and safety for cyclists using the Lake Shore East Trail as there is a need to cross new street. Design criteria for structures and roadway can be met. Insufficient spacing for signal control on Lake Shore.	● One-way pairs introduce multiple partial movement intersections at Eastern, Lake Shore, and Commissioners will increase potential for turning movement collisions. These are mitigated through appropriate control and design. Frequency of intersection and turning movements not optimal or desirable. There is an increased risk to health and safety for cyclists using the Lake Shore East Trail as there is a need to cross new street. Design criteria for structures and roadway can be met. Insufficient spacing for signal control on Lake Shore.	● Geometry of alignment close to Eastern potential to impact sight lines. Provides limited opportunity to service new development requiring increased curb cuts and potential for pedestrian/vehicular conflicts. Introduction of new full moves intersection at Eastern, Lake Shore, and Commissioners will increase potential for turning movement collisions. These are mitigated through appropriate control and design. There is an increased risk to health and safety for cyclists using the Lake Shore East Trail as there is a need to cross new street. Design criteria for structures and roadway can generally be met. Geometry of intersection at Eastern. Spacing distance on Lake Shore not optimal.
CONTRIBUTE TO THE SUSTAINABLE FUTURE OF THE CITY	Opportunities for innovation.	Can innovative features be accommodated in the design of the alternative?	36 Ability to provide innovative features in the design of the alternative.	● No opportunities for innovation.	● Ability to accommodate dedicated film parking and infrastructure.	● Ability to accommodate dedicated film parking and infrastructure.	● Ability to accommodate dedicated film parking and infrastructure.	● Ability to accommodate dedicated film parking and infrastructure.	● Ability to accommodate dedicated film parking and infrastructure.	● Ability to accommodate dedicated film parking and infrastructure if full ROW can be achieved between the existing buildings.
	Transit accommodation.	How easily can dedicated transit, or where appropriate surface transit routes in mixed traffic, be accommodated?	37 Ability to, and implications of, connecting with adjacent transit network.	● No potential for additional connections.	● Two-way 23m ROW has the ability to accommodate surface transit subject to ensuring 3.3 metre lane widths per the City's Vehicle Travel Lane Width Guidelines.	● Two-way 23m ROW has the ability to accommodate surface transit subject to ensuring 3.3 metre lane widths per the City's Vehicle Travel Lane Width Guidelines.	● Two-way 23m ROW has the ability to accommodate surface transit subject to ensuring 3.3 metre lane widths per the City's Vehicle Travel Lane Width Guidelines.	● Narrow one-way streets more challenging to accommodate bus service. Spacing would preclude both streets being signalized limiting opportunities for routes to/from the Port Lands.	● Narrow one-way streets more challenging to accommodate bus service. Spacing would preclude both streets being signalized limiting opportunities for routes to/from the Port Lands.	● Two-way 23m ROW has the ability to accommodate surface transit subject to ensuring 3.3 metre lane widths per the City's Vehicle Travel Lane Width Guidelines. Geometry challenging.
		Is transit service optimally located to serve future land use and maximize ridership potential?	38 Is transit service optimally located?	● No potential for additional connections.	● Potential for alternative bus routes to serve residential uses.	● Potential for alternative bus routes to serve residential uses.	● Potential for alternative bus routes to serve residential uses.	● Limited potential for alternative bus routes due to ROW width.	● Limited potential for alternative bus routes due to ROW width.	● Ability to accommodate bus route, however, service is in close proximity to existing route on Carlaw Avenue and would provide limited benefit.
	Flood risk potential.	Would the alternative potentially create a flood risk potential? Can flood risk potential be mitigated through design?	39 Flood risk potential created and ability to mitigate flood risk.	NA Not applicable.	NA Not applicable.	NA Not applicable.	NA Not applicable.	NA Not applicable.	NA Not applicable.	NA Not applicable.
	Noise and air quality.	Does the alternative contribute to improved noise and air quality conditions?	40 Improved noise and air quality conditions.	● Potential to impact noise and air quality as additional congestion anticipated.	● Typical noise levels of an urbanized environment anticipated during peak periods. No existing or planned residential uses in close proximity.	● Typical noise levels of an urbanized environment anticipated during peak periods. No existing or planned residential uses in close proximity.	● Typical noise levels of an urbanized environment anticipated during peak periods. No existing or planned residential uses in close proximity.	● Typical noise levels of an urbanized environment anticipated during peak periods. No existing or planned residential uses in close proximity.	● Typical noise levels of an urbanized environment anticipated during peak periods. No existing or planned residential uses in close proximity.	● Typical noise levels of an urbanized environment anticipated during peak periods. No existing or planned residential uses in close proximity.
	Resiliency and climate change.	Can the alternative be designed for maximum longevity and reduced greenhouse gas emissions?	41 Promotes reduction of greenhouse gas (e.g. through LID, minimizing pumping stations or potential to reduce congestion points).	● No contribution to resiliency or climate change.	● Improves multi-modal transportation and reduces congestion.	● Improves multi-modal transportation and reduces congestion.	● Improves multi-modal transportation and reduces congestion.	● Improves multi-modal transportation and reduces congestion.	● Improves multi-modal transportation and reduces congestion.	● Improves multi-modal transportation and reduces congestion.
IMPLEMENTATION	Compatibility with City, provincial planning policies and Waterfront Toronto/TRCA Framework standards.	Does the alternative support achieving City planning policies?	42 Supports the growth intention of the Official Plan, Central Waterfront Secondary Plan and precinct plans.	● Provides no new connections, does not divide larger sites into smaller blocks, does not provide access and address, does not provide access for emergency vehicles.	● Provides connections, divides larger sites into smaller development blocks, provides access and address, partial improvements to the visibility, access and prominence of unique human-made features, provides access for emergency vehicles.	● Provides connections, divides larger sites into smaller development blocks, provides access and address, improves the visibility, access and prominence of unique features human-made features, provides access for emergency vehicles.	● Provides connections, access and address, improves the visibility of heritage resources.	● Provides connections, divides larger sites into smaller development blocks, provides access and address although limited to one-way, improves the visibility, access and prominence of unique human-made features, potential constraints for emergency access.	● Provides connections, divides larger sites into smaller development blocks, provides access and address although limited to one-way, improves the visibility, access and prominence of unique human-made features, potential constraints for emergency access.	● Does not divide larger sites into smaller blocks, does not provide access and address north of Lake Shore.
		Does the alternative address Waterfront Toronto/TRCA objectives/frameworks?	43 Supports addressing Waterfront Toronto/TRCA objectives /frameworks.	● Does not support Waterfront Toronto/TRCA objectives	● Multi-modal street supports active transportation and improves connectivity. Ability to incorporate green infrastructure.	● Multi-modal street supports active transportation and improves connectivity. Ability to incorporate green infrastructure.	● Multi-modal street supports active transportation and improves connectivity. Ability to incorporate green infrastructure.	● Multi-modal streets supports active transportation and improves connectivity. Ability to incorporate green infrastructure.	● Multi-modal streets supports active transportation and improves connectivity. Ability to incorporate green infrastructure.	● Multi-modal street supports active transportation and improves connectivity. Ability to incorporate green infrastructure.

EVALUATION OF ALTERNATIVE SOLUTIONS - SUB AREA 2: ALTERNATIVES EAST OF CARLAW AND WEST OF LESLIE

OBJECTIVE	CRITERIA	DESCRIPTION	MEASURE	DO NOTHING	2-A WINNIFRED	2-B. CAROLINE	2-C. LARCHMOUNT	2-D.1 ONE-WAY PAIR (CAROLINE and LARCHMOUNT)	2-D.2 ONE-WAY PAIR (CAROLINE and WINNIFRED)	2-E. PAPE	
IMPLEMENTATION	Compatibility with City, provincial planning policies and Waterfront Toronto Framework standards.	Does the alternative support achieving provincial planning policies and guidelines?	44 Supports achieving provincial planning policies and guidelines.	● Does not support opportunities for providing multi-modal use. Does not facilitate improved linkages from nearby neighbourhoods to intensification areas.	● Promotes more compact urban form, promotes the use of active transportation in and between residential and employment (including commercial and industrial) areas and promotes green infrastructure to complement infrastructure.	● Promotes more compact urban form, promotes the use of active transportation in and between residential and employment (including commercial and industrial) areas and promotes green infrastructure to complement infrastructure.	● Promotes the use of active transportation in and between residential and employment (including commercial and industrial) areas and promotes green infrastructure to complement infrastructure.	● Promotes more compact urban form, promotes the use of active transportation in and between residential and employment (including commercial and industrial) areas and promotes green infrastructure to complement infrastructure.	● Promotes more compact urban form, promotes the use of active transportation in and between residential and employment (including commercial and industrial) areas and promotes green infrastructure to complement infrastructure.	● Promotes the use of active transportation in and between residential and employment (including commercial and industrial) areas and promotes green infrastructure to complement infrastructure.	
	Consistency with approved area Environmental Assessments.	Does the alternative impact approved Environment Assessment projects?	45 Extent and nature of impacts on planned infrastructure with approved Environmental Assessments.	NA Not applicable.	NA Not applicable.	NA Not applicable.	NA Not applicable.	NA Not applicable.	NA Not applicable.	NA Not applicable.	
	Engineering feasibility and construction cost.	Is the alternative possible to construct and what are the key technical challenges?	46 Key technical challenges.	● No new construction and as such no key technical challenges.	● No major technical challenges.	● Intersection design at Lake Shore will bypass physical constraints. Major technical challenges will arise from soil contamination in the area of the proposed extension between Eastern and Lake Shore Boulevard.	● Intersection spacing on Lake Shore.	● Intersection spacing on Lake Shore.	● No major technical challenges.	● Intersection spacing on Lake Shore.	● Intersection spacing on Lake Shore not optimal, but some potential subject to modifications to Lake Shore.
		Is the alternative cost effective to build?	47 Initial construction costs, excluding property, decontamination, and utilities.	● No construction required.	● Total estimated \$10.0M	● Total estimated \$10.0M	● Total estimated \$10.0M excluding reconfiguration of Lake Shore.	● Total estimated \$12.0M	● Total estimated \$12.0M	● Total estimated \$10.0M	
		Can the alternative be phased to offset initial costs and provide infrastructure in lock-step with development?	48 Ability to phase implementation and adapt to changes in phasing and timing of development.	● No new construction and no requirement to phase.	● Alternative can be phased to meet needs of development (i.e. brought on line as such time as capacity needed). However requires consideration and timing for the relocation of existing city serving uses.	● Alternative can be phased to meet needs of development (i.e. brought on line as such time as capacity needed).	● Alternative can be phased to meet needs of development (i.e. brought on line as such time as capacity needed).	● Alternative can be phased to meet needs of development (i.e. brought on line as such time as capacity needed).	● Alternative can be phased to meet needs of development (i.e. brought on line as such time as capacity needed).	● Alternative can be phased to meet needs of development (i.e. brought on line as such time as capacity needed).	● Alternative can be phased to meet the needs of development, however, more challenging to deliver due to existing property constraints.
		Is it possible to protect for future expansion and extension?	49 Adaptability to future land use changes and intensification.	● Limited ability to adapt to future land use changes and intensification.	● Good ability to adapt to future land use changes and intensification. ROW width provides some flexibility for reconfiguring ROW to accommodate changes in land use patterns.	● Good ability to adapt to future land use changes and intensification. ROW width provides some flexibility for reconfiguring ROW to accommodate changes in land use patterns.	● Good ability to adapt to future land use changes and intensification. ROW width provides some flexibility for reconfiguring ROW to accommodate changes in land use patterns.	● Good ability to adapt to future land use changes and intensification. ROW width provides some flexibility for reconfiguring ROW to accommodate changes in land use patterns.	● Good ability to adapt to future land use changes and intensification. ROW width provides some flexibility for reconfiguring ROW to accommodate changes in land use patterns.	● Limited ability to adapt to future land use changes and intensification. Location of street and existing development to remain restricts adaptability.	
		Existing municipal infrastructure and utilities.	Are there potential conflicts with existing utilities or challenges in re-location (temporary or permanent)?	50 Extent and nature of utility impacts.	● No impacts to utilities.	● No record of public utilities in this area.	● No record of public utilities in this area.	● No record of public utilities in this area.	● No record of public utilities in this area.	● No record of public utilities in this area.	● No record of public utilities in this area.
	Would the alternative have an impact on existing municipal infrastructure to remain?		51 Nature and extent of potential impacts.	● No impacts to municipal infrastructure.	● No record of existing municipal infrastructure in this area.	● No record of existing municipal infrastructure in this area.	● Existing stormwater sewer, but no impacts due to depth of the sewer.	● No record of existing municipal infrastructure in this area.	● No record of existing municipal infrastructure in this area.	● No record of existing municipal infrastructure in this area.	
	Property acquisition costs.	How many private properties will be impacted or need to be acquired to support the alternative?	52 Approximate number of hectares of privately owned lands required to be acquired with existing development anticipated to remain.	● No private properties impacted.	● Approximately 9,000m ² of privately owned land and long-term leased land with development anticipated to remain is required.	● Approximately 5,000m ² of privately owned land is impacted. No existing development to remain impacted and supports redevelopment of the 629 Eastern site. Lands south of the Ship Channel are city-owned.	● Approximately 4,500m ² of privately owned land is impacted. No existing development anticipated to remain is impacted. Southern portion of the ROW has impacts on buildings located on municipally owned lands.	● Approximately 6,900m ² of private land impacted but generally limited number of private property owners affected. Impacts to buildings currently occupied or planned for film-related uses.	● Approximately 10,100m ² of private land and long-term leased land with existing development anticipated to remain impacted.	● Approximately 9,300m ² of private land and long-term leased land with development to remain impacted.	
	Maintenance and operations.	How much effort is required for maintaining and operating the alternative?	53 Level of maintenance required.	● Maintains existing condition. No effort.	● Low or typical maintenance effort or no additional maintenance required. Please note that integrating LID measures into the road networks may result in non-typical maintenance and operational requirements, which the City does not currently have practices for.	● Low or typical maintenance effort or no additional maintenance required. Please note that integrating LID measures into the road networks may result in non-typical maintenance and operational requirements, which the City does not currently have practices for.	● Low or typical maintenance effort or no additional maintenance required. Please note that integrating LID measures into the road networks may result in non-typical maintenance and operational requirements, which the City does not currently have practices for.	● Requires the maintenance of two streets. Please note that integrating LID measures into the road networks may result in non-typical maintenance and operational requirements, which the City does not currently have practices for.	● Requires the maintenance of two streets. Please note that integrating LID measures into the road networks may result in non-typical maintenance and operational requirements, which the City does not currently have practices for.	● Low or typical maintenance effort or no additional maintenance required. Please note that integrating LID measures into the road networks may result in non-typical maintenance and operational requirements, which the City does not currently have practices for.	

EVALUATION OF ALTERNATIVE SOLUTIONS - SUB AREA 3: SHIP CHANNEL CONNECTIONS

OBJECTIVE	CRITERIA	DESCRIPTION	MEASURE	3-A. WIDEN CHERRY	3-B. DON ROADWAY	3-C. BROADVIEW	3-D. WIDEN LESLIE				
CREATING AN INTERESTING AND DYNAMIC URBAN MIX	Creation of new, vibrant mixed use communities and employment areas.	Does the alternative facilitate vibrant neighbourhoods and employment areas?	1 Vibrant new neighbourhoods/employment growth.	●	Widening and expanding the vehicle area of the street impacts the character and scale of the pedestrian and cycling environment south of the planned river valley, creates longer pedestrian crossing distances and limits the ability to achieve a vibrant, animated pedestrian environment.	●	Supports the anticipated mix of uses and connects to the Don Roadway as planned north of the Ship Channel. Facilitates employment growth south of the Ship Channel and provides access and frontage for the planned Don Greenway. Establishes an enhanced pedestrian and cycling environment.	●	Supports the anticipated mix of uses and facilitates employment growth south of the Ship Channel. Provides access and frontage for the Hearn, including the opportunity to create a suitably scaled forecourt to the building which could be used for public gatherings. Establishes an enhanced pedestrian and cycling environment.	●	Supports the anticipated mix of uses, but widening the vehicular portion of the street limits the character and scale of the desired pedestrian and cycling environment of an important city-wide gateway to the Leslie Spit/Tommy Thompson Park.
		Are viable development blocks created?	2 Viable development blocks.	●	Widening the planned ROW of Cherry in the Lower Don Lands reduces the size of the development blocks adjacent to the street. Precinct planning could address. South of the Ship Channel lot depths are currently limited adjacent to the street, widening would further limit developability of these blocks. Maintains large, contiguous tracts of land south of Ship Channel to support port and employment uses.	●	Provides large tracts of contiguous land adjacent to the dockwall to support port and employment uses.	●	Provides large tracts of contiguous land south of Ship Channel to support port and employment uses.	●	Existing ROW width is maintained with park and open space proposed adjacent to the street. No change to the size and configuration of development blocks in the vicinity of the alternative.
	Necessary vehicular capacity to support the anticipated mix of uses in the Port Lands and South of Eastern area while minimizing rights-of-way widths.	Can the alternative provide the necessary vehicular capacity and municipal services needed to support development?	3 Necessary capacity is provided while minimizing ROW widths and providing pedestrian and cycling amenities.	●	Sufficient vehicular capacity is achievable through expanded vehicular area, reduced pedestrian enhancements and expansion or replacement of the existing bascule bridge.	●	Sufficient vehicular capacity is achieved while providing for enhanced multi-modal functions.	●	Sufficient vehicular capacity is achieved while providing for enhanced multi-modal functions.	●	Sufficient vehicular capacity is achieved while providing for multi-modal functions.
		Will vehicular rights-of-ways be minimized while creating a high quality pedestrian environment?	4 Percentage of ROW dedicated to active transportation.	●	56% dedicated to active transportation.	●	67% dedicated to active transportation.	●	70% dedicated to active transportation.	●	48% dedicated to active transportation.
	Existing/planned neighbourhoods.	Does the alternative provide opportunities for improvements for existing neighbourhoods?	5 Opportunities for improvement.	●	Limited opportunities for improvements for existing neighbourhoods. Maintains the existing crossing to recreational uses south of the Ship Channel, reduces the space for pedestrians and cyclists and changes the planned character of the street in the Lower Don Lands.	●	Although alignment of street provides opportunity to connect to existing neighborhoods, it is not direct and requires out of way travel and provision of other supporting linkages. With connection to DVP maintained connection to existing neighbourhoods limited by operation of on/off ramps.	●	Connection is centrally located within the study area, providing better spacing and access to recreational amenity and potential destinations.	●	Opportunities to extend cycling lanes / improve sidewalks north of Lake Shore Blvd limited.
		Does the alternative minimize potential impacts to existing and planned neighbourhoods?	6 Number of existing residential units potentially displaced.	N/A	Not applicable.	N/A	Not applicable.	N/A	Not applicable.	N/A	Not applicable.
			7 Likelihood of non-local traffic in residential area and ability to manage traffic infiltration.	●	Some likelihood of infiltration through planned mixed-use areas in the Lower Don Lands due to the need to increase reliance on the existing crossing and potential for congestion.	●	Minimal infiltration expected with the provision of new connection providing redundancy in the network.	●	Minimal infiltration expected infiltration with the provision of new connection providing redundancy in the network.	●	Some likelihood of infiltration through neighbourhood north of Lake Shore Boulevard due to increased reliance on existing Leslie and potential congestion resulting in diversion north of Lake Shore.
	Existing businesses and industry and opportunities for new businesses and industry.	Is there potential for impacts to businesses and industry, such as displacement or reductions in parking?	8 Displacement of businesses and industry.	●	Widening has the potential to impact access to the Lafarge Polson Street terminal and would have some limited impact to the existing long-term lease south of the Ship Channel adjacent to Cherry Street.	●	Alignment bisects existing salt operation on short-term lease. No buildings displaced.	●	Alignment bisects vacant lands.	●	Alignment does not change the existing width of the ROW. No businesses or industry displaced.
		Does the alternative support the establishment of new businesses and industry?	9 Access to infrastructure.	●	Maintains existing dockwall for port usage, but does not introduce new connections which has some limitations for the establishment of new businesses and industry south of the Ship Channel.	●	Crossing provides improved access to existing and new businesses/industry on the south side of the Ship Channel and provides 775 metres of dockwall for port usage with good spacing between lift bridges (approximately 720m).	●	Crossing provides improved access for existing and new businesses on the south side of the Ship Channel and provides/creates approximately 900 metres of dockwall for port usage with excellent spacing between lift bridges (approximately 1,135m).	●	Maintains existing access which has limitations for the establishment of new businesses and industry south of the Ship Channel. Maintains existing dockwall for port usage.
		Does the alternative support dedicated truck routes and goods movement?	10 Facilitates dedicated truck routes to/from Lake Shore Boulevard and the DVP.	●	Continued reliance on Cherry Street as a goods movement corridor to and from the Port Lands. The alternative would not facilitate establishing dedicated truck routes that would bypass new mixed-use areas. Alternative does not provide redundancy for truck access in network and has the potential to result in less reliable access in terms of travel times.	●	Provides additional vehicular capacity to and from the Port Lands, with the potential to relieve congestion on potential dedicated truck routes that would bypass new mixed use areas north of the Ship Channel. Alternative provides redundancy for truck access in network and has the potential to result in improved travel times.	●	Provides additional vehicular capacity to and from the Port Lands, with the potential to relieve congestion on potential dedicated truck routes that would bypass new mixed use areas north of the Ship Channel. Alternative provides redundancy for truck access in network and has the potential to result in improved travel times.	●	Alternative provides enhanced capacity for goods movement to and from the Port Lands on Leslie Street for potential truck route that would bypass new mixed use areas. Alternative does not provide redundancy in the network but does have the potential to improve travel time reliability.

● VERY POOR ● POOR ● GOOD ● VERY GOOD

EVALUATION OF ALTERNATIVE SOLUTIONS - SUB AREA 3: SHIP CHANNEL CONNECTIONS

OBJECTIVE	CRITERIA	DESCRIPTION	MEASURE	3-A. WIDEN CHERRY	3-B. DON ROADWAY	3-C. BROADVIEW	3-D. WIDEN LESLIE	
CONNECT THE PORT LANDS TO THE CITY	Better connect the Port Lands with the South of Eastern area and the rest of the city.	Does the alternative better connect the area for all users and services?	11	Connectivity.	Maintains the existing connections across the Ship Channel, expands vehicular area and reduces pedestrian and cycling enhancements. Maintains existing spacing between crossings (2.4 kilometres).	New connection better connects the lands south of the Ship Channel for all users. Improves distance between crossings (0.7 kilometres from Cherry Street and 1.7 kilometres from Leslie).	Optimally located connection midpoint in the study area better connects the lands south of the Ship Channel. Improves distance between crossings (1.1 kilometres to Cherry and 1.3 kilometres to Leslie).	Maintains existing connections across the Ship Channel, expands vehicular area and reduces pedestrian and cycling enhancements. Maintains existing spacing between crossings (2.4 kilometres).
		Does the alternative provide the ability to achieve a fine-grained network of streets (local, secondary and major)?	12	Facilitates achieving an appropriate hierarchy and rhythm of public streets.	Limited ability to achieve a hierarchy of streets south of the Ship Channel.	Opportunity for a better distribution of streets south of the Ship Channel with opportunity to connect local east-west streets to service port and employment uses.	Creates an even distribution of streets with optimally spaced bridge centrally within the area and opportunity to connect local east-west streets to service port and employment uses.	Limited ability to achieve a hierarchy of streets south of the Ship Channel.
		Does the alternative provide enhanced connections to major destinations for all modes?	13	Enhanced direct connections to destinations.	Maintains existing connections and does not introduce new connections to improve walking/cycling distance to major destinations.	Enhances direct connections, for all modes, to the Don Greenway and recreational areas south of the Ship Channel. Improves walking/cycling distances to some destinations in combination with the planned Don Roadway north of the Ship Channel - recreational area south of the Ship Channel, linkage between Martin Goodman Trail to the Lake Shore East Trail and allows for improved walking/cycling distance to a potential destination at the Hearn over current conditions.	Significantly increases direct connections, for all modes in combination with a Broadview extension north of the Ship Channel, connecting the Danforth area to the Unilever precinct, to the McCleary Park and south to the Hearn and recreational areas south of the Ship Channel. Greatly improves walking/cycling distance to destinations - improved cycling and walking distances to recreational uses east and west of the connection, linkage between Martin Goodman Trail and Lake Shore East Trail, direct access to a potential destination at the Hearn.	Maintains existing connections and does not introduce new connections to improve walking/cycling distance to major destinations.
	Redundancy in the network.	Does the alternative contribute to redundancy in the network to allow for better access/service?	14	Redundancy in network.	Maintains existing crossing of the Ship Channel requiring increased reliance on the connection. Emergency access south of the Ship Channel would be constrained during periodic maintenance of the lift bridge or during periodic maintenance of Leslie Street.	New connection enables multiple routes for access to lands south of Ship Channel and would enable options for emergency access during periodic maintenance of lift bridges across the Ship Channel.	New connection enables multiple routes for access to lands south of Ship Channel and would enable options for emergency access during periodic maintenance of lift bridges across the Ship Channel.	Maintains existing access to lands south of Ship Channel requiring increased reliance on the connection. Emergency access south of the Ship Channel could be constrained if the existing Cherry Street crossing requires maintenance or during periodic maintenance of Leslie Street.
	Existing physical barriers.	Is the alternative impacted by physical barriers? i.e.: - rail (Harbour Lead Line, GO Line and active routes in the Port Lands - Lake Shore to Leslie to Unwin). - Existing over/underpasses - Existing on/off ramps or other Gardiner components - Ship Channel	15	Nature and extent of physical barriers.	Ship Channel is the only physical barrier requiring an expansion or new lift bridge to achieve the necessary right-of-way width and expanded vehicle area.	Ship Channel is the only physical barrier requiring a new lift bridge to achieve the connection.	Ship Channel is the only physical barrier requiring a new lift bridge to achieve the connection.	Reallocation of space within existing ROW width. No physical barriers to overcome.
	Opportunities for linking natural habitat and open spaces and improving biodiversity.	What opportunities does the alternative provide for direct linkages between natural habitat and existing/planned open spaces?	16	Opportunities to provide direct linkages between areas of natural habitat and/or open spaces.	No new opportunities for linking natural habitat and open spaces with the existing connection providing a linkage between the planned river valley and natural habitat/open spaces south of Ship Channel.	Maintains the existing connection at Cherry and introduces a new connection across the Ship Channel, providing a significant opportunity for linking planned greenways north and south of Ship Channel to natural habitat and open spaces south of Unwin Avenue.	Maintains the existing connection at Cherry and introduces a new connection across the Ship Channel. No natural habitat north of the Ship Channel, but opportunities for linking a patchwork of open spaces north of the Ship Channel to natural habitat and open spaces south of Unwin Avenue.	No new opportunities for linking natural habitat and open spaces. Maintains the existing connection at Cherry and existing linkage to Tommy Thompson Park.
		What opportunities does the alternative provide to contribute to urban biodiversity?	17	Urban biodiversity.	Limited potential to incorporate bioswales and establish a mature tree canopy with expanded vehicular area.	Potential to incorporate bioswales, understory planting, and establish a mature tree canopy within ROW and create a liminal linkage through ecology features integrated in the bridge design between existing and planned natural areas north and south of the Ship Channel.	Potential to incorporate bioswales, understory planting, and establish a mature tree canopy and establish a liminal linkage across the Ship Channel that connects a patchwork of parks and open spaces north and south of the Ship Channel.	Potential to incorporate bioswales, understory planting, and establish a mature tree canopy for an enhanced liminal linkage to Tommy Thompson Park.

EVALUATION OF ALTERNATIVE SOLUTIONS - SUB AREA 3: SHIP CHANNEL CONNECTIONS

OBJECTIVE	CRITERIA	DESCRIPTION	MEASURE	3-A. WIDEN CHERRY	3-B. DON ROADWAY	3-C. BROADVIEW	3-D. WIDEN LESLIE
LEVERAGE ASSETS	Cultural heritage resources.	Are there cultural heritage resources that might be affected by an alternative and what is the nature of the impact?	18 Nature and extent of potential impacts.	● Significant impact to the Strauss Trunion Bascule Bridge (BHR 10; Listed) through removal if replacement of the structure is required to accommodate expanded vehicular area. Replacement of the structure with a new bridge will also indirectly impact CHL 12 (Ship Channel). While permanent, this site-specific impact is of very low magnitude since the original bridging point across the channel will be retained.	● Site-specific, irreversible and permanent alteration of low magnitude to CHL 12 (Ship Channel) through the introduction of new bridge across the Ship Channel that is not in keeping with the historic fabric and appearance of the channel. Only one bridging point has crossed the channel since the 1930s (existing Cherry Street Bridge).	● Site-specific, irreversible and permanent alteration of low magnitude to CHL 12 (Ship Channel) through the introduction of new bridge across the Ship Channel that is not in keeping with the historic fabric and appearance of the channel. Only one bridging point has crossed the channel since the 1930s (existing Cherry Street Bridge).	● No cultural heritage resources impacted.
		Can any potential impacts be mitigated?	19 Ability to mitigate impacts.	● The preferred mitigation option is to preserve the existing bridge in-situ through redesign of alternative 3-A. Other potential mitigation options, in order of preference, would include: retention of existing bridge with sympathetic modifications; retention of existing bridge with sympathetically designed new structure in proximity; retention of existing bridge no longer in use for vehicle purposes but adapted for pedestrian walkways, cycle path, scenic viewing, etc.; relocation of bridge to appropriate new site for continued use or adaptive re-use; retention of bridge as heritage monument for viewing purposes only; replacement/removal of existing bridge with salvage elements/members of heritage bridge for incorporation into new structure or for future conservation work or displays; replacement/removal of existing bridge with full recording and documentation of the heritage bridge. If the existing bridge is removed, it should be commemorated. These conservation options are based on the Ontario Heritage Bridge Program (1991).	● Some potential to mitigate: Opportunity to design a new bridge that is sympathetic to the historical industrial setting of the area. For example, the Standards and Guidelines for the Conservation of Historic Places in Canada (2010) recommend the following design guideline, among others, in relation to new additions to CHLs: "Designing a new built feature, when required by a new use, to be compatible with the heritage value of the cultural landscape. For example, erecting a new [structure] using traditional form and materials..." Design, scale, massing and material fabric of any new structural feature should be sympathetic to the surrounding cultural heritage landscapes and built heritage resources, including the existing Cherry Street Bridge (BHR 10).	● Some potential to mitigate: Opportunity to design a new bridge that is sympathetic to the historical industrial setting of the area. For example, the Standards and Guidelines for the Conservation of Historic Places in Canada (2010) recommend the following design guideline, among others, in relation to new additions to CHLs: "Designing a new built feature, when required by a new use, to be compatible with the heritage value of the cultural landscape. For example, erecting a new [structure] using traditional form and materials..." Design, scale, massing and material fabric of any new structural feature should be sympathetic to the surrounding cultural heritage landscapes and built heritage resources, including the existing Cherry Street Bridge (BHR 10).	● No mitigation measures necessary.
		Are there opportunities that introducing new streets provide to frame and celebrate heritage resources?	20 Potential opportunities.	● No opportunities to frame or celebrate heritage resources.	● No opportunities to frame and celebrate heritage resources.	● Significant, unique opportunity to frame and celebrate the Hearn.	● No opportunities to frame and celebrate heritage resources.
	Archaeological resources and traditional uses of Aboriginal people.	Are there archaeological resources that might be affected by an alternative and what is the nature of the impact?	21 Nature and extent of potential impacts.	● Impacts LDP-4 (Sand Bar and Fisherman's Island Peninsula) in the Archaeological Conservation and Management Strategy (ACMS). Any subsurface disturbance associated with the construction of this alternative could potential impact soils or archaeological remains associated with these features. State of preservation of these features in the location of impact is unknown therefore the severity of impact cannot be determined in relative terms. Reconstructing/constructing the streets and connecting at Unwin Avenue would have the potential to disturb the Sand Bar and Fisherman's Island Peninsula.	● Impacts LDP-4 (Sand Bar and Fisherman's Island Peninsula) in the Archaeological Conservation and Management Strategy (ACMS). Any subsurface disturbance associated with the construction of this alternative could potential impact soils or archaeological remains associated with these features. State of preservation of these features in the location of impact is unknown therefore the severity of impact cannot be determined in relative terms. Reconstructing/constructing the streets and connecting at Unwin Avenue would have the potential to disturb the Sand Bar and Fisherman's Island Peninsula.	● Impacts LDP-4 (Sand Bar and Fisherman's Island Peninsula) in the Archaeological Conservation and Management Strategy (ACMS). Any subsurface disturbance associated with the construction of this alternative could potential impact soils or archaeological remains associated with these features. State of preservation of these features in the location of impact is unknown therefore the severity of impact cannot be determined in relative terms. Reconstructing/constructing the streets and connecting at Unwin Avenue would have the potential to disturb the Sand Bar and Fisherman's Island Peninsula.	● Impacts LDP-4 (Sand Bar and Fisherman's Island Peninsula) in the Archaeological Conservation and Management Strategy (ACMS). Any subsurface disturbance associated with the construction of this alternative could potential impact soils or archaeological remains associated with these features. State of preservation of these features in the location of impact is unknown therefore the severity of impact cannot be determined in relative terms. Reconstructing/constructing the streets and connecting at Unwin Avenue would have the potential to disturb the Sand Bar and Fisherman's Island Peninsula.
			22 Ability to mitigate.	● As per the ACMS, LDP 4 requires archaeological monitoring. A licensed archaeologist must be present to monitor the removal of topsoil for all areas indicated in order to document any archaeological resources which may be present.	● As per the ACMS, LDP 4 requires archaeological monitoring. A licensed archaeologist must be present to monitor the removal of topsoil for all areas indicated in order to document any archaeological resources which may be present.	● As per the ACMS, LDP 4 requires archaeological monitoring. A licensed archaeologist must be present to monitor the removal of topsoil for all areas indicated in order to document any archaeological resources which may be present.	● As per the ACMS, LDP 4 requires archaeological monitoring. A licensed archaeologist must be present to monitor the removal of topsoil for all areas indicated in order to document any archaeological resources which may be present.

EVALUATION OF ALTERNATIVE SOLUTIONS - SUB AREA 3: SHIP CHANNEL CONNECTIONS

OBJECTIVE	CRITERIA	DESCRIPTION	MEASURE	3-A. WIDEN CHERRY		3-B. DON ROADWAY		3-C. BROADVIEW		3-D. WIDEN LESLIE			
LEVERAGE ASSETS	Existing/planned parks and open spaces.	Does the alternative create an opportunity to enhance existing/planned parks and open spaces?	23	Opportunities to enhance.	●	Limited opportunity for an improved streetscape to enhance the gateway to Cherry Beach.	●	Opportunity for creating an enhanced streetscape adjacent to the planned Don Greenway. Ability for an iconic bridge and to extend public realm amenities across the Ship Channel in the design of the bridge.	●	Significant opportunity to create a forecourt to the Hearn and public gathering space of a scale that complements the Hearn. Ability for an iconic bridge and to extend public realm amenities across the Ship Channel in the design of the bridge.	●	Limited opportunity for an improved streetscape to provide enhanced landscaping to contribute to the proposed Leslie Pastoral gateway to Tommy Thompson Park.	
		Is there potential for temporary or permanent impacts to existing parks and open spaces?	24	Nature and extent of potential impacts.	●	No impacts to existing parks and open spaces.	●	No impacts to existing parks and open spaces.	●	No impacts to existing parks and open spaces.	●	No impacts to existing parks and open spaces.	
	Compatibility with the natural environment.	Does the alternative create an opportunity to enhance natural heritage and terrestrial resources (existing and planned) and improve opportunities for biodiversity through understory and tree planting?	25	Opportunities for net environmental gains.	NA	No existing environmental features. No opportunities for net environmental gains.	NA	No existing environmental features. No opportunities for net environmental gains.	NA	No existing environmental features. No opportunities for net environmental gains.	NA	No existing environmental features. No opportunities for net environmental gains.	
		Is there potential for temporary or permanent impacts to natural heritage and terrestrial resources (existing and planned)?	26	Nature and extent of potential impacts.	●	Widening the planned ROW in the Lower Don Lands has the potential to impact the amount of natural area and habitat planned for the new river valley in the vicinity of the street.	●	No anticipated impacts to natural heritage or terrestrial resources.	●	Minimal impacts with loss of existing vegetative cover. Potential impacts are considered minimal due to the limited ecological form and function that this area provides.	●	Expanded vehicular area and increased traffic in proximity to baselands increases potential for road kill.	
		Is there potential for adverse effects to water quality or aquatic species?	27	Minimizes the potential for an adverse effect on water quality and aquatic species.	●	Potential for aquatic impacts during construction of new or expanded bridge over Ship Channel.	●	Potential for aquatic impacts during construction of new bridge over Ship Channel.	●	Potential for aquatic impacts during construction of new bridge over Ship Channel.	●	No anticipated impacts.	
		Are there any impacts to groundwater?	28	Impacts or improvements to groundwater.	●	No effects on ground water expected.	●	No effects on ground water expected.	●	No effects on ground water expected.	●	No effects on ground water expected.	
	Visual connections.	Does the alternative provide visual connections to the study area's assets and important features?	29	Nature of any visual connections.	●	Maintains existing views - Sequence of views to and across the Ship Channel and views of the city skyline. Potential for impact to existing view corridor on Cherry if Strauss Trunion Bascule Bridge is altered or replaced.	●	Maintains existing views and introduces multiple new views corridor and vistas: - View of the Don Greenway; and - Sequence of views to and across the Ship Channel.	●	Maintains existing views and introduces multiple new view corridors and vistas: - Suspended between views of the Commissioners community hub stack and the Hearn stack; - Sequence of views to and across the Ship Channel.	●	Maintains existing views. Alignment of Leslie provides views south to natural vegetative cover of Tommy Thompson Park.	
	DEVELOP A HIGH QUALITY PUBLIC REALM	Complete street principles and street character.	Can the alternative achieve the complete street principles established and the desired street character?	30	Ability to achieve the complete street principles and desired street character.	●	Complete street principles are attainable subject to providing a new or expanded bridge. Character of the street is significantly impacted with the expanded vehicular area.	●	Complete street principles are attainable. Balance of uses within the ROW allows for multi-modal access while providing an enhanced pedestrian and cycling environment, access to transit and integration of storm water features.	●	Complete street principles are attainable. Balance of uses within the ROW allows for multi-modal access while providing an enhanced pedestrian and cycling environment, access to transit and integration of storm water features.	●	Complete street principles are attainable. Balance of uses within the ROW allows for multi-modal access while providing for some enhancements to pedestrian and cycling environment.
		Cycling routes.	Does the alternative provide for safe and continuous cycling routes?	31	Linear km of new, physically separated, continuous, high-quality cycling track.	●	No new cycling track provided. Maintains existing separated track.	●	0.4 km of continuous cycling track.	●	0.4 km of continuous cycling track.	●	No new cycling track facilities provided. Maintains existing separated track.
32				Completes or provides linkages to existing/future cycling network.	●	Provides additional cycling linkages across the Ship Channel connecting the Martin Goodman Trail with new cycling facilities north of the Ship Channel and to the existing Lower Don Recreational Trail. Future Cycling network is continuous for Cherry across bridge.	●	Provides additional cycling linkages across the Ship Channel connecting the Martin Goodman Trail with new cycling facilities north of the Ship Channel and to the existing Lake Shore East Trail.	●	Provides additional cycling linkages across the Ship Channel connecting the Martin Goodman Trail with new cycling facilities north of the Ship Channel and to the existing Lake Shore East Trail.	●	Widening or vehicular area constrains opportunities for enhancements to the existing Martin Goodman Trail along Leslie Street.	

EVALUATION OF ALTERNATIVE SOLUTIONS - SUB AREA 3: SHIP CHANNEL CONNECTIONS

OBJECTIVE	CRITERIA	DESCRIPTION	MEASURE	3-A. WIDEN CHERRY	3-B. DON ROADWAY	3-C. BROADVIEW	3-D. WIDEN LESLIE
DEVELOP A HIGH QUALITY PUBLIC REALM	Place-making opportunities.	Does the alternative provide opportunities for place-making or creating unique opportunities?	33 Place-making opportunities.	Removal of Bascule bridge due to widening of ROW is a significant loss to the quality and character of the public realm. Character of the street south of the river valley and the maritime hub gateway is impacted with expanded vehicular area.	Bridge itself has unique opportunity to be an ecological corridor. Further place-making opportunities include termination at major open space.	Bridge itself has unique opportunity to be a vibrant public place. Further place-making opportunities include potential for creating a forecourt to the Hearn and termination at Unwin Avenue and major open space.	Limited opportunities for place-making or creating unique opportunities. Expanded vehicular area minimizes opportunities for enhanced streetscaping associated with establishing a pastoral gateway.
		Does the alternative encourage everyday interaction with water or water based activities?	34 Water as a feature.	Some opportunity to celebrate water as a resource in the design of the street south of the Ship Channel. Potential to integrate storm water into the public realm and grow great trees.	Significant opportunity to celebrate water as a resource in the design of the street south of the Ship Channel. Potential to integrate storm water into the public realm and grow great trees.	With proximity to Turning Basin, significant opportunity to celebrate water as a resource in the design of the street south of the Ship Channel. Potential to integrate storm water into the public realm and grow great trees.	Limited visual and physical access to water. Good potential to integrate storm water into the public realm and grow great trees with improvements to the bailey bridge.
	Health and safety.	Does the alternative have the potential to improve existing unsafe conditions?	35 Improves existing unsafe conditions and maintains minimum design standards and criteria.	No existing unsafe conditions identified. Improvements do not result in any foreseeable unsafe conditions as design criteria for structures and roadway can be met.	No existing unsafe conditions identified. Improvements do not result in any foreseeable unsafe conditions as design criteria for structures and roadway can be met.	No existing unsafe conditions identified. Improvements do not result in any foreseeable unsafe conditions as design criteria for structures and roadway can be met. Geometric [horizontal and vertical alignment, i.e. roadway width, curvature and elevation] provisions will be challenging due to proximity of utilities, but can be managed through careful detailed design.	No existing unsafe conditions identified. Improvements do not result in any foreseeable unsafe conditions as design criteria for structures and roadway can be met.
CONTRIBUTE TO THE SUSTAINABLE FUTURE OF THE CITY	Opportunities for innovation.	Can innovative features be accommodated in the design of the alternative?	36 Ability to provide innovative features in the design of the alternative.	Replacement of the existing bascule bridge has the opportunity to integrate innovative features in a new bridge. Limited opportunity for innovation within the ROW due to space requirements required to accommodate vehicular traffic.	Opportunity to integrate innovative and ecological features into the bridge design and integrate storm water features within the public realm.	Opportunity to integrate innovative features in the design of the bridge and integrate storm water features within the public realm.	Limited opportunity for innovation within the reconfigured ROW. Some potential to integrate storm water within the public realm.
	Transit accommodation.	How easily can dedicated transit, or where appropriate surface transit routes in mixed traffic, be accommodated?	37 Ability to, and implications of, connecting with adjacent transit network.	Ability to connect to transit hub at new Cherry and Commissioners Street in Villiers Island. 42m ROW north of Ship Channel and 36m ROW south of the ship channel provide for 3.5m travel lanes, which are able to accommodate transit service in mixed traffic. Vehicle Travel Lane Width Guideline suggests at least 3.3m lanes where possible.	Ability to connect to streetcar in dedicated right-of-way at Commissioners Street and the Don Roadway. 26m ROW for the Lift Bridge and 35m ROW for the street provide for 3.5m curbside travel lanes, which are able to accommodate transit service in mixed traffic. Vehicle Travel Lane Width Guideline suggests at least 3.3m lanes where possible.	Ability to connect to a transit hub at Broadview extension and Commissioners Street. 26m ROW for the Lift Bridge and 35m ROW for the street provide for 3.5m curbside travel lanes, which are able to accommodate transit service in mixed traffic. Vehicle Travel Lane Width Guideline suggests at least 3.3m lanes where possible.	Ability to maintain and extend bus service in mixed traffic. 26.0m ROW can accommodate 3.5m curbside lane, which can support transit service in mixed traffic. Vehicle Travel Lane Width Guideline suggests at least 3.3m lanes where possible.
		Is transit service optimally located to serve future land use and maximize ridership potential?	38 Is transit service optimally located?	Transit service is oriented to the west side of the Don Greenway, leaving the Film District and points east outside of typically desired walking distance to service.	Transit service is oriented to the west side of the Port Lands, leaving much of the Film District and points east outside of typically desired walking distance to service.	Transit service is centrally located, providing maximum coverage of future development areas and minimizing walking distance.	Transit service is oriented to the east side of the Port Lands, leaving the Film District and points west outside of typically desired walking distance to service.
	Flood risk potential.	Would the alternative potentially create a flood risk potential? Can flood risk potential be mitigated through design?	39 Flood risk potential created and ability to mitigate flood risk.	Potential flood risk as the north end of the road is within the floodplain.	Potential flood risk as the north end of the road is within the floodplain.	No additional flood risk created.	No additional flood risk created.
	Noise and air quality.	Does the alternative contribute to improved noise and air quality conditions?	40 Improved noise and air quality conditions.	Typical noise levels in an urbanized environment anticipated during peak periods. No planned residential nearby. No anticipated improvements in existing air quality given anticipated increase in traffic volumes through the area.	Typical noise levels in an urbanized environment anticipated during peak periods. No planned residential nearby. No anticipated improvements in existing air quality given anticipated increase in traffic volumes through the area.	Typical noise levels in an urbanized environment anticipated during peak periods. No planned residential nearby. No anticipated improvements in existing air quality given anticipated increase in traffic volumes through the area.	Typical noise levels in an urbanized environment anticipated during peak periods. No planned residential nearby. No anticipated improvements in existing air quality given anticipated increase in traffic volumes through the area.
	Resiliency and climate change.	Can the alternative be designed for maximum longevity and reduced greenhouse gas emissions?	41 Promotes reduction of greenhouse gas and heat island effect [e.g. through LID, minimizing pumping stations or potential to reduce congestion points].	Increased demands will result in increased activity in Lower Don Lands and potential for increased congestion along the Cherry Street corridor. Increased paving with expanded vehicular area could contribute to heat island effect. Could be mitigated with high albedo surface materials.	Good distribution of connections has the potential to result in less congestion and delay. Minimal vehicular area minimizes heat island effect.	Enhanced distribution of connections within the Port Lands. Minimal vehicular area minimizes heat island effect.	Increased demands in Leslie corridor will result in increased activity in Leslie/Lake Shore area and potential for increased congestion along the corridor. Increased paving with expanded vehicular area could contribute to heat island effect. Could be mitigated with high albedo surface materials.

EVALUATION OF ALTERNATIVE SOLUTIONS - SUB AREA 3: SHIP CHANNEL CONNECTIONS

OBJECTIVE	CRITERIA	DESCRIPTION	MEASURE	3-A. WIDEN CHERRY	3-B. DON ROADWAY	3-C. BROADVIEW	3-D. WIDEN LESLIE					
IMPLEMENTATION	Compatibility with City, provincial planning policies and Waterfront Toronto/TRCA Framework standards.	Does the alternative support achieving City planning policies?	42	Supports the growth intention of the Official Plan, Central Waterfront Secondary Plan and precinct plans.	●	Impacts to significant cultural heritage resources, does not provide a new connection across the Ship Channel to better connect with the city.	●	Connection would be functional, thematic and symbolic in nature providing an ecological linkage between the Don Greenway north and south of the Ship Channel.	●	Connection would be functional, thematic and symbolic in nature providing address and access for the Hearn and in combination with the Broadview extension create a city-spine.	●	Connection is thematic in nature providing a pastoral gateway to Tommy Thompson Park, but does not provide a new connection across the Ship Channel to better connect with the city.
		Does the alternative address Waterfront Toronto/TRCA objectives/frameworks?	43	Supports addressing Waterfront Toronto/TRCA objectives/frameworks.	●	Impacts the planned character of Cherry Street north and south of the Ship Channel and limits the ability for a welcoming pedestrian environment. Does not create new linkages to the city.	●	Street layout that is welcoming and encourages walking and community interaction year-round. Supports active transportation within the Port Lands and links to major cycling routes. Limitations for connecting with the city as Don Roadway terminates at DVP.	●	Street layout that is welcoming and encourages walking and community interaction year-round. Creates enhanced active transportation linkages to major cycling routes and with the city.	●	Impacts the character of the street with the introduction of additional vehicular lanes. Does not create new linkages to the city.
		Does the alternative support achieving provincial planning policies and guidelines?	44	Supports achieving provincial planning policies and guidelines.	●	The long-term operation and economic role of marine facilities is protected. Potential impacts to a significant cultural heritage resource.	●	The long-term operation and economic role of marine facilities is protected with a new lift-bridge. Facilitates improved linkages to parks and open spaces.	●	The long-term operation and economic role of marine facilities is protected. Facilitates improved linkages to planned major destinations and intensification areas with a new lift-bridge.	●	The long-term operation and economic role of marine facilities is protected.
	Consistency with approved area Environmental Assessments.	Does the alternative impact approved Environment Assessment projects?	45	Extent and nature of impacts on planned infrastructure with approved Environmental Assessments.	●	Changes to the planned function and character of Cherry Street as identified in the Lower Don Lands EA.	●	No effects on approved EAs.	●	No effects on approved EAs.	●	No effects on approved EA's.
	Engineering feasibility and construction cost.	Is the alternative possible to construct and what are the key technical challenges?	46	Key technical challenges.	●	Potential replacement of existing Bascule Bridge requiring either a temporary reduction in access south of the Ship Channel or constructing a new bridge adjacent to the existing structure.	●	New bridge construction inherently has more technical challenges to accommodate safe approaches and desired land use, grading for water management and built form, and to accommodate desired modes. Preliminary analysis indicated feasibility.	●	New bridge construction inherently has more technical challenges to accommodate safe approaches and desired land use, grading for water management and built form, and to accommodate desired modes. Preliminary analysis indicated feasibility.	●	Reallocation of space within the existing ROW. No major technical challenges.
		Is the alternative cost effective to build?	47	Initial construction costs, excluding property, decontamination, and utilities.	●	Key structures/features with higher cost implications/considerations: - potential removal/relocation of existing Bascule bridge and a new four lane lift bridge; or - retention of existing bridge with a new structure constructed adjacent to the existing bridge. Preliminary construction cost estimates excluding key structures/features with higher cost implications/considerations: Roadway Costs = \$29.1M Structural Costs = \$23.7M Total Estimated Cost = \$52.8M LRT costs are assumed to be zero, as the LRT is only being protected for at this time.	●	Key structures/features with higher cost implications/considerations: - new lift bridge. Preliminary construction cost estimates excluding key structures/features with higher cost implications/considerations: Roadway Costs = \$17.6M Structural Costs = \$63.2M Total Estimated Cost = \$80.8M LRT costs are assumed to be zero, as the LRT is only being protected for at this time.	●	Key structures/features with higher cost implications/considerations: - new lift bridge; -Note that relocation of one Hydro One tower north of the Ship Channel is addressed in Sub Area 1 as is relocation of transformer station; Preliminary construction cost estimates excluding key structures/features with higher cost implications/considerations: Roadway Costs = \$9.6M Structural Costs = \$63.2M Total Estimated Cost = \$72.8M The relocation of the Basin Transmission Station is addressed in Sub-Area 1. LRT costs are assumed to be zero, as the LRT is only being protected for at this time.	●	No significant structure /features required in comparison to all other alternatives. Roadway Costs = \$22.7M Structural Costs = \$0 Total Estimated Cost = \$22.7M
		Can the alternative be phased to offset initial costs and provide infrastructure in lock-step with development?	48	Ability to phase implementation and adapt to changes in phasing and timing of development.	●	Alternative can be phased to meet needs of development (i.e. brought on line as such time as capacity needed).	●	Alternative can be phased to meet needs of development (i.e. brought on line as such time as capacity needed).	●	Alternative can be phased to meet needs of development (i.e. brought on line as such time as capacity needed).	●	Alternative can be phased to meet needs of development (i.e. brought on line as such time as capacity needed).
		Is it possible to protect for future expansion and extension?	49	Adaptability to future land use changes and intensification.	●	Widening of Leslie provides opportunity to adapt to future land use change by maximizing available capacity.	●	In bridge design, opportunity to protect for dedicated transit right-of-way to accommodate potential future land use changes and intensification requiring dedicated transit.	●	In bridge design, opportunity to protect dedicated transit right-of-way to accommodate potential future land use changes and intensification requiring dedicated transit.	●	Widening of Leslie provides opportunity to adapt to future land use change by maximizing available capacity.

EVALUATION OF ALTERNATIVE SOLUTIONS - SUB AREA 3: SHIP CHANNEL CONNECTIONS

OBJECTIVE	CRITERIA	DESCRIPTION	MEASURE	3-A. WIDEN CHERRY	3-B. DON ROADWAY	3-C. BROADVIEW	3-D. WIDEN LESLIE
IMPLEMENTATION	Existing municipal infrastructure and utilities.	Are there potential conflicts with existing utilities or challenges in re-location (temporary or permanent)?	50 Extent and nature of utility impacts.	● Range of typical utilities on Cherry street and including the existing Ship Channel crossing (e.g. local gas, Bell). No major conflicts anticipated since ROW will be widened and a new bridge will be required.	● No record of utilities potentially impacted.	● No record of utilities south of the Ship Channel in the vicinity of the alternative with the exception of a major, deep Enbridge Natural Gas pipeline east of the proposed alignment. No impacts are anticipated.	● Large Hydro One Vault underneath existing bike path may be impacted with road widening. Range of typical utilities on Leslie Street, including Hydro One infrastructure.
		Would the alternative have an impact on existing municipal infrastructure to remain?	51 Nature and extent of potential impacts.	● No municipal servicing to remain impacted.	● No municipal servicing to remain impacted.	● No municipal servicing to remain impacted.	● Water and sewer services in this alignment. No major conflicts anticipated with improvements.
	Property acquisition costs.	How many private properties will be impacted or need to be acquired to support the alternative?	52 Approximate number of hectares of privately owned lands required to be acquired with existing development anticipated to remain.	● Lands are municipally owned with some long-term leases that may be impacted. Requires federally owned bascule bridge to be transferred to the City.	● Lands are municipally-owned with only short-term leases currently occupying the lands. Requires federally owned bascule bridge to be transferred to the City.	● Requires provincially owned land to facilitate the connection (7850 m ²) and federally owned bascule bridge to be transferred to the City.	● Reconfiguration of existing municipal ROW and transfer of federally owned bascule bridge to the City.
	Maintenance and operations.	How much effort is required for maintaining and operating the alternative?	53 Level of maintenance required.	● High maintenance due to the need for maintaining a lift bridge to accommodate continued port activity, as well as preserving it as a heritage asset. Landscape bioswales/open channels are a maintenance consideration as the City does not have current practice for these.	● High maintenance due to the need of a lift bridge coupled with maintaining the existing lift bridge at Cherry Street to accommodate continued port activity. Landscape bioswales/open channels are a maintenance consideration as the City does not have current practice for these.	● High maintenance due to the need of a lift bridge coupled with maintaining the existing lift bridge at Cherry Street to accommodate continued port activity. Landscape bioswales/open channels are a maintenance consideration as the City does not have current practice for these.	● High maintenance associated with maintaining the lift bridge at Cherry Street, but low or typical maintenance associated with expanded vehicular area on Leslie as there is no major infrastructure additions. Landscape bioswales/open channels are a maintenance consideration as the City does not have current practice for these.

EVALUATION OF ALTERNATIVE SOLUTIONS - SUB AREA 4: EASTERN AVENUE

OBJECTIVE	CRITERIA	DESCRIPTION	MEASURE	4-A.1 DO NOTHING	4-A.2 CONSISTENTLY PROVIDE FOUR VEHICULAR LANES	4-A.3 URBANIZE
CREATING AN INTERESTING AND DYNAMIC URBAN MIX	Creation of new, vibrant mixed use communities and employment areas.	Does the alternative facilitate vibrant neighbourhoods and employment areas?	1 Vibrant new neighbourhoods/employment growth.	● Existing condition supports a mix of uses but does not provide any enhancements to the pedestrian environment, which is constrained in the current balance of the ROW. There is limited opportunity for the current ROW configuration to contribute to a dynamic urban mix.	● Supports mix of uses but does not enhance access and permeability to and through the area for all modes. Removes existing cycling facilities in favour of vehicular lanes. Potential to establish an enhanced pedestrian environment over time as properties redevelop along a portion of the segment.	● Supports mix of uses. Enhances access and permeability to and through the area for all modes. Establishes an enhanced cycling environment and opportunities for further enhancements to pedestrian environment over time as properties redevelop along a portion of the segment. Supports the potential for new urban frontages, particularly along the south side of the street, to contribute to a vibrant, grade-related urban mix.
		Are viable development blocks created?	2 Viable development blocks.	● Maintains the size and configuration of existing development blocks.	● Maintains the size and configuration of existing development blocks. Limited impact of potential ROW widening on the size and configuration.	● Maintains the size and configuration of existing development blocks. Limited impact of potential ROW widening on the size and configuration.
	Necessary vehicular capacity to support the anticipated mix of uses in the Port Lands and South of Eastern area while minimizing rights-of-way widths.	Can the alternative provide the necessary vehicular capacity and municipal services needed to support development?	3 Necessary capacity is provided while minimizing ROW widths and providing pedestrian and cycling amenities.	● The alternative does not achieve the necessary lane of vehicular capacity in each direction. Existing ROW is maintained, and consistent multi-modal functions would be difficult to achieve within existing ROW and one-way operations.	● The alternative achieves the necessary lane of vehicular capacity in each direction. There are limited multi-modal functions that can be accommodated in the existing ROW width.	● Though it does not realize the full lane of capacity desired from auto vehicle perspective (resulting in some periods of increased congestion), it provides an environment supportive of alternative modes (pedestrian, cycle). Multi-modal functions can be accommodated in the expanded ROW.
		Will vehicular rights-of-ways be minimized while creating a high quality pedestrian environment?	4 Percentage of ROW dedicated to active transportation.	● 36% dedicated to active transportation.	● 36% dedicated to active transportation.	● 60% dedicated to active transportation.
	Existing/planned neighbourhoods.	Does the alternative provide opportunities for improvements for existing neighbourhoods?	5 Opportunities for improvement.	● No change to existing condition results in no improvements.	● Moderately enhanced pedestrian environment. Downgraded cycling facilities. Improved retail and employment opportunities but not accessible to all users. Limited potential to improve streetscape and introduce street trees.	● Significantly enhanced walking/cycling to and through neighbourhood. Improved retail and employment opportunities. Improved streetscape and potential to introduce street trees.
		Does the alternative minimize potential impacts to existing and planned neighbourhoods?	6 Number of existing residential units potentially displaced.	● No change to existing condition and no existing residential units displaced.	● Maintains existing ROW width in areas where existing residential, therefore no existing residential units displaced.	● Maintains existing ROW width in areas where existing residential, therefore no existing residential units displaced.
			7 Likelihood of non-local traffic in residential area and ability to manage traffic infiltration.	● No change to existing condition. As growth in traffic occurs within corridor, the potential for traffic diversion to neighbourhood roadways increases.	● Improved capacity along Eastern would improve service flow, therefore as growth occurs potential for traffic infiltration of neighbourhoods less likely. Improvement to Eastern will not encourage diversion of traffic to neighbourhoods. There is minimal potential for traffic to divert from Lake Shore due to the primary destinations of users (downtown, and the Don Valley Parkway).	● Enhanced capacity along Eastern would improve service flow. Potential for traffic infiltration of neighbourhoods less likely. Improvement to Eastern will not encourage diversion of traffic to neighbourhoods.
	Existing businesses and industry and opportunities for new businesses and industry.	Is there potential for impacts to businesses and industry, such as displacement or reductions in parking?	8 Displacement of businesses and industry.	● No change to existing conditions and no potential impacts to businesses.	● Alternative generally maintains the existing ROW width. Potential widening occurs as properties redevelop on the south side of the street for vacant or redevelopment areas.	● Alternative generally maintains the existing ROW width. Potential widening occurs as properties redevelop on the south side of the street for vacant or redevelopment areas.
		Does the alternative support the establishment of new businesses and industry?	9 Access to infrastructure.	● Status quo does not provide for improved/ better connect users and services.	● Alternative improves access to businesses by increasing vehicle lanes and enhancing the pedestrian realm over time as properties redevelop. This applies to all modes except cycling.	● Alternative improves access to businesses by increasing vehicle lanes and creating enhanced pedestrian and cycling connections with the potential for further pedestrian realm improvements as properties redevelop.
		Does the alternative support dedicated truck routes and goods movement?	10 Facilitates dedicated truck routes to/from Lake Shore Boulevard and the DVP.	● Not intended to be a designated route for heavy (industry) trucks or goods movement. Commercial truck activity like Canada Post will be permitted.	● Not intended to be a designated route for heavy (industry) trucks or goods movement. Commercial truck activity like Canada Post will be permitted. Additional vehicular capacity across the corridor provides better connectivity for vehicles and opportunities to enhance the pedestrian realm through redevelopment of properties would have some benefit to better connecting for pedestrians.	● Not intended to be a designated route for heavy (industry) trucks or goods movement. Commercial truck activity like Canada Post will be permitted. Excellent ability to better connect the area for all users (vehicles, pedestrian and cyclists) by rationalizing and creating continuous facilities for all modes across the Sub Area.

EVALUATION OF ALTERNATIVE SOLUTIONS - SUB AREA 4: EASTERN AVENUE

OBJECTIVE	CRITERIA	DESCRIPTION	MEASURE	4-A.1 DO NOTHING		4-A.2 CONSISTENTLY PROVIDE FOUR VEHICULAR LANES		4-A.3 URBANIZE	
CONNECT THE PORT LANDS TO THE CITY	Better connect the Port Lands with the South of Eastern area and the rest of the city.	Does the alternative better connect the area for all users and services?	11 Connectivity.	●	Connection is not new, therefore does not improve / better connect users and services.	●	Improved capacity enhances the utility of the corridor and therefore promotes connections and access for all users (except cyclists).	●	Improved capacity enhances the utility of the corridor and therefore promotes connections and access for all users.
		Does the alternative provide the ability to achieve a fine-grained network of streets (local, secondary and major)?	12 Facilitates achieving an appropriate hierarchy and rhythm of public streets.	●	There is opportunity to connect a finer grain of north-south streets.	●	There is opportunity to connect a finer grain of north-south streets.	●	There is opportunity to connect a finer grain of north-south streets.
		Does the alternative provide enhanced connections to major destinations for all modes?	13 Enhanced direct connections to destinations.	●	No change to existing condition results in no new or enhanced direct connections to destinations.	●	Improved connections for pedestrians linking the downtown to the south of Eastern employment area. Potential opportunities to widen ROW to provide enhanced connections, if Loblaws or Canada Post redeveloped. Alternative would remove on-street cycling lanes between Logan and Leslie. Over time, pedestrian and cyclist amenities may be achieved through ROW widening as properties redevelop.	●	Direct connections provided for cyclists and improved connections for pedestrians with the potential for future connections linking the downtown to the south of Eastern employment area. Intent is for improvements to be achieved as properties redevelop in the street ROW to be widened from Carlaw to Rushbrook Avenue.
	Redundancy in the network.	Does the alternative contribute to redundancy in the network to allow for better access/service?	14 Redundancy in network.	●	Alternative maintains existing condition which provides constrained east-west capacity.	●	Provides enhanced east-west redundancy in the network with new east-west capacity.	●	Provides some enhanced east-west redundancy in the network with new east-west capacity.
	Existing physical barriers.	Is the alternative impacted by physical barriers? i.e.: - rail (Harbour Lead Line, GO Line and active routes in the Port Lands - Lake Shore to Leslie to Unwin). - Existing over/underpasses - Existing on/off ramps or other Gardiner components - Ship Channel	15 Nature and extent of physical barriers.	●	Maintains existing conditions.	●	No barriers identified that impact alternative.	●	No barriers identified that impact alternative.
	Opportunities for linking natural habitat and open spaces and improving biodiversity.	What opportunities does the alternative provide for direct linkages between natural habitat and existing/planned open spaces?	16 Opportunities to provide direct linkages between areas of natural habitat and/or open spaces.	●	Neutral - No opportunities identified.	●	No opportunities identified.	●	Enhancements to the public realm provide opportunity for introducing street trees and better linkages with existing open spaces along the corridor.
What opportunities does the alternative provide to contribute to urban biodiversity?		17 Urban biodiversity.	●	No change from current condition and no opportunities for introducing a mature, diverse tree canopy.	●	No opportunities to contribute to urban biodiversity. Limited potential for introducing a mature, diverse tree canopy.	●	Opportunities for introducing street trees within the ROW.	
LEVERAGE ASSETS	Cultural heritage resources.	Are there cultural heritage resources that might be affected by an alternative and what is the nature of the impact?	18 Nature and extent of potential impacts.	●	No impacts to identified cultural heritage resources.	●	There are no anticipated impacts to identified cultural heritage resources.	●	Potential widening occurs as properties redevelop on the south side of the street for vacant or redevelopment areas. No intent to redevelop BHR 3 property. There are no anticipated impacts to other identified cultural heritage resources along Eastern Avenue.
		Can any potential impacts be mitigated?	19 Ability to mitigate impacts.	NA	Not applicable.	NA	Not applicable.	NA	Not applicable.
		Are there opportunities that introducing new streets provide to frame and celebrate heritage resources?	20 Potential opportunities.	●	There are several heritage buildings that front onto the south side of Eastern, however, with no change to the pedestrian realm there is no opportunity to frame the heritage resources.	●	There are several heritage buildings that front onto the south side of Eastern. Some gradual enhancement to the pedestrian environment could integrate these resources into the public realm and provide better access.	●	There are several heritage buildings that front onto the south side of Eastern. An enhanced walking and cycling environment could integrate these resources into the public realm and provide better access.
	Archaeological resources and traditional uses of Aboriginal people.	Are there archaeological resources that might be affected by an alternative and what is the nature of the impact?	21 Nature and extent of potential impacts.	●	No impacts anticipated to archaeological resources or traditional uses by Aboriginal people.	●	No impacts anticipated to archaeological resources or traditional uses by Aboriginal people.	●	No impacts anticipated to archaeological resources or traditional uses by Aboriginal people.
		22 Ability to mitigate.	NA	Not applicable.	NA	Not applicable.	NA	Not applicable.	

EVALUATION OF ALTERNATIVE SOLUTIONS - SUB AREA 4: EASTERN AVENUE

OBJECTIVE	CRITERIA	DESCRIPTION	MEASURE	4-A.1 DO NOTHING		4-A.2 CONSISTENTLY PROVIDE FOUR VEHICULAR LANES		4-A.3 URBANIZE	
LEVERAGE ASSETS	Existing/planned parks and open spaces.	Does the alternative create an opportunity to enhance existing/planned parks and open spaces?	23 Opportunities to enhance.	●	There are no opportunities for enhancement. Existing parks and open spaces are not adjacent to Eastern Avenue.	●	There are no opportunities for enhancement. Existing parks and open spaces are not adjacent to Eastern Avenue.	●	There are no opportunities for enhancement. Existing parks and open spaces are not adjacent to Eastern Avenue.
		Is there potential for temporary or permanent impacts to existing parks and open spaces?	24 Nature and extent of potential impacts.	●	No potential impacts identified.	●	No potential impacts identified.	●	No potential impacts identified.
	Compatibility with the natural environment.	Does the alternative create an opportunity to enhance natural heritage and terrestrial resources (existing and planned) and improve opportunities for biodiversity through understory and tree planting?	25 Opportunities for net environmental gains.	NA	No existing environmental features. No opportunities for net environmental gains.	NA	No existing environmental features. No opportunities for net environmental gains.	NA	No existing environmental features. No opportunities for net environmental gains.
		Is there potential for temporary or permanent impacts to natural heritage and terrestrial resources (existing and planned)?	26 Nature and extent of potential impacts.	●	No natural heritage or terrestrial resources within the vicinity of the alternative.	●	No natural heritage or terrestrial resources within the vicinity of the alternative.	●	No natural heritage or terrestrial resources within the vicinity of the alternative.
		Is there potential for adverse effects to water quality aquatic species?	27 Minimizes the potential for an adverse effect on water quality and aquatic species.	●	No anticipated impacts.	●	No anticipated impacts.	●	No anticipated impacts.
		Are there any impacts to groundwater?	28 Impacts or improvements to groundwater.	●	No impacts to groundwater.	●	No impacts to groundwater.	●	No impacts to groundwater.
Visual connections.	Does the alternative provide visual connections to the study area's assets and important features?	29 Nature of any visual connections.	●	The existing alignment of Eastern provides views of a sequence of heritage buildings along the south side of the street.	●	The existing alignment of Eastern provides views of a sequence of heritage buildings along the south side of the street.	●	The existing alignment of Eastern provides views of a sequence of heritage buildings along the south side of the street.	
DEVELOP A HIGH QUALITY PUBLIC REALM	Complete street principles and street character.	Can the alternative achieve the complete street principles established and the desired street character?	30 Ability to achieve the complete street principles and desired street character.	●	Existing cycling routes maintained. The alternative cannot achieve complete street principles. There are no additional continuous cycling routes provided and the pedestrian realm is very narrow.	●	The alternative cannot achieve complete street principles. There are no cycling routes provided and the pedestrian realm is constrained.	●	Complete street principles are attainable. The ROW accommodates an enhanced , continuous pedestrian and cycling environment with the opportunity to improve street trees.
	Cycling routes.	Does the alternative provide for safe and continuous cycling routes?	31 Linear km of new, physically separated, continuous, high-quality cycling track.	●	No new cycling track provided. Existing condition maintained (not continuous and not separated).	●	Existing cycling track removed and no new cycling track provided.	●	2 km of continuous cycle track is provided.
			32 Completes or provides linkages to existing/future cycling network.	●	Existing cycling facilities are discontinuous.	●	Existing cycling facilities are removed and no new cycling facilities are provided.	●	Option optimizes and enhances cyclist amenity and provides a continuous route within the study area, connecting to proposed cycling routes elsewhere in the study area.
	Place-making opportunities.	Does the alternative provide opportunities for place-making or creating unique opportunities?	33 Place-making opportunities.	●	The existing street provides opportunities for place making around the numerous heritage buildings that front onto the street. However, space is limited and the alternative does not provide improved cycling and pedestrian facilities so there are very limited opportunities for place-making at these locations.	●	The existing street provides opportunities for place making around the numerous heritage buildings that front onto the street. There is potential for gradual enhancement as re-development proceeds.	●	The street provides opportunities for enhanced place making around the numerous heritage buildings that front onto the street through an enhanced pedestrian and cycling realm. There is potential for further enhancements as ROW widenings are secured through redevelopment.
		Does the alternative encourage everyday interaction with water or water based activities?	34 Water as a feature.	●	The alternative does not provide direct visual or physical access to water elements and there is no potential to integrate stormwater features within the ROW.	●	The alternative does not provide direct visual or physical access to water elements. There is limited potential to integrate stormwater with the street planting, as properties redevelop.	●	Enhanced capacity and improved design safety for all modes will improve flow and direct visual or physical access to water elements. However, there is potential to integrate stormwater with the street planting, as properties redevelop.
Health and safety.	Does the alternative have the potential to improve existing unsafe conditions?	35 Improves existing unsafe conditions and maintains minimum design standards and criteria.	●	Existing safety issues (intersection and mid-block) for pedestrians, cyclists, and autos would be exacerbated by increased traffic and congestion in the corridor.	●	Introduction of new capacity will improve flow and reduce congestion at intersections, generally reducing collision potential on these routes. More consistent cross section will reduce collision risk, however safety will decrease for cyclists as dedicated facilities are removed. Design criteria for structures and roadway can be met.	●	Enhanced capacity for corridor will improve flow and reduce congestion at intersections, generally reducing collision potential on these routes. More consistent cross section will reduce collision risk. Design criteria for structures and roadway can be met.	

EVALUATION OF ALTERNATIVE SOLUTIONS - SUB AREA 4: EASTERN AVENUE

OBJECTIVE	CRITERIA	DESCRIPTION	MEASURE	4-A.1 DO NOTHING	4-A.2 CONSISTENTLY PROVIDE FOUR VEHICULAR LANES	4-A.3 URBANIZE
CONTRIBUTE TO THE SUSTAINABLE FUTURE OF THE CITY	Opportunities for innovation.	Can innovative features be accommodated in the design of the alternative?	36 Ability to provide innovative features in the design of the alternative.	● No changes to existing condition proposed and no opportunity for innovative features.	● Limited opportunities for innovation. Existing cycling facilities are removed and no new cycling facilities are provided.	● Complete street is achieved. Wider public realm provides opportunities for innovative design and pedestrian/cycling amenity.
	Transit accommodation.	How easily can dedicated transit, or where appropriate surface transit routes in mixed traffic, be accommodated?	37 Ability to, and implications of, connecting with adjacent transit network.	● No changes to existing condition proposed. Existing 20.1m ROW provides for 3.5m lanes east of Carlaw and 3.2m lanes (in 4-lane cross section) west of Carlaw. Existing express bus service accommodated and potential exists for a local route. Potential exists for bus transit to connect with new transit system elements (bus and LRT).	● ROW can be able to accommodate optimal 3.3m lane widths to accommodate transit service subject to reducing pedestrian clearways during detailed design.	● 23.0m ROW provides for 3.3m travel lanes, which is optimal for accommodating transit service. Vehicle Travel Lane Width Guideline suggests at least 3.3m lanes where possible.
		Is transit service optimally located to serve future land use and maximize ridership potential?	38 Is transit service optimally located?	● Potential for alternative bus routes to serve Eastern Avenue corridor.	● Potential for alternative bus routes to serve Eastern Avenue corridor.	● Potential for alternative bus routes to serve Eastern Avenue corridor.
	Flood risk potential.	Would the alternative potentially create a flood risk potential? Can flood risk potential be mitigated through design?	39 Flood risk potential created and ability to mitigate flood risk.	● Don Mouth Naturalization and Port Lands Flood Protection Project requires modifications to the Eastern Avenue underpass to flood protect the lands. Alternative does not introduce a new or enhanced flood risk.	● Don Mouth Naturalization and Port Lands Flood Protection Project requires modifications to the Eastern Avenue underpass to flood protect the lands. Alternative does not introduce a new or enhanced flood risk.	● Don Mouth Naturalization and Port Lands Flood Protection Project requires modifications to the Eastern Avenue underpass to flood protect the lands. Alternative does not introduce a new or enhanced flood risk.
	Noise and air quality.	Does the alternative contribute to improved noise and air quality conditions?	40 Improved noise and air quality conditions.	● No change to existing conditions which are already impaired on a periodic basis in some locations, though similar to other areas of the city.	● Change in vehicle lanes will result in increased vehicle flow resulting in increased vehicle emissions and potential for additional noise. Typical noise levels in an urbanized environment anticipated during peak periods. Existing and planned residential uses in close proximity.	● Change in vehicle lanes will result in increased vehicle flow resulting in increased vehicle emissions and potential for additional noise. Typical noise levels in an urbanized environment anticipated during peak periods. Existing and planned residential uses in close proximity.
	Resiliency and climate change.	Can the alternative be designed for maximum longevity reduced greenhouse gas emissions?	41 Promotes reduction of greenhouse gas (e.g. through LID, minimizing pumping stations or potential to reduce congestion points).	● This street serves a significant role in the network, providing distribution of traffic across north end of study area. No change in service in the corridor.	● The street serves a significant role in the network, providing distribution of traffic across north end of study area. The better the service in the corridor, the less congestion which results in reduced delay and, therefore, vehicle emissions.	● This street serves a significant role in the network, providing distribution of traffic across north end of study area. The better the service in the corridor, the less congestion which results in reduced delay and, therefore, vehicle emissions.
IMPLEMENTATION	Compatibility with City, provincial planning policies and Waterfront Toronto/TRCA Framework standards.	Does the alternative support achieving City planning policies?	42 Supports the growth intention of the Official Plan, Central Waterfront Secondary Plan and precinct plans.	● Maintains the existing condition and provides no continuity of travel modes. No improvements to the pedestrian realm or other active transportation modes.	● Prioritizes vehicular travel over other modes. Does not improve the quality of active transportation options or promote an urban environment.	● Creates an urban environment while balancing the needs and priorities of the various users and uses within the right-of-way and improving the quality and convenience of active transportation options. ● Provides clearly understood travel routes for all transportation modes and users and ensures safe, universally accessible, direct, comfortable, attractive and convenient pedestrian and cycling conditions.
		Does the alternative address Waterfront Toronto/TRCA objectives/frameworks?	43 Supports addressing Waterfront Toronto/TRCA objectives/frameworks.	● Maintains existing conditions.	● Improves pedestrian amenities.	● Multi-modal street improves pedestrian and cyclist amenities and appeal.
		Does the alternative address Waterfront Toronto objectives/frameworks?	44 Supports achieving provincial planning policies and guidelines.	● Does not provide continuous multi-modal travel options and does not address existing safety challenges along segments of the existing corridor. Creates congested points and does not address projected needs. Significant heritage resources are conserved.	● Creates a continuous condition along the corridor and addresses projected automobile needs. Some potential improvements to the pedestrian realm. Requires removal of existing cycling facilities and cycling would be required to be accommodated in mixed-traffic with no lanes. Significant heritage resources are conserved.	● Alternative is safe and facilitates the movement of people and goods, and is appropriate to address projected needs. Promotes the use of active transportation in and between residential and employment areas. Significant heritage resources are conserved. Provides separation of modes such as the proposed separated cycling track.
	Consistency with approved area Environmental Assessments.	Does the alternative impact approved Environment Assessment projects?	45 Extent and nature of impacts on planned infrastructure with approved Environmental Assessments.	● No effects on approved EAs. Modifications required to the Eastern Avenue underpass in the DMNP EA can be accommodated.	● No effects on approved EAs. Modifications required to the Eastern Avenue underpass in the DMNP EA can be accommodated.	● No effects on approved EAs. Modifications required to the Eastern Avenue underpass in the DMNP EA can be accommodated.

EVALUATION OF ALTERNATIVE SOLUTIONS - SUB AREA 4: EASTERN AVENUE

OBJECTIVE	CRITERIA	DESCRIPTION	MEASURE	4-A.1 DO NOTHING	4-A.2 CONSISTENTLY PROVIDE FOUR VEHICULAR LANES	4-A.3 URBANIZE
IMPLEMENTATION	Engineering feasibility and construction cost.	Is the alternative possible to construct and what are the key technical challenges?	46 Key technical challenges.	● No changes to existing condition and as such no technical challenges.	● Key challenges: - geometry on west approach to Leslie will be challenging due to angle of approach and property constraints. - The modifications proposed to the cross-sections will require modifications to the geometry of Leslie to accommodate design elements and auxiliary lane for optimal operations. Space on the west approach is significantly constrained with i) property and ii) road alignment to west. East of Leslie, the RoW is more straightforward and less constrained as it is 4-lanes with sidewalks today.	● Key challenges: - geometry on west approach to Leslie will be challenging due to angle of approach and property constraints. - The modifications proposed to the cross-sections will require modifications to the geometry of Leslie to accommodate design elements and auxiliary lane for optimal operations. Space on the west approach is significantly constrained with i) property and ii) road alignment to west. East of Leslie, the RoW is more straightforward and less constrained as it is 4-lanes with sidewalks today.
		Is the alternative cost effective to build?	47 Initial construction costs, excluding property, decontamination, and utilities.	● No changes to existing condition and as such no costs associated with construction.	● General roadway upgrade and intersection control need. Majority of work between Carlaw and Leslie. Roadway Costs = \$56.7M Structural Costs = \$7.9M Total Estimated Cost = \$64.6M	● General roadway upgrades and intersection control needed across limits of study area, Broadview and Coxwell. Roadway Costs = \$33.7M Structural Costs = \$7.9 Total Estimated Cost = \$40.6M
		Can the alternative be phased to offset initial costs and provide infrastructure in lock-step with development?	48 Ability to phase implementation and adapt to changes in phasing and timing of development.	● No changes to existing condition and as such no requirement to phase or provide infrastructure.	● Alternative can be phased to meet needs of development (i.e. brought on line at such time as capacity needed). Construction of improvement will have temporary transportation impacts.	● Alternative can be phased to meet needs of development (i.e. brought on line at such time as capacity needed). Construction of improvement will have temporary transportation impacts.
		Is it possible to protect for future expansion and extension?	49 Adaptability to future land use changes and intensification.	● No changes to existing condition and as such limited ability to adapt to future land use changes or provide pedestrian and enhanced cycling amenity required to support employment growth. Opportunities to introduce local bus service.	● Some ability to provide flexibility in adding modes to the corridor (bus in mixed traffic) and to further improve amenities as re-development proceeds.	● Limited ability to provide flexibility in adding modes to the corridor (bus in mixed traffic) and to further improve amenities as re-development proceeds.
	Existing municipal infrastructure and utilities.	Are there potential conflicts with existing utilities or challenges in re-location (temporary or permanent)?	50 Extent and nature of utility impacts.	● No change to alignment or impact to existing utilities.	● For all alternatives, there are several abandoned Enbridge major gas mains at Eastern and the Go Rail underpass that will need to be considered in the reconfiguration construction planning. No major constraints are expected to accommodate the other range of utilities running along the entire length of Eastern Avenue including Bell, Hydro, gas and cable.	● For all alternatives, there are significant Enbridge major gas utilities at Eastern and the Go Rail underpass that will need to be considered in the reconfiguration construction planning. No major constraints are expected to accommodate the other range of utilities running along the entire length of Eastern Avenue including Bell, Hydro, gas and cable.
		Would the alternative have an impact on existing municipal infrastructure to remain?	51 Nature and extent of potential impacts.	● No change to alignment or impact to municipal services.	● No major constraints are expected in order to accommodate the range of water, sewer and storm water infrastructure running along the entire length of Eastern Avenue.	● No major constraints are expected in order to accommodate the range of water, sewer and storm water infrastructure running along the entire length of Eastern Avenue.
	Property acquisition costs.	How many private properties will be impacted or need to be acquired to support the alternative?	52 Approximate number of hectares of privately owned lands required to be acquired with existing development anticipated to remain.	● No privately owned land required to achieve the alternative.	● Right-of-way widening required to achieve improvements to the pedestrian realm secured through redevelopment under the Planning Act. S. 114 of City of Toronto Act and S. 41 of the Planning Act enable the City to identify ROW widenings in Official Plan and to secure said ROW widenings during Site Plan approval.	● Right-of-way widening required to achieve improvements to the pedestrian realm secured through redevelopment under the Planning Act. S. 114 of City of Toronto Act and S. 41 of the Planning Act enable the City to identify ROW widenings in Official Plan and to secure said ROW widenings during Site Plan approval.
	Maintenance and operations.	How much effort is required for maintaining and operating the alternative?	53 Level of maintenance required.	● No additional maintenance required.	● Low or typical maintenance required. Increased winter maintenance activity required to maintain service throughout year.	● Low or typical maintenance required. Increased winter maintenance activity required to maintain service throughout year.

EVALUATION OF ALTERNATIVE SOLUTIONS - SUB AREA 4: MID-BLOCK CONNECTIONS

OBJECTIVE	CRITERIA	DESCRIPTION	MEASURE	4-B.1 DO NOTHING	4-B.2 NEW EAST-WEST CONNECTION IN UNILEVER PRECINCT
CREATING AN INTERESTING AND DYNAMIC URBAN MIX	Creation of new, vibrant mixed use communities and employment areas.	Does the alternative facilitate vibrant neighbourhoods and employment areas?	1 Vibrant new neighbourhoods/employment growth.	● No east-west collector street connecting between the Don Roadway and Bouchette/Booth resulting in limited opportunity to support mix of uses and employment growth or providing opportunities for a vibrant pedestrian realm with active/animated street frontages.	● Supports mix of uses. Enhances access and permeability to and through the area for all modes into and through the precinct. Provides opportunities to establish an enhanced pedestrian and cycling environment that connects to existing/proposed pedestrian and cycling routes. Creates a new two-sided street offering the potential for new urban frontages to support vibrant, grade-related urban mix with minimal vehicular disruptions to the pedestrian/cycling environment.
		Are viable development blocks created?	2 Viable development blocks.	● Ability to achieve viable development blocks without a new collector street subject to introducing a network of local streets/lane ways for access and service. Resulting development blocks are a suitable size to accommodate employment growth.	● Ability to achieve viable development blocks with a centrally located collector street through the precinct allowing for a distributed network of local streets for access and service. Resulting development blocks are a suitable size to accommodate employment growth.
	Necessary vehicular capacity to support the anticipated mix of uses in the Port Lands and South of Eastern area while minimizing rights-of-way widths.	Can the alternative provide the necessary vehicular capacity and municipal services needed to support development?	3 Necessary capacity is provided while minimizing ROW widths and providing pedestrian and cycling amenities.	● No vehicular connection to the Don Roadway is proposed which is a critical connection to support employment intensification contemplated.	● The alternative provides a continuous vehicular connection from the Don Roadway to Bouchette/Booth providing the necessary vehicular capacity and access to the Don Roadway supporting the employment intensification contemplated.
		Will vehicular rights-of-ways be minimized while creating a high quality pedestrian environment?	4 Percentage of ROW dedicated to active transportation.	● Typical local street ROW width of 18.5 metres with 49% dedicated to pedestrians and potential for sharrows within ROW.	● 59% dedicated to active transportation while achieving a minimal ROW width of 23 metres.
	Existing/planned neighbourhoods.	Does the alternative provide opportunities for improvements for existing neighbourhoods?	5 Opportunities for improvement.	● No opportunities for improvement. Would not support street retail activity or facilitate walking and cycling for short local trips.	● Enhanced walking/cycling through neighbourhood. Improved retail/commercial opportunities and access to transit. Two pedestrian and cycling connection to Lake Shore Boulevard East Trail provided.
		Does the alternative minimize potential impacts to existing and planned neighbourhoods?	6 Number of existing residential units potentially displaced.	● No residential units displaced.	● No residential units displaced.
			7 Likelihood of non-local traffic in residential area and ability to manage traffic infiltration.	● No improvement in connections to existing or new businesses. Without additional capacity and connectivity, there will be an increased likelihood of congestion and therefore infiltration in other neighbourhoods to avoid prevailing transportation capacity issues.	● New east to west connection providing enhanced connections future businesses in the Unilever Precinct development area and to the east will reduce the potential for infiltration of non-local traffic.

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EVALUATION OF ALTERNATIVE SOLUTIONS - SUB AREA 4: MID-BLOCK CONNECTIONS

OBJECTIVE	CRITERIA	DESCRIPTION	MEASURE	4-B.1 DO NOTHING	4-B.2 NEW EAST-WEST CONNECTION IN UNILEVER PRECINCT
CREATING AN INTERESTING AND DYNAMIC URBAN MIX	Existing businesses and industry and opportunities for new businesses and industry.	Is there potential for impacts to businesses and industry, such as displacement or reductions in parking?	8 Displacement of businesses and industry.	● No existing businesses/industry anticipated to remain displaced	● No existing businesses/industry anticipated to remain displaced.
		Does the alternative support the establishment of new businesses and industry?	9 Access to infrastructure.	● No access for business. Access would require reliance on securing a network of local streets in the Unilever Precinct with different function to a collector street with no access to the Don Roadway.	● Improves access and supports redevelopment of the Unilever precinct as a major employment node by connecting Bouchette/Booth to Don Roadway.
		Does the alternative support dedicated truck routes and goods movement?	10 Facilitates dedicated truck routes to/from Lake Shore Boulevard and the DVP.	● No change to existing condition. No new capacity or opportunity to provide routing for trucks.	● Not intended to be a designated truck route. Potential to remove some traffic from surrounding streets including local smaller trucks.
CONNECT THE PORT LANDS TO THE CITY	Better connect the Port Lands with the South of Eastern area and the rest of the city.	Does the alternative better connect the area for all users and services?	11 Connectivity.	● Lack of connection to the Don Roadway results in poor overall connectivity for all users and services.	● New/enhanced connection with acceptable spacing to other connections and access for all users. Final location requires resolving grade changes associated with the VWF requirements of the DMNP EA.
		Does the alternative provide the ability to achieve a fine-grained network of streets (local, secondary and major)?	12 Facilitates achieving an appropriate hierarchy and rhythm of public streets.	● Relies on a network of local streets and the Broadview extension and as such does not assist in achieving a well-distributed, network/hierarchy of streets in the Precinct. Does not achieve a distribution of streets.	● Promotes the ability to achieve an evenly distributed network of streets through the Unilever Precinct with a centrally located and connected east-west street, Broadview extension and fine-grained network of local streets.
		Does the alternative provide enhanced connections to major destinations for all modes?	13 Enhanced direct connections to destinations.	● No enhanced connections to major destinations provided. No change in existing walking/cycling opportunities.	● New and more direct multi-modal street would provide vehicular and transit access to Unilever Precinct and potential for major office destination. Achievement of a network and hierarchy of streets through the precinct would improve overall pedestrian and cycling amenity to the precinct's destinations and Lake Shore Boulevard East Trail.
	Redundancy in the network.	Does the alternative contribute to redundancy in the network to allow for better access/service?	14 Redundancy in network.	● No redundancy provided for in the network.	● Provides enhanced redundancy in the network with new east-west connection to Don Roadway and Booth. Provides a significant benefit by way of offering relief to Eastern and Lakeshore.

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EVALUATION OF ALTERNATIVE SOLUTIONS - SUB AREA 4: MID-BLOCK CONNECTIONS

OBJECTIVE	CRITERIA	DESCRIPTION	MEASURE	4-B.1 DO NOTHING		4-B.2 NEW EAST-WEST CONNECTION IN UNILEVER PRECINCT	
CONNECT THE PORT LANDS TO THE CITY	Existing physical barriers.	Is the alternative impacted by physical barriers? i.e.: - rail (Harbour Lead Line, GO Line and active routes in the Port Lands - Lake Shore to Leslie to Unwin). - Existing over/underpasses - Existing on/off ramps or other Gardiner components - Ship Channel	15 Nature and extent of physical barriers.	●	No physical barriers to overcome.	●	Physical barriers include: - Requirement for VWF adjacent to the Don Roadway/River presents some challenges to achieving a connection to the Don Roadway to be limited in final design; - proximity to Lake Shore and to DVP Ramps will also constrain location/alignment.
	Opportunities for linking natural habitat and open spaces and improving biodiversity.	What opportunities does the alternative provide for linking natural habitat and existing/planned open spaces?	16 Opportunities to provide direct linkages to natural habitat and open spaces.		Not applicable. No natural habitat or parks and open spaces immediately accessible through the area and the Don Roadway acts as a barrier for connections.		Not applicable. No natural habitat or parks and open spaces immediately accessible through the area and the Don Roadway acts as a barrier for connections.
		What opportunities does the alternative provide to contribute to urban biodiversity?	17 Urban biodiversity.	●	Limited opportunities to contribute to urban biodiversity with a network of local streets. New tree plantings may be able to be accommodated.	●	Potential to incorporate bioswales, understory planting and establish a mature tree canopy along new roadway. However, option bisects VWF.
LEVERAGE ASSETS	Cultural heritage resources.	Are there cultural heritage resources that might be affected by an alternative and what is the nature of the impact?	18 Nature and extent of potential impacts.	●	No impacts to identified cultural heritage resources.	●	No impacts to identified cultural heritage resources.
		Can any potential impacts be mitigated?	19 Ability to mitigate impacts.	NA	Not applicable.	NA	Not applicable.
		Are there opportunities that introducing new streets provide to frame and celebrate heritage resources?	20 Potential opportunities.	●	No change from existing condition resulting in no opportunities to frame heritage. Framing heritage could be achieved with a network of local streets, however, the EA addresses arterial streets only.	●	No change from existing condition resulting in no opportunities to frame heritage. Framing heritage could be achieved with a network of local streets, however, the EA addresses arterial streets only.
	Archaeological resources and traditional uses of Aboriginal people.	Are there archaeological resources that might be affected by an alternative and what is the nature of the impact?	21 Nature and extent of potential impacts.	●	No impacts anticipated to archaeological resources or traditional uses by Aboriginal people.	●	No impacts anticipated to archaeological resources or traditional uses by Aboriginal people.
		Does the alternative create an opportunity to enhance existing/planned parks and open spaces?	22 Ability to mitigate.	NA	Not applicable.	NA	Not applicable.
	Existing/planned parks and open spaces.	Does the alternative create an opportunity to enhance existing/planned parks and open spaces?	23 Opportunities to enhance.	●	No opportunities to enhance.	●	No opportunities to enhance.
		Is there potential for temporary or permanent impacts to existing parks and open spaces?	24 Nature and extent of potential impacts.	●	No impacts identified.	●	No impacts identified.
Compatibility with the natural environment.	Does the alternative create an opportunity to enhance natural heritage and terrestrial resources (existing and planned) and improve opportunities for biodiversity through understory and tree planting?	25 Opportunities for net environmental gains.	NA	No existing environmental features. No opportunities for net environmental gains.	NA	No existing environmental features. No opportunities for net environmental gains.	

EVALUATION OF ALTERNATIVE SOLUTIONS - SUB AREA 4: MID-BLOCK CONNECTIONS

OBJECTIVE	CRITERIA	DESCRIPTION	MEASURE	4-B.1 DO NOTHING	4-B.2 NEW EAST-WEST CONNECTION IN UNILEVER PRECINCT
LEVERAGE ASSETS	Compatibility with the natural environment.	Is there potential for temporary or permanent impacts to natural heritage and terrestrial resources (existing and planned)?	26 Nature and extent of potential impacts.	● No impacts identified.	● No impacts identified.
		Is there potential for adverse effects to water quality aquatic species?	27 Minimizes the potential for an adverse effect on water quality and aquatic species.	● No impacts.	● No impacts.
		Are there any impacts to groundwater?	28 Impacts or improvements to groundwater.	● None.	● No specific issues in road construction that will affect groundwater. Regrading will be needed to address flooding issues which will improve ground water protection.
	Visual connections.	Does the alternative provide visual connections to the study area's assets and important features?	29 Nature of any visual connections.	● Some visual connections possible if a network of local streets is achieved. Visual connections to heritage building on Booth.	● Multiple corridors and vistas for new collector: - Visual axis aligned with heritage building; - Visual axis aligned with Don River.
DEVELOP A HIGH QUALITY PUBLIC REALM	Complete street principles and street character.	Can the alternative achieve the complete street principles established and the desired street character?	30 Ability to achieve the complete street principles and desired street character.	● No change from existing condition with this alignment resulting in no opportunities to provide a complete street. Network of local streets provides more limited ability to achieve complete street principles and desired street character	● Complete street principles are attainable. ROW provides an enhanced pedestrian environment and cycling facilities alongside vehicular access.
	Cycling routes.	Does the alternative provide for safe and continuous cycling routes?	31 Linear km of new, physically separated, continuous, high-quality cycling track.	● No new cycling track is provided.	● 0.6km of continuous cycle track between Lower Don Trail and Booth Avenue.
			32 Completes or provides linkages to existing/future cycling network.	● No new cycling facilities are provided.	● Would connect to Broadview Extension which would facilitate access to other major cycling facilities such as the Lake Shore Boulevard East Trail and enhanced cycling through the Precinct, and potential cycling facilities on Eastern Avenue.
	Place-making opportunities.	Does the alternative provide opportunities for place-making or creating unique opportunities?	33 Alternative terminates at a place.	● Local street could terminate at a heritage building with potential new plaza.	● West end of new street could terminate at the Don River, and the east end of the new street could terminate at a heritage building with the potential to create an open space that frames this resource.
	Health and safety.	Does the alternative encourage everyday interaction with water or water based activities?	34 Water as a feature.	● Limited ability to incorporate water as a feature in a local street cross-section.	● Opportunity within the new street ROW to use stormwater to grow great trees. Street alignment provides visual access to the Don River.

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EVALUATION OF ALTERNATIVE SOLUTIONS - SUB AREA 4: MID-BLOCK CONNECTIONS

OBJECTIVE	CRITERIA	DESCRIPTION	MEASURE	4-B.1 DO NOTHING	4-B.2 NEW EAST-WEST CONNECTION IN UNILEVER PRECINCT
DEVELOP A HIGH QUALITY PUBLIC REALM	Health and safety.	Does the alternative have the potential to improve existing unsafe conditions?	35 Improves existing unsafe conditions and maintains minimum design standards and criteria .	● No new link, no pro/con to existing potential safety issues. ● No requirement to meet minimum design standards and criteria as no new street is provided.	● Introduction of new mid block connection between Eastern and Lake Shore will provide relief to those corridors, generally reducing collision potential on these routes. Design criteria for structures and roadway can be met. Geometric provisions will be challenging given location of intersection on Don Roadway (proximity to DVP ramps, vicinity to Lake shore, and grades to east).
	CONTRIBUTE TO THE SUSTAINABLE FUTURE OF THE CITY	Opportunities for innovation.	Can innovative features be accommodated in the design of the alternative?	36 Ability to provide innovative features in the design of the alternative.	● No change from existing condition resulting in no opportunities to provide innovative features.
Transit accommodation.		How easily can dedicated transit, or where appropriate surface transit routes in mixed traffic, be accommodated?	37 Ability to, and implications of, connecting with adjacent transit network.	● Limited opportunity of accommodating transit on local streets and connecting with the adjacent transit network.	● Service in this corridor would provide better connectivity to adjacent routes and service. Centrally located E-W collector provides opportunity for transit hub in Unilever precinct where future bus service on Eastern and on Broadview can connect.
		Is transit service optimally located to serve future land use and maximize ridership potential?	38 Is transit service optimally located?	● No new street is proposed providing no opportunities to include surface transit routes.	● Provides opportunity for transit linkage through First Gulf site.
Flood risk potential.		Would the alternative potentially create a flood risk potential? Can flood risk potential be mitigated through design?	39 Flood risk potential created and ability to mitigate flood risk.	● No flood risk potential created.	● Connecting to the Don Roadway requires careful consideration to grading and location of street in relation to requirements for VWF features in the precinct.
Noise and air quality.		Does the alternative contribute to improved noise and air quality conditions?	40 Improved noise and air quality conditions.	● No improvement or significant effects.	● Additional capacity likely to increase volume of traffic, increasing emissions and noise. Typical noise levels in an urbanized environment anticipated during peak periods. No residential uses in vicinity of this new street.

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EVALUATION OF ALTERNATIVE SOLUTIONS - SUB AREA 4: MID-BLOCK CONNECTIONS

OBJECTIVE	CRITERIA	DESCRIPTION	MEASURE	4-B.1 DO NOTHING	4-B.2 NEW EAST-WEST CONNECTION IN UNILEVER PRECINCT
CONTRIBUTE TO THE SUSTAINABLE FUTURE OF THE CITY	Resiliency and climate change.	Can the alternative be designed for maximum longevity and reduced greenhouse gas emissions?	41 Promotes reduction of greenhouse gas (e.g. through LID, minimizing pumping stations or potential to reduce congestion points).	● No potential to promote the reduction of greenhouse gases as no active transportation or surface transit routes can be accommodated and would not provide relief to surrounding network resulting in the potential of additional congestion.	● This link serves a significant role in the network, providing distribution of traffic related to redevelopment in the Unilever precinct, providing significant relief to Eastern and Lake Shore. Reduced congestion reduces the delays and congestion in the network and therefore the vehicle emissions. Potential to include street trees.
IMPLEMENTATION	Compatibility with City, provincial planning policies and Waterfront Toronto Framework standards.	Does the alternative support achieving City planning policies?	42 Supports the growth intention of the Official Plan, Central Waterfront Secondary Plan and precinct plans.	● Limited ability to achieve policy objectives. Does not provide a connected network of streets or support all transportation modes. Would increase reliance on surrounding collector/arterial streets or enable a well distributed grid of streets.	● Alternative exceeds policy objectives. It contributes to the development of a connected network of streets and works to improve traffic conditions on surrounding inter-regional transportation connections. ● It supports pedestrian movement. It divides larger sites into smaller development blocks, providing access and addresses for new development as well as access for emergency vehicles. Opportunities are provided for enhanced pedestrian realm and connected cycling network.
		Does the alternative address Waterfront Toronto objectives/frameworks?	43 Supports addressing Waterfront Toronto objectives/frameworks.	● Alternative does not provide enhanced connections or promote good walkability.	● Alternative exceeds objectives. It provides additional connections and promotes good walkability. It assists in creating linkages between areas. Subject to a separate EA, has the potential to connect to new streets west of the Don River.
		Does the alternative support achieving provincial planning policies and guidelines?	44 Supports achieving provincial planning policies and guidelines.	● Does not support achieving provincial planning policies. Alternative does not support the movement of people or use of active transportation in and between residential and employment areas.	● Alternative promotes the use of active transportation and transit in and between residential and employment areas. Addresses projected needs and facilitates the movement of people.
	Consistency with approved area Environmental Assessments.	Does the alternative impact approved Environment Assessment projects?	45 Extent and nature of impacts on planned infrastructure with approved Environmental Assessments.	● No effects on approved EAs.	● DMNP EA requires flood protection measures adjacent to the Don Roadway in the form of a Flood Protection Landform or Valley Wall Feature. Given existing grade of the Don Roadway and requirements for flood protection measure, alternative will need to be designed with attention to this in future phases consistent with approved EAs.

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EVALUATION OF ALTERNATIVE SOLUTIONS - SUB AREA 4: MID-BLOCK CONNECTIONS

OBJECTIVE	CRITERIA	DESCRIPTION	MEASURE	4-B.1 DO NOTHING	4-B.2 NEW EAST-WEST CONNECTION IN UNILEVER PRECINCT
IMPLEMENTATION	Engineering feasibility and construction cost.	Is the alternative possible to construct and what are the key technical challenges?	46 Key technical challenges.	No major technical challenges or connection to the Don Roadway.	Key challenges: - connection to Don Roadway will be challenging due to VWF requirements and existing grades; - operational considerations related to proximity to LSB and DVP ramps.
		Is the alternative cost effective to build?	47 Initial construction costs, excluding property, decontamination, and utilities	Local streets secured through approvals under the Planning Act.	No significant infrastructure costs - general roadway upgrades and intersection control will have an estimated cost of \$14.5M plus any costs for crossing the VWF landform (additional grading).
		Can the alternative be phased to offset initial costs and provide infrastructure in lock-step with development?	48 Ability to phase implementation and adapt to changes in phasing and timing of development.	Local streets secured as development advances	Alternative can be phased to meet needs of development (i.e. brought on line as such time as capacity needed). Could be broken into two parts - Booth to Broadview Extension and Broadview to Don Roadway crossing.
		Is it possible to protect for future expansion and extension?	49 Adaptability to future land use changes and intensification.	No new street is provided and as such no potential to adapt to future land use changes and intensification.	Multi-modal link has the ability to adapt to different land uses and some ability to adapt to potential future intensification. Width of ROW limited to surface transit in mixed-traffic. Also potential, subject to a separate EA and ensuring sediment management basin requirements from the DMNP EA are satisfied, for connecting westward across the Don River.
	Existing municipal infrastructure and utilities.	Are there potential conflicts with existing utilities or challenges in re-location (temporary or permanent)?	50 Extent and nature of utility impacts.	No change to collector roads or expected impact to utilities.	No record of utilities potentially impacted except at intersection with Booth Street where impacts can be mitigated.
		Would the alternative have an impact on existing municipal infrastructure to remain?	51 Nature and extent of potential impacts.	No change to collector roads or expected impact to municipal services.	No record of municipal services potentially impacted except at intersection with Booth Street where impacts can be mitigated.
	Property acquisition costs.	How many private properties will be impacted or need to be acquired to support the alternative?	52 Approximate number of hectares of privately owned lands required to be acquired with existing development anticipated to remain.	Local streets secured under the Planning Act. However, without connecting to the Don Roadway development potential within the precinct will be constrained.	Approximately 10,216 square meters of private land impacted by proposed New East West ROW. The impacts to land owners include private landowners First Gulf and Cinspace. However, the east-west collector is needed in order to support significant employment development in this district.

EVALUATION OF ALTERNATIVE SOLUTIONS - SUB AREA 4: MID-BLOCK CONNECTIONS

OBJECTIVE	CRITERIA	DESCRIPTION	MEASURE		4-B.1 DO NOTHING		4-B.2 NEW EAST-WEST CONNECTION IN UNILEVER PRECINCT	
	Maintenance and operations.	How much effort is required for maintaining and operating the alternative?	53	Level of maintenance required.	●	Low or typical maintenance required.	●	Low or typical maintenance required. Landscape bioswales/open channels are a maintenance consideration as the City does not have current practice for these.

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EVALUATION OF ALTERNATIVE SOLUTIONS - SUB AREA 5: EAST-WEST CONNECTIONS BETWEEN LAKESHORE AND THE SHIP CHANNEL

OBJECTIVE	CRITERIA	DESCRIPTION	MEASURE	5-A: NEW EAST-WEST (AND MAINTAIN and ENHANCE COMMISSIONERS, 5-B.2)	5-B.1 URBANIZE COMMISSIONERS	5-B.2 MAINTAIN and ENHANCE COMMISSIONERS	5-C.1 EXTENDED BASIN (and MAINTAIN and ENHANCE COMMISSIONERS 5-B.2)	5-C.2 REALIGNED and EXTENDED BASIN (and MAINTAIN and ENHANCE COMMISSIONERS, 5-B.2)	5-D: MULTIPLE CONNECTIONS (and URBANIZE COMMISSIONERS, 5-B.1)
CREATING AN INTERESTING AND DYNAMIC URBAN MIX	Creation of new, vibrant mixed use communities and employment areas.	Does the alternative facilitate vibrant neighbourhoods and employment areas?	1 Vibrant new neighbourhoods/employment growth.	Supports mix of uses. Creates improved, continuous pedestrian and cycling amenity on Commissioners with some potential to support grade-related active uses although more challenging due to the width of the Commissioners ROW. The additional connection offers the potential for two new urban frontages to support vibrant, grade-related urban mix.	Enhances access and permeability to and through the area for all modes, except with reduced auto capacity. Establishes an enhanced pedestrian and cycling environment along Commissioners Street, creating an urbanized main street with the potential to support vibrant, grade-related urban mix.	Creates improved, continuous pedestrian and cycling amenity, potential to support two-sided retail along portions of the street, however more challenging due to crossing distances and width of the travel portion of the ROW.	Supports a mix of uses. Enhances access and permeability to and through the area for all modes at multiple locations. Establishes an enhanced pedestrian and cycling environment. Creates an urbanized main street with the potential for urban frontages with an additional connection offering the potential for four new urban frontages to support vibrant, grade-related urban mix and provide varying relationships with water's edges.	Supports a mix of uses. Enhances access and permeability to and through the area for all modes at multiple locations. Establishes an enhanced pedestrian and cycling environment. Creates an urbanized main street with the potential for urban frontages with an additional connection offering the potential for four new urban frontages to support vibrant, grade-related urban mix and provide varying relationships with water's edges.	Supports mix of uses. Enhances access and permeability to and through the area for all modes at multiple locations. Establishes a greatly enhanced pedestrian and cycling environment. Creates an urbanized main street with the potential for urban frontages with two additional connections offering the potential for six new urban frontages to support vibrant, grade-related urban mix and provide varying relationships with water's edges.
		Are viable development blocks created?	2 Viable development blocks.	Good developability along both sides of Commissioners and along the new east-west street. Well configured blocks with typical urban depth of approximately 70 metres between the new street and Commissioners Street. South of Commissioners Street large blocks would remain.	Good developability along both sides of Commissioners. Viable development blocks are achievable with the provision of a 42 metre ROW. Large blocks north and south would remain that would require to be accessed/serviced from a network of local streets.	Good developability along both sides of Commissioners. Viable development blocks are achievable with the provision of a 42 metre ROW. Large blocks north and south would remain that would require to be accessed/serviced from a network of local streets.	Good developability along both sides of Commissioners. Well configured blocks with typical urban depth of approximately 100 metres between the new street and Commissioners Street. North of Commissioners Street large blocks would remain that would require to be accessed/serviced from a network of local streets.	Good developability along both sides of Commissioners and along the new east-west street. Well configured blocks with interesting diversity of size to promote a vibrant mix. Block sizes vary between 41m to 73 metres adjacent to the Ship Channel with the ability to accommodate a wide range of uses. North of Commissioners Street large blocks would remain that would require to be accessed/serviced from a network of local streets.	Multiple new streets provide for varied size and configuration of blocks, providing opportunities for a vibrant urban mix that promotes a diversity of uses. Good developability along both sides of Commissioners, as well as both new east-west streets. Blocks have a typical urban depth of approximately 70 metres between the new street and Commissioners Street. Block sizes vary between 41m to 73 metres adjacent to the Ship Channel with the ability to accommodate a wide range of uses.
	Necessary vehicular capacity to support the anticipated mix of uses in the Port Lands and South of Eastern area while minimizing rights-of-way widths.	Can the alternative provide the necessary vehicular capacity and municipal services needed to support development?	3 Necessary capacity is provided while minimizing ROW widths and providing pedestrian and cycling amenities.	The alternative achieves the necessary 3 lanes of vehicular capacity in each direction. Multi-modal functions can be accommodated in the ROW while minimizing ROW widths.	While multi-modal functions can be accommodated in the ROW, the alternative does not achieve the necessary 3 lanes of vehicular capacity in each direction. Enhanced multi-modal functions accommodated.	While multi-modal functions can be accommodated in the ROW, the alternative only achieves 2 lanes of vehicular capacity in each direction.	The alternative achieves the necessary 3 lanes of vehicular capacity in each direction. Multi-modal functions can be accommodated in the ROW while minimizing ROW widths.	The alternative achieves the necessary 3 lanes of vehicular capacity in each direction. Multi-modal functions can be accommodated while minimizing ROW widths.	The alternative achieves the necessary 3 lanes of vehicular capacity in each direction. Enhanced multi-modal functions can be accommodated while minimizing ROW widths.
		Will vehicular rights-of-ways be minimized while creating a high quality pedestrian environment?	4 Percentage of ROW dedicated to active transportation.	55% dedicated to active transportation.	61% dedicated to active transportation.	53% dedicated to active transportation.	55% dedicated to active transportation.	55% dedicated to active transportation.	60% dedicated to active transportation.
	Existing/planned neighbourhoods.	Does the alternative provide opportunities for improvements for existing neighbourhoods ?	5 Opportunities for improvement.	Enhanced walking/cycling opportunities to encourage walking and cycling for short local trips along Commissioners and on new street. Introduces improved retail opportunities for Commissioners. Provides multiple opportunities for place-making: heritage connections, views, connecting parks and open spaces and celebrating water as a community resource. However, narrow ROW limits the amount of space available to greatly enhance the pedestrian realm.	Enhanced walking/cycling opportunities to encourage walking and cycling for short local trips along Commissioners and on new street. Introduces improved retail opportunities for Commissioners. Provides multiple opportunities for place-making: heritage connections, views, connecting parks and open spaces and celebrating water as a community resource.	Enhanced walking/cycling opportunities to encourage walking and cycling for short local trips along Commissioners. Introduces improved retail opportunities and enhanced access to transit. Multiple opportunities for place-making : heritage connections, views, connecting parks and open spaces and celebrating water as a community resource. However, narrow ROW limits the amount of space available to greatly enhance the pedestrian realm.	Enhanced walking/cycling opportunities to encourage walking and cycling for short local trips. Introduces improved retail opportunities and a variety of block sizes to encourage a vibrant mix of uses. Enhanced access to transit. Multiple opportunities for place-making: heritage connections, views, connecting parks and open spaces and celebrating water as a community resource. However, narrow ROW limits the amount of space available to greatly enhance the pedestrian realm.	Enhanced walking/cycling opportunities to encourage walking and cycling for short local trips along Commissioners and on new street. Introduces improved retail opportunities and a variety of block sizes to encourage a vibrant mix of uses. Enhanced access to transit. Multiple opportunities for place-making : heritage connections, views, connecting parks and open spaces and celebrating water as a community resource. However, narrow ROW limits the amount of space available to greatly enhance the pedestrian realm.	Greatly enhanced walking/cycling opportunities to encourage walking and cycling for short local trips on multiple connections. Increased porosity and permeability through the sub area with multiple connections providing enhanced access. Introduces improved retail opportunities and a variety of block sizes to encourage a vibrant mix of uses. Enhanced access to transit. Multiple opportunities for place-making : heritage connections, views, connecting parks and open spaces and celebrating water as a community resource.

EVALUATION OF ALTERNATIVE SOLUTIONS - SUB AREA 5: EAST-WEST CONNECTIONS BETWEEN LAKESHORE AND THE SHIP CHANNEL

OBJECTIVE	CRITERIA	DESCRIPTION	MEASURE	5-A: NEW EAST-WEST (AND MAINTAIN and ENHANCE COMMISSIONERS, 5-B.2)	5-B.1: URBANIZE COMMISSIONERS	5-B.2: MAINTAIN and ENHANCE COMMISSIONERS	5-C.1: EXTENDED BASIN (and MAINTAIN and ENHANCE COMMISSIONERS 5-B.2)	5-C.2: REALIGNED and EXTENDED BASIN (and MAINTAIN and ENHANCE COMMISSIONERS, 5-B.2)	5-D: MULTIPLE CONNECTIONS (and URBANIZE COMMISSIONERS, 5-B.1)					
CREATING AN INTERESTING AND DYNAMIC URBAN MIX	Existing/planned neighbourhoods.	Does the alternative minimize potential impacts to existing and planned neighbourhoods?	6	Number of existing residential units potentially displaced.	NA	No existing residential units in the sub area	NA	No existing residential units in the sub area	NA	No existing residential units in the sub area				
			7	Likelihood of non-local traffic in residential area and ability to manage traffic infiltration.	●	Medium likelihood of additional non-local traffic in future residential areas in McLeary District. New roadway would serve two functions, alternative capacity to Commissioners and access to adjacent residential properties.	●	High likelihood of additional non-local traffic in residential area. Reduced capacity on Commissioners would result in diversion to parallel links not intended to carry local non-local traffic.	●	Medium likelihood of additional non-local traffic in residential area. Reduced capacity on Commissioners would result in diversion to parallel links not intended to carry local non-local traffic.	●	Medium likelihood of additional non-local traffic future residential areas in McLeary District and mixed use area in film district.		
	Existing businesses and industry and opportunities for new businesses and industry.	Is there potential for impacts to businesses and industry, such as displacement or reductions in parking?	8	Displacement of businesses and industry.	●	Alternative will not displace existing businesses/industries to remain if appropriate mitigation/ careful design attention is given to protecting buildings on the north side of Commissioners Street east of Carlaw Avenue.	●	Alternative will not displace existing businesses/industries if appropriate mitigation/careful design attention is given to protecting buildings on the north side of Commissioners Street east of Carlaw Avenue.	●	Alternative will not displace existing businesses/industries if appropriate mitigation/careful design attention is given to protecting buildings on the north side of Commissioners Street east of Carlaw Avenue. Maintains existing secure perimeter at the film studios.	●	Alternative will not displace existing businesses/industries to remain if appropriate mitigation/ careful design attention is given to protecting buildings on the north side of Commissioners Street east of Carlaw Avenue.		
			9	Does the alternative support the establishment of new businesses and industry?	●	A new east to west street adds connectivity across/through proposed mixed use area providing support for existing and new businesses. Enhancements of Commissioners to support businesses also achieved.	●	Urbanizing Commissioners and introducing dedicate transit and continuous active transportation connections provides enhanced access and amenity for area businesses. Capacity is significantly constrained with only one vehicular lane in each direction.	●	Enhanced Commissioners and introducing dedicate transit and continuous active transportation connections provides enhanced access and amenity for area businesses. Capacity is constrained with only two vehicular lanes in each direction.	●	A new east to west street adds connectivity across/through proposed mixed land use area providing support for existing and new businesses. Enhancements of Commissioners to support businesses also achieved.	●	The urbanization of Commissioners provides a more supportive environment for all modes and supports planned business activity in the corridor. The provision of the east-west facilities provide increased accessibility to business and industry.
Existing businesses and industry and opportunities for new businesses and industry.	Does the alternative support dedicated truck routes and goods movement?	10	Facilitates dedicated truck routes to/from Lake Shore Boulevard and the DVP.	●	Ability to accommodate goods movement in necessary locations with additional east-west street providing congestion relief in the network in appropriate areas.	●	Some ability to accommodate goods movement in necessary locations but lack of capacity has the potential for resulting in a highly congested environment.	●	Ability to accommodate goods movement in necessary locations. Some congestion possible.	●	Ability to accommodate goods movement in necessary locations with additional east-west street providing congestion relief in the network in appropriate areas.	●	Ability to accommodate goods movement in necessary locations with additional east-west streets providing congestion relief in the network in appropriate areas.	
		11	Connectivity.	●	Enhanced existing connection and new east-west connection provides good spacing, enhancing connectivity for all users, multiple routing options for each mode and increasing porosity through the study area.	●	Urbanizing Commissioners creates continuous sidewalks and cycling facilities and introduces dedicated transit for improved connectivity across the corridor for active transportation. No additional connections in and through the area.	●	Maintaining and enhancing Commissioners creates continuous sidewalks and cycling facilities and introduces transit for improved connectivity across the Corridor. No additional connections in and through the area.	●	Enhanced existing connection and new east-west connection provides good spacing, with potential to provide a direct connection to Basin Street as approved in the Lower Don Lands EA, providing excellent connectivity across the Port Lands and multiple routing options. Achieving this connection would require impacting the secure perimeter of the existing studios.	●	Enhanced existing connection and new east-west connection provides good spacing, enhancing connectivity for all users, multiple routing options for each mode and increasing porosity through the site.	
CONNECT THE PORT LANDS TO THE CITY	Better connect the Port Lands with the South of Eastern area and the rest of the city.	Does the alternative provide the ability to achieve a fine-grained network of streets (local, secondary and major)?	12	Facilitates achieving an appropriate hierarchy and rhythm of public streets.	●	Provides opportunities to achieve an appropriate hierarchy of local, minor collector and well positioned main street through the study area. Hierarchy and rhythm of streets achieved north of Commissioners Street.	●	Provides a well-positioned main street through the study area but does not improve the ability to achieve a finer grain and hierarchy of streets. Would result in heavier reliance on local streets north and south of Commissioners Street.	●	Provides a well-positioned main street through the Film Studio District but does not improve the ability to achieve a finer grain and hierarchy of streets. Would result in heavier reliance on local streets north and south of Commissioners Street.	●	Provides opportunities to achieve an appropriate hierarchy of local, minor collector and well positioned main street through the study area. Hierarchy and rhythm of streets achieved south of Commissioners Street.	●	Provides opportunities to achieve an appropriate hierarchy of local, minor collector and well positioned main street through the study area. Hierarchy and rhythm of streets achieved south of Commissioners Street.
			11	Connectivity.	●	Enhanced existing connection and new east-west connection provides good spacing, enhancing connectivity for all users, multiple routing options for each mode and increasing porosity through the study area.	●	Urbanizing Commissioners creates continuous sidewalks and cycling facilities and introduces dedicated transit for improved connectivity across the corridor for active transportation. No additional connections in and through the area.	●	Maintaining and enhancing Commissioners creates continuous sidewalks and cycling facilities and introduces transit for improved connectivity across the Corridor. No additional connections in and through the area.	●	Enhanced existing connection and new east-west connection provides good spacing, with potential to provide a direct connection to Basin Street as approved in the Lower Don Lands EA, providing excellent connectivity across the Port Lands and multiple routing options. Achieving this connection would require impacting the secure perimeter of the existing studios.	●	Enhanced existing connection and new east-west connection provides good spacing, enhancing connectivity for all users, multiple routing options for each mode and increasing porosity through the site.

EVALUATION OF ALTERNATIVE SOLUTIONS - SUB AREA 5: EAST-WEST CONNECTIONS BETWEEN LAKESHORE AND THE SHIP CHANNEL

OBJECTIVE	CRITERIA	DESCRIPTION	MEASURE	5-A: NEW EAST-WEST (AND MAINTAIN and ENHANCE COMMISSIONERS, 5-B.2)	5-B.1: URBANIZE COMMISSIONERS	5-B.2: MAINTAIN and ENHANCE COMMISSIONERS	5-C.1: EXTENDED BASIN (and MAINTAIN and ENHANCE COMMISSIONERS 5-B.2)	5-C.2: REALIGNED and EXTENDED BASIN (and MAINTAIN and ENHANCE COMMISSIONERS, 5-B.2)	5-D: MULTIPLE CONNECTIONS (and URBANIZE COMMISSIONERS, 5-B.1)
CONNECT THE PORT LANDS TO THE CITY	Better connect the Port Lands with the South of Eastern area and the rest of the city.	Does the alternative provide enhanced connections to major destinations for all modes?	13 Enhanced direct connections to destinations.	● Enhanced connections to Don Greenway, the future Commissioners community hub, Turning Basin and the Leslie Pastoral Gateway with two streets.	● Enhanced connections to Don Greenway, the future Commissioners community hub, Turning Basin and the Leslie Pastoral Gateway.	● Enhanced connections to Don Greenway, the future Commissioners community hub, Turning Basin and the Leslie Pastoral Gateway.	● Enhanced connections to Don Greenway, the future Commissioners community hub, Turning Basin and the Leslie Pastoral Gateway with two streets.	● Enhanced connections to Don Greenway, the future Commissioners community hub, Turning Basin and the Leslie Pastoral Gateway with two streets.	● Enhanced connections to Don Greenway, the future Commissioners community hub, Turning Basin and the Leslie Pastoral Gateway with three streets.
	Redundancy in the network.	Does the alternative contribute to redundancy in the network to allow for better access/service?	14 Redundancy in network.	● With new east-west street, improves redundancy in network as street parallels Commissioners Street.	● Limited redundancy potential with single facility and only two vehicular lanes.	● Some redundancy with the single facility with four vehicular lanes. Would provide the ability to maintain vehicular lanes during maintenance/resurfacing.	● With new east-west street, improves redundancy in network as street parallels Commissioners.	● With new east-west street, improves redundancy in network as street parallels Commissioners.	● Multiple streets provides enhanced redundancy in network.
	Existing physical barriers.	Is the alternative impacted by physical barriers? Eg. rail, existing over/underpasses, existing on/off ramps or other Gardiner components, Ship Channel	15 Nature and extent of physical barriers.	● No significant physical barriers identified.	● No significant physical barriers identified.	● No significant physical barriers identified.	● Provision of public road through Film Studio would require changes to provisions for secure perimeter, i.e. removal of gates and other security features.	● No significant physical barriers identified.	● No significant physical barriers identified.
	Opportunities for linking natural habitat and open spaces and improving biodiversity.	What opportunities does the alternative provide for direct linkages between natural habitat and existing/planned open spaces?	16 Opportunities to provide direct linkages to natural habitat and open spaces.	● Commissioners Street provides a good east west link between the future river valley, planned parks and open spaces along Commissioners and Leslie Street/gateway to Tommy Thompson Park. New east-west street would provide good connectivity between the Don Greenway, local parks and expanded McCleary park.	● Commissioners Street provides the only east west link between the future river valley, planned parks and open spaces along Commissioners and Leslie Street/gateway to Tommy Thompson Park.	● Commissioners Street provides the only east west link between the future river valley, planned parks and open spaces along Commissioners and Leslie Street/gateway to Tommy Thompson Park.	● Commissioners Street provides a good east west link between the future river valley, planned parks and open spaces along Commissioners and Leslie Street/gateway to Tommy Thompson Park. New street would provide direct linkages between the Don Greenway/high quality wetlands in the Lower Don Lands, Inner Harbour and the Ship Channel/Turning Basin.	● Commissioners Street provides a good east west link between the future river valley, planned parks and open spaces along Commissioners and Leslie Street/gateway to Tommy Thompson Park. New street would provide direct linkages between the Don Greenway/high quality wetlands in the Lower Don Lands, Inner Harbour and the Ship Channel/Turning Basin.	● Commissioners Street provides a good east west link between the future river valley, planned parks and open spaces along Commissioners and Leslie Street/gateway to Tommy Thompson Park. New street would provide direct linkages between the Don Greenway/high quality wetlands in the Lower Don Lands, Inner Harbour and the Ship Channel/Turning Basin. New Street connects Don Greenway, local parks, and McCleary Park.
	What opportunities does the alternative provide to contribute to urban biodiversity?	17 Urban biodiversity.	● Potential to incorporate bioswales, understory planting, and establish a mature tree canopy on Commissioners Street. Opportunity to establish great street trees on the new east west street.	● Significant potential to incorporate a wide linear park with bioswales, understory planting, and establish a mature tree canopy on Commissioners providing enhanced liminal linkage between future estuary and pastoral gateway on Leslie Street.	● Potential to incorporate bioswales, understory planting, and establish a mature tree canopy on Commissioners Street.	● Potential to incorporate bioswales, understory planting, and establish a mature tree canopy on Commissioners Street. Opportunity to establish great street trees on the new east west street.	● Potential to incorporate bioswales, understory planting, and establish a mature tree canopy on Commissioners Street. Opportunity to establish great street trees on the new east west street.	● Significant potential to incorporate a wide linear park with bioswales, understory planting, and establish a mature tree canopy on Commissioners providing enhanced liminal linkage between future estuary and pastoral gateway on Leslie Street. Opportunity to establish great street trees on the new east west street.	

EVALUATION OF ALTERNATIVE SOLUTIONS - SUB AREA 5: EAST-WEST CONNECTIONS BETWEEN LAKESHORE AND THE SHIP CHANNEL

OBJECTIVE	CRITERIA	DESCRIPTION	MEASURE	5-A: NEW EAST-WEST (AND MAINTAIN and ENHANCE COMMISSIONERS, 5-B.2)	5-B.1: URBANIZE COMMISSIONERS	5-B.2: MAINTAIN and ENHANCE COMMISSIONERS	5-C.1: EXTENDED BASIN (and MAINTAIN and ENHANCE COMMISSIONERS 5-B.2)	5-C.2: REALIGNED and EXTENDED BASIN (and MAINTAIN and ENHANCE COMMISSIONERS, 5-B.2)	5-D: MULTIPLE CONNECTIONS (and URBANIZE COMMISSIONERS, 5-B.1)	
LEVERAGE ASSETS	Cultural heritage resources.	Are there cultural heritage resources that might be affected by an alternative and what is the nature of the impact?	18 Nature and extent of potential impacts.	Irreversible and permanent alteration to CHL 10 by introducing a new ROW through the property, removing built structures and landscape features. Potential removal of mature trees associated with CHL 10 along Commissioners Street to accommodate ROW widening. Decommissioning and removal of hydro towers associated with CHL 11 to accommodate improvements to Commissioners Street. Potential displacement or destruction of BHR 11.	Potential removal of mature trees associated with CHL 10 along Commissioners Street to accommodate ROW widening. Potential displacement or destruction of BHR 11. Alternative does not impact CHL 11 - conceptual cross-section maintains all three towers.	Potential removal of mature trees associated with CHL 10 along Commissioners Street to accommodate ROW widening. Decommissioning and removal of one or more hydro towers associated with CHL 11 to accommodate improvements to Commissioners Street. Potential displacement or destruction of BHR 11.	Potential removal of mature trees associated with CHL 10 along Commissioners Street to accommodate ROW widening. Decommissioning and removal of one or more hydro towers associated with CHL 11 to accommodate improvements to Commissioners Street. Potential displacement or destruction of BHR 11 and BHR 9.	Potential removal of mature trees associated with CHL 10 along Commissioners Street to accommodate ROW widening. Decommissioning and removal of one or more hydro towers associated with CHL 11 to accommodate improvements to Commissioners Street. Potential displacement or destruction of BHR 11.	Irreversible and permanent alteration to CHL 10 by introducing a new ROW through the property, potentially removing built structures and landscape features associated with the property. Potential removal of mature trees associated with CHL 10 along Commissioners Street to accommodate ROW widening. Potential displacement or destruction of BHR 11. Alternative does not impact CHL 11 - conceptual cross-section maintains all three towers.	
		Can any potential impacts be mitigated?	19 Ability to mitigate impacts.	Limited potential to mitigate: New east-west street and improvements to Commissioners Street can be configured to minimize impacts to CHL 10. An HIA should be conducted to confirm cultural heritage attributes of CHL 10 and propose specific measures to minimize impacts to the heritage attributes. Insufficient space within the ROW to conserve decommissioned hydro towers (CHL 11) as landscape features Commissioners Street ROW could be configured to avoid impacts to BHR 11.	High potential to mitigate: Improvements to Commissioners Street can be configured to minimize impacts to mature trees associated with CHL 10. Decommissioned hydro towers (CHL 11) can be preserved in-situ and enhanced as landscape features commemorating the industrial history of the area. Commissioners Street ROW could be configured to avoid impacts to BHR 11.	Limited potential to mitigate: Difficult to reconfigure Commissioners Street to minimize impacts to mature trees associated with CHL 10. Insufficient space within the ROW to preserve decommissioned hydro towers (CHL 11) as landscape features commemorating the industrial history of the area while maintaining multi-modal functionality. Difficult to reconfigure ROW to avoid impacts to BHR 11.	Limited potential to mitigate: Improvements to Commissioners Street can be configured to minimize impacts to mature trees associated with CHL 10. Decommissioned hydro towers (CHL 11) can be preserved in-situ as landscape features commemorating the industrial history of the area. Commissioners Street ROW could be configured to avoid impacts to BHR 11. Basin Street ROW could be configured to avoid impacts to BHR 9.	Limited potential to mitigate: Difficult to reconfigure Commissioners Street to minimize impacts to mature trees associated with CHL 10. Insufficient space within the ROW to preserve decommissioned hydro towers (CHL 11) as landscape features commemorating the industrial history of the area while maintaining multi-modal functionality. Difficult to reconfigure ROW to avoid impacts to BHR 11.	Some potential to mitigate: New east-west street and improvements to Commissioners Street can be configured to minimize impacts to CHL 10. An HIA should be conducted to confirm cultural heritage attributes of CHL 10 and propose specific measures to minimize impacts to the heritage attributes. Decommissioned hydro towers (CHL 11) can be preserved in-situ as landscape features commemorating the industrial history of the area. Commissioners Street ROW could be configured to avoid impacts to BHR 11.	
		Are there opportunities that introducing new streets provide to frame and celebrate heritage resources?	20 Potential opportunities.	Good opportunities: - Facilitates access and showcases the future Commissioners Community Hub, - Some potential to integrate Turning Basin and heritage dock wall as part of a 'blue square', - Enhanced experience of the Commissioners Community Hub Stack through alignment and material treatment of new east-west street which could be designed with special treatment and configured as a shared street.	Multiple opportunities: - Integration of decommissioned 'power towers' along Commissioners as part of storm water feature/linear open space, - Facilitating access and showcasing the future Commissioners Community Hub as part of a new community open space, - Integration of the Turning Basin and heritage dock wall as part of a 'blue square'.	Some opportunities: - Facilitating access and showcasing the future Commissioners Community Hub as part of a new community open space, - Integration of the Turning Basin and heritage dock wall as part of a 'blue square'.	Some opportunities: - Facilitating access and showcasing the future Commissioners Community Hub as part of a new community open space. - Integration of the Turning Basin and heritage dock wall as part of a 'blue square'.	Some opportunities: - Facilitating access and showcasing the future Commissioners Community Hub as part of a new community open space. - Integration of the Turning Basin and heritage dock wall as part of a 'blue square'.	Multiple opportunities: - Integration of decommissioned 'power towers' along Commissioners as part of storm water feature/linear open space, - Facilitating access and showcasing the future Commissioners Community Hub as part of a new community open space, - Integration of the Turning Basin and heritage dock wall as part of a 'blue square', - Enhanced experience of the Commissioners Community Hub Stack through alignment and material treatment of new east-west street - to be designed as a special shared street.	
	Archaeological resources and traditional uses of Aboriginal people.	Are there archaeological resources that might be affected by an alternative and what is the nature of the impact?	21 Nature and extent of potential impacts.	No impacts anticipated to archaeological resources or traditional uses by Aboriginal people.	No impacts anticipated to archaeological resources or traditional uses by Aboriginal people.	No impacts anticipated to archaeological resources or traditional uses by Aboriginal people.	No impacts anticipated to archaeological resources or traditional uses by Aboriginal people.	No impacts anticipated to archaeological resources or traditional uses by Aboriginal people.	No impacts anticipated to archaeological resources or traditional uses by Aboriginal people.	No impacts anticipated to archaeological resources or traditional uses by Aboriginal people.
			22 Ability to mitigate.	NA Not applicable.	NA Not applicable.	NA Not applicable.	NA Not applicable.	NA Not applicable.	NA Not applicable.	NA Not applicable.

EVALUATION OF ALTERNATIVE SOLUTIONS - SUB AREA 5: EAST-WEST CONNECTIONS BETWEEN LAKESHORE AND THE SHIP CHANNEL

OBJECTIVE	CRITERIA	DESCRIPTION	MEASURE	5-A: NEW EAST-WEST (AND MAINTAIN and ENHANCE COMMISSIONERS, 5-B.2)	5-B.1: URBANIZE COMMISSIONERS	5-B.2: MAINTAIN and ENHANCE COMMISSIONERS	5-C.1: EXTENDED BASIN (and MAINTAIN and ENHANCE COMMISSIONERS 5-B.2)	5-C.2: REALIGNED and EXTENDED BASIN (and MAINTAIN and ENHANCE COMMISSIONERS, 5-B.2)	5-D: MULTIPLE CONNECTIONS (and URBANIZE COMMISSIONERS, 5-B.1)	
LEVERAGE ASSETS	Existing/planned parks and open spaces.	Does the alternative create an opportunity to enhance existing/planned parks and open spaces?	23 Opportunities to enhance.	● Some potential for a linear open space on Commissioners with potential for integration with the future Turning Basin Blue Square park. Alternative would bisect McCleary Park expansion. Street can be sensitively designed as a shared street to minimize impacts.	● Alternative is able to accommodate: - An uninterrupted, expanded McCleary Park. ● - A wide, linear open space on Commissioners with potential for integration with the future Turning Basin Blue Square park.	● Alternative is able to accommodate: - An uninterrupted, expanded McCleary Park ● - Some potential for a linear open space on Commissioners with potential for integration with the future Turning Basin Blue Square park.	● Some potential for a linear open space on Commissioners with potential for integration with the future Turning Basin Blue Square Park. Opportunities for creating a linear promenade adjacent to the Turning Basin on Carlaw extension.	● Some potential for a linear open space on Commissioners with potential for integration with the future Turning Basin Blue Square park. Opportunities for creating a linear promenade adjacent to the Turning Basin on Carlaw extension.	● Alternative is able to accommodate: - A wide, linear open space on Commissioners with potential for integration with the future Turning Basin Blue Square park ● - Opportunities for creating a linear promenade adjacent to the Turning Basin on Carlaw extension. Alternative would bisect McCleary Park expansion. Street can be sensitively designed as a shared street to minimize impacts.	
		Is there potential for temporary or permanent impacts to existing parks and open spaces?	24 Nature and extent of potential impacts.	● No impact to existing parks and open spaces. New east-west street would be located to the south of the existing park.	● No impact to existing parks and open spaces.	● No impact to existing parks and open spaces.	● No impact to existing parks and open spaces.	● No impact to existing parks and open spaces.	● No impact to existing parks and open spaces. New east-west street would be located to the south of the existing park.	
	Compatibility with the natural environment.	Does the alternative create an opportunity to enhance natural heritage and terrestrial resources (existing and planned)?	25 Opportunities for net environmental gains.	● Potential opportunity to naturalize the interface between the existing natural cover and Commissioners Street (without encroachment) through tree plantings.	● Potential opportunity to naturalize the interface between the existing natural cover and Commissioners Street (without encroachment) through tree plantings.	● Potential opportunity to naturalize the interface between the existing natural cover and Commissioners Street (without encroachment) through tree plantings.	● Potential opportunity to naturalize the interface between the existing natural cover and Commissioners Street (without encroachment) through tree plantings.	● Potential opportunity to naturalize the interface between the existing natural cover and Commissioners Street (without encroachment) through tree plantings.	● Potential opportunity to naturalize the interface between the existing natural cover and Commissioners Street (without encroachment) through tree plantings.	● Potential opportunity to naturalize the interface between the existing natural cover and Commissioners Street (without encroachment) through tree plantings.
		Is there potential for temporary or permanent impacts to natural heritage and terrestrial resources (existing and planned)?	26 Nature and extent of potential impacts.	● The existing natural cover areas between Lake Shore Blvd. and the Shipping Channel, between the Don Roadway and Saulter Street will be removed by the Valley Wall Feature required by the approved DMNP EA. Therefore, no impacts for these areas. Anticipated impacts with widening/new street directly over existing natural cover north of Commissioners Street between Bouchette Street and Saulter Street. Potential impacts are considered minimal due to the limited ecological form and function that this area provides.	● The existing natural cover areas between Lake Shore Blvd. and the Shipping Channel, between the Don Roadway and Saulter Street will be removed by the Valley Wall Feature required by the approved DMNP EA. Therefore, no impacts for these areas. Anticipated impacts with widening directly over existing natural cover north of Commissioners Street between Bouchette Street and Saulter Street. Potential impacts are considered minimal due to the limited ecological form and function that this area provides.	● The existing natural cover areas between Lake Shore Blvd. and the Shipping Channel, between the Don Roadway and Saulter Street will be removed by the Valley Wall Feature required by the approved DMNP EA. Therefore, no impacts for these areas. Anticipated impacts with widening directly over existing natural cover north of Commissioners Street between Bouchette Street and Saulter Street. Potential impacts are considered minimal due to the limited ecological form and function that this area provides.	● The existing natural cover areas between Lake Shore Blvd. and the Shipping Channel, between the Don Roadway and Saulter Street will be removed by the Valley Wall Feature required by the approved DMNP EA. Therefore, no impacts for these areas. Anticipated impacts with widening directly over existing natural cover north of Commissioners Street between Bouchette Street and Saulter Street. Potential impacts are considered minimal due to the limited ecological form and function that this area provides.	● The existing natural cover areas between Lake Shore Blvd. and the Shipping Channel, between the Don Roadway and Saulter Street will be removed by the Valley Wall Feature required by the approved DMNP EA. Therefore, no impacts for these areas. Anticipated impacts with widening directly over existing natural cover north of Commissioners Street between Bouchette Street and Saulter Street. Potential impacts are considered minimal due to the limited ecological form and function that this area provides.	● The existing natural cover areas between Lake Shore Blvd. and the Shipping Channel, between the Don Roadway and Saulter Street will be removed by the Valley Wall Feature required by the approved DMNP EA. Therefore, no impacts for these areas. Anticipated impacts with widening/new street directly over existing natural cover north of Commissioners Street between Bouchette Street and Saulter Street. Potential impacts are considered minimal due to the limited ecological form and function that this area provides.	
		Is there potential for adverse effects to water quality aquatic species?	27 Minimizes the potential for an adverse effect on water quality and aquatic species.	● No anticipated impacts.	● No anticipated impacts.	● No anticipated impacts.	● No anticipated impacts.	● No anticipated impacts.	● No anticipated impacts.	● No anticipated impacts.
		Are there any impacts to groundwater?	28 Impacts or improvements to groundwater.	● No anticipated impacts.	● No anticipated impacts.	● No anticipated impacts.	● No anticipated impacts.	● No anticipated impacts.	● No anticipated impacts.	● No anticipated impacts.

EVALUATION OF ALTERNATIVE SOLUTIONS - SUB AREA 5: EAST-WEST CONNECTIONS BETWEEN LAKESHORE AND THE SHIP CHANNEL

OBJECTIVE	CRITERIA	DESCRIPTION	MEASURE	5-A: NEW EAST-WEST (AND MAINTAIN and ENHANCE COMMISSIONERS, 5-B.2)	5-B.1: URBANIZE COMMISSIONERS	5-B.2: MAINTAIN and ENHANCE COMMISSIONERS	5-C.1: EXTENDED BASIN (and MAINTAIN and ENHANCE COMMISSIONERS 5-B.2)	5-C.2: REALIGNED and EXTENDED BASIN (and MAINTAIN and ENHANCE COMMISSIONERS, 5-B.2)	5-D: MULTIPLE CONNECTIONS (and URBANIZE COMMISSIONERS, 5-B.1)
LEVERAGE ASSETS	Visual connections.	Does the alternative provide visual connections to the study area's assets and important features?	29 Nature of any visual connections.	Multiple corridors and vistas: - Multiple views to the Don Greenway, - Multiple views to Commissioners Community Hub, - Creates a continuous corridor to the west in Villiers Island, - View of the Turning Basin.	Some corridors and vistas: - View to the Don Greenway, - Conceptual cross-section maintains and provides views to decommissioned 'power towers', - Views to Commissioners Community Hub, - View of the Turning Basin.	Some corridors and vistas: - View to the Don Greenway, - Conceptual cross-section maintains and provides views, - Views to Commissioners Community Hub, - View of the Turning Basin.	Multiple corridors and vistas: - Multiple views to the Don Greenway, - Views to Commissioners Community Hub, - Multiple views of the Turning Basin.	Multiple corridors and vistas: - Multiple views to the Don Greenway, - Views to Commissioners Community Hub, - Multiple views of the Turning Basin.	Multiple corridors and vistas: - Multiple views to the Don Greenway, - Alignment provides views to decommissioned 'power towers', - Multiple views to Commissioners Community Hub, - Creates a continuous corridor to the west in Villiers Island, - Multiple views of the Turning Basin.
	Complete street principles and street character.	Can the alternative achieve the complete street principles established and the desired street character?	30 Ability to achieve the complete street principles and desired street character.	The balance of uses within the ROW allows for multi-modal access but is biased towards vehicular use. Integration of storm water features, transit prioritization and good ability for goods movement.	Complete street principles are attainable. Balance of uses within the ROW allows for multi-modal access, transit prioritization, enhanced pedestrian and cycling environment, access to transit, integration of enhanced storm water features and port/industrial qualities of the existing landscape. Goods movement and vehicular movements challenged due to high potential for congestion.	The balance of uses within the ROW allows for multi-modal access but is biased towards vehicular use. Integration of storm water features, transit prioritization and good ability for goods movement.	The balance of uses within the ROW allows for multi-modal access but is biased towards vehicular use. Integration of storm water features, transit prioritization and good ability for goods movement.	The balance of uses within the ROW allows for multi-modal access but is biased towards vehicular use. Integration of storm water features, transit prioritization and good ability for goods movement.	Complete street principles are attainable and exceeded. Multiple links provide the ability to maintain vehicular efficiency, goods movement and transit prioritization while providing an enhanced pedestrian and cycling environment and integration of enhanced storm water features and port/industrial qualities of the existing landscape.
DEVELOP A HIGH QUALITY PUBLIC REALM	Cycling routes.	Does the alternative provide for safe and continuous cycling routes?	31 Linear km of new, physically separated, continuous, high-quality cycling track.	1.75 km of continuous cycle track from Don Roadway to Leslie and additional 0.9km of potential cycle from Don Roadway to Carlaw Avenue.	1.75km of continuous cycle track from Don Roadway to Leslie.	1.75km of continuous cycle track from Don Roadway to Leslie.	1.75 km of continuous cycle track from Don Roadway to Leslie and additional 0.9km of potential cycle from Don Roadway to Carlaw Avenue.	1.75 km of continuous cycle track from Don Roadway to Leslie and additional 1 km of potential cycle from Don Roadway to Carlaw Avenue.	1.75 km of continuous cycle track from Don Roadway to Leslie and additional 1.95 km of potential cycle from Don Roadway to Carlaw Avenue.
			32 Completes or provides linkages to existing/future cycling network.	Multiple links to north-south system at Don Roadway, Broadview extension and Leslie. Connection to the Lower Don Lands.	Provides an enhanced east-west link between the Lower Don Lands, Don Roadway, Broadview extension and Leslie.	Provides an enhanced east-west link between the Lower Don Lands, Don Roadway, Broadview extension and Leslie.	Multiple links to north-south system at Don Roadway, Broadview extension and Leslie. Directly aligned to planned Basin Street in the Lower Don Lands providing a continuous connection across multiple districts for all modes.	Multiple links to north-south system at Don Roadway, Broadview extension and Leslie. Connection to the Lower Don Lands with some potential for a future connection to the Lower Don Lands.	Multiple links to north-south system at Don Roadway, Broadview extension and Leslie. Connection to the Lower Don Lands with some potential for a future connection to the Lower Don Lands.
	Place-making opportunities.	Does the alternative provide opportunities for place-making or creating unique opportunities?	33 Place-making opportunities.	Commissioners Street presents significant opportunity for place-making within the ROW through the creation of a new linear park that highlights power heritage and supports storm water. The urbanized street also has the potential to act as a gateway to anchoring open spaces: the Don Greenway to the west, the proposed Turning Basin Park and planned pastoral gateway to the east.	Commissioners Street presents significant opportunity for place-making within the ROW through the creation of a new linear park that highlights power heritage and supports storm water. The urbanized street also has the potential to act as a gateway to anchoring open spaces: the Don Greenway to the west, the proposed Turning Basin Park and planned pastoral gateway to the east.	Commissioners Street presents significant opportunity for place-making within the ROW through the creation of a new linear park that highlights power heritage and supports storm water. The urbanized street also has the potential to act as a gateway to anchoring open spaces: the Don Greenway to the west, the proposed Turning Basin Park and planned pastoral gateway to the east.	Commissioners Street presents significant opportunity for place-making within the ROW through the creation of a new linear park that highlights power heritage and supports storm water. The urbanized street also has the potential to act as a gateway to anchoring open spaces: the Don Greenway to the west, the proposed Turning Basin Park (with public road through Film Studio) and planned pastoral gateway to the east.	Commissioners Street presents significant opportunity for place-making within the ROW through the creation of a new linear park that highlights power heritage and supports storm water. The urbanized street also has the potential to act as a gateway to anchoring open spaces: the Don Greenway to the west, the proposed Turning Basin Park and planned pastoral gateway to the east.	Commissioners Street presents significant opportunity for place-making within the ROW through the creation of a new linear park that highlights power heritage and supports storm water. The urbanized street also has the potential to act as a gateway to anchoring open spaces: the Don Greenway to the west, the proposed Turning Basin Park and planned pastoral gateway to the east.
			34 Water as a feature.	Opportunities to integrate storm water within linear open space anchoring the street in varied experiences of water.	Opportunities to integrate storm water within linear open space as a significant public space feature.	Opportunities to integrate storm water within linear open space anchoring the street in varied experiences of water.	Opportunities to integrate storm water within linear open space anchoring the street in varied experiences of water.	Opportunities to integrate storm water within linear open space anchoring the street in varied experiences of water.	Opportunities to integrate storm water within linear open space as a significant public space feature.

EVALUATION OF ALTERNATIVE SOLUTIONS - SUB AREA 5: EAST-WEST CONNECTIONS BETWEEN LAKESHORE AND THE SHIP CHANNEL

OBJECTIVE	CRITERIA	DESCRIPTION	MEASURE	5-A: NEW EAST-WEST (AND MAINTAIN and ENHANCE COMMISSIONERS, 5-B.2)	5-B.1: URBANIZE COMMISSIONERS	5-B.2: MAINTAIN and ENHANCE COMMISSIONERS	5-C.1: EXTENDED BASIN (and MAINTAIN and ENHANCE COMMISSIONERS 5-B.2)	5-C.2: REALIGNED and EXTENDED BASIN (and MAINTAIN and ENHANCE COMMISSIONERS, 5-B.2)	5-D: MULTIPLE CONNECTIONS (and URBANIZE COMMISSIONERS, 5-B.1)
DEVELOP A HIGH QUALITY PUBLIC REALM	Health and safety.	Does the alternative have the potential to improve existing unsafe conditions?	35 Improves existing unsafe conditions and maintains minimum design standards and criteria .	● Alternative relieves congestion in Commissioners corridor, therefore reducing risk for collisions at major intersections. Creates continuous sidewalks on multiple corridors. Does not minimize pedestrian crossing distance across vehicle lanes. Vertical and horizontal design criteria for roadway can be met.	● Enhanced capacity in Commissioners corridor will improve operating condition and reduce potential for safety issues. Creates continuous sidewalks along the corridor and improves pedestrian crossing distances. Vertical and horizontal design criteria for roadway can be met.	● Enhanced capacity in Commissioners corridor will improve operating condition and reduce potential for safety issues. Creates continuous sidewalks along the corridor. Does not minimize pedestrian crossing distance across vehicle lanes. Vertical and horizontal design criteria for roadway can be met.	● Alternative relieves congestion in Commissioners Corridor, therefore reducing risk for collisions at major intersections. Creates continuous sidewalks on multiple corridors. Does not minimize pedestrian crossing distance across vehicle lanes. Vertical and horizontal design criteria for roadway can be met.	● Alternative relieves congestion in Commissioners Corridor, therefore reducing risk for collisions at major intersections. Creates continuous sidewalks on multiple corridors. Does not minimize pedestrian crossing distance across vehicle lanes. Vertical and horizontal design criteria for roadway can be met.	● Alternative relieves congestion in Commissioners Corridor, therefore reducing risk for collisions at major intersections. Creates continuous sidewalks on multiple corridors and reduces pedestrian crossing distances of travel portion of the street on Commissioners Street. Vertical and horizontal design criteria for roadway can be met.
CONTRIBUTE TO THE SUSTAINABLE FUTURE OF THE CITY	Opportunities for innovation.	Can innovative features be accommodated in the design of the alternative?	36 Ability to provide innovative features in the design of the alternative.	● Some innovative features for Commissioners Street and ability for innovative features with new east-west street. Opportunity to introduce a special shared street that provides access to the Community Hub and facilitates seasonal or festival pedestrian only uses.	● Innovative features able to accommodated in the design.	● Some innovative features able to accommodated in the design.	● Some innovative features for Commissioners Street and ability for innovative features with redesign of Basin street.	● Some innovative features for Commissioners Street and ability for innovative features with realigned Basin street.	● Excellent opportunities for innovative features in the design of all streets. Opportunity to introduce a special shared street that provides access to the Community Hub and facilitates seasonal or festival pedestrian only uses.
	Transit accommodation.	How easily can dedicated transit, or where appropriate surface transit routes in mixed traffic, be accommodated?	37 Ability to, and implications of, connecting with adjacent transit network.	● Streetcar accommodated in Commissioners Street with connections to future streetcar on Queens Quay and Broadview.	● Streetcar accommodated in Commissioners Street with connections to future streetcar on Queens Quay and Broadview.	● Streetcar accommodated in Commissioners Street with connections to future streetcar on Queens Quay and Broadview.	● Streetcar accommodated in Commissioners Street with connections to future streetcar on Queens Quay and Broadview.	● Streetcar accommodated in Commissioners Street with connections to future streetcar on Queens Quay and Broadview.	● Streetcar accommodated in Commissioners Street with connections to future streetcar on Queens Quay and Broadview.
		Is transit service optimally located to serve future land use and maximize ridership potential?	38 Is transit service optimally located?	● Provision of streetcar in dedicated ROW on Commissioners and potential to connect bus service from other areas of the city.	● Provision of streetcar in dedicated ROW on Commissioners and potential to connect bus service from other areas of the city.	● Provision of streetcar in dedicated ROW on Commissioners and potential to connect bus service from other areas of the city.	● Provision of streetcar in dedicated ROW on Commissioners and potential to connect bus service from other areas of the city.	● Provision of streetcar in dedicated ROW on Commissioners and potential to connect bus service from other areas of the city.	● Provision of streetcar in dedicated ROW on Commissioners and potential to connect bus service from other areas of the city.
	Flood risk potential.	Would the alternative potentially create a flood risk potential? Can flood risk potential be mitigated through design?	39 Flood risk potential created and ability to mitigate flood risk.	● Able to accommodate Valley Wall Feature requirement from the DMNP EA.	● Able to accommodate Valley Wall Feature requirement from the DMNP EA.	● Able to accommodate Valley Wall Feature requirement from the DMNP EA.	● Able to accommodate Valley Wall Feature requirement from the DMNP EA.	● Able to accommodate Valley Wall Feature requirement from the DMNP EA.	● Able to accommodate Valley Wall Feature requirement from the DMNP EA.

EVALUATION OF ALTERNATIVE SOLUTIONS - SUB AREA 5: EAST-WEST CONNECTIONS BETWEEN LAKESHORE AND THE SHIP CHANNEL

OBJECTIVE	CRITERIA	DESCRIPTION	MEASURE	5-A NEW EAST-WEST (AND MAINTAIN and ENHANCE COMMISSIONERS, 5-B.2)	5-B.1 URBANIZE COMMISSIONERS	5-B.2 MAINTAIN and ENHANCE COMMISSIONERS	5-C.1 EXTENDED BASIN (and MAINTAIN and ENHANCE COMMISSIONERS 5-B.2)	5-C.2 REALIGNED and EXTENDED BASIN (and MAINTAIN and ENHANCE COMMISSIONERS, 5-B.2)	5-D MULTIPLE CONNECTIONS (and URBANIZE COMMISSIONERS, 5-B.1)
CONTRIBUTE TO THE SUSTAINABLE FUTURE OF THE CITY	Noise and air quality.	Does the alternative contribute to improved noise and air quality conditions?	40 Improved noise and air quality conditions.	● Typical noise levels of an urbanized environment anticipated during peak periods. Potential for additional non-local traffic contributing to potential noise impacts on new east-west street. Non-residential uses anticipated adjacent to Commissioners in the Land Use Direction. New low floor streetcars have reduced noise impacts that would potentially impact studios. Further assessment required at Phase 3 of the EA process.	● Non-residential uses anticipated adjacent to Commissioners in the Land Use Direction. New low floor streetcars have reduced noise impacts that would potentially impact studios. Further assessment required at Phase 3 of the EA process. Typical noise levels in an urbanized environment anticipated during peak periods.	● Non-residential uses anticipated adjacent to Commissioners in the Land Use Direction. New low floor streetcars have reduced noise impacts that would potentially impact studios. Further assessment required at Phase 3 of the EA process. Typical noise levels in an urbanized environment anticipated during peak periods.	● Typical noise levels of an urbanized environment anticipated during peak periods. Potential for reduced noise levels on planned residential uses in the McCleary District with east-west street located south of Commissioners. New low floor streetcars have reduced noise impacts that would impact studios. Further assessment required at Phase 3 of the EA process.	● Typical noise levels of an urbanized environment anticipated during peak periods. Non-residential uses anticipated adjacent to Commissioners in the Land Use Direction. New low floor streetcars have reduced noise impacts that would impact studios. Further assessment required at Phase 3 of the EA process.	● Typical noise levels of an urbanized environment anticipated during peak periods. Trip distribution across three connections would minimize potential impacts to the planned residential uses in the McCleary District. New low floor streetcars have reduced noise impacts that would impact studios. Further assessment required at Phase 3 of the EA process.
	Resiliency and climate change.	Can the alternative be designed for maximum longevity and reduced greenhouse gas emissions?	41 Promotes reduction of greenhouse gas (e.g. through LID, minimizing pumping stations or potential to reduce congestion points).	● Potential for congestion is minor. Expanded vehicular area could contribute to heat island effect.	● Enhanced ROW amenities and limited travel portion of the street will minimize heat island effect but potential for congestion on Commissioners is increased.	● Potential for congestion is minor. Expanded vehicular area could contribute to heat island effect.	● Potential in congestion is minor. Expanded vehicular area could contribute to heat island effect.	● Potential in congestion is minor. Expanded vehicular area could contribute to heat island effect.	● Large new paved area over multiple streets will contribute to heat island. Provision of vegetation (two canopy landscape opened channels) and vegetation communities will mitigate the "heat island" effect. Best opportunity to minimize congestion.
IMPLEMENTATION	Compatibility with City, provincial planning policies and Waterfront Toronto/TRCA Framework/standards.	Does the alternative support achieving City planning policies?	42 Supports the growth intention of the Official Plan, Central Waterfront Secondary Plan and precinct plans.	● The design of the public realm would be of a high quality, but provides increased emphasis on vehicular travel. Streetcars would operate in a dedicated right-of-way with improved pedestrian and cycling connections across the area. Larger sites are divided north of Commissioners and with improved pedestrian and cycling connections.	● Street that is thematic and symbolic in nature and street is remade as a place. Streetcar operates in a dedicated right-of-way. Vehicular capacity is constrained limiting the functionality of the street and area. Subdivision of larger sites would be dependent on establishing a network of local streets. The design of the public realm would be excellent, promoting an urban environment with comfortable, attractive pedestrian/cycling routes, viewing areas, open space elements, public art opportunities.	● The design of the public realm would be of a high quality, but provides increased emphasis on vehicular travel. Streetcars would operate in a dedicated right-of-way with improved pedestrian and cycling connections across the area. Good vehicular capacity with some potential for congestion. Larger sites are not subdivided and would be dependent on establishing a network of local streets.	● The design of the public realm would be of a high quality, but provides increased emphasis on vehicular travel. Streetcars would operate in a dedicated right-of-way with improved pedestrian and cycling connections across the area. Larger sites are divided south of Commissioners and with improved pedestrian and cycling connections.	● The design of the public realm would be of a high quality, but provides increased emphasis on vehicular travel. Streetcars would operate in a dedicated right-of-way with improved pedestrian and cycling connections across the area. Larger sites are divided south of Commissioners and with improved pedestrian and cycling connections.	● Exceeds policy objectives. Promotes a connected grid of streets that maximizes connections with the surrounding network and offers safe and convenient travel options with a central spine through the area that is thematic and symbolic in nature. Streetcar operates in a dedicated right-of-way with sufficient vehicular capacity. The public realm on all streets would be excellent promoting an urban environment, public art, viewing areas, divides larger sites and integrates and showcases the Port Lands cultural landscape.
	Does the alternative address Waterfront Toronto/TRCA objectives/frame works?	43 Supports addressing Waterfront Toronto/TRCA objectives/frame works.	● The alternative meets objectives. The streets encourage walking and community interaction year-round centrally and at multiple points through the area. Minimizes the amount of impervious paved surfaces and creates cycling linkages with the broader Port Lands and waterfront. Providing a linkage through the expanded McCleary Park is not desirable. Accommodates green infrastructure.	● The alternative meets objectives. The street is welcoming and encourages walking and community interaction year-round centrally through the area. Minimizes the amount of impervious paved surfaces and creates cycling linkages with the broader Port Lands and waterfront. Accommodates green infrastructure.	● The alternative encourages walking and community interaction year-round centrally and at multiple points through the area. Minimizes the amount of impervious paved surfaces. Accommodates green infrastructure.	● The alternative meets objectives. The streets encourage walking and community interaction year-round centrally and at multiple points through the area. Minimizes the amount of impervious paved surfaces and creates cycling linkages with the broader Port Lands and waterfront. Accommodates green infrastructure.	● The alternative meets objectives. The streets encourage walking and community interaction year-round centrally and at multiple points through the area. Minimizes the amount of impervious paved surfaces and creates cycling linkages with the broader Port Lands and waterfront. Accommodates green infrastructure.	● The alternative meets objectives. The streets encourage walking and community interaction year-round centrally and at multiple points through the area. Minimizes the amount of impervious paved surfaces and creates cycling linkages with the broader Port Lands and waterfront. Accommodates green infrastructure.	● The alternative meets objectives. The streets encourage walking and community interaction year-round centrally and at multiple points through the area. Minimizes the amount of impervious paved surfaces and creates cycling linkages with the broader Port Lands and waterfront. Providing a linkage through the expanded McCleary Park is not desirable. Accommodates green infrastructure.

EVALUATION OF ALTERNATIVE SOLUTIONS - SUB AREA 5: EAST-WEST CONNECTIONS BETWEEN LAKESHORE AND THE SHIP CHANNEL

OBJECTIVE	CRITERIA	DESCRIPTION	MEASURE	5-A: NEW EAST-WEST (AND MAINTAIN and ENHANCE COMMISSIONERS, 5-B.2)	5-B.1: URBANIZE COMMISSIONERS	5-B.2: MAINTAIN and ENHANCE COMMISSIONERS	5-C.1: EXTENDED BASIN (and MAINTAIN and ENHANCE COMMISSIONERS 5-B.2)	5-C.2: REALIGNED and EXTENDED BASIN (and MAINTAIN and ENHANCE COMMISSIONERS, 5-B.2)	5-D: MULTIPLE CONNECTIONS (and URBANIZE COMMISSIONERS, 5-B.1)
IMPLEMENTATION	Compatibility with City, provincial planning policies and Waterfront Toronto/TRCA Framework/standards.	Does the alternative support achieving provincial planning policies and guidelines?	44 Supports achieving provincial planning policies and guidelines.	The alternative provides good multi-modal connectivity and linkages in and between areas, incorporates green infrastructure and supports redundancy, goods movement and provides a system of nodes and corridors.	The alternative provides good multi-modal connectivity and linkages in and between areas and is integrated with adjacent systems, and incorporates green infrastructure, but does not support redundancy, goods movement, or provide a system of nodes and corridors.	While the alternative provides improved pedestrian and cycling connections, the alternative is not balanced and does not prioritize other modes.	The alternative provides good multi-modal connectivity and linkages in and between areas, incorporates green infrastructure and supports redundancy, goods movement and provides a system of nodes and corridors.	The alternative provides good multi-modal connectivity and linkages in and between areas, with the potential for enhanced connections, incorporates green infrastructure and supports redundancy, goods movement and provides a system of nodes and corridors.	Multiple connections provides excellent connectivity and redundancy supporting goods movement, delivery of emergency management services, integrated with adjacent systems, promotes an enhanced, compact system of nodes and corridors, active transportation and transit in and between areas. Provides green infrastructure in multiple connections.
	Consistency with approved area Environmental Assessments.	Does the alternative impact approved Environment Assessment projects?	45 Extent and nature of impacts on planned infrastructure with approved Environmental Assessments.	No effects on approved EAs. Ability to implement requirements from the DMNP EA.	No effects on approved EAs. Ability to implement requirements from the DMNP EA.	No effects on approved EAs. Ability to implement requirements from the DMNP EA.	No effects on approved EAs. Ability to implement requirements from the DMNP EA.	No effects on approved EAs. Ability to implement requirements from the DMNP EA.	No effects on approved EAs. Ability to implement requirements from the DMNP EA.
	Engineering feasibility and construction cost.	Is the alternative possible to construct and what are the key technical challenges?	46 Key technical challenges.	No significant challenges	No significant challenges	No significant challenges	No significant challenges	Requires hydro relocation and moving transmission station.	Requires hydro relocation and moving transmission station.
		Is the alternative cost effective to build?	47 Initial construction costs, excluding property, decontamination, and utilities	Roadway/Cycling/Boulevard: \$68.5M Streetcar in dedicated ROW (Don Roadway to Leslie): \$100M Total Cost = \$168.5M	Roadway/Cycling/Boulevard: \$52.5M Streetcar in dedicated ROW (Don Roadway to Leslie): \$100M Total Cost = \$152.5M	Roadway/Cycling/Boulevard: \$51M Streetcar in dedicated ROW (Don Roadway to Leslie): \$100M Total Cost = \$151M	Roadway/Cycling/Boulevard: \$68.5M Streetcar in dedicated ROW (Don Roadway to Leslie): \$100M Total Cost = \$168.5M	Roadway/Cycling/Boulevard: \$72M Streetcar in dedicated ROW (Don Roadway to Leslie): \$100M Total Cost = \$172M The relocation of the Basin Transmission Station is addressed in Sub-Area 1.	Roadway/Cycling/Boulevard: \$88M Streetcar in dedicated ROW (Don Roadway to Leslie): \$100M Total Cost = \$188M The relocation of the Basin Transmission Station is addressed in Sub-Area 1.
	Engineering feasibility and construction cost.	Can the alternative be phased to offset initial costs and provide infrastructure in lock-step with development?	48 Ability to phase implementation and adapt to changes in phasing and timing of development.	Some ability to phase Commissioners through delivering the corridor in segments. Construction of alternative can be phased such that E-W components precede Commissioners, allowing for potential detour routes to be in place. Ability to phase and implement new east-west street as development proceeds in the-district. Ability exists to phase transit implementation.	Some ability to phase through delivering the corridor in segments. Ability exists to phase transit implementation.	Some ability to phase through delivering the corridor in segments. Ability exists to phase transit implementation.	Some ability to phase Commissioners through delivering the corridor in segments. Construction of alternative can be phased such that E-W components precede Commissioners, allowing for potential detour routes to be in place. Ability to phase and implement new east-west street as development proceeds in the-district. Ability exists to phase transit implementation.	Some ability to phase Commissioners through delivering the corridor in segments. Construction of alternative can be phased such that E-W components precede Commissioners, allowing for potential detour routes to be in place. Ability to phase and implement new east-west street as development proceeds in the-district. Ability exists to phase transit implementation.	Some ability to phase Commissioners through delivering the corridor in segments. Construction of alternative can be phased such that E-W components precede Commissioners, allowing for potential detour routes to be in place. Ability to phase and implement new east-west street as development proceeds in the-district. Ability exists to phase transit implementation.
		Is it possible to protect for future expansion and extension?	49 Adaptability to future land use changes and intensification.	Good potential for reallocation of space in ROW given four vehicle lanes on Commissioners. Some ability to adapt to future land use changes with additional connection.	Limited potential for future expansion with single narrow vehicle corridor. Limited ability to adapt to future land use changes with reliance on single connection.	Good potential for reallocation of space in ROW given four vehicle lanes on Commissioners. Limited ability to adapt to future land use changes with reliance on single connection.	Good potential for reallocation of space in ROW given four vehicle lanes on Commissioners. Some ability to adapt to future land use changes with additional connection.	Good potential for reallocation of space in ROW given four vehicle lanes on Commissioners. Some ability to adapt to future land use changes with additional connection.	Limited potential for reallocation of space in ROW given 2 vehicle lanes on Commissioners. However, high ability to integrate and support land use development with multiple connections and focus on active transportation.

EVALUATION OF ALTERNATIVE SOLUTIONS - SUB AREA 5: EAST-WEST CONNECTIONS BETWEEN LAKESHORE AND THE SHIP CHANNEL

OBJECTIVE	CRITERIA	DESCRIPTION	MEASURE	5-A: NEW EAST-WEST (AND MAINTAIN and ENHANCE COMMISSIONERS, 5-B.2)	5-B.1: URBANIZE COMMISSIONERS	5-B.2: MAINTAIN and ENHANCE COMMISSIONERS	5-C.1: EXTENDED BASIN (and MAINTAIN and ENHANCE COMMISSIONERS 5-B.2)	5-C.2: REALIGNED and EXTENDED BASIN (and MAINTAIN and ENHANCE COMMISSIONERS, 5-B.2)	5-D: MULTIPLE CONNECTIONS (and URBANIZE COMMISSIONERS, 5-B.1)
IMPLEMENTATION	Existing municipal infrastructure and utilities.	Are there potential conflicts with existing utilities or challenges in re-location (temporary or permanent)?	50 Extent and nature of utility impacts.	There are a range of utilities on Commissioners Street including major Toronto Hydro infrastructure, gas and telecommunications (Bell). Significant major above ground Hydro One towers and related circuits will need to be buried on Commissioners Street. New east west street crosses range of utilities on north south intersections with no challenges identified (Bell, TELUS, Hydro One, Toronto Hydro).	There are a range of utilities on Commissioners Street including major Toronto Hydro infrastructure, gas and telecommunications (Bell). Significant major above ground Hydro One towers and related circuits will need to be buried on Commissioners Street.	There are a range of utilities on Commissioners Street including major Toronto Hydro infrastructure, gas and telecommunications (Bell). Significant major above ground Hydro One towers and related circuits will need to be buried on Commissioners Street.	There are a range of utilities on Commissioners Street, including major Toronto Hydro infrastructure, gas and telecommunications (Bell). Significant major above ground Hydro One towers and related circuits will need to be buried on Commissioners Street. Extended Basin Street contains a range of utilities (Toronto Hydro, gas, Hydro One, Bell) including significant Hydro One infrastructure at Bouchette.	There are a range of utilities on Commissioners Street including major Toronto Hydro infrastructure, gas and telecommunications (Bell). Significant major above ground Hydro One towers and related circuits will need to be buried on Commissioners Street. Realigned Basin Street is located where there is no record of utilities at present. However Hydro One Towers and transformer station relocation required.	There are a range of utilities on Commissioners Street including major Toronto Hydro infrastructure, gas and telecommunications (Bell). Significant major above ground Hydro One towers and related circuits will need to be buried on Commissioners Street. New east west street crosses range of utilities on north south intersections with no challenges identified (Bell, TELUS, Hydro One, Toronto Hydro). However Hydro One Towers and transformer station relocation required.
		Would the alternative have an impact on existing municipal infrastructure to remain?	51 Nature and extent of potential impacts.	Sanitary sewer in Commissioners to be replaced with a new gravity fed sewer to connect to the MTI. Some water mains on Commissioners may be able to be retained while others need to be resized. New storm sewers for the Port Lands. Maintains existing box culverts for external SWM. New east-west street crosses a range of services on north south intersections including water, storm, sanitary sewer. No major impacts identified.	Sanitary sewer in Commissioners to be replaced with a new gravity fed sewer to connect to the MTI. Some water mains on Commissioners may be able to be retained while others need to be resized. New storm sewers for the Port Lands. Maintains existing box culverts for external SWM.	Sanitary sewer in Commissioners to be replaced with a new gravity fed sewer to connect to the MTI. Some water mains on Commissioners may be able to be retained while others need to be resized. New storm sewers for the Port Lands. Maintains existing box culverts for external SWM.	Sanitary sewer in Commissioners to be replaced with a new gravity fed sewer to connect to the MTI. Some water mains on Commissioners may be able to be retained while others need to be resized. New storm sewers for the Port Lands. Maintains existing box culverts for external SWM. Extended Basin Street also contains storm, sanitary, water and no challenges are identified.	Sanitary sewer in Commissioners to be replaced with a new gravity fed sewer to connect to the MTI. Some water mains on Commissioners may be able to be retained while others need to be resized. New storm sewers for the Port Lands. Maintains existing box culverts for external SWM. Realigned Basin Street is located where there is no record of services at present.	Sanitary sewer in Commissioners to be replaced with a new gravity fed sewer to connect to the MTI. Some water mains on Commissioners may be able to be retained while others need to be resized. New storm sewers for the Port Lands. Maintains existing box culverts for external SWM. New east-west street crosses a range of services on north south intersections including water, storm, sanitary sewer. No major impacts identified.
	Property acquisition costs.	How many private properties will be impacted or need to be acquired to support the alternative?	52 Approximate number of hectares of privately owned lands required to be acquired with existing development anticipated to remain.	About 11,000 square meters of privately owned land is impacted by the addition of a new road.	Alternative is achieved through a ROW widening.	Alternative is achieved through a ROW widening.	Alternative is achievable through a ROW widening and reopening of Basin Street through the existing film studios.	About 11,000 square metres of privately owned land is required.	About 17,000 square metres of privately owned land is required.
	Maintenance and operations.	How much effort is required for maintaining and operating the alternative?	53 Level of maintenance required.	Two streets requiring typical maintenance. Integrating LID measures into the street networks may result in non-typical maintenance and operational requirements.	Typical maintenance for street with dedicated streetcar. Higher landscaping maintenance. Integrating LID measures into the street networks may result in non-typical maintenance and operational requirements.	Typical maintenance for street with dedicated streetcar. Integrating LID measures into the street networks may result in non-typical maintenance and operational requirements.	Two streets requiring typical maintenance. Integrating LID measures into the street networks may result in non-typical maintenance and operational requirements.	Two streets requiring typical maintenance. Integrating LID measures into the street networks may result in non-typical maintenance and operational requirements.	Three streets requiring typical maintenance. Higher landscaping maintenance. Integrating LID measures into the street networks may result in non-typical maintenance and operational requirements.

EVALUATION OF ALTERNATIVE SOLUTIONS - SUB AREA 6: UNWIN AVENUE

OBJECTIVE	CRITERIA	DESCRIPTION	MEASURE	6-A. MAINTAIN WITH AN IMPROVED BAILEY BRIDGE	6-B. REALIGN AND ADD ADDITIONAL VEHICULAR LANES	6-C. REALIGN AND URBANIZE
CREATING AN INTERESTING AND DYNAMIC URBAN MIX	Creation of new, vibrant mixed use communities and employment areas.	Does the alternative facilitate vibrant neighbourhoods and employment areas?	1 Vibrant new neighbourhoods/employment growth.	● Supports mix of uses but does not improve access for pedestrians and cyclists. Supports the wild character of the south, park edge of the street.	● Supports mix of uses. Enhances safe access and permeability through the area for all modes. Supports the wild character of the south, park edge of the street. Establishes an enhanced pedestrian environment. Provides opportunities for port and industry development.	● Supports mix of uses. Enhances safe access and permeability through the area for all modes. Establishes a greatly enhanced pedestrian environment. Supports the wild character of the south, park edge of the street. Provides opportunities for port and industry development.
		Are viable development blocks created?	2 Viable development blocks.	● Good developability along the north side of Unwin. Maintains the existing development areas on the north side of the street, allowing for viability of continued port and employment purposes that requires more space.	● Good developability along the north side of Unwin. Realignment enhances opportunity for employment intensification. Requires additional lands to provide the full right-of-way width.	● Good developability along the north side of Unwin. Well configured blocks. Realignment enhances opportunity for employment intensification. Requires some additional lands to provide the full right-of-way width.
	Necessary vehicular capacity to support the anticipated mix of uses in the Port Lands and South of Eastern area while minimizing rights-of-way widths.	Can the alternative provide the necessary vehicular capacity and municipal services needed to support development?	3 Necessary capacity is provided while minimizing ROW widths and providing pedestrian and cycling amenities.	● The alternative achieves the necessary lane of vehicular capacity in each direction. The existing jog provides some limitations.	● The alternative achieves the necessary lane of vehicular capacity in each direction. Elimination of the existing jog improves operations of the street.	● The alternative achieves the necessary lane of vehicular capacity in each direction. Elimination of the existing jog improves operations of the street.
		Will vehicular rights-of-ways be minimized while creating a high quality pedestrian environment?	4 Percentage of ROW dedicated to active transportation.	● 0% dedicated to active transportation.	● 46% dedicated to active transportation.	● 68% dedicated to active transportation.
	Existing/planned neighbourhoods.	Does the alternative provide opportunities for improvements for existing neighbourhoods?	5 Opportunities for improvement.	● No improvements for existing neighbourhoods to the north.	● Enhanced walking/cycling with significant improvement in pedestrian safety. Improved street presence for development blocks on the north side of the street. Significantly improved management and integration of storm water. Opportunity to transform Hearn site into a well connected community destination. Widening of the vehicular ROW/additional lanes impacts the character of the street, allocating less space to integrate storm water and reinforce the wild character of the south, park edge.	● Enhanced walking/cycling with significant improvement in pedestrian safety. Improved street presence for development blocks on the north side of the street. Significantly improved management and integration of storm water. Opportunity to transform Hearn site into a well connected community destination. Opportunity to reinforce the 'wild' character of the south, park edge of the street through landscape and material treatment.
		Does the alternative minimize potential impacts to existing and planned neighbourhoods?	6 Number of existing residential units potentially displaced.	N/A Not applicable.	N/A Not applicable.	N/A Not applicable.
			7 Likelihood of non-local traffic in residential area and ability to manage traffic infiltration.	N/A Not applicable.	N/A Not applicable.	N/A Not applicable.
	Existing businesses and industry and opportunities for new businesses and industry.	Is there potential for impacts to businesses and industry, such as displacement or reductions in parking?	8 Displacement of businesses and industry.	● No displacement of business and industry.	● Realignment has the potential to impact the Port Lands Energy facility supporting infrastructure including major gas and water supply/cooling connections. Additional investigation needed to assess road upgrade requirements and potential to affect underground infrastructure. ROW wider than for 6-C (4m). Concept alignment details to be investigated further at Phase 3 of the Municipal Class EA process.	● Realignment has the potential to impact the Port Lands Energy facility supporting infrastructure including major gas and water supply/cooling connections. Additional investigation needed to assess road upgrade requirements and potential to affect underground infrastructure. Concept alignment details to be investigated further at Phase 3 of the Municipal Class EA process.

EVALUATION OF ALTERNATIVE SOLUTIONS - SUB AREA 6: UNWIN AVENUE

OBJECTIVE	CRITERIA	DESCRIPTION	MEASURE	6-A. MAINTAIN WITH AN IMPROVED BAILEY BRIDGE	6-B. REALIGN AND ADD ADDITIONAL VEHICULAR LANES	6-C. REALIGN AND URBANIZE
CREATING AN INTERESTING AND DYNAMIC URBAN MIX	Existing businesses and industry and opportunities for new businesses and industry.	Does the alternative support the establishment of new businesses and industry?	9 Access to infrastructure.	● The only improvement to Unwin Avenue is a new vehicle bridge, and as such access to business/industry will not be significantly improved.	● Improvements to Unwin Avenue will improve access to businesses south of the Ship Channel.	● Improvements to Unwin Avenue will improve access to businesses south of the Ship Channel.
		Does the alternative support dedicated truck routes and goods movement?	10 Facilitates dedicated truck routes to/from Lake Shore Boulevard and the DVP.	● The jog in the existing alignment is undesirable given the expected increases in auto and truck volume over time. While low operating speeds can be expected and are consistent with the proposed character of the future road, the horizontal alignment of the alternative is not preferred.	● Alternative facilitates reliable access for potential dedicated truck routes. Multiple travel lanes provide for truck activity, including staging. Elimination of the jog is desirable for truck operations.	● Alternative facilitates reliable access for potential dedicated truck routes. On street parking could accommodate staging of trucks that occurs. Elimination of the jog is desirable for truck operations.
CONNECT THE PORT LANDS TO THE CITY	Better connect the Port Lands with the South of Eastern area and the rest of the city.	Does the alternative better connect the area for all users and services?	11 Connectivity.	● No change to existing condition results in no improvement in connectivity beyond the improved bailey bridge.	● Existing connection is enhanced improving connectivity for all users and increasing porosity through the sub area.	● Existing connection is enhanced improving connectivity for all users and increasing porosity through the sub area.
		Does the alternative provide the ability to achieve a fine-grained network of streets (local, secondary and major).	12 Facilitates achieving an appropriate hierarchy and rhythm of public streets.	● The existing alignment of Unwin provides a continuous east-west connection with the potential to support a fine grain of local streets to the north of the street.	● Realigned Unwin provides a optimally configured, continuous east-west connection with the potential to support a fine grain of local streets to the north of the street.	● Realigned Unwin provides a optimally configured, continuous east-west connection with the potential to support a fine grain of local streets to the north of the street.
		Does the alternative provide enhanced connections to major destinations for all modes?	13 Enhanced direct connections to destinations.	● The existing alignment of Unwin provides east west connection only for vehicles between the Cherry Beach Gateway to the west, Don Greenway South, the perimeter of the Hearn Hub and Leslie Pastoral Gateway. Pedestrian and cyclist access remains limited.	● Realigned Unwin provides a direct, east west connection for all users between the Cherry Beach Gateway to the west, Don Greenway South, the Hearn Hub and Leslie Pastoral Gateway. Enhanced street provides continuous interface with Lake Ontario Park, as well as to the Martin Goodman Trail (connecting Cherry to Leslie, parallel to Unwin).	● Realigned Unwin provides a direct, east west connection for all users between the Cherry Beach Gateway to the west, Don Greenway South, the Hearn Hub and Leslie Pastoral Gateway. Enhanced street provides continuous interface with Lake Ontario Park, as well as to the Martin Goodman Trail (connecting Cherry to Leslie, parallel to Unwin).
	Redundancy in the network.	Does the alternative contribute to redundancy in the network to allow for better access/service?	14 Redundancy in network.	● No Redundancy created.	● Additional vehicular lanes provide some potential for redundancy.	● Integration of on-street parking provides some potential for addressing vehicle staging that occurs on Unwin while allowing for continued traffic flow, but overall the parking lane adds little redundancy.
	Existing physical barriers.	Is the alternative impacted by physical barriers? i.e.: - rail (Harbour Lead Line, GO Line and active routes in the Port Lands - Lake Shore to Leslie to Unwin). - Existing over/underpasses - Existing on/off ramps or other Gardiner components - Ship Channel	15 Nature and extent of physical barriers.	● Physical Barriers include: -Circulating channel.	● Width of right-of-way has increased likelihood of being impacted by existing physical barriers. Barriers to be addressed include: - Port Lands Energy Centre building and associated above grade infrastructure and structures; -Circulating channel; -Existing rail.	● Physical barriers to be addressed include: - Port Lands Energy Centre building and associated above grade infrastructure and structures; -Circulating channel; -Existing rail.
Opportunities for linking natural habitat and open spaces and improving biodiversity.	What opportunities does the alternative provide for direct linkages between natural habitat and existing/planned open spaces?	16 Opportunities to provide direct linkages between natural habitat and/or open spaces.	● No opportunities provided.	● Improved east-west link south of Ship Channel with opportunities for enhanced landscaping within the right-of-way and providing linkages between natural habitat and existing/planned parks and open spaces.	● Improved east-west link south of Ship Channel with opportunities for enhanced landscaping within the right-of-way and providing linkages between natural habitat and existing/planned parks and open spaces.	

● VERY POOR ● POOR ● GOOD ● VERY GOOD

EVALUATION OF ALTERNATIVE SOLUTIONS - SUB AREA 6: UNWIN AVENUE

OBJECTIVE	CRITERIA	DESCRIPTION	MEASURE		6-A. MAINTAIN WITH AN IMPROVED BAILEY BRIDGE	6-B. REALIGN AND ADD ADDITIONAL VEHICULAR LANES	6-C. REALIGN AND URBANIZE
CONNECT THE PORT LANDS TO THE CITY	Opportunities for linking natural habitat and open spaces and improving biodiversity.	What opportunities does the alternative provide to contribute to urban biodiversity.	17	Urban biodiversity.	No opportunities provided.	Potential to incorporate bioswales and establish a mature tree canopy on Unwin Avenue. Wildlife required to cross four vehicular lanes. Realignment will create more lakefront habitat and opportunities to support enhanced biodiversity.	Significant potential to incorporate wide bioswales with multi level understory planting and establish a mature tree canopy on Unwin Avenue. Width of travel portion of the ROW wildlife required to cross is minimized. Realignment will create more lakefront habitat and opportunities to support enhanced biodiversity.
	LEVERAGE ASSETS	Cultural heritage resources.	Are there cultural heritage resources that might be affected by an alternative and what is the nature of the impact?	18	Nature and extent of potential impacts.	No negative impacts to identified cultural heritage resources.	Alteration to the setting of CHL 9 (Hearn Generating Station; Listed on heritage inventory) through the realignment of Unwin Avenue through the property. Known landscape features (e.g., circulation routes) are located within the zone of realignment which is concentrated along the southern portion of the property. Further landscape features associated with CHL 9 may be identified within the zone of realignment with more detailed assessment. Although irreversible and permanent, the alteration is considered of low magnitude.
Can any potential impacts be mitigated?			19	Ability to mitigate impacts.	No mitigation measures required.	Some potential to mitigate impacts through configuration of alignment in tandem with more detailed assessment of CHL 9 at Phase 3 of the EA process (e.g., HIA). The street layout of the ROW can be designed to be sympathetic to and visually and physically compatible with CHL 9.	Some potential to mitigate impacts through configuration of alignment in tandem with more detailed assessment of CHL 9 at Phase 3 of the EA process (e.g., HIA). The street layout of the ROW can be designed to be sympathetic to and visually and physically compatible with CHL 9.
Are there opportunities that introducing new streets provide to frame and celebrate heritage resources?			20	Potential opportunities.	No opportunities to frame and celebrate heritage resources. Existing alignment provides a view to the Hearn stack from the west.	Realigned Unwin has significant potential to frame views of the Hearn stack as a visual axis. The historic rail tracks are features integrated as part of the pedestrian realm.	Realigned Unwin has significant potential to frame views of the Hearn stack as a visual axis. The historic rail tracks are features integrated as part of the pedestrian realm.
Archaeological resources and traditional uses of Aboriginal people.		Are there archaeological resources that might be affected by an alternative and what is the nature of the impact?	21	Nature and extent of potential impacts.	No impacts to archaeological resources.	Alternative overlaps with lands identified to equate with the footprint of features LDP-2 (1882 Government Breakwater) ,LDP-4 (Sand Bar and Fisherman's Island Peninsula), and LDP-6 (Fisherman's Island Cottages, Boat Houses, etc.) in the Archaeological Conservation and Management Strategy (ACMS). Any subsurface disturbance associated with the construction of this alternative could potential impact soils or archaeological remains associated with these features. State of preservation of these features in the location of impact is unknown therefore the severity of impact cannot be determined in relative terms.	Alternative overlaps with lands identified to equate with the footprint of features LDP-2 (1882 Government Breakwater) ,LDP-4 (Sand Bar and Fisherman's Island Peninsula), and LDP-6 (Fisherman's Island Cottages, Boat Houses, etc.) in the Archaeological Conservation and Management Strategy (ACMS). Any subsurface disturbance associated with the construction of this alternative could potential impact soils or archaeological remains associated with these features. State of preservation of these features in the location of impact is unknown therefore the severity of impact cannot be determined in relative terms.

VERY POOR
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 GOOD
 VERY GOOD

EVALUATION OF ALTERNATIVE SOLUTIONS - SUB AREA 6: UNWIN AVENUE

OBJECTIVE	CRITERIA	DESCRIPTION	MEASURE	6-A. MAINTAIN WITH AN IMPROVED BAILEY BRIDGE	6-B. REALIGN AND ADD ADDITIONAL VEHICULAR LANES	6-C. REALIGN AND URBANIZE
LEVERAGE ASSETS	Archaeological resources and traditional uses of Aboriginal people.	Are there archaeological resources that might be affected by an alternative and what is the nature of the impact?	22 Ability to mitigate.	● No mitigation required.	● As per the ACMS, LDP-2 and LDP 4, require archaeological monitoring. A licensed archaeologist must be present to monitor the removal of topsoil for all areas indicated in order to document any archaeological resources which may be present. As per the ACMS, LDP-6, does not require further archaeological action however it should be subject to interpretation and commemoration as part of the development.	● As per the ACMS, LDP-2 and LDP 4, require archaeological monitoring. A licensed archaeologist must be present to monitor the removal of topsoil for all areas indicated in order to document any archaeological resources which may be present. As per the ACMS, LDP-6, does not require further archaeological action however it should be subject to interpretation and commemoration as part of the development.
	Existing/planned parks and open spaces.	Does the alternative create an opportunity to enhance existing/planned parks and open spaces?	23 Opportunities to enhance.	● No opportunities to enhance existing parks and open spaces.	● Realigned Unwin has potential to enhance planned/existing parks and open space: - opportunity to expand area of parkland and environmentally sensitive area south of the realigned Unwin Avenue and connect to larger open space; - opportunity for a continuous linear open space that integrates storm water and reinforces the 'wild' character at the edge of Lake Ontario Park. Width of linear open space south of Unwin limited due to the number of vehicular lanes; - opportunity for enhanced pedestrian connection at the Don Greenway south; - opportunity for enhanced connection at the Hearn; - opportunity for enhanced connection to Leslie Pastoral Gateway.	● Realigned Unwin has significant potential to enhance planned/existing parks and open space: - opportunity to expand area of parkland and environmentally sensitive area south of the realigned Unwin Avenue and connect to larger open space; - opportunity for a continuous linear open space that integrates storm water and reinforces the 'wild' character at the edge of Lake Ontario Park. Ability for expanded bioswale and provision of on-street parking; - opportunity for enhanced pedestrian connection at the Don Greenway south; - opportunity for enhanced connection at the Hearn hub plaza; - opportunity for enhanced connection to Leslie Pastoral Gateway.
		Is there potential for temporary or permanent impacts to existing parks and open spaces?	24 Nature and extent of potential impacts.	● No impacts to existing parks and open spaces and no improvements.	● No impacts to existing parks and open spaces.	● No impacts to existing parks and open spaces.
	Compatibility with the natural environment.	Does the alternative create an opportunity to enhance natural heritage and terrestrial resources (existing and planned) and improve opportunities for biodiversity through understory and tree planting?	25 Opportunities for net environmental gains.	● No opportunities for net environmental gains.	● Realignment provides opportunity to expand Cherry Beach ESA and Base of Spit ESA (proposed) and increase total habitat size adjacent to the lakefront and/or build upon the PEC naturalization.	● Realignment provides opportunity to expand Cherry Beach ESA and Base of Spit ESA (proposed) and increase total habitat size adjacent to the lakefront and/or build upon the PEC naturalization.
		Is there potential for temporary or permanent impacts to natural heritage and terrestrial resources (existing and planned)?	26 Nature and extent of potential impacts.	● Limited potential for terrestrial impacts associated with Bailey Bridge improvements. Potential to impact Cherry Beach and Base of Spit ESAs.	● Anticipated impact to existing natural cover north of Unwin Avenue, west of Hearn and South of PEC. Will result in net gains and habitat creation, outweighing this impact. However, potential to impact Cherry Beach and Base of Spit ESAs.	● Anticipated impact to existing natural cover north of Unwin Avenue, west of Hearn and south of PEC. Will result in net gains and habitat creation, outweighing this impact. However, potential to impact Cherry Beach and Base of Spit ESAs.
		Is there potential for adverse effects to water quality aquatic species?	27 Minimizes the potential for an adverse effect on water quality and aquatic species.	● Potential impacts during construction of Bailey Bridge improvements.	● No anticipated impacts provided the street is realigned north of the circulating channel.	● No anticipated impacts provided the street is realigned north of the circulating channel.
		Are there any impacts to groundwater?	28 Impacts or improvements to groundwater.	● Proximity to water inlet and wetlands on south side of inlet to be considered.	● Proximity to water inlet and wetlands on south side of inlet to be considered.	● Proximity to water inlet and wetlands on south side of inlet to be considered.

● VERY POOR ● POOR ● GOOD ● VERY GOOD

EVALUATION OF ALTERNATIVE SOLUTIONS - SUB AREA 6: UNWIN AVENUE

OBJECTIVE	CRITERIA	DESCRIPTION	MEASURE	6-A. MAINTAIN WITH AN IMPROVED BAILEY BRIDGE	6-B. REALIGN AND ADD ADDITIONAL VEHICULAR LANES	6-C. REALIGN AND URBANIZE
LEVERAGE ASSETS	Visual connections.	Does the alternative provide visual connections to the study area's assets and important features?	29 Nature of any visual connections.	The existing alignment of Unwin provides numerous visual connections: - Hearn Stack; - views across Don Greenway west towards the City; - Continuous visual connection with the 'wild' edge of Lake Ontario Park and Lake Ontario at the circulating channel.	The realigned Unwin provides numerous visual connections: - enhanced/continuous axial view of Hearn Stack; - views across Don Greenway west towards the City; - Continuous visual connection with the 'wild' edge of Lake Ontario Park and the circulating channel.	The realigned Unwin provides numerous visual connections: - enhanced/continuous axial view of Hearn Stack; - views across Don Greenway west towards the City; - Continuous visual connection with the 'wild' edge of Lake Ontario Park and the circulating channel.
DEVELOP A HIGH QUALITY PUBLIC REALM	Complete street principles and street character.	Can the alternative achieve the complete street principles established and the desired street character?	30 Ability to achieve the complete street principles and desired street character.	Complete street principles and street character not achieved.	Generally achieves the complete street principles. Access for all users is provided but is biased towards vehicular use. Active transportation enhancements are provided and storm water features integrated. On-street parking possible in off-peak times.	Complete street principles are achieved. The balance of uses within the ROW allows for access for all users, providing a greatly enhanced pedestrian and cycling environment, and integration of storm water features. On-street parking possible.
	Cycling routes.	Does the alternative provide for safe and continuous cycling routes?	31 Linear km of new, physically separated, continuous, high-quality cycling track.	No new cycling track provided.	Up to 2.4km of continuous cycling track provided as part of a new, separated multi-use trail.	Up to 2.4km of continuous cycling track provided as part of a new, separated multi-use trail.
			32 Completes or provides linkages to existing/future cycling network.	No new cycling facilities are provided.	New cycling facilities will provide continuous east-west capacity and connectivity to north-south linkages back to the city (via Cherry, Broadview extension and Leslie).	New cycling facilities will provide north south linkages back to the city along Cherry, Broadview extension and Leslie.
	Place-making opportunities.	Does the alternative provide opportunities for place-making or creating unique opportunities?	33 Place-making opportunities.	The existing alignment of Unwin terminates to the west at Cherry Beach Gateway and to the east at the Leslie pastoral gateway. However, this alternative does not provide improved cycling and pedestrian facilities and very limited opportunities for place-making at these locations.	Realigned Unwin creates unique potential to activate the Hearn site and support a vibrant public space at its entrance. The alternative provides numerous other place-making opportunities: at the intersection with the Cherry Beach Gateway, at the Don Greenway, at the intersection with the Leslie Pastoral Gateway and all along the 'wild' edge of Lake Ontario Park. The width of the ROW and focus on vehicular travel limits potential.	Realigned Unwin creates unique potential to activate the Hearn site and support a vibrant public space at the entrance to the Hearn. The alternative provides numerous other place-making opportunities: at the intersection with the Cherry Beach Gateway, at the Don Greenway, at the intersection with the Leslie Pastoral Gateway and all along the 'wild' edge of Lake Ontario Park.
34 Water as a feature.			The existing alignment of Unwin does not provide opportunity to integrate water as a prominent public realm feature. Alternative intersects with the Don Greenway and the Broadview extension bridge, providing visual connections with the Ship Channel through these elements. Good visual proximity to circulating channel.	Opportunities to integrate storm water within the public realm through a bioswales feature that extends the character of Lake Ontario Park into the street. Alternative intersects with the Don Greenway and the Broadview extension bridge, providing visual connections with the Ship Channel through these elements. Good visual proximity to circulating channel.	Opportunities to integrate storm water within the public realm through a bioswales feature that extends the character of Lake Ontario Park into the street. Alternative intersects with the Don Greenway and the Broadview extension bridge, providing visual connections with the Ship Channel through these elements. Good visual proximity to circulating channel.	

EVALUATION OF ALTERNATIVE SOLUTIONS - SUB AREA 6: UNWIN AVENUE

OBJECTIVE	CRITERIA	DESCRIPTION	MEASURE	6-A. MAINTAIN WITH AN IMPROVED BAILEY BRIDGE	6-B. REALIGN AND ADD ADDITIONAL VEHICULAR LANES	6-C. REALIGN AND URBANIZE
DEVELOP A HIGH QUALITY PUBLIC REALM	Health and safety.	Does the alternative have the potential to improve existing unsafe conditions?	35 Improves existing unsafe conditions and maintains minimum design standards and criteria .	<p>● Maintaining existing alignment does not address 90 degree turns east of Bailey Bridge, which require low operating speeds to be safe.</p> <p>● Improvement/replacement of Bailey bridge to accommodate simultaneous 2-way flow will eliminate potential for vehicle conflicts. Alternative presents significant challenges related to separation of active and vehicular modes (especially trucks).</p> <p>● Design criteria for structures and roadway can be met.</p>	<p>● Realignment of existing Unwin at Hearn property and to east addresses low operating speeds through 90 degree turns. Addition of pedestrian and cycling amenity improves safety.</p> <p>● Design criteria for structures and roadway can be met.</p>	<p>● Realignment of existing Unwin at Hearn property and to east addresses low operating speeds through 90 degree turns. Addition of pedestrian and cycling amenity improves safety.</p> <p>● Design criteria for structures and roadway can be met.</p>
CONTRIBUTE TO THE SUSTAINABLE FUTURE OF THE CITY	Opportunities for innovation.	Can innovative features be accommodated in the design of the alternative?	36 Ability to provide innovative features in the design of the alternative.	● No innovative features in the design of the alternative.	● Numerous innovative features: - Ability to activate the Hearn site to bring new life to power heritage and frame a community hub; - some potential for integrated storm water feature. Width of ROW limits opportunities to south (wider to accommodate 4 vehicle lanes).	● Numerous innovative features: - Ability to activate the Hearn site to bring new life to power heritage and frame a community hub; - extend the existing 'wild' character of the south edge of Unwin into the street as an integrated storm water feature of prominent dimensions; - incorporation of truck lay-by (for staging)/on-street parking to support park usage and integrated with expanded bio-scales and environmental features).
	Transit accommodation.	How easily can dedicated transit, or where appropriate surface transit routes in mixed traffic, be accommodated?	37 Ability to, and implications of, connecting with adjacent transit network.	● Good ability to connect to future transit. Modification required pending location of future ship channel crossing.	● Alternative accommodates bus in mixed traffic and improved connection to city.	● Alternative accommodates bus in mixed traffic and improved connection to city.
		Is transit service optimally located to serve future land use and maximize ridership potential?	38 Is transit service optimally located?	NA Not applicable.	NA Not applicable.	NA Not applicable.
	Flood risk potential.	Would the alternative potentially create a flood risk potential? Can flood risk potential be mitigated through design?	39 Flood risk potential created and ability to mitigate flood risk.	NA Not applicable. Sub area is outside regulatory flood spill zones for the Lower Don River.	NA Not applicable. Sub area is outside regulatory flood spill zones for the Lower Don River.	NA Not applicable. Sub area is outside regulatory flood spill zones for the Lower Don River.
	Noise and air quality.	Does the alternative contribute to improved noise and air quality conditions?	40 Improved noise and air quality conditions.	● Increases in traffic expected for all alternatives with associated increased noise levels and reduced air quality of the same magnitude for each. Area is currently industrial and no changes to the existing alignment and capacity. Hearn destination re-use/development will be a sensitive use. Multiple adjacent parks and open spaces in area are sensitive outdoor living areas.	● Increases in traffic expected for all alternatives with associated increased noise levels and reduced air quality of the same magnitude for each. Change in alignment and multi-modal amenities will improve traffic flow and encourage non-auto travel with associated improvements to noise and air quality. Hearn destination re-use/development will be a sensitive use. Multiple adjacent parks and open spaces in area are sensitive outdoor living areas.	● Increases in traffic expected for all alternatives with associated increased noise levels and reduced air quality of the same magnitude for each. Change in alignment and multi-modal amenities will improve traffic flow and encourage non-auto travel with associated improvements to noise and air quality. Hearn destination re-use/development will be a sensitive use. Multiple adjacent parks and open spaces in area are sensitive outdoor living areas.

● VERY POOR ● POOR ● GOOD ● VERY GOOD

EVALUATION OF ALTERNATIVE SOLUTIONS - SUB AREA 6: UNWIN AVENUE

OBJECTIVE	CRITERIA	DESCRIPTION	MEASURE	6-A. MAINTAIN WITH AN IMPROVED BAILEY BRIDGE	6-B. REALIGN AND ADD ADDITIONAL VEHICULAR LANES	6-C. REALIGN AND URBANIZE
	Resiliency and climate change.	Can the alternative be designed for maximum longevity and reduced greenhouse gas emissions?	41 Promotes reduction of greenhouse gas (e.g. through LID, minimizing pumping stations or potential to reduce congestion points).	● Limited ability to reduce congestion and pinch points at 90 degree jog. Improvements to the existing bailey bridge would have some benefit in reducing idling at bridge.	● Realigning the street provides opportunities to reduce congestion points. Narrow bioswale has some benefit. Potential to enlarge natural green space through re-alignment. Potential to enlarge natural green space through re-alignment.	● Realigning the street provides opportunities to reduce congestion points. Provides a wide integrated bioswale benefit. Minimizing impervious paved surfaces to limit heat island effect. Potential to enlarge natural green space through re-alignment.
IMPLEMENTATION	Compatibility with City, provincial planning policies and Waterfront Toronto/TRCA Framework standards.	Does the alternative support achieving City planning policies?	42 Supports the growth intention of the Official Plan, Central Waterfront Secondary Plan and precinct plans.	● Limited opportunities to remove existing barriers with the exception of improvements to the existing one-lane bailey bridge. Right-of-way insufficient to accommodate travel lanes, transit, pedestrian, cycling, landscaping and other urban design elements. Street is not remade as a place.	● Removes existing barriers. Right-of-way width accommodates all modes and provides some enhancements to landscaping and integration of other urban design elements.	● Removes existing barriers, accommodates all modes and enhanced landscaping and other urban design elements. Street is remade as a place. Includes innovative features to accommodate urban freight movement.
		Does the alternative address Waterfront Toronto/TRCA objectives/frameworks?	43 Supports addressing Waterfront Toronto/TRCA objectives/frameworks.	● Alternative is not welcoming and does not provide enhanced bike paths or create pedestrian linkages.	● Alternative provides improvements to bike paths and creates pedestrian linkages, but wider right-of-way limits achieving a welcoming pedestrian environment. Integrates some green infrastructure into design.	● Street layout that is welcoming and encourages walking and community interaction year-round. Minimizes the amount of impervious paved surfaces. Creates enhanced bike paths and pedestrian linkages. Integrates green infrastructure into the design.
		Does the alternative support achieving provincial planning policies and guidelines?	44 Supports achieving provincial planning policies and guidelines.	● Alternative does not support active transportation and transit and only limited improvements to existing to major goods movement corridor.	● Alternative supports active transportation and incorporates some LID/green infrastructure.	● Major goods movement facilities and corridors are protected while providing enhanced active transportation options and pedestrian experience. Minimal impacts to natural features and opportunities for net environmental gains. Includes LID and green infrastructure.
	Consistency with approved area Environmental Assessments.	Does the alternative impact approved Environment Assessment projects?	45 Extent and nature of impacts on planned infrastructure with approved Environmental Assessments.	NA Not applicable. WSSMP only completed EA in the sub area. This EA will be guiding document in the Port Lands moving forward.	NA Not applicable. WSSMP only completed EA in the sub area. This EA will be guiding document in the Port Lands moving forward.	NA Not applicable. WSSMP only completed EA in the sub area. This EA will be guiding document in the Port Lands moving forward.
	Engineering feasibility and construction cost.	Is the alternative possible to construct and what are the key technical challenges?	46 Key technical challenges.	● Key technical challenge: - expansion to Bailey bridge; - minimizing impacts to ESA;	● Key technical challenge: - accommodation expansion of ROW while maintaining rail operations; - mitigating impacts to Hearn property and infrastructure (including lateral clearance from the Hearn smokestack to ensure roadway/roadside safety standards are met); - mitigating impacts to Port Lands Energy Centre property and infrastructure.	● Key technical challenge: - accommodation expansion of ROW while maintaining of rail operations; - mitigating impacts to the Hearn property and infrastructure (including lateral clearance from the Hearn smokestack to ensure roadway/roadside safety standards are met); - mitigating impacts to Port Lands Energy Centre property and infrastructure.

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● POOR

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EVALUATION OF ALTERNATIVE SOLUTIONS - SUB AREA 6: UNWIN AVENUE

OBJECTIVE	CRITERIA	DESCRIPTION	MEASURE	6-A. MAINTAIN WITH AN IMPROVED BAILEY BRIDGE	6-B. REALIGN AND ADD ADDITIONAL VEHICULAR LANES	6-C. REALIGN AND URBANIZE
IMPLEMENTATION	Engineering feasibility and construction cost.	Is the alternative cost effective to build?	47 Initial construction costs, excluding property, decontamination, and utilities	● Limited construction costs with the exception of upgrading the existing Bailey Bridge and potential reconfiguration of the existing rail within the vicinity. Estimated Total Cost = \$28.0M	● Requires reconstructing and realigning the street north of the circulating channel. Estimated Total Cost = \$43M Additional potential costs may also include: - potential rail impacts; - removal of abandoned Hearn infrastructure; -accommodating Port Lands Energy Centre/Enbridge infrastructure (anticipated to be high).	● Requires reconstructing and realigning the street north of the circulating channel. Estimated Total Cost = \$33.5M Additional potential costs may also include: - potential rail impacts; - removal of abandoned Hearn infrastructure; -accommodating Port Lands Energy Centre/Enbridge infrastructure (anticipated to be high).
		Can the alternative be phased to offset initial costs and provide infrastructure in lock-step with development?	48 Ability to phase implementation and adapt to changes in phasing and timing of development.	● Improvements to the bailey bridge could be phased to be provided in tandem with development.	● Alternative could be reconstructed in segments and to final configuration as redevelopment and employment intensification occurs.	● Alternative could be reconstructed in segments and to final configuration as redevelopment and employment intensification occurs.
		Is it possible to protect for future expansion and extension?	49 Adaptability to future land use changes and intensification.	● No potential for adaptability.	● Character of street suitable to employment intensification. Potential to some accommodate dedicated transit (bus), but further widening may be needed to support a change in land use in the future.	● Character of street and enhanced active transportation adaptable to a wide range of land uses. Ability to integrate dedicated transit limited by right-of-way width. Would require further widening.
	Existing municipal infrastructure and utilities.	Are there potential conflicts with existing utilities or challenges in re-location (temporary or permanent)?	50 Extent and nature of utility impacts.	● No change in alignment or potential to impact utilities.	● Minimal utilities on Unwin. However, significant and major utilities connecting the PEC including major water, gas and hydro one connections. Future design stages will need to consider a final preferred alignment and how to manage and mitigate to protect these significant utility connections. A subsurface utility exploration will be required to be completed.	● Minimal utilities on Unwin. However, significant and major utilities connecting the PEC including major water, gas and hydro one connections. Future design stages will need to consider a final preferred alignment and how to manage and mitigate to protect these significant utility connections. A subsurface utility exploration will be required to be completed.
		Would the alternative have an impact on existing municipal infrastructure to remain?	51 Nature and extent of potential impacts.	● No municipal infrastructure to remain impacted.	● No municipal infrastructure to remain impacted.	● No municipal infrastructure to remain impacted.
	Property acquisition costs.	How many private properties will be impacted or need to be acquired to support the alternative?	52 Approximate number of hectares of privately owned lands required to be acquired with existing development anticipated to remain.	● No private lands impacted.	● Requires additional lands to the north of the existing ROW. Realignment would require lands from the Hearn and Port Lands Energy sites. Amount of lands required would vary depending on final alignment to be determined in phase 3 of the Municipal Class EA process.	● Minimal right-of-way width. Realignment would require lands from the Hearn and Port Lands Energy sites. Amount of lands required would vary depending on final alignment to be determined in phase 3 of the Municipal Class EA process.
	Maintenance and operations.	How much effort is required for maintaining and operating the alternative?	53 Level of maintenance required.	● No additional maintenance required.	● Low or typical maintenance required. Integrating LID measures into the road networks may result in non-typical maintenance and operational requirements, which the City does not currently have practices for.	● Low or typical maintenance required. Integrating LID measures into the road networks may result in non-typical maintenance and operational requirements, which the City does not currently have practices for.

EVALUATION OF ALTERNATIVE SOLUTIONS - NEW NORTH SOUTH STREET EAST OF LESLIE

OBJECTIVE	CRITERIA	DESCRIPTION	MEASURE	KNOX AVENUE		WOODFIELD ROAD	
CREATING AN INTERESTING AND DYNAMIC URBAN MIX	Creation of new, vibrant mixed use communities and employment areas.	Does the alternative facilitate vibrant neighbourhoods and employment areas?	1 Vibrant new neighbourhoods/employment growth.	●	Supports employment uses through provision of improved network access. Enhances access and permeability through the area for all modes. Establishes an enhanced pedestrian and cycling environment south of Eastern to Lake Shore Blvd but presents a challenging intersection configuration for cyclists and pedestrians to cross Lake Shore (distance curb to curb as result of large median). New street with minimal development potential with limitations on both sides of the street due to existing buildings.	●	Supports employment uses through provision of improved network access. Enhances access and permeability through the area for all modes. Establishes an enhanced pedestrian and cycling environment south of Eastern to Lake Shore Blvd. New street with some development potential with some limitations on both sides of the street due to existing buildings.
		Are viable development blocks created?	2 Viable development blocks.	N/A	NA	N/A	NA
	Necessary vehicular capacity to support the anticipated mix of uses in the Port Lands and South of Eastern area while minimizing rights-of-way widths.	Can the alternative provide the necessary vehicular capacity and municipal services needed to support development?	3 Necessary capacity is provided while minimizing ROW widths and providing pedestrian and cycling amenities.	N/A	NA	N/A	NA
		Will vehicular rights-of-ways be minimized while creating a high quality pedestrian environment?	4 Percentage of ROW dedicated to active transportation.	●	55% dedicated to active transportation.	●	55% dedicated to active transportation.
	Existing/planned neighbourhoods.	Does the alternative provide opportunities for improvements for existing neighbourhoods?	5 Opportunities for improvement.	●	Enhanced walking/cycling opportunities to encourage walking and cycling for short local trips and broader city connections. Introduces potential for improved employment access. Alignment does not provide new opportunities for place-making. Supports role and function of Eastern which is both a collector and a neighbourhood street by reducing traffic. Through traffic is best accommodated on Lake Shore.	●	Enhanced walking/cycling opportunities to encourage walking and cycling for short local trips and broader city connections. Introduces potential for improved employment access. Alignment does not provide new opportunities for place-making. Supports role and function of Eastern which is both a collector and a neighbourhood street by reducing traffic. Through traffic is best accommodated on Lake Shore.

EVALUATION OF ALTERNATIVE SOLUTIONS - NEW NORTH SOUTH STREET EAST OF LESLIE

OBJECTIVE	CRITERIA	DESCRIPTION	MEASURE	KNOX AVENUE		WOODFIELD ROAD		
CREATING AN INTERESTING AND DYNAMIC URBAN MIX	Existing/planned neighbourhoods.	Does the alternative minimize potential impacts to existing and planned neighbourhoods?	6	Number of existing residential units potentially displaced.	N/A	NA	N/A	NA
			7	Likelihood of non-local traffic in residential area and ability to manage traffic infiltration.	●	Some potential for traffic infiltration from vehicles travelling on Queen destined for Lake Shore but will direct more traffic through non-residential area south of Eastern reducing infiltration on residential streets. Some potential for implementing traffic calming measures. Potential to reduce number of trucks on Eastern by providing access to Lake Shore.	●	Some potential for traffic infiltration from vehicles travelling on Queen destined for Lake Shore but will direct more traffic through non-residential area south of Eastern reducing infiltration on residential streets. . Some potential for implementing traffic calming measures. Potential to reduce number of trucks on Eastern by providing access to Lake Shore.
	Existing businesses and industry and opportunities for new businesses and industry.	Is there potential for impacts to businesses and industry, such as displacement or reductions in parking?	8	Displacement of businesses and industry.	●	Minor displacement impacts from re-opening existing City owned ROW to connect to Lake Shore and widening the ROW to 20m. Widening to 20 ROW (600m2 of land required) would impact existing Canada Post landscaping and parking adjacent to Knox Ave. with potential for parking reduction. May impact truck access in terms of ability to queue vehicles at entrance -- queue might interfere with roadway operation.	●	No displacement impacts from re-opening existing City owned ROW to connect to Lake Shore. No property impacts as no change in ROW width. Operations at truck delivery area may interfere with roadway operations and changes to Canada Post entrances will be required towards Lakeshore.
			9	Access to infrastructure.	N/A	NA	N/A	NA
			10	Facilitates dedicated truck routes to/from Lake Shore Boulevard and the DVP.	N/A	NA	N/A	NA
CONNECT THE PORT LANDS TO THE CITY	Better connect the Port Lands with the South of Eastern area and the rest of the city.	Does the alternative better connect the area for all users and services?	11	Connectivity.	●	New connection provides added vehicle, pedestrian/cycling connectivity to Lake Shore.	●	New connection provides added vehicle, pedestrian/cycling connectivity to Lake Shore.

EVALUATION OF ALTERNATIVE SOLUTIONS - NEW NORTH SOUTH STREET EAST OF LESLIE

OBJECTIVE	CRITERIA	DESCRIPTION	MEASURE	KNOX AVENUE		WOODFIELD ROAD	
CONNECT THE PORT LANDS TO THE CITY	Better connect the Port Lands with the South of Eastern area and the rest of the city.	Does the alternative provide the ability to achieve a fine-grained network of streets (local, secondary and major)?	12 Facilitates achieving an appropriate hierarchy and rhythm of public streets.	N/A	NA	N/A	NA
	Better connect the Port Lands with the South of Eastern area and the rest of the city.	Does the alternative provide enhanced connections to major destinations for all modes?	13 Enhanced direct connections to destinations.	N/A	NA	N/A	NA
	Redundancy in the network.	Does the alternative contribute to redundancy in the network to allow for better access/service?	14 Redundancy in network.	●	Provides enhanced redundancy in the network with new north-south connection to Lake Shore.	●	Provides enhanced redundancy in the network with new north-south connection to Lake Shore.
	Existing physical barriers.	Is the alternative impacted by physical barriers? i.e.: - rail (Harbour Lead Line, GO Line and active routes in the Port Lands - Lake Shore to Leslie to Unwin). - Existing over/underpasses - Existing on/off ramps or other Gardiner components - Ship Channel	15 Nature and extent of physical barriers.	●	Existing Lakeshore median is a barrier for crossing Lakeshore to eastbound lanes. New signalized and full moves intersection would require closure of existing emergency access to Lake Shore immediately to west and north of Knox alignment (future full access to property would be via New Knox connection).	●	No physical barriers.
	Opportunities for linking natural habitat and open spaces and improving biodiversity.	What opportunities does the alternative provide for direct linkages between natural habitat and existing/planned open spaces?	16 Opportunities to provide direct linkages between areas of natural habitat and/or open spaces.	N/A	NA	N/A	NA
		What opportunities does the alternative provide to contribute to urban biodiversity?	17 Urban biodiversity.	N/A	NA	N/A	NA
LEVERAGE ASSETS	Cultural heritage resources.	Are there cultural heritage resources that might be affected by an alternative and what is the nature of the impact?	18 Nature and extent of potential impacts.	●	No cultural heritage resources present.	●	No cultural heritage resources present.
		Can any potential impacts be mitigated?	19 Ability to mitigate impacts.	N/A	NA	N/A	NA

EVALUATION OF ALTERNATIVE SOLUTIONS - NEW NORTH SOUTH STREET EAST OF LESLIE

OBJECTIVE	CRITERIA	DESCRIPTION	MEASURE	KNOX AVENUE		WOODFIELD ROAD	
LEVERAGE ASSETS	Cultural heritage resources.	Are there opportunities that introducing new streets provide to frame and celebrate heritage resources?	20 Potential opportunities.	N/A	NA	N/A	NA
	Archaeological resources and traditional uses of Aboriginal people.	Are there archaeological resources that might be affected by an alternative and what is the nature of the impact?	21 Nature and extent of potential impacts.	●	No archaeological resources present.	●	No archaeological resources present.
			22 Ability to mitigate.	N/A	NA	N/A	NA
	Existing/planned parks and open spaces.	Does the alternative create an opportunity to enhance existing/planned parks and open spaces?	23 Opportunities to enhance.	N/A	NA	N/A	NA
		Is there potential for temporary or permanent impacts to existing parks and open spaces?	24 Nature and extent of potential impacts.	●	Multi-use trail north of Lakeshore will be crossed by new street. Mitigation to ensure new street crossing is safe and convenient can be achieved through appropriate detailed .	●	Multi-use trail north of Lakeshore will be crossed by new street. Mitigation to ensure new street crossing is safe and convenient can be achieved through appropriate detailed design.
	Compatibility with the natural environment.	Does the alternative create an opportunity to enhance natural heritage and terrestrial resources (existing and planned) and improve opportunities for biodiversity through understory and tree planting?	25 Opportunities for net environmental gains.	N/A	NA	N/A	NA
		Is there potential for temporary or permanent impacts to natural heritage and terrestrial resources (existing and planned)?	26 Nature and extent of potential impacts.	●	No significant natural heritage features present.	●	No significant natural heritage features present.
		Is there potential for adverse effects to water quality aquatic species?	27 Minimizes the potential for an adverse effect on water quality and aquatic species.	N/A	NA	N/A	NA
		Are there any impacts to groundwater?	28 Impacts or improvements to groundwater.	N/A	NA	N/A	NA
	Visual connections.	Does the alternative provide visual connections to the study area's assets and important features?	29 Nature of any visual connections.	N/A	NA	N/A	NA

EVALUATION OF ALTERNATIVE SOLUTIONS - NEW NORTH SOUTH STREET EAST OF LESLIE

OBJECTIVE	CRITERIA	DESCRIPTION	MEASURE	KNOX AVENUE		WOODFIELD ROAD	
DEVELOP A HIGH QUALITY PUBLIC REALM	Complete street principles and street character.	Can the alternative achieve the complete street principles established and the desired street character?	30 Ability to achieve the complete street principles and desired street character.	●	Complete street principles are attainable. 20 m ROW provides an enhanced pedestrian environment and cycling facilities alongside vehicular access reducing potential conflicts.	●	Complete street principles are attainable. 20 m ROW provides an enhanced pedestrian environment and cycling facilities alongside vehicular access reducing potential conflicts.
	Cycling routes.	Does the alternative provide for safe and continuous cycling routes?	31 Linear km of new, physically separated, continuous, high-quality cycle track.	N/A	NA	N/A	NA
			32 Completes or provides linkages to existing/future cycling network.	●	Existing Quiet Street Cycling Route on Knox Ave. from Lake Shore Trail to Danforth via Greenwood Ave. but requires jog on Queen Street to access Greenwood Bike Lane.	●	Quiet Street Cycling Route planned on Woodfield direct from Danforth to Lake Shore Trail (in 2010 Toronto and East York Cycling Plan).
	Place-making opportunities.	Does the alternative provide opportunities for place-making or creating unique opportunities?	33 Place-making opportunities.	N/A	NA	N/A	NA
		Does the alternative encourage everyday interaction with water or water based activities?	34 Water as a feature.	N/A	NA	N/A	NA
	Health and safety.	Does the alternative have the potential to improve existing unsafe conditions?	35 Improves existing unsafe conditions and maintains minimum design standards and criteria .	●	Traffic signal spacing is problematic if median on Lake Shore maintained. Full movement intersection will not be possible (westbound only). New intersection would restrict emergency/temp access to Lakshore immediately to west.	●	Traffic signal spacing on Eastern and Lake Shore allows full movement intersections.
CONTRIBUTE TO THE SUSTAINABLE FUTURE OF THE CITY	Opportunities for innovation.	Can innovative features be accommodated in the design of the alternative?	36 Ability to provide innovative features in the design of the alternative.	N/A	NA	N/A	NA
	Transit accommodation.	How easily can dedicated transit, or where appropriate surface transit routes in mixed traffic, be accommodated?	37 Ability to, and implications of, connecting with adjacent transit network.	N/A	NA	N/A	NA

EVALUATION OF ALTERNATIVE SOLUTIONS - NEW NORTH SOUTH STREET EAST OF LESLIE

OBJECTIVE	CRITERIA	DESCRIPTION	MEASURE	KNOX AVENUE		WOODFIELD ROAD		
CONTRIBUTE TO THE SUSTAINABLE FUTURE OF THE CITY	Transit accommodation.	Is transit service optimally located to serve future land use and maximize ridership potential?	38	Is transit service optimally located?	N/A	NA	N/A	NA
	Flood risk potential.	Would the alternative potentially create a flood risk potential? Can flood risk potential be mitigated through design?	39	Flood risk potential created and ability to mitigate flood risk.	N/A	NA	N/A	NA
	Noise and air quality.	Does the alternative contribute to improved noise and air quality conditions?	40	Improved noise and air quality conditions.	●	Typical noise levels of an urbanized environment anticipated.	●	Typical noise levels of an urbanized environment anticipated.
	Resiliency and climate change.	Can the alternative be designed for maximum longevity and reduced greenhouse gas emissions?	41	Promotes reduction of greenhouse gas (e.g. through LID, minimizing pumping stations or potential to reduce congestion points).	●	Improvements to overall network congestion condition. Accommodates active transportation to support reduced reliance on the automobile.	●	Improvements to overall network congestion condition. Accommodates active transportation to support reduced reliance on the automobile.
IMPLEMENTATION	Compatibility with City, provincial planning policies and Waterfront Toronto Framework standards.	Does the alternative support achieving City planning policies?	42	Supports the growth intention of the Official Plan, Central Waterfront Secondary Plan and precinct plans.	●	Contributes to the development of a connected grid network network of streets which provides direct and clearly understood travel routes for all transportation modes. Ensures safe, universally accessible, direct, comfortable, attractive and convenient pedestrian conditions. Provides connections and access to Lake Shore Blvd., provides more direct access for emergency vehicles.	●	Contributes to the development of a connected grid network network of streets which provides direct and clearly understood travel routes for all transportation modes. Ensures safe, universally accessible, direct, comfortable, attractive and convenient pedestrian conditions. Provides connections and access to Lake Shore Blvd., provides more direct access for emergency vehicles.
		Does the alternative address Waterfront Toronto objectives/frameworks?	43	Supports addressing Waterfront Toronto objectives/frameworks.	N/A	NA	N/A	NA
		Does the alternative support achieving provincial planning policies and guidelines?	44	Supports achieving provincial planning policies and guidelines.	●	Promotes the use of active transportation in and between residential and employment (including commercial and industrial) areas and promotes green infrastructure to complement infrastructure.	●	Promotes the use of active transportation in and between residential and employment (including commercial and industrial) areas and promotes green infrastructure to complement infrastructure.
	Consistency with approved area Environmental Assessments.	Does the alternative impact approved Environment Assessment projects?	45	Extent and nature of impacts on planned infrastructure with approved Environmental Assessments.	N/A	NA	N/A	NA

EVALUATION OF ALTERNATIVE SOLUTIONS - NEW NORTH SOUTH STREET EAST OF LESLIE

OBJECTIVE	CRITERIA	DESCRIPTION	MEASURE	KNOX AVENUE		WOODFIELD ROAD	
IMPLEMENTATION	Engineering feasibility and construction cost.	Is the alternative possible to construct and what are the key technical challenges?	46 Key technical challenges.	N/A	NA	N/A	NA
		Is the alternative cost effective to build?	47 Initial construction costs, excluding property, decontamination, and utilities	●	Roadway \$2,400,000	●	Roadway \$2,400,000
		Can the alternative be phased to offset initial costs and provide infrastructure in lock-step with development?	48 Ability to phase implementation and adapt to changes in phasing and timing of development.	N/A	NA	N/A	NA
		Is it possible to protect for future expansion and extension?	49 Adaptability to future land use changes and intensification.	N/A	NA	N/A	NA
	Existing municipal infrastructure and utilities.	Are there potential conflicts with existing utilities or challenges in re-location (temporary or permanent)?	50 Extent and nature of utility impacts.	●	Range of typical public and private utilities located in corridor. No major conflicts anticipated since ROW will be widened and very short new road added.	●	Range of typical public and private utilities located in corridor. No major conflicts anticipated for very short new road added.
		Would the alternative have an impact on existing municipal infrastructure to remain?	51 Nature and extent of potential impacts.	●	Existing watermain and existing stormwater sewer in corridor, but no impacts due to depth of the storm sewer.	●	Existing watermain and existing stormwater sewer in corridor, but no impacts due to depth of the storm sewer.
	Property acquisition costs.	How many private properties will be impacted or need to be acquired to support the alternative?	52 Approximate area of privately owned lands required to be acquired with existing development anticipated to remain.	●	1,200 m ² of land affected - 600m ² of municipally owned land is affected. 600m ² of federally owned is required	●	No additional property required
	Maintenance and operations.	How much effort is required for maintaining and operating the alternative?	53 Level of maintenance required.	N/A	NA	N/A	NA

**WATER
AND WATERWATER**

OBJECTIVE	CRITERIA	DESCRIPTION	MEASURE		1 Reduce Water Usage by Users and Keep Existing Network.		2 Reduce Water Usage by Users and Enlarge/Extend Network.		3 Install Separate Pipe System for non-Potable Users.	
			RANK	RATIONALE	RANK	RATIONALE	RANK	RATIONALE		
CREATING AN INTERESTING AND DYNAMIC URBAN MIX	Creation of new, vibrant mixed use communities and employment areas.	Does the alternative facilitate vibrant neighbourhoods and employment areas?	1	Vibrant new neighbourhoods/employment growth.	●	Supports required servicing for the anticipated mix of uses only where infrastructure currently exists; however, service will decline in areas currently experiencing low fire flow under existing conditions. Development on new streets would remain unserviced and development would not be feasible.	●	Supports required servicing for the anticipated mix of uses through use of existing infrastructure and new watermains installed on new streets through neighbourhood.	●	Supports required servicing for the anticipated mix of uses through use of existing infrastructure and new watermains installed on new streets through neighbourhood.
		Are viable development blocks created?	2	Viable development blocks.	●	New streets would remain unserviced and development would not be feasible. 5 km of streets have been identified requiring watermain replacement to address low fire flows.	●	Watermains can be routed to enable the creation of viable development blocks.	●	Watermains can be routed to enable the creation of viable development blocks.
	Necessary capacity to support the anticipated mix of uses in the Port Lands and South of Eastern area while minimizing rights-of-way widths.	Can the alternative provide the necessary vehicular capacity and municipal services needed to support development?	3	Necessary capacity is provided.	●	The area south of the Ship Channel and on new streets would remain unserviced and development would not be feasible.	●	Provides the required servicing to support development.	●	Provides the required servicing to support development, provided there is approval and support of the City to operate parallel non-potable system.
	Existing/planned neighbourhoods.	Does the alternative provide opportunities for improvements for existing neighbourhoods?	4	Opportunities for improvement.	●	No significant improvements. Areas with low fire flows could experience further decline in service.	●	Provision of looping/upsizing as identified through hydraulic modelling will improve areas currently experiencing low fire flows.	●	Provision of non-potable system will improve fire flows through existing neighbourhoods.
		Does the alternative minimize potential impacts to existing and planned neighbourhoods?	5	Number of existing residential units potentially displaced.	●	No existing residential units displaced.	●	No existing residential units displaced.	●	No existing residential units displaced.
	Existing businesses and industry and opportunities for new businesses and industry.	Is there potential for impacts to businesses and industry, such as displacement or reductions in parking?	6	Displacement of businesses and industry.	●	No displacement or reduced parking for business/industry.	●	No displacement or reduced parking for business/industry.	●	No displacement of businesses and industry. Location of pumping station on municipal-owned land would be identified during future design phases when size and detailed network modelling of participating areas in non-potable servicing are confirmed.
		Does the alternative support the establishment of new businesses and industry?	7	Access to infrastructure.	●	New streets would remain unserviced and development would not be feasible. Lower fire flows may limit the types of feasible development.	●	Infrastructure provided to support redevelopment with municipal servicing, including the Unilever Precinct.	●	Infrastructure provided to support redevelopment with municipal servicing, including the Unilever Precinct. Potential also exists for coordinated effort in sizing non-potable system during design to support industrial uses.
CONNECT THE PORT LANDS TO THE CITY	Better connect the Port Lands with the South of Eastern area and the rest of the city.	Does the alternative better connect the area for all users and services?	8	Connectivity.	●	Does not provide servicing on new streets so connection of full Study Area is not achieved.	●	Provides for connection of full Study Area to municipal servicing network.	●	Provides for connection of full Study Area to municipal servicing network.
	Redundancy in the network.	Does the alternative contribute to redundancy in the network to allow for better access/service?	9	Redundancy in network.	●	Existing system contains several redundant supply points.	●	Provides full connection of Study Area to municipal network with looping and redundant supply points.	●	Provides full connection of Study Area to municipal network with looping and redundant supply points.
	Existing physical barriers.	Are there any physical barriers that would be impacted by the alternative?	10	Nature and extent of physical barriers.	●	No impact to physical barriers as no additional infrastructure provided.	●	A VWF crossing under the Don Roadway is required to provide for appropriate looping and depth of WM to be coordinated with VWF design to minimize impact. Existing rail lines throughout the Study Area will be crossed in several locations by new and replaced watermains and detailed design of the WM installation will require coordination with rail operating authority design requirements (i.e. trenchless installation, steel encasement, etc.). Modelling identifies no upgrade to Eastern Ave WM., therefore no conflict with DMNP EA requirement to disconnect. Servicing unlikely to be impacted given the network of existing connections. Network layout minimized crossing of ship channel with connections to Unwin provided at east and west end of network; however, crossing can be considered for additional redundancy. Any crossing will require detailed investigation of geotechnical conditions to determine most appropriate construction methodology. Final decisions made with respect to Unwin Avenue alignment in subsequent phases may require an easement to be secured north of circulating channel for the new watermain to avoid having to relocate the 24" PEC main	●	A VWF crossing under the Don Roadway is required to provide for appropriate looping and depth of WM to be coordinated with VWF design to minimize impact. Existing rail lines throughout the Study Area will be crossed in several locations by new and replaced watermains and detailed design of the WM installation will require coordination with rail operating authority design requirements (i.e. trenchless installation, steel encasement, etc.). Modelling identifies no upgrade to Eastern Ave WM., therefore no conflict with DMNP EA requirement to disconnect. Servicing unlikely to be impacted given the network of existing connections. Network layout minimized crossing of ship channel with connections to Unwin provided at east and west end of network; however, crossing can be considered for additional redundancy. Any crossing will require detailed investigation of geotechnical conditions to determine most appropriate construction methodology. Final decisions made with respect to Unwin Avenue alignment in subsequent phases may require an easement to be secured north of circulating channel for the new watermain to avoid having to relocate the 24" PEC main

EVALUATION OF ALTERNATIVE SOLUTIONS: WATER SYSTEMS

● VERY POOR ● POOR ● GOOD ● VERY GOOD

OBJECTIVE	CRITERIA	DESCRIPTION	MEASURE	1 Reduce Water Usage by Users and Keep Existing Network.		2 Reduce Water Usage by Users and Enlarge/Extend Network.		3 Install Separate Pipe System for non-Potable Users.	
				RANK	RATIONALE	RANK	RATIONALE	RANK	RATIONALE
LEVERAGE ASSETS	Cultural heritage resources.	Are there cultural heritage resources that might be affected by an alternative and what is the nature of the impact?	11 Nature and extent of potential impacts.	●	No impact to cultural heritage resources.	●	No additional cultural heritage resource impacts to those identified with the provision of new ROW's.	●	No additional cultural heritage resource impacts to those identified with the provision of new ROW's.
		Can any potential impacts be mitigated?	12 Ability to mitigate impacts.	●	No mitigation required.	●	No additional mitigation beyond that identified for ROW provision.	●	No additional mitigation beyond that identified for ROW provision.
	Archaeological resources and traditional uses of Aboriginal people	Are there archaeological resources that might be affected by an alternative and what is the nature of the impact?	13 Nature and extent of potential impacts.	●	No impacts anticipated to archaeological resources or traditional uses by Aboriginal people.	●	The ACMS recommends that LDP-2 (west of Don Roadway) and LDP-4 (near Unwin Ave) require archaeological monitoring and interpretation and commemoration, and that LDP-6 (near Unwin Ave) does not require monitoring but should be subject to interpretation and commemoration.	●	The ACMS recommends that LDP-2 (west of Don Roadway) and LDP-4 (near Unwin Ave) require archaeological monitoring and interpretation and commemoration, and that LDP-6 (near Unwin Ave) does not require monitoring but should be subject to interpretation and commemoration.
			14 Ability to mitigate.	●	No mitigation required.	●	The ACMS recommends that LDP-2 (west of Don Roadway) and LDP-4 (near Unwin Ave) require archaeological monitoring and interpretation and commemoration, and that LDP-6 (near Unwin Ave) does not require monitoring but should be subject to interpretation and commemoration.	●	The ACMS recommends that LDP-2 (west of Don Roadway) and LDP-4 (near Unwin Ave) require archaeological monitoring and interpretation and commemoration, and that LDP-6 (near Unwin Ave) does not require monitoring but should be subject to interpretation and commemoration.
	Existing/planned parks and open spaces.	Does the alternative create an opportunity to enhance existing/planned parks and open spaces?	15 Opportunities to enhance.	●	Existing parks and open spaces are currently serviced with municipal water supply.	●	Existing parks and open spaces are currently serviced with municipal water supply.	●	Existing parks and open spaces are currently serviced with municipal water supply.
		Is there potential for temporary or permanent impacts to existing parks and open spaces?	16 Nature and extent of potential impacts.	●	No impacts to existing/planned parks and open spaces.	●	No impacts to existing/planned parks and open spaces.	●	No impacts to existing/planned parks and open spaces. Location of pumping station on municipal-owned land would be identified during future design phases when size and detailed network modelling of participating areas in non-potable servicing are confirmed.
	Compatibility with the natural environment.	Is there potential for temporary or permanent impacts to natural heritage and terrestrial resources (existing and planned)?	17 Nature and extent of potential impacts.	●	No change to existing system or impacts.	●	No impacts with existing natural environment anticipated to remain. System is underground or in street ROW.	●	No impacts with existing natural environment anticipated to remain. System is underground or in street ROW.
		Is there potential for adverse effects to water quality aquatic species?	18 Minimizes the potential for an adverse effect on water quality and aquatic species.	●	No change to existing system or impacts.	●	No impacts related to water quality or aquatic species. System is underground or in street ROW.	●	No impacts related to water quality or aquatic species.
		Are there any impacts to groundwater?	19 Impacts or improvements to groundwater.	●	No change to existing system or impacts.	●	Construction of new watermains may interact with groundwater. Consideration may need to be given to treatment of groundwater prior to discharge.	●	Construction of new watermains may interact with groundwater. Consideration may need to be given to treatment of groundwater prior to discharge.
	DEVELOP A HIGH QUALITY PUBLIC REALM	Complete street principles and street character.	Can the alternative achieve the complete street principles established and the desired street character?	20 Ability to achieve the complete street principles and desired street character.	●	No change to existing network	●	Street ROWs are widened, maintained or reconfigured. The location of existing watermains on streets undergoing redevelopment will need to be addressed for reconfiguration of Right-of-Ways to be determined in detailed design phases.	●
Does the alternative have the potential to improve existing unsafe conditions?			21 Improves existing unsafe conditions.	●	Areas that currently fail to meet target fire flows will increase in area and/or severity.	●	Looping and upsizing watermains will increase fire flows.	●	Provision of non-potable supply will increase fire flows.
Health and safety.		Does the alternative create a potential unsafe condition?	22 Minimum design standards and criteria achievable.	●	Areas that currently fail to meet target fire flows will increase in area and/or severity.	●	Design criteria for water system design can be met.	●	Additional safety provisions are required to protect against any cross-connection between non-potable and potable system.

OBJECTIVE	CRITERIA	DESCRIPTION	MEASURE	1 Reduce Water Usage by Users and Keep Existing Network.		2 Reduce Water Usage by Users and Enlarge/Extend Network.		3 Install Separate Pipe System for non-Potable Users.	
				RANK	RATIONALE	RANK	RATIONALE	RANK	RATIONALE
CONTRIBUTE TO THE SUSTAINABLE FUTURE OF THE CITY	Opportunities for innovation.	Can innovative features be accommodated in the design of the alternative?	23 Ability to provide innovative features in the design of the alternative.	●	No ability as alternative maintains existing condition.	●	Ability to integrate advances in watermain design and construction.	●	Ability to create an innovative feature of dual non-potable supply.
	Transit accommodation.	How easily can dedicated transit, or where appropriate surface transit routes in mixed traffic, be accommodated?	24 Ability for alternative to accommodate appropriate transit service.	●	Existing watermain locations may conflict with dedicated transit Right-of-Way requiring relocation.	●	Relocation may be required to accommodate dedicated transit on Commissioners Street pending design decisions for road/transit and Subsurface Utility Engineering confirmation in future design phases.	●	Relocation may be required to accommodate dedicated transit on Commissioners Street pending design decisions for road/transit and Subsurface Utility Engineering confirmation in future design phases.
	Flood risk potential.	Would the alternative potentially create a flood risk potential? Can flood risk potential be mitigated through design?	25 Flood risk potential created and ability to mitigate flood risk.	●	Alternative has no impact on flood risk. Existing infrastructure may need to be relocated depending on final design on feature.	●	Alternative has no impact on flood risk as network layout confirms that new infrastructure can be routed to avoid features. Existing infrastructure may need to be relocated depending on final design on feature.	●	Alternative has no impact on flood risk as network layout confirms that new infrastructure can be routed to avoid features. Existing infrastructure may need to be relocated depending on final design on feature.
	Noise and air quality.	Does the alternative contribute to improved noise and air quality conditions?	26 Improved noise and air quality conditions.	●	Alternative has no impact on noise and air quality.	●	Construction of new watermains could contribute some additional noise and dust during construction; however impact can be mitigated through by-law provisions for work hours and dust control.	●	Construction of new watermains could contribute some additional noise and dust during construction; however impact can be mitigated through by-law provisions for work hours and dust control.
	Resiliency and climate change.	Can the alternative be designed for maximum longevity and reduced greenhouse gas emissions?	27 Promotes reduction of greenhouse gas (e.g. through LID, minimizing pumping stations or potential to reduce congestion points).	●	Reducing water consumption would have some effect on reducing greenhouse gases through the reduction of pumping requirements.	●	Reducing water consumption would have some effect on reducing greenhouse gases through the reduction of pumping requirements. The availability of high quality water available at the R C Harris WTP, does not require power-intensive treatment.	●	Reducing water consumption would have some effect on reducing greenhouse gases. Requirement for a pumping station for non-potable system requires energy and has the potential to contribute additional greenhouse gas emissions. The use of non-potable water would minimize the amount of water to be treated; potentially reducing greenhouse gases, however, the high quality of water supply available at the R C Harris WTP, does not require power-intensive treatment.
IMPLEMENTATION	Compatibility with City, provincial planning policies and Waterfront Toronto Framework standards.	Does the alternative support achieving City planning policies?	28 Supports the growth intention of the Official Plan, Central Waterfront Secondary Plan and precinct plans.	●	Will provide for servicing of growth in areas serviced by existing network; however, will have negative impact on areas already experiencing low fire flows Area serviced by new streets will not be able to develop.	●	Provides sufficient municipal servicing to support growth intention.	●	Provides sufficient municipal servicing to support growth intention.
		Does the alternative address Waterfront Toronto objectives/frameworks?	29 Supports addressing Waterfront Toronto objectives/frameworks.	●	Will provide for servicing of growth in areas serviced by existing network. Foundation of alternative is reduction of demand for fresh water in line with Waterfront Toronto Sustainability Framework Goals. Area serviced by new streets will not be able to develop.	●	Provides sufficient municipal servicing to support objectives. Foundation of alternative is reduction of demand for fresh water in line with Waterfront Toronto Sustainability Framework Goals.	●	Provides sufficient municipal servicing to support objectives. Foundation of alternative is reduction of demand for fresh water in line with Waterfront Toronto Sustainability Framework Goals, enhanced by alternate source of supply for fire-fighting.
		Does the alternative support achieving provincial planning policies and guidelines?	30 Supports achieving provincial planning policies and guidelines.	●	Will provide for servicing of growth in areas serviced by existing network and demonstrates consistency with 2.2.1 f as the foundation is based on the implementation of water conservation and reduced water demand.	●	Consistent with recently updated 2014 Provincial Policy Statement (PPS) by servicing expected growth or development in a manner that promotes the efficient use and optimization of existing infrastructure and relies on existing municipal servicing. Supports Policy 1.8.1 of the PPS that requires land use and development patterns that support energy conservation and efficiency, improved air quality, reduced greenhouse gas emissions, and climate change adaptation as the foundation is based on the implementation of water conservation and reduced water demand. Implementation of Master Plan recommendations will allow for co-ordinated investment in infrastructure.	●	Consistent with recently updated 2014 Provincial Policy Statement (PPS) by servicing expected growth or development in a manner that promotes the efficient use and optimization of existing infrastructure and relies on existing municipal servicing. Supports Policy 1.8.1 of the PPS that requires land use and development patterns that support energy conservation and efficiency, improved air quality, reduced greenhouse gas emissions, and climate change adaptation as the foundation is based on the implementation of water conservation and reduced water demand. Implementation of Master Plan recommendations will allow for co-ordinated investment in infrastructure.

OBJECTIVE	CRITERIA	DESCRIPTION	MEASURE	1 Reduce Water Usage by Users and Keep Existing Network.		2 Reduce Water Usage by Users and Enlarge/Extend Network.		3 Install Separate Pipe System for non-Potable Users.	
				RANK	RATIONALE	RANK	RATIONALE	RANK	RATIONALE
IMPLEMENTATION	Consistency with approved area Environmental Assessments.	Does the alternative impact approved Environment Assessment projects?	31 Extent and nature of impacts on planned infrastructure with approved Environmental Assessments.	●	A Class Environmental Assessment Master Plan completed for the adjacent Lower Don Lands Study Area identified a preferred option to extend the existing network, implement water efficiency measures and institute a Private Operated Non-Potable Water Supply Systems. The solution assumes connection to future water mains in the Port Lands that would not be constructed under this alternative.	●	A Class Environmental Assessment Master Plan completed for the adjacent Lower Don Lands identified a preferred option to extend the existing network, implement water efficiency measures and institute a Private Operated Non-Potable Water Supply Systems. The future water mains identified for Port Lands would support the LDL Preferred Alternative. WM's crossing the VWF south of Lakeshore have been aligned with the utility crossing identified in the LDL EA.	●	A Class Environmental Assessment Master Plan completed for the adjacent Lower Don Lands identified a preferred option to extend the existing network, implement water efficiency measures and institute a Private Operated Non-Potable Water Supply Systems. The future water mains identified for Port Lands would support the LDL Preferred Alternative. WM's crossing the VWF south of Lakeshore have been aligned with the utility crossing identified in the LDL EA.
	Engineering feasibility and construction cost.	Is the alternative possible to construct and what are the key technical challenges?	32 Key technical challenges.	●	No technical challenges as alternative involves no construction.	●	Alternative is constructible and has the following technical challenges: - high water table in Port Lands will likely require extensive dewatering during construction of new or replacement water mains; - construction in any areas of reclaimed land could limit ability to use directional drilling technique due to potential presence of boulders or concrete. - It is noted that existing pipes that achieve acceptable pressures and fire flows under future conditions are assumed to remain in place; however, age and coordination with other major infrastructure may require replacement	●	Alternative is constructible and has the following technical challenges: - identifying an appropriate control strategy for the non-potable system during detailed design to meet regulatory and operability constraints; finding space for the dual pipe system may be challenging in the more space constrained areas. - high water table in Port Lands will likely require extensive dewatering during construction of new or replacement water mains; - construction in any areas of reclaimed land could limit ability to use directional drilling technique due to potential presence of boulders or concrete. - It is noted that existing pipes that achieve acceptable pressures and fire flows under future conditions are assumed to remain in place; however, age and coordination with other major infrastructure may require replacement
		Is the alternative cost effective to build?	33 Initial construction and commissioning costs.	●	No costs as alternative involves no construction.	●	High water table in Port Lands will likely require extensive dewatering during construction of new or replacement water mains.	●	High water table in Port Lands will likely require extensive dewatering during construction of new or replacement water mains and dual system. Dual system requires construction of additional supply infrastructure (i.e. pumping station).
		Can the alternative be phased to offset initial costs and provide infrastructure in lock-step with development?	34 Ability to phase implementation and adapt to changes in phasing and timing of development.	●	As alternative involves no additional infrastructure no ability to adapt to phasing.	●	Alternative can be phased to meet needs of development (i.e. brought on line as such time as capacity needed); however upgrades for existing fireflow should not be deferred.	●	Alternative can be phased to meet needs of development (i.e. brought on line as such time as capacity needed); however upgrades for existing fireflow should not be deferred. Construction of non-potable supply infrastructure may be difficult to phase effectively.
		Is it possible to protect for future expansion and extension?	35 Adaptability to future land use changes and intensification.	●	Not applicable as alternative involves no additional infrastructure.	●	Network can be laid out to support additional connections.	●	Network can be laid out to support additional connections.

EVALUATION OF ALTERNATIVE SOLUTIONS: WATER SYSTEMS

● VERY POOR ● POOR ● GOOD ● VERY GOOD

OBJECTIVE	CRITERIA	DESCRIPTION	MEASURE	1 Reduce Water Usage by Users and Keep Existing Network.		2 Reduce Water Usage by Users and Enlarge/Extend Network.		3 Install Separate Pipe System for non-Potable Users.	
				RANK	RATIONALE	RANK	RATIONALE	RANK	RATIONALE
IMPLEMENTATION	Existing municipal infrastructure and utilities.	Are there potential conflicts with existing utilities or challenges in re-location (temporary or permanent)?	36 Extent and nature of utility impacts.	●	No impact as alternative involves no additional infrastructure.	●	ROW design for new streets can accommodate required infrastructure. Major natural gas infrastructure crosses Study Area in numerous areas on route to PEC. Location and depth to be confirmed with Subsurface Utility Engineering to avoid conflicts.	●	Construction of dual piping in some areas could increase the degree of utility impacts depending on alignment and decisions made with respect to separation of services. Major natural gas infrastructure crosses Study Area in numerous areas on route to PEC. Location and depth to be confirmed with Subsurface Utility Engineering to avoid conflicts.
		Would the alternative have an impact on existing municipal infrastructure to remain?	37 Nature and extent of potential impacts.	●	No impacts to municipal servicing anticipated to remain.	●	No impacts to municipal servicing anticipated to remain.	●	Areas where non-potable system is installed on existing streets will require detailed coordination with existing servicing to avoid cross-connections.
	Property acquisition costs.	How many private properties will be impacted or need to be acquired to support the alternative?	38 Approximate number of hectares of privately owned lands required to be acquired with existing development anticipated to remain.	●	No property required as alternative involves no construction.	●	No additional land required beyond ROW requirements; however alignment decisions made during detailed design may identify additional temporary construction easements.	●	Pumping and storage requirements for the non-potable supply system (i.e. pumping station) can likely be located on municipal-owned property. Alignment decisions made during detailed design may identify additional temporary construction easements. Dual systems may not be feasible in some areas if ROW is congested.
	Maintenance and operations.	How much effort is required for maintaining and operating the alternative?	39 Level of maintenance required.	●	No additional infrastructure identified. Removes opportunity to replace aging infrastructure and reduce maintenance effort (i.e. leak repair). Requires continued daily maintenance.	●	Low or typical maintenance effort or no additional maintenance required.	●	A non-potable system is anticipated to require additional maintenance due to dual piping, need for a pumping station and additional maintenance and operational requirements to minimize the potential health risks of coming in contact with an untreated supply. Fail-safe measures are required to eliminate potential for connection and resulting cross-contamination of the City's water supply system

EVALUATION OF ALTERNATIVE SOLUTIONS: WASTEWATER SYSTEMS

● VERY POOR ● POOR ● GOOD ● VERY GOOD

OBJECTIVE	CRITERIA	DESCRIPTION	MEASURE	1 Do Nothing and Reduce Waste Water Flows.		2 Reduce Waste Water Flows & Enlarge/Extend Collection - Convey flow via Carlaw Avenue inter-connecting sewer.		3 Reduce Waste Water Flows & Enlarge/Extend Collection and Provide Decentralized Treatment – for flows South of Ship Channel.	
				RANK	RATIONALE	RANK	RATIONALE	RANK	RATIONALE
CREATING AN INTERESTING AND DYNAMIC URBAN MIX	Creation of new, vibrant mixed use communities and employment areas.	Does the alternative facilitate vibrant neighbourhoods and employment areas?	1 Vibrant new neighbourhoods/employment growth.	●	Supports required servicing for the anticipated mix of uses only where infrastructure currently exists. The area south of the Ship Channel and on new streets would remain unserved and development would not be feasible.	●	Supports required servicing for the anticipated mix of uses through use of existing infrastructure and new sewers installed on new streets through neighbourhood.	●	Supports required servicing for the anticipated mix of uses through use of existing infrastructure and new sewers installed on new streets through neighbourhood. Provides potential for accelerating development in areas that are currently un-served where the complexity of extending the municipal system may delay implementation.
		Are viable development blocks created?	2 Viable development blocks.	●	The area south of the Ship Channel and on new streets would remain unserved and development would not be feasible.	●	Provides the required servicing to support the desired development mix.	●	Additional complexity of implementing and gaining approval for communal system may limit the range of development that would be viable in these areas.
	Necessary vehicular capacity to support the anticipated mix of uses in the Port Lands and South of Eastern area while minimizing rights-of-way widths.	Can the alternative provide the necessary vehicular capacity and municipal services needed to support development?	3 Necessary capacity is provided.	●	Support for viable development blocks constrained by lack of existing sewer network in area South of Ship Channel.	●	Will support viable development blocks with proposed sewers which enables collection of wastewater flow .	●	Will support viable development blocks with proposed sewers which enables collection of wastewater flow .
	Existing/planned neighbourhoods.	Does the alternative provide opportunities for improvements for existing neighbourhoods?	4 Opportunities for improvement.	●	No significant improvements. Areas south of the Ship Channel remain unserved. Large portions of the Port Lands area would continue to be surcharged under relatively moderate wet weather flow conditions; however, future improvements to the operation of the Low level Interceptor may reduce this impact.	●	Connection of Port Lands area to Carlaw Interconnecting Sewer removes surcharge condition. Full municipal servicing is provided to users south of Ship Channel currently on holding/septic tanks.	●	Connection of Port Lands area to Carlaw Interconnecting Sewer removes surcharge condition. Servicing is provided to users south of Ship Channel currently on holding/septic tanks (either through municipal or communal servicing) and will improve services; however if privately operated, subject to the City guaranteeing the system and agreeing to operate if needed.
		Does the alternative minimize potential impacts to existing and planned neighbourhoods?	5 Number of existing residential units potentially displaced.	●	No existing residential units displaced.	●	No existing residential units displaced.	●	No existing residential units displaced.
	Existing businesses and industry and opportunities for new businesses and industry.	Is there potential for impacts to businesses and industry, such as displacement or reductions in parking?	6 Displacement of businesses and industry.	●	As alternative includes no construction, there is no displacement or reduced parking for business/industry.	●	Infrastructure requirements can be accommodated within new Right-of-Ways with no displacement or reduced parking for business/industry.	●	Infrastructure requirements can be accommodated within new Right-of-Ways with no displacement or reduced parking for business/industry. Public Lands south of the Ship Channel could be accessed for facilities required for communal system.
		Does the alternative support the establishment of new businesses and industry?	7 Access to infrastructure.	●	The area south of the Ship Channel and on new streets would remain unserved and development would not be feasible.	●	Infrastructure provided to support redevelopment of the Unilever Precinct with municipal servicing. Servicing provided to areas south of the Ship Channel.	●	Infrastructure provided to support redevelopment of the Unilever Precinct with municipal servicing. Servicing provided to areas south of the Ship Channel; however, areas provided with communal services will require support of City to own and/or operate communal facility.

EVALUATION OF ALTERNATIVE SOLUTIONS: WASTEWATER SYSTEMS

● VERY POOR ● POOR ● GOOD ● VERY GOOD

OBJECTIVE	CRITERIA	DESCRIPTION	MEASURE		1 Do Nothing and Reduce Waste Water Flows.		2 Reduce Waste Water Flows & Enlarge/Extend Collection - Convey flow via Carlaw Avenue inter-connecting sewer.		3 Reduce Waste Water Flows & Enlarge/Extend Collection and Provide Decentralized Treatment – for flows South of Ship Channel.	
			RANK	RATIONALE	RANK	RATIONALE	RANK	RATIONALE		
CONNECT THE PORT LANDS TO THE CITY	Better connect the Port Lands with the South of Eastern area and the rest of the city.	Does the alternative better connect the area for all users and services?	8	Connectivity.	●	Alternative continues to isolate area south of Ship Channel from connection to municipal servicing network.	●	Provides for connection of full Study Area to municipal servicing network.	●	Servicing is provided, however, areas provided with decentralized treatment remain unconnected to the existing municipal servicing network.
	Redundancy in the network.	Does the alternative contribute to redundancy in the network to allow for better access/service?	9	Redundancy in network.	●	There is no improvement with this alternative as there is no additional infrastructure added.	●	Provides full connection of Study Area to municipal network.	●	Servicing is provided, however, areas provided with decentralized treatment remain unconnected to the existing municipal servicing network.
	Existing physical barriers.	Are there any physical barriers that would be impacted by the alternative?	10	Nature and extent of physical barriers.	●	There are no physical barriers impacted as there is no additional infrastructure added.	●	Preliminary sewer alignment assessment indicates that Ship Channel and existing cooling water channel can be avoided. Long sewer run from west to east required to drain western corner of Study Area as a crossing of the Ship Channel is not feasible. Existing rail lines throughout the Study Area will be crossed in several locations by new and replaced sewers and detailed design of the installation will require coordination with rail operating authority design requirements (i.e. trenchless installation, steel encasement, etc.). Final decisions made with respect to Unwin Avenue alignment in subsequent phases may require an easement to be secured north of circulating channel for the new sewer to avoid having to relocate the 24" PEC main	●	Provision of communal system avoids requirement for long, deep sewer south of the Ship Channel. Existing rail lines throughout the Study Area will be crossed in several locations by new and replaced sewers and detailed design of the installation will require coordination with rail operating authority design requirements (i.e. trenchless installation, steel encasement, etc.). Final decisions made with respect to Unwin Avenue alignment and layout of communal system in subsequent phases may require an easement to be secured north of circulating channel for the new sewer to avoid having to relocate the 24" PEC main
LEVERAGE ASSETS	Cultural heritage resources.	Are there cultural heritage resources that might be affected by an alternative and what is the nature of the impact?	11	Nature and extent of potential impacts.	●	No impact to cultural heritage resources. No change to existing system.	●	No additional cultural heritage resource impacts to those identified with the provision of new ROW's.	●	No additional cultural heritage resource impacts to those identified with the provision of new ROW's.
		Can any potential impacts be mitigated?	12	Ability to mitigate impacts.	●	No mitigation required.	●	No additional mitigation beyond that identified for ROW provision.	●	No additional mitigation beyond that identified for ROW provision.
	Archaeological resources and traditional uses of Aboriginal people.	Are there archaeological resources that might be affected by an alternative and what is the nature of the impact?	13	Nature and extent of potential impacts.	●	No impacts anticipated to archaeological resources or traditional uses by Aboriginal people. No change to existing system.	●	The ACMS recommends that LDP-2 (near Don Roadway) and LDP-4 (near Unwin Ave) require archaeological monitoring and that LDP-6 (near Unwin Ave) does not require monitoring but should be subject to interpretation and commemoration.	●	The ACMS recommends that LDP-2 (near Don Roadway) and LDP-4 (near Unwin Ave) require archaeological monitoring and that LDP-6 (near Unwin Ave) does not require monitoring but should be subject to interpretation and commemoration.
			14	Ability to mitigate.	●	No mitigation required.	●	A licensed archaeologist must be present to monitor the removal of topsoil for areas indicated in order to document any archaeological resources which may be present for LDP2 and LDP-4. LDP- 6 (Fisherman's Island Cottages, Boat House, etc. should be subject to interpretation and commemoration.	●	A licensed archaeologist must be present to monitor the removal of topsoil for areas indicated in order to document any archaeological resources which may be present for LDP2 and LDP-4. LDP- 6 (Fisherman's Island Cottages, Boat House, etc. should be subject to interpretation and commemoration.

EVALUATION OF ALTERNATIVE SOLUTIONS: WASTEWATER SYSTEMS

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					RANK	RATIONALE	RANK	RATIONALE	RANK	RATIONALE
LEVERAGE ASSETS	Existing/planned parks and open spaces.	Does the alternative create an opportunity to enhance existing/planned parks and open spaces?	15	Opportunities to enhance.	●	Under this alternative, recreational uses south of the Ship Channel continue to be serviced with septic/holding tanks.	●	Under this alternative, recreational uses south of the Ship Channel are connected to full municipal servicing.	●	Under this alternative, recreational uses south of the Ship Channel may be connected to communal servicing; however, requires City support to own and/or operate. Facilities for communal system would likely be located within public spaces.
		Is there potential for temporary or permanent impacts to existing parks and open spaces?	16	Nature and extent of potential impacts.	●	No change to existing system or impacts.	●	No impacts to existing parks and open spaces. Proposed network improvements are located in the street ROW.	●	No impacts to existing parks and open spaces. Proposed network improvements are located in the street ROW. Opportunity to co-locate Infrastructure to support communal treatment with SWM treatment contemplated for planned Don Greenway.
	Compatibility with the natural environment.	Is there potential for temporary or permanent impacts to natural heritage and terrestrial resources (existing and planned)?	17	Nature and extent of potential impacts.	●	No change to existing system or impacts.	●	No impacts with existing natural environment anticipated to remain. System is underground or in the street ROW.	●	Provision of communal facilities may impact natural heritage resources depending on location and phasing.
		Is there potential for adverse effects to water quality aquatic species?	18	Minimizes the potential for an adverse effect on water quality and aquatic species.	●	No change to existing system or impacts.	●	No impacts related to water quality or aquatic species. System is underground or in the street ROW.	●	No impacts related to water quality or aquatic species. System is underground or in the street ROW.
		Are there any impacts to groundwater?	19	Impacts or improvements to groundwater.	●	No impacts related to groundwater.	●	Construction of sewers will interact with groundwater. Consideration may need to be given to treatment of groundwater prior to discharge.	●	Construction of sewers will interact with groundwater; however, avoidance of construction of deep sewers south of the Ship Channel could reduce the interaction. Consideration may need to be given to treatment of groundwater prior to discharge.
DEVELOP A HIGH QUALITY PUBLIC REALM	Complete street principles and street character.	Can the alternative achieve the complete street principles established and the desired street character?	20	Ability to achieve the complete street principles and desired street character.	●	New streets identified to achieve desired street character would not be serviced. The location of existing sewers on streets undergoing redevelopment may interfere with plans to narrow Right-of-Ways.	●	Construction of new and replacement sewers throughout the Study Area will be coordinated with other major infrastructure construction including new road and transit and watermain and storm sewer networks.	●	Construction of new and replacement sewers throughout the Study Area will be coordinated with other major infrastructure construction including new road and transit and watermain and storm sewer networks.
	Health and safety.	Does the alternative have the potential to improve existing unsafe conditions?	21	Improves existing unsafe conditions.	●	Potential for surcharge conditions through existing connection to LLI increases risk of flooding.	●	Connection to Carlaw Interconnecting Sewer removes surcharge condition and risk of flooding.	●	Connection to Carlaw Interconnecting Sewer removes surcharge condition and risk of flooding.
		Does the alternative create a potential unsafe condition?	22	Minimum design standards and criteria achievable.	●	Potential for surcharge conditions through existing connection to LLI increases risk of flooding and contact with untreated sewage.	●	Design criteria for sanitary sewer design can be met.	●	Safe operation of communal system would require additional training for City to support and own and/or operate, or retention of a qualified private operator.

EVALUATION OF ALTERNATIVE SOLUTIONS: WASTEWATER SYSTEMS

● VERY POOR ● POOR ● GOOD ● VERY GOOD

OBJECTIVE	CRITERIA	DESCRIPTION	MEASURE	1 Do Nothing and Reduce Waste Water Flows.		2 Reduce Waste Water Flows & Enlarge/Extend Collection - Convey flow via Carlaw Avenue inter-connecting sewer.		3 Reduce Waste Water Flows & Enlarge/Extend Collection and Provide Decentralized Treatment – for flows South of Ship Channel.	
				RANK	RATIONALE	RANK	RATIONALE	RANK	RATIONALE
CONTRIBUTE TO THE SUSTAINABLE FUTURE OF THE CITY	Opportunities for innovation.	Can innovative features be accommodated in the design of the alternative?	23 Ability to provide innovative features in the design of the alternative.	●	As alternative maintains existing condition no opportunity for innovative features.	●	Ability to integrate advances in sewer system design, including pipeline and manhole materials and construction techniques to reduce infiltration and inflow to the sewer system and improve longevity of system.	●	Ability to integrate advances in sewer system design, including pipeline material and construction technique to reduce infiltration and inflow to the sewer system and improve longevity of system. Ability to create, with the endorsement of the City, a servicing solution south of the Ship Channel that incorporates innovative and emerging wastewater treatment features, with the potential for energy recovery. Will require City support to own and either operate or if privately operated, guarantee performance and assume operation, if required. The ability to support resource recovery from the wastewater flow would depend on final decisions made with respect to facility sizing and location .
	Transit accommodation.	How easily can dedicated transit, or where appropriate surface transit routes in mixed traffic, be accommodated?	24 Ability for alternative to accommodate appropriate transit service.	●	Existing sewer locations may conflict with dedicated transit Right-of-Way requiring relocation.	●	Replacement of existing sewer on Commissioners Street can be coordinated with identification of dedicated transit Right-of-Way.	●	Replacement of existing sewer on Commissioners Street can be coordinated with identification of dedicated transit Right-of-Way.
	Flood risk potential.	Would the alternative potentially create a flood risk potential? Can flood risk potential be mitigated through design?	25 Flood risk potential created and ability to mitigate flood risk.	●	Alternative has no impact on flood risk.	●	Alternative has no impact on flood risk as new infrastructure can be routed to avoid features.	●	Alternative has no impact on flood risk as new infrastructure can be routed to avoid features.
	Noise and air quality.	Does the alternative contribute to improved noise and air quality conditions?	26 Improved noise and air quality conditions.	●	Alternative has no impact on noise and air quality.	●	Construction of new sewers could contribute some additional noise and dust during construction; however impact can be mitigated through by-law provisions for work hours and dust control.	●	Construction of new sewers could contribute some additional noise and dust during construction; however impact can be mitigated through by-law provisions for work hours and dust control. Decisions made with respect to technology selection of the communal system will need to factor in operational noise of new facilities.
	Resiliency and climate change.	Can the alternative be designed for maximum longevity and reduced greenhouse gas emissions?	27 Promotes reduction of greenhouse gas (e.g. through LID, minimizing pumping stations or potential to reduce congestion points).	●	Alternative will not contribute to reduction of greenhouse gases through reducing wastewater flows.	●	Alternative will contribute to reduction of greenhouse gases through reducing wastewater flows.	●	Additional power demand of new facility has potential to increase green-house gas emissions; however this may be off-set if energy recovery through thermal energy recovery or methane production from wastewater solids is feasible.

EVALUATION OF ALTERNATIVE SOLUTIONS: WASTEWATER SYSTEMS

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			RANK	RATIONALE	RANK	RATIONALE	RANK	RATIONALE		
IMPLEMENTATION	Compatibility with City, provincial planning policies and Waterfront Toronto Framework standards.	Does the alternative support achieving City planning policies?	28	Supports the growth intention of the Official Plan, Central Waterfront Secondary Plan and precinct plans.	●	Will provide for servicing of growth in areas serviced by existing network. Area south of the Ship Channel and new streets will not be able to develop.	●	Provides sufficient municipal servicing to support growth intention.	●	Provides sufficient municipal servicing to support growth intention. Potential to achieve energy recovery supports policy 26 of the CWSP.
		Does the alternative address Waterfront Toronto objectives/frameworks?	29	Supports addressing Waterfront Toronto objectives/frameworks.	●	Will provide for servicing of growth in areas serviced by existing network. Foundation of alternative is reduction of wastewater flows commensurate with reduced potable water demand in line with Waterfront Toronto Sustainability Framework Goals. Reduced Water demand is achieved through implementation of Toronto Water's Water Efficiency Plan which follows on Building Code changes to require high-efficiency fixtures and focuses on public education and communication to further promote water conservation initiatives and support for the City's industrial and commercial business community to achieve efficiencies in water usage and reduce consumption. Opportunities for additional water demand reduction can be realized through building developments to collect and re-use grey water/rainwater to supplement toilet flushing demands and irrigation.	●	Will provide for servicing of growth in Study Area Foundation of alternative is reduction of wastewater flows commensurate with reduced potable water demand in line with Waterfront Toronto Sustainability Framework Goals. Reduced Water demand is achieved through implementation of Toronto Water's Water Efficiency Plan which follows on Building Code changes to require high-efficiency fixtures and focuses on public education and communication to further promote water conservation initiatives and support for the City's industrial and commercial business community to achieve efficiencies in water usage and reduce consumption. Opportunities for additional water demand reduction can be realized through building developments to collect and re-use grey water/rainwater to supplement toilet flushing demands and irrigation.	●	Will provide for servicing of growth in Study Area Foundation of alternative is reduction of wastewater flows commensurate with reduced potable water demand in line with Waterfront Toronto Sustainability Framework Goals. Reduced Water demand is achieved through implementation of Toronto Water's Water Efficiency Plan which follows on Building Code changes to require high-efficiency fixtures and focuses on public education and communication to further promote water conservation initiatives and support for the City's industrial and commercial business community to achieve efficiencies in water usage and reduce consumption. Opportunities for additional water demand reduction can be realized through building developments to collect and re-use grey water/rainwater to supplement toilet flushing demands and irrigation. Potential exists for further implementation of water reduction measures should alternative wastewater collection methods (such as vacuum collection technology) be feasible, South of Ship Channel. Potential for resource recovery from the wastewater flow through collection of methane generation from digestion of wastewater biosolids residuals or cogeneration of combined heat and power, for concurrent power production and recovery of thermal energy supports objective to increase the percentage of energy consumption from renewable sources.
		Does the alternative support achieving provincial planning policies and guidelines?	30	Supports achieving provincial planning policies and guidelines.	●	Will provide for servicing of growth in areas serviced by existing network and demonstrates consistency with 2.2.1 f as the foundation is based on the implementation of water conservation and reduced water demand. Area south of the Ship Channel and new streets will not be able to develop.	●	Consistent with recently updated 2014 Provincial Policy Statement (PPS) by servicing expected growth or development in a manner that promotes the efficient use and optimization of existing infrastructure and further, that, "intensification and redevelopment within settlement areas on existing municipal sewage services and municipal water services should be promoted, wherever feasible." (2014 Provincial Policy Statement Under the Planning Act). Supports Policy 1.8.1 that requires land use and development patterns that support energy conservation and efficiency, improved air quality, reduced greenhouse gas emissions, and climate change adaptation. Demonstrates consistency with 2.2.1 f as the foundation is based on the implementation of water conservation and reduced water demand. Implementation of Master Plan recommendations will allow for co-ordinated investment in infrastructure.	●	Development South of the Ship Channel on a communal system would not align with recently updated 2014 Provincial Policy Statement (PPS), which promotes servicing expected growth or development in a manner that promotes the efficient use and optimization of existing infrastructure and further, that, "intensification and redevelopment within settlement areas on existing municipal sewage services and municipal water services should be promoted, wherever feasible." (2014 Provincial Policy Statement Under the Planning Act). Supports Policy 1.8.1 that requires land use and development patterns that support energy conservation and efficiency, improved air quality, reduced greenhouse gas emissions, and climate change adaptation, particularly if energy recovery is feasible. Demonstrates consistency with 2.2.1 f as the foundation is based on the implementation of water conservation and reduced water demand. Implementation of Master Plan recommendations will allow for co-ordinated investment in infrastructure.

EVALUATION OF ALTERNATIVE SOLUTIONS: WASTEWATER SYSTEMS

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			RANK	RATIONALE	RANK	RATIONALE	RANK	RATIONALE		
IMPLEMENTATION	Consistency with approved area Environmental Assessments.	Does the alternative impact approved Environment Assessment projects?	31	Extent and nature of impacts on planned infrastructure with approved Environmental Assessments.	●	Servicing plan contained in the Lower Don Lands Infrastructure Master Plan assumes a gravity connection to the existing network through the Port Lands which is not feasible under existing conditions.	●	Preliminary network assessment has incorporated discharge of Lower Don Lands flows through the Port Lands and has been developed in coordination with Waterfront Sanitary Sewer Master Plan.	●	Preliminary network assessment has incorporated discharge of Lower Don Lands flows through the Port Lands and has been developed in coordination with Waterfront Sanitary Sewer Master Plan.
	Engineering feasibility and construction cost.	Is the alternative possible to construct and what are the key technical challenges?	32	Key technical challenges.	●	Alternative involves no construction so no technical challenges.	●	Alternative has the following technical challenges: - utility coordination with 20" High Pressure gas main routed through Port Lands to Port Lands Energy Centre. Subsurface Utility Engineering recommended during detailed design to confirm specific location of underground utilities; - high water table in Port Lands will likely require extensive dewatering during construction given depth of sewer, particularly south of the Ship Channel unless new innovative trenching and refill methods such as Liquid soil are being used; - Soil contamination- stabilizing/interring contaminants and reuse of soil would be cost beneficial; - Port operations- Maintaining operations in the area will require detailed construction sequencing.	●	Alternative has the following technical challenges: - utility coordination with 20" High Pressure gas main routed through Port Lands to Port Lands Energy Centre. Subsurface Utility Engineering recommended during detailed design to confirm specific location of underground utilities; Crossings south of the Ship Channel may be avoided, depending on final routing of sewers to service Communal solutionts - identifying an appropriate technology for the communal system during detailed design to meet regulatory and operability constraints; - high water table in Port Lands will likely require extensive dewatering during construction given depth of sewer, which can be minimized south of the Ship Channel; - Soil contamination- stabilizing/interring contaminants and reuse of soil would be cost beneficial; -Port operations- Maintaining operations in the area will require detailed construction sequencing.
	Engineering feasibility and construction cost.	Is the alternative cost effective to build?	33	Initial construction and commissioning costs.	●	Alternative involves no construction so no cost impact.	●	Preliminary Order of Magnitude Costs are approximately \$111 M	●	Preliminary Order of Magnitude Costs for new sewers are estimated at \$111M. Additional costs for decentralized communal treatment system. Costs for decentralized treatment are highly variable, depending on the design decisions made with respect to type of treatment technology, disposal method selected and the configuration and number of systems provided. Analysis during detailed design required to determine if lifecycle cost of communal facility can offset cost associated with complexity of servicing south of Ship Channel to offset \$21 M servicing cost. The additional cost of operating a separate treatment system could be mitigated by arranging for a private operator offering economies of scale; however, as it is likely that the City will also be required to guarantee operation, contingencies should be set aside to address the risk of performance.
		Can the alternative be phased to offset initial costs and provide infrastructure in lock-step with development?	34	Ability to phase implementation and adapt to changes in phasing and timing of development.	●	Alternative does not provide infrastructure to match development need.	●	Alternative can be phased to meet needs of development (i.e. brought on line as such time as capacity needed).	●	Alternative can be phased to meet needs of development (i.e. brought on line as such time as capacity needed).Decisions made with respect to technology/configuration of communal system may support advancing development and provided approval can be advanced.
		Is it possible to protect for future expansion and extension?	35	Adaptability to future land use changes and intensification.	●	As alternative involves no additional infrastructure, ability to service future land uses is not feasible.	●	Network can be laid out to support additional connections and selection of proper pipeline material will allow for increased capacity and improved operation.	●	Network can be laid out to support additional connections and selection of proper pipeline material will allow for increased capacity and improved operation. Decisions made during detailed design of communal systems can support future expansion through a phased development of the system.

EVALUATION OF ALTERNATIVE SOLUTIONS: WASTEWATER SYSTEMS

● VERY POOR ● POOR ● GOOD ● VERY GOOD

OBJECTIVE	CRITERIA	DESCRIPTION	MEASURE		1 Do Nothing and Reduce Waste Water Flows.		2 Reduce Waste Water Flows & Enlarge/Extend Collection - Convey flow via Carlaw Avenue inter-connecting sewer.		3 Reduce Waste Water Flows & Enlarge/Extend Collection and Provide Decentralized Treatment – for flows South of Ship Channel.	
					RANK	RATIONALE	RANK	RATIONALE	RANK	RATIONALE
IMPLEMENTATION	Existing municipal infrastructure and utilities.	Are there potential conflicts with existing utilities or challenges in re-location (temporary or permanent)?	36	Extent and nature of utility impacts.	●	As alternative involves no additional infrastructure, there are no impacts on utilities.	●	Utility coordination with Enbridge infrastructure at Port Lands Energy Centre required to avoid conflicts. Subsurface Utility Engineering recommended during detailed design to confirm specific location of underground utilities.	●	Depending on extent of area to be serviced by communal system, less utility coordination with Enbridge infrastructure at Port Lands Energy Centre may be required. Subsurface Utility Engineering recommended during detailed design to confirm specific location of underground utilities.
		Would the alternative have an impact on existing municipal infrastructure to remain?	37	Nature and extent of potential impacts.	●	No impacts to municipal servicing anticipated to remain.	●	Municipal servicing remaining after road realignment will be re-connected to new infrastructure.	●	Municipal servicing remaining after road realignment will be re-connected to new infrastructure.
	Property acquisition costs.	How many private properties will be impacted or need to be acquired to support the alternative?	38	Approximate number of hectares of privately owned lands required to be acquired with existing development anticipated to remain.	●	No property required as alternative involves no construction.	●	No additional land required beyond ROW requirements; however decisions made during detailed design may identify additional temporary construction easements.	●	No additional land required beyond ROW requirements; decisions made during detailed design may identify additional temporary construction easements Potential for additional land requirement to support decisions made with respect to technology to be used for communal system.
	Maintenance and operations.	How much effort is required for maintaining and operating the alternative?	39	Level of maintenance required.	●	No additional infrastructure identified.	●	Low or typical maintenance effort or no additional maintenance required.	●	Requirement for City to own and/or operate communal facility will increase operations and maintenance requirements.

STORMWATER

EVALUATION OF ALTERNATIVE SOLUTIONS - STORMWATER MANAGEMENT

● VERY POOR ● POOR ● GOOD ● VERY GOOD

OBJECTIVE	CRITERIA	DESCRIPTION	MEASURE	1 DO NOTHING	2 CONVENTIONAL	3 WATER AS A RESOURCE
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CREATING AN INTERESTING AND DYNAMIC URBAN MIX	Creation of new, vibrant mixed use communities and employment areas.	Does the alternative facilitate vibrant neighbourhoods and employment areas?	1 Vibrant new neighbourhoods/employment growth.	●	Does not facilitate vibrant neighbourhoods and employment growth. Properties will be redeveloped in accordance with the WWFMG however existing stormwater infrastructure within ROW will not change and will not be able to accommodate additional flows and changes in water quality from redeveloped areas.	●	Supports vibrant, new neighbourhoods / employment area growth. Properties will be redeveloped in accordance with the WWFMG and the proposed storm sewer networks will be designed to accommodate additional flows and changes in water quality from redevelopment areas.	●	Supports vibrant, new neighbourhoods / employment area growth. Properties will be redeveloped in accordance with the WWFMG and the proposed SWM infrastructure will be sized to accommodate additional flows and changes in water quality from redevelopment areas. The integration of open channels within the ROW will further enhance opportunities for vibrant new neighbourhoods.
		Are viable development blocks created?	2 Viable development blocks.	●	Limited support for viable development blocks. In areas outside of existing storm sewer locations, limited availability of SWM infrastructure restricts opportunities for municipal connection or servicing.	●	Will support viable development blocks with proposed sewers which enable conveyance, control and treatment of stormwater runoff and flows.	●	Text updated to: Will support viable development blocks with proposed storm sewers and open/hybrid channels which enable conveyance, control and treatment of stormwater runoff, including the potential for some treatment of stormwater runoff through natural means in open/hybrid channels.
	Necessary vehicular capacity to support the anticipated mix of uses in the Port Lands and South of Eastern area while minimizing rights-of-way widths.	Can the alternative provide the necessary municipal services needed to support development?	3 Necessary capacity is provided.	●	Alternative does not provide necessary stormwater servicing to support proposed development. Existing SWM infrastructure will remain unchanged meaning there is no municipal storm sewer network to service new developments.	●	Additional SWM infrastructure is proposed to meet development needs therefore alternative will provide necessary stormwater servicing to support development.	●	Additional SWM infrastructure is proposed to meet development needs therefore alternative will provide necessary stormwater servicing to support development.
	Existing/planned neighbourhoods.	Does the alternative provide opportunities for improvements for existing neighbourhoods?	4 Opportunities for improvement.	●	Limited to no opportunities for improvement of existing neighbourhoods. Existing SWM features to remain unchanged therefore no water quality treatment or water quantity control will be achieved before overland discharge to Ship Channel.	●	Some opportunity for improvements to existing neighbourhoods. Additional storm sewers will provide opportunities for water quality treatment and water quantity control for the entire study area, including existing neighbourhoods.	●	Enhanced opportunities for improvements to existing neighbourhoods. Additional storm sewers will provide opportunities for water quality treatment and water quantity control for the entire study area, including existing neighbourhoods. Open and hybrid channels within major ROWs will provide aesthetic and environmental improvements.
		Does the alternative minimize potential impacts to existing and planned neighbourhoods?	5 Number of existing residential units potentially displaced.	●	No existing units displaced. Existing neighbourhoods may be impacted by localized ponding and flooding due to predominantly overland flow and minimal restrictions to water quantity.	●	No existing units displaced. Controlling runoff on lot level reduces occurrences of localized ponding and potential flooding in existing neighbourhoods.	●	No existing units displaced. Controlling runoff on lot level reduces occurrences of localized ponding and potential flooding in existing neighbourhoods.
	Existing businesses and industry and opportunities for new businesses and industry.	Is there potential for impacts to businesses and industry, such as displacement or reductions in parking?	6 Displacement of businesses and industry.	●	Existing and proposed business and industry will not be displaced but may be impacted by localized ponding and flooding particularly within parking areas	●	Existing business and industry will not be displaced. Proposed storm sewers will reduce the risk of localized ponding and flooding of businesses and industry	●	Existing business and industry will not be displaced. Proposed storm sewers and open/hybrid channels will reduce the risk of localized ponding and flooding of businesses and industry
		Does the alternative support the establishment of new businesses and industry?	7 Access to infrastructure.	●	Limited access to infrastructure does not support the establishment of new business and industry, especially in areas outside of existing sewer network.	●	Proposed storm sewer network supports the establishment of new business and industry by providing easy access to municipal stormwater infrastructure.	●	Proposed storm sewers and channels support the establishment of new business and industry by providing easy access to municipal stormwater infrastructure.

CONNECT THE PORT LANDS TO THE CITY	Better connect the Port Lands with the South of Eastern area and the rest of the city.	Does the alternative better connect the area for all users and services?	8 Connectivity.	●	Limited servicing connectivity in the area. Existing servicing is in place to meet the needs of individual properties and development blocks and would not connect all users and services	●	Improved servicing connectivity for all users by provision of extensive storm sewer network to service development properties.	●	Improved servicing connectivity for all users by provision of extensive storm sewer network to service development properties.
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EVALUATION OF ALTERNATIVE SOLUTIONS - STORMWATER MANAGEMENT						
OBJECTIVE	CRITERIA	DESCRIPTION	MEASURE	1 DO NOTHING	2 CONVENTIONAL	3 WATER AS A RESOURCE
CONNECT THE PORT LANDS TO THE CITY	Existing physical barriers.	Are there any physical barriers that would be impacted by the alternative?	9 Nature and extent of physical barriers.	The physical barriers include Lake Ontario, the Ship Channel, the Don River, the PEC circulating channel, existing rail corridors, existing Gardiner ramps, existing dock walls and the proposed flood protection features from the DMNP EA. The proposed flood protection features may be impacted by existing storm sewers which are currently discharging to the Don River and will create a hydraulic connection between the river and the study area; increasing the potential for flood waters within the Port Lands.	The physical barriers include Lake Ontario, the Ship Channel, the Don River, the PEC circulating channel, existing rail corridors, existing Gardiner ramps, existing dock walls and the proposed flood protection features from the DMNP EA. The proposed flood protection features will not be impacted by this alternative as proposed storm sewers will be located on the dry side of the VWF and will not be connected through the structure (i.e. no hydraulic connection to Don River). There may be some impacts to the existing infrastructure located at the PEC channel due to the location of proposed storm sewers south of the Ship Channel, and to the existing dockwalls as new or upsized outlets are created for the storm sewer system. There are no impacts from this alternative to the Don River, existing Gardiner ramps, existing rail corridors and Ship Channel	The physical barriers include Lake Ontario, the Ship Channel, the Don River, the PEC circulating channel, existing rail corridors, existing Gardiner ramps, existing dock walls and the proposed flood protection features from the DMNP EA. The proposed flood protection features will not be impacted by this alternative as proposed storm sewers will be located on the dry side of the VWF and will not be connected through the structure (i.e. no hydraulic connection to Don River). There may be some impacts to the existing infrastructure located at the PEC channel due to the location of proposed storm sewers south of the Ship Channel, and to the existing dockwalls as new or upsized outlets are created for the storm sewer system. There are no impacts from this alternative to the Don River, existing Gardiner ramps, existing rail corridors and Ship Channel
	Opportunities for linking natural habitat and open spaces and improving biodiversity.	What opportunities does the alternative provide for linking natural habitat and existing/planned open spaces?	10 Opportunities to provide direct linkages to natural habitat and open spaces.	No opportunities to provide direct linkages to natural habitat and open spaces.	Limited opportunity to provide direct linkages to natural habitat and open spaces.	Enhanced opportunity to provide direct linkages to natural habitat and open spaces, particularly within the Pilot areas and along roadways with open/hybrid channels.
		What opportunities does the alternative provide to contribute to urban biodiversity?	11 Urban biodiversity.	No opportunity to contribute to urban diversity.	There may be some opportunities to support urban biodiversity with the use of LIDs or green infrastructure on individual properties.	Enhanced opportunities to contribute to urban biodiversity, particularly within the Pilot areas and along roadways with open/hybrid channels.
	LEVERAGE ASSETS	Cultural heritage resources.	Are there cultural heritage resources that might be affected by an alternative and what is the nature of the impact?	12 Nature and extent of potential impacts.	A number of existing cultural heritage resources may be impacted by localized ponding due to poor drainage and the lack of well defined major and minor systems in this alternative, including: <i>CHL13</i> (55 Unwin Avenue - Industrial Complex); <i>CHL14</i> (Railscape throughout Port Lands Area); <i>CHL9</i> (440 Unwin Avenue - Hearn Generating Station); <i>BHR9</i> (29 Basin Street - Sun Oil Company Building); <i>CHL11</i> (Hydro Corridor along Commissioners St); <i>CHL10</i> (400 Commissioners St - City of Toronto Incinerator 1953 (potential)); <i>CHL8</i> (Railscape - Rail Yard located directly north of Lakeshore) and <i>BHR11</i> (450 Commissioners St - Industrial Building).	There may be some impact to cultural and heritage resources from this alternative. In instances of high lake levels or during large storms, surcharging of storm sewers may occur and lead to increased depths of ponding on the roads and potentially affect cultural heritage resources at lower elevations. Cultural heritage resources in existing areas that are to remain (i.e. where grading remained unchanged) may experience some impacts from roadway ponding.
Can any potential impacts be mitigated?			13 Ability to mitigate impacts.	No potential to mitigate impacts to cultural heritage features for this alternative	Impacts to cultural heritage resources can be mitigated through the use of appropriate stormwater management measures to control and convey runoff away from the properties and direct overland runoff to a suitable outlet. Grading of the roadway, as part of the overland system will be designed to avoid or mitigate impacts to cultural heritage features and to prevent excessive ponding in the roadway.	Impacts to cultural heritage resources are mitigated through the use of appropriate stormwater management measures to control and convey runoff away from the properties and direct overland runoff to a suitable outlet. Grading of the roadway, as part of the overland system was designed to avoid or mitigate impacts to cultural heritage features and to prevent excessive ponding in the roadway. Open/hybrid channels also provide additional capacity for runoff conveyance.
Are there opportunities that introducing new streets provide to frame and celebrate heritage resources?			14 Potential opportunities.	No potential opportunities to frame and celebrate heritage resources.	No opportunities to frame and celebrate cultural heritage resources considering SWM infrastructure will be underground.	Enhanced opportunities to frame and celebrate cultural heritage resources, particularly in areas with landscaped open channels and stormwater features such as along Unwin Avenue in the vicinity of the Hearn, and along the open channel on Commissioners Street.
Archaeological resources and traditional uses of Aboriginal people.		Are there archaeological resources that might be affected by an alternative and what is the nature of the impact?	15 Nature and extent of potential impacts.	Since no excavation for SWM infrastructure is expected for this alternative, there will be no impact on archaeological resources.	There are no additional impacts anticipated to archaeological resources or traditional uses by Aboriginal people beyond those identified within the ROW. The ASI archaeological assessment identifies LDP 4 (sand bar and Fisherman's Island Peninsula along Unwin Avenue) as an area that requires archaeological monitoring during construction to document any archaeological resources which may exist, as per ACMS recommendations.	There are no additional impacts anticipated to archaeological resources or traditional uses by Aboriginal people beyond those identified within the ROW. The ASI archaeological assessment identifies LDP 4 (sand bar and Fisherman's Island Peninsula along Unwin Avenue) as an area that requires archaeological monitoring during construction to document any archaeological resources which may exist, as per ACMS recommendations.

EVALUATION OF ALTERNATIVE SOLUTIONS - STORMWATER MANAGEMENT

● VERY POOR ● POOR ● GOOD ● VERY GOOD

OBJECTIVE	CRITERIA	DESCRIPTION	MEASURE	1 DO NOTHING	2 CONVENTIONAL	3 WATER AS A RESOURCE	
LEVERAGE ASSETS	Archaeological resources and traditional uses of Aboriginal people.	Are there archaeological resources that might be affected by an alternative and what is the nature of the impact?	16 Ability to mitigate.	● No necessity to mitigate since no impact to archaeological resources expected for this alternative.	● While minimal impacts are expected, provisions during construction will require the Contractor or a licensed archaeologist to monitor the removal of topsoil and document any archaeological resources which may be present in areas requiring excavation for drainage improvements.	● While minimal impacts are expected, provisions during construction will require the Contractor or a licensed archaeologist to monitor the removal of topsoil and document any archaeological resources which may be present in areas requiring excavation for drainage improvements.	
	Existing/planned parks and open spaces.	Does the alternative create an opportunity to enhance existing/planned parks and open spaces?	17 Opportunities to enhance.	● No opportunity to enhance existing/planned parks and open spaces since no proposed infrastructure changes.	● Some opportunity to enhance parks and open spaces with the integration of LID measures on an individual lot basis to address stormwater management.	● Increased opportunity to enhance parks and open spaces with the inclusion of hybrid channels within specific road ROWs and the integration of LID measures on individual development properties. Proposed open channels in pilot area further enhances green space within the study area, however SWM infrastructure in planned parks and open spaces has the potential to limit the amount of land available for recreational purposes	
		Is there potential for temporary or permanent impacts to existing parks and open spaces?	18 Nature and extent of potential impacts.	● There are no anticipated impacts to existing parks	● There are no anticipated impacts to existing parks	● There are no anticipated impacts to existing parks.	
	Compatibility with the natural environment.	Does the alternative create an opportunity to enhance natural heritage and terrestrial resources (existing and planned)?	19 Opportunities for net environmental gains.	● Alternative does not provide opportunities for net environmental gains.	● Some opportunity for net environmental gains by providing adequate drainage for existing and planned natural areas.	● Enhanced opportunities for net environmental gains by providing adequate drainage for existing and planned natural areas, increasing naturalized areas within road ROW through hybrid and open channels and creating a pilot area using LID measures for stormwater management.	
		Is there potential for temporary or permanent impacts to natural heritage and terrestrial resources (existing and planned)?	20 Nature and extent of potential impacts.	● Existing natural heritage and terrestrial resources in the area north of Commissioners Street between Saulter Street S and Bouchette Street, and south of Basin Street and north of the Ship Channel will be negatively impacted due to lack of adequate servicing	● No impacts to natural heritage and terrestrial resources from this alternative.	● No impacts to natural heritage and terrestrial resources from this alternative	
		Is there potential for adverse effects to water quality aquatic species?	21 Minimizes the potential for an adverse effect on water quality and aquatic species.	● High likelihood of adverse impact on water quality and aquatic species as alternative does not provide opportunities to treat stormwater and promote enhanced water quality.	● Alternative provides opportunity for enhanced water quality due to proposed SWM measures, therefore no adverse effects to water quality aquatic species expected.	● Alternative provides opportunity for enhanced water quality due to proposed SWM measures, therefore no adverse effects to water quality aquatic species expected.	
		Are there any impacts to groundwater?	22 Impacts or improvements to groundwater.	● Potential impacts to ground water quality due to untreated and/or contaminated surface runoff discharging to Lake Ontario.	● Under permanent conditions, there will be no interaction between groundwater and surface water as a hard cap/impermeable layer associated with the City's practices and policies is expected to be installed. There is the potential for temporary interaction with groundwater during excavation of the proposed SWM infrastructure, however measures such as impermeable geotextile barriers and dewatering methods are expected to be in place during excavation to mitigate potential impacts.	● Under permanent conditions, there will be no interaction between groundwater and surface water as the shallow depths of the proposed open/hybrid channels are not expected to have an impact on the groundwater table and a hard cap/impermeable layer associated with the City's practices and policies is expected to be installed. There is the potential for temporary interaction with groundwater during excavation of the proposed SWM infrastructure, however measures such as impermeable geotextile barriers and dewatering methods are expected to be in place during excavation to mitigate potential impacts.	
	DEVELOP A HIGH QUALITY PUBLIC REALM	Complete street principles and street character.	Can the alternative achieve the complete street principles established and the desired street character?	23 Ability to achieve the complete street principles and desired street character.	● No ability to achieve desired complete street character due to limited stormwater infrastructure.	● Some ability to achieve desired complete street principles with the use of SWM infrastructure to support the proposed street network.	● Complete street principles will be achieved with the use of SWM infrastructure to support the proposed street network. The use of open channels within the pilot area and hybrid channels in road ROWs provides additional opportunity to create a vibrant public realm and showcase stormwater as a valuable resource.
		Place-making opportunities.	Does the alternative encourage everyday interaction with water or water based activities?	24 Water as a feature.	● Under this alternative, water predominantly flows overland and discharges directly to the Ship Channel so there is limited ability to highlight water as a feature and encourage daily interaction with water.	● Some opportunities to highlight stormwater as a feature through the use of LIDs on an individual lot basis.	● Significant opportunity to highlight water as a feature and encourage daily interaction with stormwater through the use of open channels in the pilot area and hybrid channels in road ROWs. There is also aesthetics of these features. The potential for innovative/passive treatment methods (such as naturalized wetlands) for the pilot area provides further place-making opportunities using water as a feature.
		Health and safety.	Does the alternative create a potential unsafe condition?	25 Minimum design standards and criteria achievable.	● Minimum stormwater design standards and criteria are not achieved. There may be areas of localized ponding of untreated/contaminated runoff which creates unsafe conditions from a public health and stormwater management perspective	● Minimum stormwater management design standards and criteria, specifically WWFMM criteria for water quantity, water quality and water balance, are achieved with proposed stormwater infrastructure	● Minimum stormwater management design standards and criteria, specifically WWFMM criteria for water quantity, water quality and water balance, are achieved with proposed stormwater infrastructure. Open and hybrid channels will be designed/graded to allow positive drainage and prevent prolonged periods of standing water during wet periods, and will only experience intermittent flows during dry periods.

EVALUATION OF ALTERNATIVE SOLUTIONS - STORMWATER MANAGEMENT									
● VERY POOR ● POOR ● GOOD ● VERY GOOD									
OBJECTIVE	CRITERIA	DESCRIPTION	MEASURE	1 DO NOTHING		2 CONVENTIONAL		3 WATER AS A RESOURCE	
CONTRIBUTE TO THE SUSTAINABLE FUTURE OF THE CITY	Opportunities for innovation.	Can innovative features be accommodated in the design of the alternative?	26 Innovative and sustainable features included in the design of the alternative.	●	No innovative stormwater features included in this alternative since infrastructure will remain unchanged.	●	Some ability to include innovative features through the use of LIDs on individual properties however this is dependent on property owner preference.	●	Innovative features are integrated in design of alternative with the use of open channels in pilot areas and hybrid channels in road ROWs. There are opportunities for innovative water quality treatment options for pilot areas with the passive treatment methods.
	Transit accommodation.	How easily can dedicated transit, or where appropriate surface transit routes in mixed traffic, be accommodated?	27 Ability for appropriate transit service to be accommodated.	●	Limitations to accommodating transit service due to location of some existing sewers and lack of infrastructure to support proposed transit systems such as the Broadview extension.	●	Transit services easily accommodated as proposed stormwater infrastructure will be appropriately located to service and enable drainage of dedicated transit rights-of-ways	●	Transit services easily accommodated as proposed stormwater infrastructure will be appropriately located to service and enable drainage of dedicated transit rights-of-ways
	Flood risk potential.	Would the alternative potentially create a flood risk potential? Can flood risk potential be mitigated through design?	28 Flood risk potential created and ability to mitigate flood risk (e.g., Creates a flood risk or hydraulic connection).	●	Significant flood risk potential is created as a result of insufficient infrastructure to service study area with proposed development, especially in areas such as those adjacent to the identified flood protection features which will not have appropriate outlets for overland flows, or along Unwin which has minimal SWM infrastructure and redevelopment properties are at a lower elevation than the roadway making it more susceptible to flooding.	●	Reduced flood risk potential as proposed SWM infrastructure provides safe overland flow routes for large storms, drains runoff from the ROW during frequent storm events and manages water quantity on a lot level. Alternative meets WWFVG criteria for urban flood protection and provides ability to mitigate flood risk.	●	Reduced flood risk potential as proposed SWM infrastructure provides safe overland flow routes for large storms (including additional capacity provided by open and hybrid channels), drains runoff from the ROW during frequent storm events and manages water quantity on a lot level. Alternative meets WWFVG criteria for urban flood protection and provides ability to mitigate flood risk.
	Noise and air Quality.	Does the alternative contribute to improved noise and air quality conditions?	29 Improved noise and air quality conditions.	●	No ability to improve noise and air quality conditions.	●	Limited ability to improve air quality conditions with the use of LID measures on an individual property basis however this is dependent on property owner preference. No change in noise conditions expected.	●	Some ability to provide improved air quality conditions with the use of naturalized open channels within pilot areas and hybrid channels in road ROWs. Naturalized areas contribute to improved air quality through "filtering" of air. No change in noise conditions expected.
	Resiliency and climate change.	Can the alternative be designed for maximum longevity and reduced greenhouse gas emissions?	30 Promotes reduction of greenhouse gas (e.g. through LID, minimizing pumping stations or potential to reduce congestion points).	●	With no proposed SWM improvements, there is no opportunity to reduce greenhouse gas emissions or provide resiliency for major storms.	●	There are limited opportunities to accommodate storms in excess of the design storm however due to the conservative assumptions made, it is anticipated that there is some in-built resiliency in the infrastructure design.	●	There are limited opportunities to accommodate storms in excess of the design storm however due to the conservative assumptions made, it is anticipated that there is some in-built resiliency in the infrastructure design. Furthermore, the presence of open channels provide additional capacity for conveying overland runoff. The use of LIDs as part of the alternative provides some opportunity for reduced greenhouse gas
IMPLEMENTATION	Compatibility with City, provincial planning policies and Waterfront Toronto Framework standards.	City Does the alternative support achieving City planning policies?	31 Supports the growth intention of the Official Plan, Central Waterfront Secondary Plan and precinct plans.	●	Alternative does not support achievement of City planning policies. There is insufficient servicing to support growth and the alternative does not effectively manage stormwater runoff in accordance with design standards, guidelines and policies.	●	Alternative supports growth intention in City planning policies and enables good management of stormwater runoff in accordance with design standards, guidelines and policies.	●	Alternative supports growth intention in City planning policies, enables good management of stormwater runoff in accordance with design standards, guidelines and policies and promotes greening of communities and employment areas using innovative practices.
		City Does the alternative address Waterfront Toronto objectives/frameworks?	32 Supports addressing Waterfront Toronto objectives/frameworks.	●	Alternative does not support achieving Waterfront Toronto's Sustainability Framework or TRCA's LID Guidelines.	●	Alternative supports achieving aspects of Waterfront Toronto's Sustainability Framework and TRCA's LID guidelines through treatment train process including appropriate on-site, conveyance and end-of-pipe measures for management of stormwater run-off	●	Alternative supports achieving Waterfront Toronto's Sustainability Framework and TRCA's LID guidelines through the use of treatment train process including appropriate on-site, conveyance and end-of-pipe measures including open channels/bio swales that contribute to vibrant street life and a natural systems approach to managing stormwater runoff.
		City Does the alternative support achieving provincial planning policies and guidelines?	33 Supports achieving provincial planning policies and guidelines.	●	Alternative does not support achieving provincial planning policies and guidelines such as those outlined in the MOECC Stormwater Management Planning and Design Manual and the PPS/Growth Plan	●	Alternative strongly supports provincial planning policies and guidelines such as those outlined in the MOECC Stormwater Management Planning and Design Manual and the PPS/Growth Plan, including the use of stormwater management best practices, reducing the level of contaminant loads in stormwater runoff and not increasing the risk to human health and safety and property damage.	●	Alternative strongly supports provincial planning policies and guidelines such as those outlined in the MOECC Stormwater Management Planning and Design Manual and the PPS/Growth Plan, including the use of stormwater management best practices and low-impact development measures, reducing the level of contaminant loads in stormwater runoff and not increasing the risk to human health and safety and property damage.
	Consistency with approved area Environmental Assessments.	Does the alternative impact approved Environment Assessment projects?	34 Extent and nature of impacts on planned/approved infrastructure.	●	Alternative impacts approved flood protection measures from DMNP EA: a number of existing storm sewers discharge to the Don River and creates a hydraulic connection between the river and the study area which is inconsistent with the requirements of the DMNP EA.	●	Alternative does not impact approved existing EAs as it incorporates infrastructure from these EAs into the design. Existing approved EA that were considered include WDL EA, LDL EA, DMNP EA and Don River and Central Waterfront EA.	●	Alternative does not impact approved existing EAs as it incorporates infrastructure from these EAs into the design. Existing approved EA that were considered include WDL EA, LDL EA, DMNP EA and Don River and Central Waterfront EA.
	Is the alternative possible to construct and what are the key technical challenges?	35 Key technical challenges.	●	No construction needed for stormwater however key technical challenges anticipated as the study area develops include: connecting redeveloped properties to limited existing storm infrastructure where it exists, or servicing new developments in areas where there is no infrastructure or appropriate overland flow routes and outlets.	●	Key Technical Challenges include maintaining a positive grade on storm sewers; reducing storm sewer back up due to high lake levels and integrating water quality treatment considerations into design of SWM infrastructure to meet applicable criteria. Alternative addresses the key technical challenges by employing creative solutions such as backflow prevention valves at sewer outlets and increasing the depth of sewers to maintain slopes.	●	Key Technical Challenges include integration of open channels with storm sewer systems and proposed water quality treatment alternatives, ensuring positive drainage within storm sewers and open channels and preventing stormwater back-up within storm sewers and open channels due to high lake levels. This alternative uses creative solutions to address these challenges including revised grading to provide positive drainage, backflow prevention valves at open channel outlets to prevent fish being introduced into the system, sub-surface perforated pipe systems to attenuate flows in hybrid channels and deep shafts and pumps to connect SWM infrastructure to proposed water quality treatment systems.	

EVALUATION OF ALTERNATIVE SOLUTIONS - STORMWATER MANAGEMENT						
● VERY POOR ● POOR ● GOOD ● VERY GOOD						
OBJECTIVE	CRITERIA	DESCRIPTION	MEASURE	1 DO NOTHING	2 CONVENTIONAL	3 WATER AS A RESOURCE
	Engineering feasibility and construction cost.	Is the alternative cost effective to build?	36 Initial construction and commissioning costs.	● Since there are no changes to the existing system, there will be no construction costs or commissioning costs associated with this alternative.	● Alternative is expected to be generally cost effective since typical construction methods are envisioned. There may be higher initial construction costs associated with installing storm sewers at depth, however there may be the potential to use technologically advanced options such as Horizontal Directional Drilling (HDD) methods could be used to install sewers and provide cost benefits.	● Construction and commissioning costs for open channels within the Pilot areas are anticipated to be similar to the costs associated with installing drainage swales. Typical construction methods for storm sewers are envisioned in areas outside the pilot areas however there may be higher costs associated with installing storm sewers at depth. There may be the potential to use technologically advanced options such as HDD methods to install sewers and provide cost benefits. The cost of this alternative is estimated at approximately \$260,638,500
IMPLEMENTATION	Engineering feasibility and construction cost.	Can the alternative be phased to offset initial costs and provide infrastructure in lock-step with development?	37 Ability to phase implementation and adapt to changes in phasing and timing of development.	● With no proposed addition or extension to existing infrastructure, there is no opportunity for phased infrastructure in lock-step with development.	● Alternative offers flexibility in phasing and timing of development since storm sewer connections can be put in place as needed, as long as key servicing infrastructure (e.g. along Broadview Av. and Basin St.) is in place.	● Alternative generally offers flexibility in phasing and timing of development since storm sewer connections can be put in place as needed, as long as key servicing infrastructure (e.g. along Broadview Av. and Basin St.) is in place. Changes in phasing and timing of development blocks within the pilot areas may need to be reviewed and assessed more closely to ensure consistency with the proposed infrastructure.
		Is it possible to protect for future expansion and extension?	38 Adaptability to future land use changes and intensification.	● With no proposed addition or extension to existing infrastructure there is no opportunity to adapt to future land use changes and intensification.	● Easily adaptable to future land use changes and intensification. This would generally require adjusting sizing or proposing additional SWM infrastructure.	● Alternative is generally adaptable to future land use changes and intensification. This would generally require adjusting sizing or proposing additional SWM infrastructure. ● Within the pilot area, there is limited adaptability in location and sizing of the open channels to accommodate future land use changes and intensification however alternative methods of stormwater management may be implemented to support any changes.
	Existing municipal infrastructure and utilities.	Are there potential conflicts with existing utilities or challenges in re-location (temporary or permanent)?	39 Extent and nature of utility impacts.	● Observed conflicts located at north end of Unilever Precinct adjacent to Eastern Avenue VWF. Enbridge Gas - Station B conflicts directly with proposed road and VWF.	● Observed conflicts located at north end of Unilever Precinct adjacent to Eastern Avenue VWF. Enbridge Gas - Station B conflicts directly with proposed road and VWF. A sub-surface utility investigation is recommended during detailed design to confirm specific location of underground utilities. Detailed siting of existing infrastructure or realignment of major infrastructure (Enbridge Gas - Station B) may be needed as appropriate to avoid conflicts with proposed sewers. Utility coordination with Enbridge infrastructure at Port Lands Energy Centre is also required to avoid conflicts.	● Observed conflicts located at north end of Unilever Precinct adjacent to Eastern Avenue VWF. Enbridge Gas - Station B conflicts directly with proposed road and VWF. A sub-surface utility investigation is recommended during detailed design to confirm specific location of underground utilities. Detailed siting of existing infrastructure or realignment of major infrastructure (Enbridge Gas - Station B) may be needed as appropriate to avoid conflicts with proposed sewers. Utility coordination with Enbridge infrastructure at Port Lands Energy Centre is also required to avoid conflicts. ● Observed conflict along Commissioners Street as gas line is perpendicular to road and crosses open channels. In areas of conflict, a proposed siphon /channel break will interconnect pipes beneath the gas main to avoid conflicts. Potential conflicts with existing siphon (i.e. Queen Street deep tunnel and outlet) are to be avoided.
		Would the alternative have an impact on existing municipal infrastructure to remain?	40 Nature and extent of potential impacts.	● No impact to existing municipal infrastructure as no new infrastructure proposed however, proposed redevelopment will regularly overwhelm existing municipal infrastructure which does not have capacity to handle additional flows.	● The alternative will not have substantial impact on existing municipal utilities or infrastructure. In the East Port area, a localized servicing solution has been proposed which reduces the amount of existing infrastructure to remain. Stormwater infrastructure at the Turning Basin is proposed to be installed deep enough to avoid conflict with existing outfalls and proposed large diameter sewers (1950 and 2250mm) proposed by the City's IHT I team.	● The alternative will not have substantial impact on existing municipal utilities or infrastructure. In the East Port area, a localized servicing solution has been proposed which reduces the amount of existing infrastructure to remain. Stormwater infrastructure at the Turning Basin is proposed to be installed deep enough to avoid conflict with existing outfalls and proposed large diameter sewers (1950 and 2250mm) proposed by the City's IHT I team.
	Property acquisition costs.	How many private properties will be impacted or need to be acquired to support the alternative?	41 Approximate number of hectares of privately owned lands required to be acquired with existing development anticipated to remain.	● There will be no requirements for additional private lands.	● No additional land required beyond ROW requirements; however decisions made during detailed design may identify additional temporary construction easements.	● No additional land required beyond ROW requirements; however decisions made during detailed design may identify additional temporary construction easements.
Maintenance and operations.	How much effort is required for maintaining and operating the alternative? Who will be doing the maintenance? Who will be paying?	42 Level of maintenance required.	● Significant maintenance of existing infrastructure will be required to provide adequate drainage since they will not have sufficient capacity to accommodate increased flows from land use changes. Significant costs would be required for ongoing maintenance and potential flood management measures for individual properties.	● Maintenance will be required to ensure the proposed SWM measures function as designed in order to be compliant with the WWFMG. Storm sewer networks will require typical maintenance as recommended by City guidelines.	● As with any SWM system, maintenance is required. There is the potential for accumulation of sediment within the open channels and bioswales. With proper source, conveyance and end of pipe controls, the frequency of sediment accumulation and removal should be limited. Monitoring and regular inspections will be needed and in accordance with any practices established by the City. The MOECC 2003 SWM manual recommends maintenance for SWM ponds when the TSS removal efficiency has decreased by 5%.	

EVALUATION OF ALTERNATIVE SOLUTIONS - STORMWATER TREATMENT

OBJECTIVE	CRITERIA	DESCRIPTION	MEASURE	2A	2B	2C	2D	2E	2F
CREATING AN INTERESTING AND DYNAMIC URBAN MIX	Creation of new, vibrant mixed use communities and employment areas.	Does the alternative facilitate vibrant neighbourhoods and employment areas?	1 Vibrant new neighbourhoods/employment growth.	● Meets municipal and provincial objectives for stormwater quality.	● Meets municipal and provincial objectives for stormwater quality.	● Meets municipal and provincial objectives for stormwater quality, however, timing of satellite facility and infrastructure upgrades would not coincide with development timelines in redevelopment areas.	● Meets municipal and provincial objectives for stormwater quality, however, timing of satellite facility and infrastructure upgrades would not coincide with development timelines in redevelopment areas.	● Meets municipal and provincial objectives for stormwater quality, however, timing of satellite facility and infrastructure upgrades would not coincide with development timelines in redevelopment areas.	● Meets municipal and provincial objectives for stormwater quality.
	Necessary capacity to support the anticipated mix of uses.	Can the alternative provide the necessary capacity to support development?	2 Necessary capacity is provided.	● SWQTF can be sized to provide the necessary capacity	● Proposed SWQTF facility would need to be enlarged to accommodate additional flows	● Proposed satellite facility at ABTP has the necessary capacity to accommodate flows	● DGP facility can be sized to provide the necessary capacity and sufficient capacity at the proposed ABTP plant	● Proposed satellite facility at ABTP has the necessary capacity to accommodate flows	● TB facility can be sized to provide the necessary capacity and sufficient capacity can be provided at the proposed ABTP satellite facility
	Existing/planned neighbourhoods.	Does the alternative provide opportunities for improvements for existing neighbourhoods?	3 Opportunities for improvement.	● Supports improvements to water quality in Lake Ontario and the Inner Harbour	● Supports improvements to water quality in Lake Ontario and the Inner Harbour	● Supports improvements to water quality in Lake Ontario and the Inner Harbour, however, may not be in place for redevelopment	● Supports improvements to water quality in Lake Ontario and the Inner Harbour, however IHT may not be in place for redevelopment	● Supports improvements to water quality in Lake Ontario and the Inner Harbour, however, may not be in place for redevelopment	● Supports improvements to water quality in Lake Ontario and the Inner Harbour
	Existing businesses and industry and opportunities for new businesses and industry.	Is there potential for impacts to businesses and industry, such as displacement or reductions in parking?	4 Displacement of businesses and industry.	● SWQTF is located in lands identified for future Don Greenway park. No displacement of business and industry.	● No displacement of business or industry	● No displacement of business or industry	● No displacement of business or industry	● No displacement of business or industry	● No displacement of business or industry
CONNECT THE PORT LANDS TO THE CITY	Better connect the Port Lands with the South of Eastern area and the rest of the city.	Does the alternative better connect the area for all users and services?	5 Connectivity.	● Connects lands south of the Ship Channel to municipal treatment.	● Connects lands south of the Ship Channel to municipal treatment, however, requires tunneling under the Ship Channel.	● Connects lands south of the Ship Channel to municipal treatment, however, requires tunneling beneath existing and proposed ROWs and other infrastructure upgrade to connect into the IHT which may not be in place for redevelopment.	● Connects lands south of the Ship Channel to municipal treatment and requires tunneling beneath existing and proposed ROWs and other infrastructure upgrade to connect into the IHT which may not be in place for redevelopment.	● Connects redevelopment lands north of the Ship Channel to municipal treatment, but requires other infrastructure upgrades that may not be in place for redevelopment.	● Connects redevelopment lands north of the Ship Channel to municipal treatment.
	Existing physical barriers.	Are there any physical barriers that would be impacted by the alternative?	6 Nature and extent of physical barriers.	● Directing all 1 year flows from lands South of Ship Channel potentially requires infrastructure that crosses the circulating channel at the PEC.	● Requires tunnelling under the Ship Channel and connecting to proposed storm sewer in the Lower Don Lands that cross the river valley.	● Requires deep tunneling beneath existing and proposed ROWs	● Requires deep tunneling beneath existing and proposed ROWs and potentially requires infrastructure that crosses the circulating channel at the PEC.	● No anticipated physical barriers.	● No anticipated physical barriers.
LEVERAGE ASSETS	Cultural heritage resources.	Are there cultural heritage resources that might be affected by an alternative and what is the nature of the impact? Can any potential impacts be mitigated?	7 Nature and extent of potential impacts.	● No cultural heritage resources impacted.	● No cultural heritage resources impacted.	● No cultural heritage resources impacted.	● No cultural heritage resources impacted.	● No cultural heritage resources impacted.	● No cultural heritage resources impacted.
	Archaeological resources and traditional uses of Aboriginal people.	Are there archaeological resources that might be affected by an alternative and what is the nature of the impact?	8 Ability to mitigate impacts.	● No mitigation required.	● No mitigation required.	● No mitigation required.	● No mitigation required.	● No mitigation required.	● No mitigation required.
			9 Nature and extent of potential impacts.	● No impacts anticipated to archaeological resources or traditional uses by Aboriginal people.	● No impacts anticipated to archaeological resources or traditional uses by Aboriginal people.	● No impacts anticipated to archaeological resources or traditional uses by Aboriginal people.	● No impacts anticipated to archaeological resources or traditional uses by Aboriginal people.	● No impacts anticipated to archaeological resources or traditional uses by Aboriginal people.	● No impacts anticipated to archaeological resources or traditional uses by Aboriginal people.
	Existing/planned parks and open spaces.	Is there potential for temporary or permanent impacts to existing parks and open spaces?	10 Ability to mitigate.	● The ACMS recommended that LDP 4 (sand bar and Fisherman's Island Peninsula along Unwin Avenue), which is included in the Port Lands study area, require archaeological monitoring. This area has been identified as area for improved drainage with major and minor system improvements.	● The ACMS recommended that LDP 4 (sand bar and Fisherman's Island Peninsula along Unwin Avenue), which is included in the Port Lands study area, require archaeological monitoring. This area has been identified as area for improved drainage with major and minor system improvements.	● The ACMS recommended that LDP 4 (sand bar and Fisherman's Island Peninsula along Unwin Avenue), which is included in the Port Lands study area, require archaeological monitoring. This area has been identified as area for improved drainage with major and minor system improvements.	● The ACMS recommended that LDP 4 (sand bar and Fisherman's Island Peninsula along Unwin Avenue), which is included in the Port Lands study area, require archaeological monitoring. This area has been identified as area for improved drainage with major and minor system improvements.	● No mitigation required.	● No mitigation required.
			12 Nature and extent of potential impacts.	● Proposed SWQTF facility to be located within planned Don Greenway Park. Impacts are anticipated to be minor outside of footprint required for facility and associated infrastructure.	● Impacts to the proposed parks programming in Villiers Park.	● No impacts to existing parks. Proposed satellite facility at ABTP integrated in Coatsworth Cut Design.	● No impacts to existing parks. Proposed satellite facility at ABTP integrated in Coatsworth Cut Design.	● No impacts to existing parks. Proposed satellite facility at ABTP integrated in Coatsworth Cut Design and impacts to proposed SWQTF to be located within planned Don Greenway Park are anticipated to be minor outside of footprint required for facility and associated infrastructure.	● No impacts to existing parks. Proposed ABTP plant integrated in Coatsworth Cut Design.
Compatibility with the natural environment.	Is there potential for temporary or permanent impacts to natural heritage and terrestrial resources (existing and planned)? Is there potential for adverse effects to water quality and aquatic species?	13 Nature and extent of potential impacts.	● Requires lands in the future Don Greenway Park. SWQTF footprint at grade will need to be minimized.	● No anticipated impacts. Ties into proposed infrastructure in the LDL.	● No anticipated impacts.	● Requires lands in the future Don Greenway Park. SWQTF footprint at grade will need to be minimized.	● No anticipated impacts.	● No anticipated impacts.	● Requires lands in the future Turning Basin Park. SWQTF footprint at grade will need to be minimized.
		14 Minimizes the potential for an adverse effect on water quality and aquatic species.	● No aquatic habitat of significance in the Ship Channel. However, treating stormwater that ultimately reaches the Inner Harbour may improve water quality and aquatic habitat.	● No aquatic habitat of significance in the Ship Channel and ties into proposed servicing in the Lower Don Lands.	● No adverse effects anticipated. Treatment at and discharge from the proposed ABTP satellite facility may improve water quality and aquatic habitat, however development may proceed in advance of IHT construction resulting in untreated flows to the TB in the interim.	● No aquatic habitat of significance in the Ship Channel. However, treating stormwater that ultimately reaches the Inner Harbour may improve aquatic habitat. No other adverse effects anticipated. Some flows may continue to be discharged untreated depending on timing of ABTP plant.	● No adverse effects anticipated. Treatment at the proposed ABTP satellite facility may improve aquatic habitat, however development may proceed in advance of IHT construction resulting in untreated flows to the TB in the interim.	● No aquatic habitat of significance in the Turning Basin. Treatment at the proposed ABTP satellite facility may improve aquatic habitat, however development may proceed in advance of IHT construction resulting in untreated flows to the TB in the interim.	

EVALUATION OF ALTERNATIVE SOLUTIONS - STORMWATER TREATMENT

OBJECTIVE	CRITERIA	DESCRIPTION	MEASURE	2A South of Ship Channel - All 1 Year Flows to the Stormwater Quality Treatment Facility (SWQTF) at Don Greenway Park (DGP).	2B South of Ship Channel - All 1 Year flows to Lower Don Lands (LDL) SWQTF.	2C South of Ship Channel - All 1 Year Flow to a satellite wet weather flow treatment facility near the Ashbridge's Bay Treatment Plant (ABTP) via Inner Harbour Tunnel (IHT).	2D South of Ship Channel - 1 Year Flow split between SWQTF at DGP and a satellite wet weather flow treatment facility near the ABTP (via the IHT).	2E North of Ship Channel - All 1 Year flow to a satellite wet weather flow treatment facility near the ABTP.	2F North of Ship Channel: 1-year flow from Film Studio Precinct and East Port area to potential SWQTF at Turning Basin (TB), 1 year flow from South of Eastern (SoE) area to ABTP via IHT.
		Are there any impacts to groundwater?	15 Impacts or improvements to groundwater.	● There are limited opportunities to encounter groundwater as the proposed facility and associated infrastructure are fully enclosed and the proposed outfalls discharge directly to the Ship Channel	● There are limited opportunities to encounter groundwater as the proposed facility and associated infrastructure are fully enclosed and the proposed outlets from the LDL facility discharge directly to the Keating Channel	● There are limited opportunities to encounter groundwater as the proposed facility and associated infrastructure are fully enclosed and the proposed outfalls connect directly to the IHT	● There are limited opportunities to encounter groundwater as the proposed facility and associated infrastructure are fully enclosed and the proposed outfalls discharge directly to the Ship Channel or connect to the IHT	● There are limited opportunities to encounter groundwater as the proposed facility and associated infrastructure are fully enclosed and the proposed outfalls connect directly to the IHT	● There are limited opportunities to encounter groundwater as the proposed facility and associated infrastructure are fully enclosed and the proposed outlets discharge directly to the Turning Basin or connect to the IHT
DEVELOP A HIGH QUALITY PUBLIC REALM	Place-making opportunities.	Does the alternative provide opportunities for place-making or creating unique opportunities?	17 Place-making opportunities.	● Ability to provide a distinct architectural quality for a facility located in the future park.	● Would impact the parks programming for Villiers Park which is intended on being a local park with active and passive recreational activities.	● No placemaking opportunities.	● Ability to provide a distinct architectural quality for a facility located in the future park.	● No placemaking opportunities.	● Ability to provide a distinct architectural quality for a facility located in the future park.
	Health and safety.	Does the alternative have the potential to improve existing unsafe conditions?	18 Improves existing unsafe conditions and maintains minimum design standards and criteria.	● Improves stormwater quality.	● Improves stormwater quality.	● Improves stormwater quality, however, timing of required infrastructure may not coincide with redevelopment.	● Improves stormwater quality, however, timing of required infrastructure may not coincide with redevelopment.	● Improves stormwater quality, however, timing of required infrastructure may not coincide with redevelopment.	● Improves stormwater quality.
CONTRIBUTE TO THE SUSTAINABLE FUTURE OF THE CITY	Noise and air quality.	Does the alternative contribute to improved noise and air quality conditions?	20 Noise and air quality conditions.	● No noise or air quality impacts anticipated.	● No noise or air quality impacts anticipated.	● No noise or air quality impacts anticipated.	● No noise or air quality impacts anticipated.	● No noise or air quality impacts anticipated.	● No noise or air quality impacts anticipated.
	Resiliency and climate change.	Can the alternative be designed for maximum longevity and reduced greenhouse gas emissions?	21 Promotes reduction of greenhouse gas (e.g. through LID, minimizing pumping stations or potential to reduce congestion points).	● Requires a separate treatment facility and pump station.	● Contributes to minimizing the number of treatment facilities and potential for greenhouse gas emissions, but may require a pumping station.	● Capitalizes on planned infrastructure but will likely require a pump station.	● Requires a separate treatment facility and potentially two pump stations (one to pump flows to facility at DGP and one to pump flows to IHT).	● Capitalizes on planned infrastructure, but will likely require a pump station.	● Requires a separate treatment facility and pump station.
IMPLEMENTATION	Consistency with approved/completed Environmental Assessments.	Does the alternative impact approved/completed Environment Assessment projects?	22 Extent and nature of impacts on planned infrastructure with approved/completed Environmental Assessments.	● No impact on approved/completed EAs	● Requires expansion of planned facility(s) in the Lower Don Lands	● No impact on approved/completed EAs. Planned IHT and associated infrastructure is anticipated to be able to accommodate the flows.	● No impact on approved/completed EAs. Planned IHT and associated infrastructure is anticipated to be able to accommodate the flows.	● No impact on approved/completed EAs. Planned IHT and associated infrastructure is anticipated to be able to accommodate the flows.	● No impact on approved/completed EAs. Planned IHT and associated infrastructure is anticipated to be able to accommodate the flows.
	Engineering feasibility and construction cost.	Is the alternative possible to construct and what are the key technical challenges?	23 Key technical challenges.	● Key Technical Challenges include draining to DG SWQTF through gravity flow, managing impact of high lake levels on stormwater infrastructure and integrating water quality treatment considerations into design to meet applicable criteria.	● Key Technical Challenges include tunnelling under Ship Channel and connecting to planned sewers in the LDL SWQTF.	● Key Technical Challenges include deep tunnelling required to connect deep sewer network to Inner Harbour Tunnel.	● Key Technical Challenges include deep tunnelling required to connect sewer network to Inner Harbour Tunnel, draining to DGP SWQTF through gravity flow, managing impact of high lake levels on stormwater infrastructure and integrating water quality treatment considerations into design to meet applicable criteria.	● Key Technical Challenges connecting into existing/planned infrastructure	● Key Technical Challenges include draining sewer network to TB SWQTF through gravity flow, managing impact of high lake levels on stormwater infrastructure and integrating water quality treatment considerations into design to meet applicable criteria.
		Is the alternative cost effective to build?	24 Initial construction costs (excluding property, decontamination and utilities).	● High capital cost associated with new satellite treatment facility.	● High capital cost associated with expanding LDL SWQTF and tunnelling under the Ship Channel.	● High capital cost of tunnelling under the Ship Channel and capital costs associated with the IHT and the Don River and Central Waterfront project.	● High capital cost associated with new satellite treatment facility and capital costs associated with the IHT and the Don River and Central Waterfront project.	● Capital costs associated with the IHT and the Don River and Central Waterfront project.	● High capital cost associated with new satellite treatment facility and capital costs associated with the IHT and the Don River and Central Waterfront project.
		Is it possible to protect for future expansion and extension?	26 Adaptability to future land use changes and intensification.	● Additional space may be available subject to a reduction in the park to expand facilities.	● Less adaptability due to tunnelling required for connection to LDL.	● Less adaptability due to tunnelling.	● Less adaptability due to tunnelling.	● Good adaptability provided sufficient capacity in the proposed ABTP plant.	● Additional space may be available subject to a reduction in the park to expand facilities.
	Existing municipal infrastructure and utilities.	Are there potential conflicts with existing utilities or challenges in re-location (temporary or permanent)?	27 Extent and nature of utility impacts.	● No anticipated impacts.	● No anticipated impacts.	● Potential utilities impacts associated with new storm sewers/tunnels to convey flows to proposed ABTP plant.	● Potential utilities impacts associated with new storm sewers/tunnels to convey flows to proposed ABTP plant.	● Potential for relocation of existing utilities within ROWs.	● Potential for relocation of existing utilities within ROWs and at TB.
		Would the alternative have an impact on existing municipal infrastructure to remain?	28 Nature and extent of potential impacts.	● No anticipated impacts.	● May require larger diameter sewers to connect to SWQTF.	● Flows able to be accommodated in existing sewers and planned upgrades, however potential for conflict with existing municipal infrastructure along Leslie	● Flows able to be accommodated in existing sewers and planned upgrades, however potential for conflict with existing municipal infrastructure along Leslie	● Flows able to be accommodated in existing sewers and planned new sewers.	● No anticipated impacts. Able to accommodate both existing and proposed new sewers within ROW to convey flows. Proposed sewers to be installed at depth
	Property acquisition costs.	How many private properties will be impacted or need to be acquired to support the alternative?	29 Approximate number of hectares of privately owned lands required to be acquired with existing development anticipated to remain.	● No private owned lands required.	● No private owned lands required.	● No private owned lands required.	● No private owned lands required.	● No private owned lands required.	● No private owned lands required.
Maintenance and operations.	How much effort is required for maintaining and operating the alternative?	30 Level of maintenance required.	● Additional maintenance costs with multiple facilities.	● Reduces the number of facilities, reducing maintenance costs.	● Ongoing maintenance efforts/costs associated with ABTP.	● Additional maintenance costs with multiple facilities.	● Ongoing maintenance costs/efforts associated with ABTP	● Additional maintenance costs with multiple facilities.	

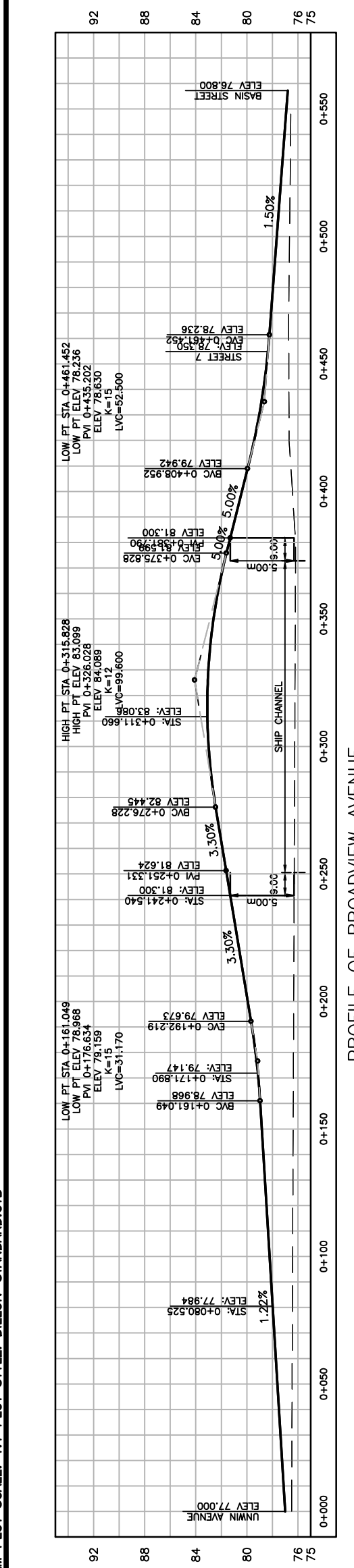
APPENDIX J:
**PRELIMINARY GRADING
PLAN**

LEGEND

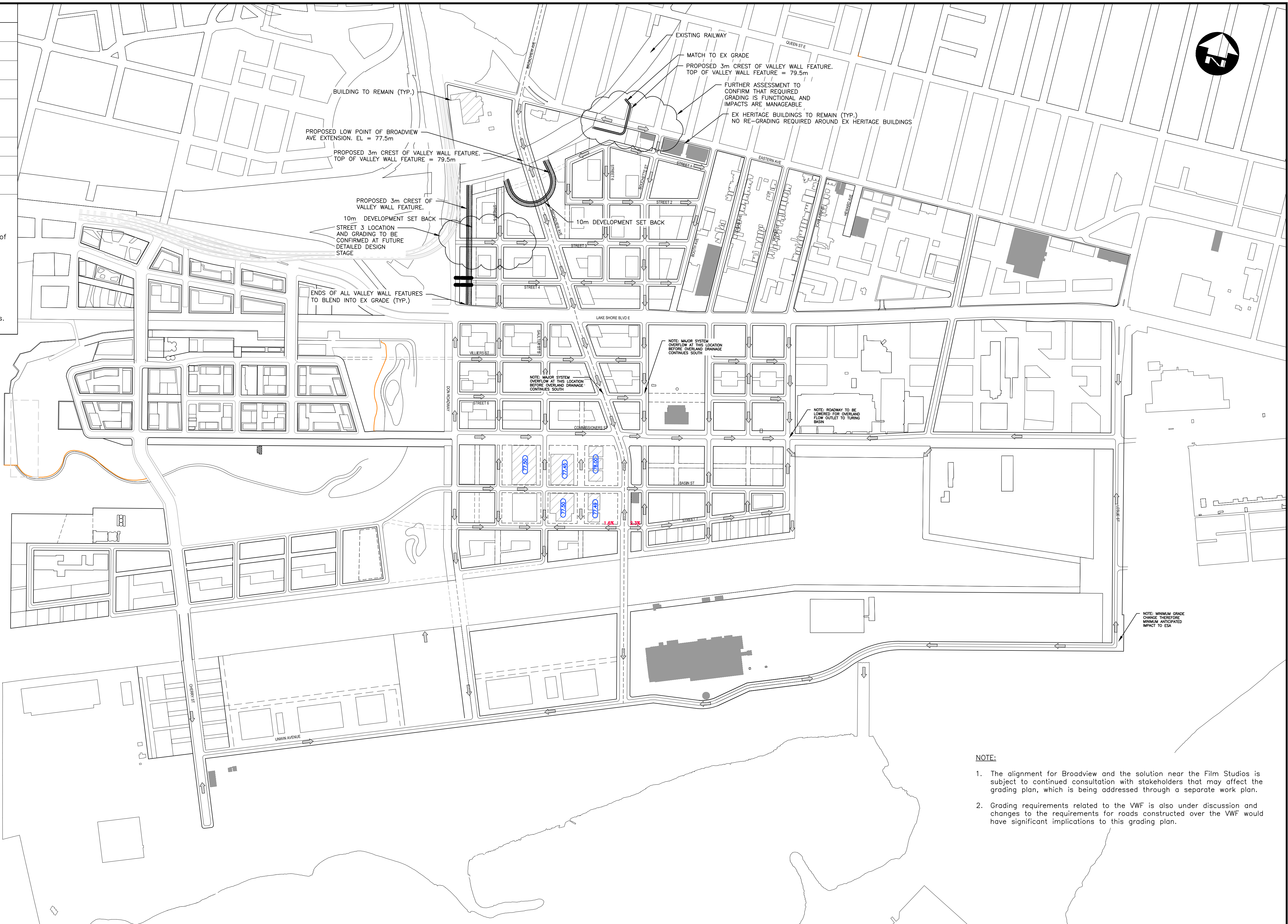
	PROPOSED TOP OF SLOPE
	PROPOSED TOE OF SLOPE
	EX MAJOR/MINOR CONTOURS
	VALLEY WALL FEATURE WITH 3m WIDE CREST AND 10m WIDE SET BACK
	PROPOSED ELEVATION
	EX ELEVATION AT PROPOSED LOCATION
	EX FINISHED FLOOR ELEVATION
	EX ELEVATION
	PROPOSED OVERLAND FLOW DIRECTION
	HERITAGE BUILDINGS/STRUCTURES

NOTE:

1. Clearance shown is preliminary and based on achieving 6 metres from top of road to top of structure that meets the TTC's minimum required LFLRV pantograph height of 3962mm. Phase 3 of the Municipal Class EA process will address design and clearance requirements for the structure in more detail to a minimum 30% design and in consultation with relevant stakeholders.
2. Grades shown are the minimum elevations required for flood protection. Additional fill may be required to provide sufficient depths for soil remediation/planting requirements and road sub-grades, to accommodate any services and/or associated appurtenances. Phase 3 of the Municipal Class EA process will further develop the grading plan to account for these requirements.



PROFILE OF BROADVIEW AVENUE FROM UNWIN AVE. TO BASIN ST.



NOTE:

1. The alignment for Broadview and the solution near the Film Studios is subject to continued consultation with stakeholders that may affect the grading plan, which is being addressed through a separate work plan.
2. Grading requirements related to the VWF is also under discussion and changes to the requirements for roads constructed over the VWF would have significant implications to this grading plan.

Conditions of Use

Verify elevations and/or dimensions on drawing prior to use. Report any discrepancies to Dillon Consulting Limited.

Do not scale dimensions from drawing.

Do not modify drawing, re-use it, or use it for purposes other than those intended at the time of its preparation without prior written permission from Dillon Consulting Limited.

PRELIMINARY

NOT FOR CONSTRUCTION



No.	ISSUED FOR	DATE	BY
7	CONTOURS ADDED	2016-11-22	FRF/RJZ
6	GRADING REVISED	2016-08-30	YAR/RJZ
5	BROADVIEW GRADING REVISED OVER CHANNEL	2016-05-10	FRF/RJZ
4	STREET 7 RELOCATED	2016-04-21	FRF
3	3.5m PROM. CLEAR. & PINEWOOD GRADING	2016-02-20	FRF
2	2.5m PROM. CLEAR. & PINEWOOD GRADING	2016-02-10	FRF
1	PRELIMINARY REVIEW	2016-02-03	FRF

TORONTO PORT LANDS TORONTO, CORPORATION OF THE CITY	PROJECT NO. 13-8520
GRADING PLAN	SHEET NO. 01

FILENAME: \\DILLON\CA\Dillon\DESIGN\WINDSOR\WINDSOR CAD\CAD\138520 TORONTO PORT LANDS CIVIL DESIGN\138520-02-GRP-REVISED-CONDWG PLOTTED BY: AMATO, JOSEPH WINDSOR, ONTARIO
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