



City of Hamilton

PUBLIC WORKS COMMITTEE REVISED

Meeting #: 22-005
Date: April 4, 2022
Time: 1:30 p.m.
Location: Due to the COVID-19 and the Closure of City Hall (CC)

All electronic meetings can be viewed at:

City's Website:
<https://www.hamilton.ca/council-committee/council-committee-meetings/meetings-and-agendas>

City's YouTube Channel:
<https://www.youtube.com/user/InsideCityofHamilton> or Cable 14

Carrie McIntosh, Legislative Coordinator (905) 546-2424 ext. 2729

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1. CEREMONIAL ACTIVITIES	
2. APPROVAL OF AGENDA	
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13.	GENERAL INFORMATION / OTHER BUSINESS	
13.1.	Amendments to the Outstanding Business List	
	a. Items Considered Complete and Needing to be Removed:	

- a. Addressing Traffic Speed and Volume on Harbour Front Drive

Addressed as Item 10.1 on today's agenda - Report Pw20063(a)
Item on OBL: ACF

- b. Truck Route Master Plan Update

Addressed as Item 10.3 on today's agenda - Truck Route Sub-Committee Report 22-001, March 28, 2022
Item on OBL: ACI

- b. Items Requiring a New Due Date:

- a. Ward 1 Multi-Modal Connections Review

Item on OBL: ABD
Current Due Date: March 21, 2022
Proposed New Due Date: May 16, 2022

14. PRIVATE AND CONFIDENTIAL

- 14.1. Closed Session Minutes - March 21, 2022

Pursuant to Section 9.1, Sub-sections (j) and (k) of the City's Procedural By-law 21-021, and Section 239(2), Sub-sections (j) and (k) of the *Municipal Act, 2001*, as amended, as the subject matter pertains to a trade secret or scientific, technical, commercial or financial information that belongs to the City or a local board and has monetary value or potential monetary value; a position, plan, procedure, criteria or instruction to be applied to any negotiations carried on or to be carried on by or on behalf of the City or a local board.

- 14.2. Transit Maintenance & Storage Facility - Policy 11 Contract Extension and Phase 2 Award (Contract Administration Services) (PW19006(a)) (City Wide)

Pursuant to Section 9.1, Sub-section (k) of the City's Procedural By-law 21-021, and Section 239(2), Sub-section (k) of the *Municipal Act, 2001*, as amended, as the subject matter pertains to a position, plan, procedure, criteria or instruction to be applied to any negotiations carried on or to be carried on by or on behalf of the City or a local board.

15. ADJOURNMENT



**PUBLIC WORKS COMMITTEE
MINUTES 22-004**

1:30 p.m.

Monday, March 21, 2022

Room 264, 2nd Floor

Hamilton City Hall

71 Main Street West

Present: Councillors N. Nann (Chair), R. Powers (Vice-Chair), J.P. Danko, J. Farr, L. Ferguson, T. Jackson, S. Merulla, E. Pauls, M. Pearson and A. VanderBeek

**Absent with
Regrets:** Councillor T. Whitehead - Personal

THE FOLLOWING ITEMS WERE REFERRED TO COUNCIL FOR CONSIDERATION:

1. 2021 Annual Drinking Water Report (PW22011) (City Wide) (Item 7.1)

(Pearson/Pauls)

That Item 7.1, Report PW22011 respecting the 2021 Annual Drinking Water Report, be received.

Result: Motion CARRIED by a vote of 9 to 0, as follows:

YES - Ward 2 Councillor Jason Farr
YES - Chair - Ward 3 Councillor Nrinder Nann
YES - Ward 4 Councillor Sam Merulla
YES - Vice Chair - Ward 5 Councillor Russ Powers
YES - Ward 6 Councillor Tom Jackson
YES - Ward 7 Councillor Esther Pauls
NOT PRESENT - Ward 8 Councillor John-Paul Danko
YES - Ward 10 Councillor Maria Pearson
YES - Ward 12 Councillor Lloyd Ferguson
YES - Ward 13 Councillor Arlene VanderBeek
NOT PRESENT - Ward 14 Councillor Terry Whitehead

2. Public Works Response and Actions to Roads Value for Money Audit - Cracked Sealing Process (PW22012) (City Wide) (Item 7.2)

(Danko/Powers)

That Item 7.2, Report PW22012, respecting Public Works Response and Actions to Roads Value for Money Audit – Cracked Sealing Process, be received.

Result: Motion CARRIED by a vote of 10 to 0, as follows:

YES - Ward 2 Councillor Jason Farr
 YES - Chair - Ward 3 Councillor Nrinder Nann
 YES - Ward 4 Councillor Sam Merulla
 YES - Vice Chair - Ward 5 Councillor Russ Powers
 YES - Ward 6 Councillor Tom Jackson
 YES - Ward 7 Councillor Esther Pauls
 YES - Ward 8 Councillor John-Paul Danko
 YES - Ward 10 Councillor Maria Pearson
 YES - Ward 12 Councillor Lloyd Ferguson
 YES - Ward 13 Councillor Arlene VanderBeek
 NOT PRESENT - Ward 14 Councillor Terry Whitehead

3. Streamlining the Process for Incorporating City Reserve Lands, City Widening, and Legacy Widening into Public Highway (PW22013) (City Wide) (Item 10.1)

(Powers/Ferguson)

- (a) That the General Manager of Public Works, or their delegate, be authorized and directed to prepare by-laws under the provisions of Subsection 31(2) of the *Municipal Act*, as amended, and place before Council for enactment, to incorporate;
- (i) City Reserve Lands into public highway, provided:
- (1) The incorporating by-laws are in a standard form satisfactory to the City Solicitor;
 - (2) The General Manager of Planning and Economic Development has confirmed that all outstanding requirements with respect to the reserve lands have been completed to the satisfaction of the City;
- (ii) City Widening into public highway, provided:
- (1) The incorporating by-laws are in a standard form satisfactory to the City Solicitor;

- (2) The General Manager of Planning and Economic Development has confirmed that all outstanding requirements with respect to the Widening lands have been completed to the satisfaction of the City;
- (iii) Legacy Widening into public highway, provided;
 - (1) The incorporating by-laws are in a standard form satisfactory to the City Solicitor; and
 - (2) The General Manager of Planning and Economic Development has confirmed that all outstanding requirements with respect to the Legacy Widening lands have been completed to the satisfaction of the City.

Result: Motion CARRIED by a vote of 10 to 0, as follows:

YES - Ward 2 Councillor Jason Farr
 YES - Chair - Ward 3 Councillor Nrinder Nann
 YES - Ward 4 Councillor Sam Merulla
 YES - Vice Chair - Ward 5 Councillor Russ Powers
 YES - Ward 6 Councillor Tom Jackson
 YES - Ward 7 Councillor Esther Pauls
 YES - Ward 8 Councillor John-Paul Danko
 YES - Ward 10 Councillor Maria Pearson
 YES - Ward 12 Councillor Lloyd Ferguson
 YES - Ward 13 Councillor Arlene VanderBeek
 NOT PRESENT - Ward 14 Councillor Terry Whitehead

4. Appropriation Transfer of Funds for Dewitt Road - Highway 8 to Barton Street (PW22014) (Ward 10) (Item 10.2)

(Pearson/VanderBeek)

- (a) That the General Manager of Public Works be authorized and directed to award Tender C15-76-21 (HS) Dewitt Road and Highway 8 - Sewer, Watermains, Roadway, Curb and Sidewalk Reconstruction to Coco Paving Inc. in the amount of \$4,173,238 (not including contingency and non-refundable HST) and that the General Manager of Public Works be authorized to execute, on behalf of the City of Hamilton, all agreements and other documents necessary to implement this award on confirmation that each such agreement be in a form satisfactory to the City Solicitor; and,
- (b) That the budget and financing plan for DeWitt Road Sanitary Sewer – Highway 8 to Barton Street project (# 5162171025),

totaling \$3,261,000, be amended and approved from the following sources referenced in Appendix "A" to Report PW22014:

- (i) \$1,700,000 from rate revenues as approved in the 2021 and 2022 capital budgets;
- (ii) An additional \$780,500 from the Linear Wastewater Development Charges Reserves (\$483,910 from Reserve #110340 and \$296,590 from Reserve #110341);
- (iii) A capital budget appropriation of previously approved Linear Wastewater Development Charges of \$200,000 from the 2017 Intensification Infrastructure Upgrades project (#5161796011);
- (iv) A capital budget appropriation of previously approved Linear Wastewater Development Charges of \$200,000 from the 2019 Intensification Infrastructure Upgrades project (#5161996011); and
- (v) A capital budget appropriation of previously approved rate revenues of \$380,500 from the Dewitt Road Sanitary Sewer – Barton Street to South Service Road project (#5162280280).

Result: Motion CARRIED by a vote of 10 to 0, as follows:

YES - Ward 2 Councillor Jason Farr
 YES - Chair - Ward 3 Councillor Nrinder Nann
 YES - Ward 4 Councillor Sam Merulla
 YES - Vice Chair - Ward 5 Councillor Russ Powers
 YES - Ward 6 Councillor Tom Jackson
 YES - Ward 7 Councillor Esther Pauls
 YES - Ward 8 Councillor John-Paul Danko
 YES - Ward 10 Councillor Maria Pearson
 YES - Ward 12 Councillor Lloyd Ferguson
 YES - Ward 13 Councillor Arlene VanderBeek
 NOT PRESENT - Ward 14 Councillor Terry Whitehead

5. Father Sean O’Sullivan Memorial Park Improvements, 1139 Greenhill Avenue, Hamilton (Ward 5) (Item 11.1)

(Powers/Pearson)

WHEREAS, the play structure located at Father Sean O’Sullivan Memorial Park, 1139 Greenhill Avenue, Hamilton was originally installed in the early 1990s;

WHEREAS, the play structure has surpassed its useful life span and needs to be replaced;

WHEREAS, in February 2021 Council approved \$120,000 funded from the Ward 5 – Capital Infrastructure Reserve #108055 for the new play structure and safety surfacing;

WHEREAS, an enhanced design that offers additional play features and increased play value, which will allow community members more choices for play components, can be installed; and,

WHEREAS, an increased budget is required for the enhanced design.

THEREFORE, BE IT RESOLVED:

- (a) That additional funds for the play structure replacement at Father Sean O’Sullivan Memorial Park, 1139 Greenhill Avenue, Hamilton be funded from the Ward 5 Special Capital Re-Investment Reserve Fund (#108055) at an upset limit, including contingency, not to exceed \$55,000 and added to Project ID #4242109503 Father Sean O’Sullivan Park; and
- (b) That the Mayor and City Clerk be authorized and directed to approve and execute all required agreements and ancillary documents, with such terms and conditions in a form satisfactory to the City Solicitor.

Result: Motion CARRIED by a vote of 10 to 0, as follows:

YES - Ward 2 Councillor Jason Farr
 YES - Chair - Ward 3 Councillor Nrinder Nann
 YES - Ward 4 Councillor Sam Merulla
 YES - Vice Chair - Ward 5 Councillor Russ Powers
 YES - Ward 6 Councillor Tom Jackson
 YES - Ward 7 Councillor Esther Pauls
 YES - Ward 8 Councillor John-Paul Danko
 YES - Ward 10 Councillor Maria Pearson
 YES - Ward 12 Councillor Lloyd Ferguson
 YES - Ward 13 Councillor Arlene VanderBeek
 NOT PRESENT - Ward 14 Councillor Terry Whitehead

6. Natural Burial Section at 260 Rymal Road East, Hamilton (Mount Hamilton Cemetery) (Ward 7) (Item 11.2)

(Pauls/Farr)

WHEREAS, the City of Hamilton operates 69 cemeteries under By-law 12-151, a By-law Respecting the City of Hamilton’s Cemeteries;

WHEREAS, in 2021, Council amended By-law 12-151 to add provisions relating to natural burials to regulate Natural Burial Sections within City of Hamilton cemeteries;

WHEREAS, a Natural Burial Section means a designated area within a cemetery which is specifically designed to permit human remains to be returned to the earth as naturally as possible; and

WHEREAS, funding for the construction, planting and communal memorial of the Natural Burial Section at Mount Hamilton Cemetery is required.

THEREFORE, BE IT RESOLVED:

- (a) That the construction, planting and communal memorial for the Natural Burial Section at 260 Rymal Road East, Hamilton (Mount Hamilton Cemetery) to be funded from the Ward 7 Special Capital Re-Investment Reserve Fund (#108057) to an upset limit of \$100,000, be approved;
- (b) That the annual operating impacts of \$55,000 to fund a 0.5 FTE be included in the 2022 Public Works Department base operating budget;
- (c) That the Mayor and City Clerk be authorized and directed to approve and execute all required agreements and ancillary documents, with such terms and conditions in a form satisfactory to the City Solicitor.

Result: Motion CARRIED by a vote of 10 to 0, as follows:

YES - Ward 2 Councillor Jason Farr
 YES - Chair - Ward 3 Councillor Nrinder Nann
 YES - Ward 4 Councillor Sam Merulla
 YES - Vice Chair - Ward 5 Councillor Russ Powers
 YES - Ward 6 Councillor Tom Jackson
 YES - Ward 7 Councillor Esther Pauls
 YES - Ward 8 Councillor John-Paul Danko
 YES - Ward 10 Councillor Maria Pearson
 YES - Ward 12 Councillor Lloyd Ferguson
 YES - Ward 13 Councillor Arlene VanderBeek
 NOT PRESENT - Ward 14 Councillor Terry Whitehead

**7. Eleanor Park Playground Replacement, 80 Presidio Drive, Hamilton (Ward 6)
(Item 11.3)**

(Jackson/Merulla)

WHEREAS, Eleanor Park Playground is located at Eleanor Park, 80 Presidio Drive, Hamilton, Ward 6;

WHEREAS, the existing play structure is well used by the community and has

reached its end of life and the community would benefit from the replacement and enhancement of the existing structure;

WHEREAS, to honour the late Jude Strickland, a young local resident who tragically lost his life in December 2020, the replacement structure be named the Jude Strickland Play Structure;

WHEREAS, the Strickland family is in support of commemorating Jude Strickland by naming the new play structure in his memory;

WHEREAS, the total project cost for supply and installation of an enhanced play structure with climbing feature, additional components and a commemorative plaque is estimated to be \$220,300;

WHEREAS, the City of Hamilton Parks Division of the Public Works Department has received Capital funding in the amount of \$100,000 to be contributed to this project; and

WHEREAS, the project requires additional funding of \$120,300.

THEREFORE, BE IT RESOLVED:

- (a) That the new play structure at Eleanor Park, 80 Presidio Drive, Hamilton, be named the Jude Strickland Play Structure, in honour of the late Jude Strickland, a young local resident who tragically lost his life in December 2020, with the installation of a commemorative plaque;
- (b) That the balance of funding required for the supply and installation of a new play structure and a commemorative plaque to honour Jude Strickland at Eleanor Park, 80 Presidio Drive, Hamilton, to be funded from the Ward 6 Special Capital Re-Investment Reserve Fund (#108056) with an upset limit, including contingency, not to exceed \$120,300, be approved and transferred to Project ID 4402152600 Playground Lifecycle Replacement Program; and
- (c) That the Mayor and City Clerk be authorized and directed to approve and execute required agreements and ancillary documents, with such terms and conditions in a form satisfactory to the City Solicitor.

Result: Motion CARRIED by a vote of 10 to 0, as follows:

YES - Ward 2 Councillor Jason Farr
YES - Chair - Ward 3 Councillor Nrinder Nann
YES - Ward 4 Councillor Sam Merulla
YES - Vice Chair - Ward 5 Councillor Russ Powers
YES - Ward 6 Councillor Tom Jackson

YES - Ward 7 Councillor Esther Pauls
 YES - Ward 8 Councillor John-Paul Danko
 YES - Ward 10 Councillor Maria Pearson
 YES - Ward 12 Councillor Lloyd Ferguson
 YES - Ward 13 Councillor Arlene VanderBeek
 NOT PRESENT - Ward 14 Councillor Terry Whitehead

**8. Improvements to Dr. William Bethune Park, 60 Dicenzo Drive, Hamilton
(Ward 8) (Item 11.4)**

(Danko/Merulla)

WHEREAS, Dr. William Bethune Park is an existing neighbourhood park located at 60 Dicenzo Drive, Hamilton, Ward 8;

WHEREAS, the existing backstops for the baseball diamonds require replacement; and

WHEREAS, parking and driveway improvements are required to support vehicles onsite.

THEREFORE, BE IT RESOLVED:

- (a) That the replacement of the baseball diamond backstops to an upset limit of \$25,000 and parking and driveway improvements to an upset limit of \$8,000 at Dr. William Bethune Park, 60 Dicenzo Drive, Hamilton, to be funded from the Ward 8 Special Capital Re-investment Reserve Fund (#108058), be approved;
- (b) That the annual operating impacts of \$1,000 for maintenance for the parking and driveway improvements be included in the 2022 Public Works Department base operating budget; and
- (c) That the Mayor and City Clerk be authorized and directed to approve and execute all required agreements and ancillary documents, with such terms and conditions in a form satisfactory to the City Solicitor.

Result: Motion CARRIED by a vote of 10 to 0, as follows:

YES - Ward 2 Councillor Jason Farr
 YES - Chair - Ward 3 Councillor Nringer Nann
 YES - Ward 4 Councillor Sam Merulla
 YES - Vice Chair - Ward 5 Councillor Russ Powers
 YES - Ward 6 Councillor Tom Jackson
 YES - Ward 7 Councillor Esther Pauls
 YES - Ward 8 Councillor John-Paul Danko
 YES - Ward 10 Councillor Maria Pearson

YES - Ward 12 Councillor Lloyd Ferguson
YES - Ward 13 Councillor Arlene VanderBeek
NOT PRESENT - Ward 14 Councillor Terry Whitehead

9. Installation of Wheelchair Accessible Swings at William Connell Park, 1086 West 5th Street, Hamilton, and Heritage Green Park, 355 First Road West, Hamilton (Wards 8 and 9) (Item 11.5)

(Danko/Pauls)

WHEREAS, there is a need for wheelchair accessible play opportunities in City of Hamilton Parks;

WHEREAS, Parks and Cemeteries staff have identified a 'We-Go-Swing', manufactured by Landscape Structures Inc., which is a fully inclusive swing (allowing a user to remain seated in a wheelchair while swinging) that can be added to an existing playground footprint and is suitable for a public setting as it does not require a secured fenced area;

WHEREAS, William Connell Park is an existing Community Park located at 1086 West 5th Street, Hamilton, Ward 8, that could support the addition of a fully inclusive swing;

WHEREAS, Heritage Green Park is an existing Community Park located at 355 First Road West, Hamilton, Ward 9, that could support the addition of a fully inclusive swing;

WHEREAS, at its March 31, 2021 meeting, Council authorized and directed City of Hamilton Staff to investigate and submit applications for Heritage Green Community Trust grants as an additional funding source to support the capital replacement and enhancement program in order to implement improvements at Heritage Green Park, 355 First Road West, Hamilton;

WHEREAS, the Parks and Cemeteries Section submitted an application to the Heritage Green Community Trust for funding to support the installation of a wheelchair accessible swing at Heritage Green Park; and

WHEREAS, funding for the installation of a wheelchair accessible swing at William Connell Park is required.

THEREFORE, BE IT RESOLVED:

- (a) That the purchase of two 'We-Go-Swing', manufactured by Landscape Structures Inc., through ABC Recreation Ltd. be approved as a single source purchase pursuant to Procurement Policy #11 – Non-competitive Procurements;

- (b) That the supply and installation of the wheelchair accessible swing at William Connell Park, 1086 West 5th Street, Hamilton, to be funded from the Ward 8 Special Capital Re-Investment Reserve Fund (#108058) to an upset limit of \$60,000, be approved;
- (c) That the supply and installation of the wheelchair accessible swing at Heritage Green Park, 355 First Road West, Hamilton, Ward 9, be approved contingent upon funding from the Heritage Green Community Trust grant;
- (d) That the annual operating impacts of \$3,000 (\$1,500 for each swing) to fund the required maintenance and repairs be included in the 2022 Public Works Department base operating budget; and
- (e) That the Mayor and City Clerk be authorized and directed to approve and execute all required agreements and ancillary documents, with such terms and conditions in a form satisfactory to the City Solicitor.

Result: Motion CARRIED by a vote of 10 to 0, as follows:

YES - Ward 2 Councillor Jason Farr
 YES - Chair - Ward 3 Councillor Nrinder Nann
 YES - Ward 4 Councillor Sam Merulla
 YES - Vice Chair - Ward 5 Councillor Russ Powers
 YES - Ward 6 Councillor Tom Jackson
 YES - Ward 7 Councillor Esther Pauls
 YES - Ward 8 Councillor John-Paul Danko
 YES - Ward 10 Councillor Maria Pearson
 YES - Ward 12 Councillor Lloyd Ferguson
 YES - Ward 13 Councillor Arlene VanderBeek
 NOT PRESENT - Ward 14 Councillor Terry Whitehead

10. Construction of a Park Walkway Loop within Centennial Heights Park, 12, 14 Karendale Crescent, Hamilton (Freelton) (Ward 13) (Item 11.6)

(VanderBeek/Powers)

WHEREAS, Centennial Heights Park is an existing neighbourhood park located at 12,14 Karendale Crescent, Hamilton (Freelton), Ward 13;

WHEREAS, the park does not currently have an existing walkway loop amenity to support walking and cycling; and

WHEREAS there are no sidewalks in this rural settlement neighbourhood for safe walking.

THEREFORE, BE IT RESOLVED:

- (a) That the construction of a park walkway loop within Centennial Heights Park, 12, 14 Karendale Crescent, Hamilton (Freelton), to be funded from the Council Priority-Ward 13 Minor Rehabilitation fund (#4031911613) to an upset limit of \$175,000, be approved;
- (b) That the annual operating impacts of \$4,000 for the required maintenance and repairs for the park walkway loop within Centennial Heights Park, 12, 14 Karendale Crescent, Hamilton (Freelton), be included in the 2023 Public Works Department base operating budget;
- (c) That the Mayor and City Clerk be authorized and directed to approve and execute all required agreements and ancillary documents, with such terms and conditions in a form satisfactory to the City Solicitor.

Result: Motion CARRIED by a vote of 10 to 0, as follows:

YES - Ward 2 Councillor Jason Farr
 YES - Chair - Ward 3 Councillor Nrinder Nann
 YES - Ward 4 Councillor Sam Merulla
 YES - Vice Chair - Ward 5 Councillor Russ Powers
 YES - Ward 6 Councillor Tom Jackson
 YES - Ward 7 Councillor Esther Pauls
 YES - Ward 8 Councillor John-Paul Danko
 YES - Ward 10 Councillor Maria Pearson
 YES - Ward 12 Councillor Lloyd Ferguson
 YES - Ward 13 Councillor Arlene VanderBeek
 NOT PRESENT - Ward 14 Councillor Terry Whitehead

11. Replacement of Asphalt Pathways at Beulah Park, 59 Beulah Avenue, Hamilton (Ward 1) (Item 11.7)

(VanderBeek/Pearson)

WHEREAS, on August 13, 2021 Council approved the replacement of portions of asphalt pathways at Alexander Park, Churchill Park and Jackson Playground, Hamilton, at an approximate cost of \$90,000, to be funded from the Ward 1 Special Capital Re-Investment Reserve Fund (#108051);

WHEREAS, park pathways offer a valuable active transportation link to pedestrians and bike users in Ward 1 and beyond;

WHEREAS, the asphalt pathways at Beulah Park, 59 Beulah Avenue, Hamilton, require replacement; and

WHEREAS, there is a remaining balance within the approved funds for Ward 1 Park Pathway Improvements Project ID #4242109110.

THEREFORE, BE IT RESOLVED:

- (a) That replacement of asphalt pathways at Beulah Park, 59 Beulah Avenue, Hamilton, at an approximate cost of \$8,000, to be funded from the balance of the \$90,000 of the approved funds for Ward 1 Park Pathway Improvements Project ID #4242109110, be approved; and
- (b) That the Mayor and City Clerk be authorized and directed to approve and execute all required agreements and ancillary documents, with such terms and conditions in a form satisfactory to the City Solicitor.

Result: Motion CARRIED by a vote of 10 to 0, as follows:

YES - Ward 2 Councillor Jason Farr
 YES - Chair - Ward 3 Councillor Nrinder Nann
 YES - Ward 4 Councillor Sam Merulla
 YES - Vice Chair - Ward 5 Councillor Russ Powers
 YES - Ward 6 Councillor Tom Jackson
 YES - Ward 7 Councillor Esther Pauls
 YES - Ward 8 Councillor John-Paul Danko
 YES - Ward 10 Councillor Maria Pearson
 YES - Ward 12 Councillor Lloyd Ferguson
 YES - Ward 13 Councillor Arlene VanderBeek
 NOT PRESENT - Ward 14 Councillor Terry Whitehead

12. Pedestrian Enhancements on Sulphur Springs Road and Queen Street, Ancaster (Ward 12) (Item 11.8)

(Ferguson/VanderBeek)

WHEREAS, the City of Hamilton is committed to creating safe neighbourhoods and vibrant communities;

WHEREAS, ensuring the safety of vulnerable road users is a priority;

WHEREAS, the Ancaster Memorial Art Centre is scheduled to open in June of 2022;

WHEREAS, residents enjoying the Ancaster Memorial Art Centre will utilize the Ryerson United Church parking lot and access the Art Centre by crossing Sulphur Springs Road and walking on Queen Street;

WHEREAS, there are no pedestrian crossing amenities on Sulphur Springs Road or sidewalk on Queen Street;

WHEREAS, the Transportation Operations & Maintenance Division reviewed Sulphur Springs Road and determined that a pedestrian crossing (PXO) is warranted and is supportive of the installation of a sidewalk on Queen Street; and

WHEREAS, there are sufficient funds available in the Ward 12 Canada Community-Building Fund and they are suitable to support the installation of a PXO and sidewalk.

THEREFORE, BE IT RESOLVED:

- (a) That \$40,000 be allocated to the installation of a pedestrian crossing (PXO) on Sulphur Springs Road in close proximity to the intersection of Sulphur Springs Road and Queen Street in Ward 12, implemented by Transportation Operations & Maintenance in 2022, and funded by utilizing the Ward 12 – Minor Maintenance CCBF Account (#403211112);
- (b) That \$30,000 be allocated to the installation of a sidewalk on the west side of Queen Street between Sulphur Springs Road and the Ancaster Memorial Art Centre implemented by Transportation Operations & Maintenance in 2022, and funded by utilizing the Ward 12 – Minor Maintenance CCBF Account (#403211112); and
- (c) That the Mayor and City Clerk be authorized and directed to execute any required agreements and ancillary documents, with such terms and conditions in a form satisfactory to the City Solicitor.

Result: Motion CARRIED by a vote of 10 to 0, as follows:

YES - Ward 2 Councillor Jason Farr
 YES - Chair - Ward 3 Councillor Nrinder Nann
 YES - Ward 4 Councillor Sam Merulla
 YES - Vice Chair - Ward 5 Councillor Russ Powers
 YES - Ward 6 Councillor Tom Jackson
 YES - Ward 7 Councillor Esther Pauls
 YES - Ward 8 Councillor John-Paul Danko
 YES - Ward 10 Councillor Maria Pearson
 YES - Ward 12 Councillor Lloyd Ferguson
 YES - Ward 13 Councillor Arlene VanderBeek
 NOT PRESENT - Ward 14 Councillor Terry Whitehead

13. Improvements to Powell Park, 53 Birch Avenue, Hamilton (Ward 3) (Item 11.9)

(Nann/Merulla)

WHEREAS, the basketball court in Powell Park at 53 Birch Avenue, Hamilton in Ward 3, is aging and would benefit from the installation of a new backboard and rim, relining of the court and repainting of the concrete wall supporting the basketball net;

WHEREAS, the concrete wall supporting the basketball net is an ideal location for a community art mural project; and

WHEREAS, the building adjacent to the basketball court is in need of being painted.

THEREFORE, BE IT RESOLVED:

- (a) That the installation of a new backboard including rim, relining of the court and painting of the concrete wall supporting the basketball net at Powell Park, 53 Birch Avenue, Hamilton, to be funded from the Ward 3 Special Capital Re-Investment Discretionary Fund (# 3302209300) with an upset limit, of \$6,000, be approved;
- (b) That the installation of art mural on a portion of the concrete wall of the basketball court at Powell Park, 53 Birch Avenue, Hamilton, to be funded from the Ward 3 Special Capital Re-Investment Discretionary Fund (# 3302209300) with an upset limit, of \$9,000, be approved;
- (c) That the painting of the building at Powell Park, 53 Birch Avenue, Hamilton, to be funded from the Ward 3 Special Capital Re-Investment Discretionary Fund (# 3302209300) with an upset limit, of \$8,000, be approved; and
- (d) That the Mayor and City Clerk be authorized and directed to approve and execute required agreements and ancillary documents, with such terms and conditions in a form satisfactory to the City Solicitor.

Result: Motion CARRIED by a vote of 10 to 0, as follows:

YES - Ward 2 Councillor Jason Farr
 YES - Chair - Ward 3 Councillor Nrinder Nann
 YES - Ward 4 Councillor Sam Merulla
 YES - Vice Chair - Ward 5 Councillor Russ Powers
 YES - Ward 6 Councillor Tom Jackson
 YES - Ward 7 Councillor Esther Pauls
 YES - Ward 8 Councillor John-Paul Danko
 YES - Ward 10 Councillor Maria Pearson
 YES - Ward 12 Councillor Lloyd Ferguson
 YES - Ward 13 Councillor Arlene VanderBeek
 NOT PRESENT - Ward 14 Councillor Terry Whitehead

14. Pathway and Lighting Improvements, Eastmount Park, 115 East 26th Street, Hamilton (Ward 7) (Added Item 11.10)

(Pauls/Jackson)

WHEREAS, Eastmount Park is an existing neighbourhood park located at 115 East 26th Street, Hamilton, Ward 7;

WHEREAS, the existing park pathways are well used and the community would benefit from additional pathways running east to west at the south end of the park, connecting East 26th Street to Upper Sherman Avenue; and

WHEREAS, the park would benefit from additional lighting near the parking lot.

THEREFORE, BE IT RESOLVED:

- (a) That the construction of a new park pathway running east to west at the south end of the park at Eastmount Park, 115 East 26th Street, Hamilton, to be funded from the Ward 7 Special Capital Re-Investment Reserve Fund (#108057) to an upset limit of \$70,000, be approved;
- (b) That the installation of additional lighting near the parking lot at Eastmount Park, 115 East 26th Street, Hamilton, to be funded from the Ward 7 Special Capital Re-Investment Reserve Fund (#108057) to an upset limit of \$20,000, be approved;
- (c) That the annual operating impacts of \$1,500 for the required maintenance and repairs for the new pathway and \$500 for the new lighting be included in the 2022 Public Works Department base operating budget;
- (d) That the Mayor and City Clerk be authorized and directed to approve and execute all required agreements and ancillary documents, with such terms and conditions in a form satisfactory to the City Solicitor.

Result: Motion CARRIED by a vote of 10 to 0, as follows:

YES - Ward 2 Councillor Jason Farr
 YES - Chair - Ward 3 Councillor Nrinder Nann
 YES - Ward 4 Councillor Sam Merulla
 YES - Vice Chair - Ward 5 Councillor Russ Powers
 YES - Ward 6 Councillor Tom Jackson
 YES - Ward 7 Councillor Esther Pauls
 YES - Ward 8 Councillor John-Paul Danko
 YES - Ward 10 Councillor Maria Pearson
 YES - Ward 12 Councillor Lloyd Ferguson
 YES - Ward 13 Councillor Arlene VanderBeek
 NOT PRESENT - Ward 14 Councillor Terry Whitehead

15. Appointments to the Hamilton Cycling Committee for the remainder of the 2018-2022 Term (Item 14.2)

(Farr/VanderBeek)

That the appointments to the Hamilton Cycling Committee for the remainder of the 2018-2022 Term be approved and released publicly following approval by Council.

Result: Motion CARRIED by a vote of 10 to 0, as follows:

YES - Ward 2 Councillor Jason Farr
 YES - Chair - Ward 3 Councillor Nrinder Nann
 YES - Ward 4 Councillor Sam Merulla
 YES - Vice Chair - Ward 5 Councillor Russ Powers
 YES - Ward 6 Councillor Tom Jackson
 YES - Ward 7 Councillor Esther Pauls
 YES - Ward 8 Councillor John-Paul Danko
 YES - Ward 10 Councillor Maria Pearson
 YES - Ward 12 Councillor Lloyd Ferguson
 YES - Ward 13 Councillor Arlene VanderBeek
 NOT PRESENT - Ward 14 Councillor Terry Whitehead

**16. Material Recycling Facility Unsolicited Proposal (PW21050(a)) (City Wide)
(Item 14.3)**

(Jackson/Ferguson)

- (a) That Report PW21050(a), respecting Material Recycling Facility Unsolicited Proposal, be received; and
- (b) That Report PW21050(a), respecting Material Recycling Facility Unsolicited Proposal, remain confidential.

Result: Motion CARRIED by a vote of 10 to 0, as follows:

YES - Ward 2 Councillor Jason Farr
 YES - Chair - Ward 3 Councillor Nrinder Nann
 YES - Ward 4 Councillor Sam Merulla
 YES - Vice Chair - Ward 5 Councillor Russ Powers
 YES - Ward 6 Councillor Tom Jackson
 YES - Ward 7 Councillor Esther Pauls
 YES - Ward 8 Councillor John-Paul Danko
 YES - Ward 10 Councillor Maria Pearson
 YES - Ward 12 Councillor Lloyd Ferguson
 YES - Ward 13 Councillor Arlene VanderBeek
 NOT PRESENT - Ward 14 Councillor Terry Whitehead

FOR INFORMATION:

(Pauls/Powers)

That the Public Works Committee recess until the conclusion of the Special Council Meeting.

**Public Works Committee
Minutes 22-004**

**March 21, 2022
Page 17 of 25**

Result: Motion CARRIED by a vote of 9 to 0, as follows:

YES - Ward 2 Councillor Jason Farr
 YES - Chair - Ward 3 Councillor Nrinder Nann
 YES - Ward 4 Councillor Sam Merulla
 YES - Vice Chair - Ward 5 Councillor Russ Powers
 YES - Ward 6 Councillor Tom Jackson
 YES - Ward 7 Councillor Esther Pauls
 NOT PRESENT - Ward 8 Councillor John-Paul Danko
 YES - Ward 10 Councillor Maria Pearson
 YES - Ward 12 Councillor Lloyd Ferguson
 YES - Ward 13 Councillor Arlene VanderBeek
 NOT PRESENT - Ward 14 Councillor Terry Whitehead

(a) APPROVAL OF AGENDA (Item 2)

The Committee Clerk advised that there were no changes to the agenda.

(Pearson/Powers)

That the agenda for the March 21, 2022 Public Works Committee meeting be approved, as presented.

Result: Motion CARRIED by a vote of 8 to 0, as follows:

YES - Ward 2 Councillor Jason Farr
 YES - Chair - Ward 3 Councillor Nrinder Nann
 YES - Ward 4 Councillor Sam Merulla
 YES - Vice Chair - Ward 5 Councillor Russ Powers
 YES - Ward 6 Councillor Tom Jackson
 NOT PRESENT - Ward 7 Councillor Esther Pauls
 NOT PRESENT - Ward 8 Councillor John-Paul Danko
 YES - Ward 10 Councillor Maria Pearson
 YES - Ward 12 Councillor Lloyd Ferguson
 YES - Ward 13 Councillor Arlene VanderBeek
 NOT PRESENT - Ward 14 Councillor Terry Whitehead

(b) DECLARATIONS OF INTEREST (Item 3)

There were no declarations of interest.

(c) APPROVAL OF MINUTES OF PREVIOUS MEETING (Item 4)

(i) February 14, 2022 (Item 4.1)

(Pearson/Ferguson)

That the Minutes of the February 14, 2022 meeting of the Public Works Committee be approved, as presented.

Result: Motion CARRIED by a vote of 8 to 0, as follows:

YES - Ward 2 Councillor Jason Farr
 YES - Chair - Ward 3 Councillor Nrinder Nann
 YES - Ward 4 Councillor Sam Merulla
 YES - Vice Chair - Ward 5 Councillor Russ Powers
 YES - Ward 6 Councillor Tom Jackson
 NOT PRESENT - Ward 7 Councillor Esther Pauls
 NOT PRESENT - Ward 8 Councillor John-Paul Danko
 YES - Ward 10 Councillor Maria Pearson
 YES - Ward 12 Councillor Lloyd Ferguson
 YES - Ward 13 Councillor Arlene VanderBeek
 NOT PRESENT - Ward 14 Councillor Terry Whitehead

(d) DELEGATION REQUESTS (Item 6)**(Farr/Jackson)**

That the following Delegation Requests, be approved for today's meeting:

- (a) Richard Brunet, respecting Potholes on Waterdown Roads (for today's meeting) (Item 6.1)
- (b) Antonio Gallo, Gallo Ice Cream Retail, respecting Ice Cream Vendor Operation at Confederation Park (for today's meeting) (Item 6.2)

Result: Motion CARRIED by a vote of 9 to 0, as follows:

YES - Ward 2 Councillor Jason Farr
 YES - Chair - Ward 3 Councillor Nrinder Nann
 YES - Ward 4 Councillor Sam Merulla
 YES - Vice Chair - Ward 5 Councillor Russ Powers
 YES - Ward 6 Councillor Tom Jackson
 YES - Ward 7 Councillor Esther Pauls
 NOT PRESENT - Ward 8 Councillor John-Paul Danko
 YES - Ward 10 Councillor Maria Pearson
 YES - Ward 12 Councillor Lloyd Ferguson
 YES - Ward 13 Councillor Arlene VanderBeek
 NOT PRESENT - Ward 14 Councillor Terry Whitehead

(Ferguson/Powers)

That the following Delegation Request, be approved for a future meeting:

- (i) David Jones, Turn On Powerline, respecting Construction of a Roundabout at the Corner of Highway 52 and Powerline Road, Ancaster (for a future meeting) (Item 6.3)

Result: Motion CARRIED by a vote of 9 to 0, as follows:

YES - Ward 2 Councillor Jason Farr
 YES - Chair - Ward 3 Councillor Nrinder Nann
 YES - Ward 4 Councillor Sam Merulla
 YES - Vice Chair - Ward 5 Councillor Russ Powers
 YES - Ward 6 Councillor Tom Jackson
 YES - Ward 7 Councillor Esther Pauls
 NOT PRESENT - Ward 8 Councillor John-Paul Danko
 YES - Ward 10 Councillor Maria Pearson
 YES - Ward 12 Councillor Lloyd Ferguson
 YES - Ward 13 Councillor Arlene VanderBeek
 NOT PRESENT - Ward 14 Councillor Terry Whitehead

(e) CONSENT ITEMS (Item 7)

- (i) **Interview Sub-Committee to the Public Works Committee Minutes - March 2, 2022 (Item 7.3)**

(Ferguson/Farr)

That the Interview Sub-Committee to the Public Works Committee Minutes of March 2, 2022, be received.

Result: Motion CARRIED by a vote of 9 to 0, as follows:

YES - Ward 2 Councillor Jason Farr
 YES - Chair - Ward 3 Councillor Nrinder Nann
 YES - Ward 4 Councillor Sam Merulla
 YES - Vice Chair - Ward 5 Councillor Russ Powers
 YES - Ward 6 Councillor Tom Jackson
 YES - Ward 7 Councillor Esther Pauls
 NOT PRESENT - Ward 8 Councillor John-Paul Danko
 YES - Ward 10 Councillor Maria Pearson
 YES - Ward 12 Councillor Lloyd Ferguson
 YES - Ward 13 Councillor Arlene VanderBeek
 NOT PRESENT - Ward 14 Councillor Terry Whitehead

(ii) Keep Hamilton Clean and Green Committee Minutes (Item 7.4)

(Merulla/Danko)

That the following Minutes of the Keep Hamilton Clean and Green Committee, be received:

- (a) October 10, 2021
- (b) November 16, 2021

Result: Motion CARRIED by a vote of 10 to 0, as follows:

YES - Ward 2 Councillor Jason Farr
 YES - Chair - Ward 3 Councillor Nrinder Nann
 YES - Ward 4 Councillor Sam Merulla
 YES - Vice Chair - Ward 5 Councillor Russ Powers
 YES - Ward 6 Councillor Tom Jackson
 YES - Ward 7 Councillor Esther Pauls
 YES - Ward 8 Councillor John-Paul Danko
 YES - Ward 10 Councillor Maria Pearson
 YES - Ward 12 Councillor Lloyd Ferguson
 YES - Ward 13 Councillor Arlene VanderBeek
 NOT PRESENT - Ward 14 Councillor Terry Whitehead

(f) PUBLIC HEARINGS / DELEGATIONS (Item 9)

(i) Richard Brunet, respecting Potholes on Waterdown Roads (for today's meeting) (Item 9.1)

Richard Brunet was not present when called upon.

(ii) Antonio Gallo, Gallo Ice Cream Retail, respecting Ice Cream Vendor Operation at Confederation Park (for today's meeting) (Item 9.2)

Antonio Gallo, Gallo Ice Cream Retail, addressed the Committee with the aid of a video presentation respecting Ice Cream Vendor Operation at Confederation Park.

(Powers/Ferguson)

That the delegation from Antonio Gallo, Gallo Ice Cream Retail, respecting Ice Cream Vendor Operation at Confederation Park, be received and referred to staff for their review and report back to Public Works Committee.

Result: Motion CARRIED by a vote of 10 to 0, as follows:

YES - Ward 2 Councillor Jason Farr
 YES - Chair - Ward 3 Councillor Nrinder Nann
 YES - Ward 4 Councillor Sam Merulla
 YES - Vice Chair - Ward 5 Councillor Russ Powers
 YES - Ward 6 Councillor Tom Jackson
 YES - Ward 7 Councillor Esther Pauls
 YES - Ward 8 Councillor John-Paul Danko
 YES - Ward 10 Councillor Maria Pearson
 YES - Ward 12 Councillor Lloyd Ferguson
 YES - Ward 13 Councillor Arlene VanderBeek
 NOT PRESENT - Ward 14 Councillor Terry Whitehead

(g) MOTIONS (Item 11)

(i) Improvements to Powell Park, 53 Birch Avenue, Hamilton (Ward 3) (Item 11.9)

Councillor Nann relinquished the Chair to Councillor Powers in order to introduce the motion respecting Improvements to Powell Park, 53 Birch Avenue, Hamilton (Ward 3).

For further disposition of this matter, refer to Item 13.

(h) NOTICES OF MOTIONS (Item 12)

(i) Pathway and Lighting Improvements, Eastmount Park, 115 East 26th Street, Hamilton (Ward 7) (Item 12.1)

(Pauls/Jackson)

That the Rules of Order be waived to allow for the introduction of a Motion respecting Pathway and Lighting Improvements, Eastmount Park, 115 East 26th Street, Hamilton (Ward 7).

Result: Motion CARRIED by a 2/3 majority vote of 10 to 0, as follows:

YES - Ward 2 Councillor Jason Farr
 YES - Chair - Ward 3 Councillor Nrinder Nann
 YES - Ward 4 Councillor Sam Merulla
 YES - Vice Chair - Ward 5 Councillor Russ Powers
 YES - Ward 6 Councillor Tom Jackson
 YES - Ward 7 Councillor Esther Pauls
 YES - Ward 8 Councillor John-Paul Danko
 YES - Ward 10 Councillor Maria Pearson
 YES - Ward 12 Councillor Lloyd Ferguson

YES - Ward 13 Councillor Arlene VanderBeek
NOT PRESENT - Ward 14 Councillor Terry Whitehead

For further disposition of this matter, refer to Item 14.

(i) GENERAL INFORMATION / OTHER BUSINESS (Item 13)

(i) Amendments to the Outstanding Business List (Item 13.1)

(Powers/Danko)

That the following amendments to the Public Works Committee's Outstanding Business List, be approved.

- (a) Items Considered Complete and Needing to be Removed (Item 13.1 (a)):
 - (i) Public Works Response and Actions to Roads Value for Money Audit - Cracked Sealing Process
Addressed at Item 7.2 on today's agenda - Report PW22012
Item on OBL: ABZ
 - (b) Items Requiring a New Due Date (Item 13.1 (b)):
 - (i) Certificate of Recognition (COR™)
Item on OBL: AQ
Current Due Date: June 14, 2021
Proposed New Due Date: July 6, 2022
 - (ii) Municipal Class Environmental Assessment and Conceptual Design of Ancaster Elevated Water Reservoir
Item on OBL: AAP
Current Due Date: January 31, 2022
Proposed New Due Date: June 13, 2022
 - (iii) Management of the Aviary at 85 Oak Knoll Drive
Item on OBL: AAY
Current Due Date: December 6, 2021
Proposed New Due Date: September 9, 2022
 - (iv) Public Information Portal to Track Environmental Issues on City of Hamilton Projects
Item on OBL: ACD
Current Due Date: April 4, 2022
Proposed New Due Date: May 16, 2022
 - (v) Environmentally Sustainable Food Trucks at Bayfront (and other) Park(s)

Item on OBL: ACE
 Current Due Date: Q1, 2022
 Proposed New Due Date: May 30, 2022

Result: Motion CARRIED by a vote of 10 to 0, as follows:

YES - Ward 2 Councillor Jason Farr
 YES - Chair - Ward 3 Councillor Nrinder Nann
 YES - Ward 4 Councillor Sam Merulla
 YES - Vice Chair - Ward 5 Councillor Russ Powers
 YES - Ward 6 Councillor Tom Jackson
 YES - Ward 7 Councillor Esther Pauls
 YES - Ward 8 Councillor John-Paul Danko
 YES - Ward 10 Councillor Maria Pearson
 YES - Ward 12 Councillor Lloyd Ferguson
 YES - Ward 13 Councillor Arlene VanderBeek
 NOT PRESENT - Ward 14 Councillor Terry Whitehead

(j) PRIVATE AND CONFIDENTIAL (Item 14)

Committee determined that discussion of items 14.1 and 14.2 was not required in Closed Session, so the items were addressed in Open Session, as follows:

(i) Closed Session Minutes – February 14, 2022 (Item 14.1)

(Farr/Ferguson)

- (a) That the Closed Session Minutes of the February 14, 2022 Public Works Committee meeting be approved; and
- (b) That the Closed Session Minutes of the February 14, 2022 Public Works Committee meeting, remain confidential.

Result: Motion CARRIED by a vote of 10 to 0, as follows:

YES - Ward 2 Councillor Jason Farr
 YES - Chair - Ward 3 Councillor Nrinder Nann
 YES - Ward 4 Councillor Sam Merulla
 YES - Vice Chair - Ward 5 Councillor Russ Powers
 YES - Ward 6 Councillor Tom Jackson
 YES - Ward 7 Councillor Esther Pauls
 YES - Ward 8 Councillor John-Paul Danko
 YES - Ward 10 Councillor Maria Pearson
 YES - Ward 12 Councillor Lloyd Ferguson
 YES - Ward 13 Councillor Arlene VanderBeek
 NOT PRESENT - Ward 14 Councillor Terry Whitehead

(ii) Appointments to the Hamilton Cycling Committee for the remainder of the 2018-2022 Term (Item 14.2)

For further disposition of this matter, refer to Item 15.

(Jackson/Pearson)

That Committee move into Closed Session respecting Item 14.3, pursuant to Section 9.1, Sub-sections (j) and (k) of the City's Procedural By-law 21-021, and Section 239(2), Sub-sections (j) and (k) of the Municipal Act, 2001, as amended, as the subject matter pertains to a trade secret or scientific, technical, commercial or financial information that belongs to the City or a local board and has monetary value or potential monetary value; a position, plan, procedure, criteria or instruction to be applied to any negotiations carried on or to be carried on by or on behalf of the City or a local board.

Result: Motion CARRIED by a vote of 10 to 0, as follows:

YES - Ward 2 Councillor Jason Farr
 YES - Chair - Ward 3 Councillor Nrinder Nann
 YES - Ward 4 Councillor Sam Merulla
 YES - Vice Chair - Ward 5 Councillor Russ Powers
 YES - Ward 6 Councillor Tom Jackson
 YES - Ward 7 Councillor Esther Pauls
 YES - Ward 8 Councillor John-Paul Danko
 YES - Ward 10 Councillor Maria Pearson
 YES - Ward 12 Councillor Lloyd Ferguson
 YES - Ward 13 Councillor Arlene VanderBeek
 NOT PRESENT - Ward 14 Councillor Terry Whitehead

(iii) Material Recycling Facility Unsolicited Proposal (PW21050(a)) (City Wide) (Item 14.3)

For further disposition of this matter, refer to Item 16.

(k) ADJOURNMENT (Item 15)**(Pearson/Ferguson)**

That there being no further business, the meeting adjourned at 4:45 p.m.

Result: Motion CARRIED by a vote of 10 to 0, as follows:

YES - Ward 2 Councillor Jason Farr
 YES - Chair - Ward 3 Councillor Nrinder Nann
 YES - Ward 4 Councillor Sam Merulla
 YES - Vice Chair - Ward 5 Councillor Russ Powers
 YES - Ward 6 Councillor Tom Jackson

**Public Works Committee
Minutes 22-004**

**March 21, 2022
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YES - Ward 7 Councillor Esther Pauls
YES - Ward 8 Councillor John-Paul Danko
YES - Ward 10 Councillor Maria Pearson
YES - Ward 12 Councillor Lloyd Ferguson
YES - Ward 13 Councillor Arlene VanderBeek
NOT PRESENT - Ward 14 Councillor Terry Whitehead

Respectfully submitted,

Councillor N. Nann, Chair,
Public Works Committee

Carrie McIntosh
Legislative Coordinator
Office of the City Clerk



INFORMATION REPORT

TO:	Chair and Members Public Works Committee
COMMITTEE DATE:	April 4, 2022
SUBJECT/REPORT NO:	Ministry of Transportation Provincial Highway Projects Update (PW20063(a)) (City Wide)
WARD(S) AFFECTED:	City Wide
PREPARED BY:	Stephen Gagne (905) 546-2424 Ext. 4296
SUBMITTED BY:	Mike Field Acting Director, Transportation, Operations & Maintenance Public Works Department
SIGNATURE:	

COUNCIL DIRECTION

N/A

INFORMATION

Information Report PW20063(a) provides an update to Report PW20063 which was presented at the Public Works Committee in October of 2020 regarding significant Ministry of Transportation (MTO) capital projects that have a potential for traffic impacts on City of Hamilton (City) roadways as a result of planned temporary road closures in 2022/2023. In addition, it provides new information related to the Burlington Canal Lift Bridge deck replacement being undertaken by Public Works & Government Services Canada (PWGSC).

Highway 403 Bridge Rehabilitations:

The purpose of the MTO project is to rehabilitate Highway 403 at the Macklin Street overpass and the Old Guelph Road overpass to extend the service life of the structures.

OUR Vision: To be the best place to raise a child and age successfully.

OUR Mission: To provide high quality cost conscious public services that contribute to a healthy, safe and prosperous community, in a sustainable manner.

OUR Culture: Collective Ownership, Steadfast Integrity, Courageous Change, Sensational Service, Engaged Empowered Employees.

**SUBJECT: Ministry of Transportation Provincial Highway Projects Update
(PW20063(a)) (City Wide) – Page 2 of 3**

The Highway 403 Macklin Street overpass and the Old Guelph Road overpass are single span concrete rigid-frame structures were built in 1962. MTO conducted previous rehabilitation work in 1994.

All planned works are within MTO property and no City property impacts are anticipated.

The planned MTO bridge rehabilitation work includes:

- Removal and replacement of existing asphalt and waterproofing;
- Removal of select deteriorating concrete in deck;
- Concrete patch repairs on deck, soffit, and fascia;
- Crack injection on barriers and abutment walls;
- Replacement of a 4 m section of concrete centre median on the Old Guelph Road structure; and
- Repaving of Macklin Street (underneath Highway 403) within the MTO right-of-way.

The MTO has reviewed multiple construction staging and closure scenarios, in coordination with the Transportation, Operations & Maintenance Division, in order to reduce the traffic impacts. The optimal solution requires that the work will be completed through a full closure of Highway 403 between the Highway 6 and the King Street interchanges (refer to Appendix “A” attached to Report PW20063(a)).

Two full weekend closures, one direction at a time, will utilized to complete the work and during the closures traffic will be detoured onto the Lincoln M. Alexander Parkway, Red Hill Valley Parkway, York Boulevard and Queen Elizabeth Way (QEW).

Construction is anticipated to start in June of 2022 and expected to be completed in August 2022. The two full weekend closures will be coordinated with the City and the MTO and City will develop a robust communications plan to inform the public of the construction, closure and detour.

Highway 403 Wilson Street to Jerseyville Road Pavement Rehabilitation:

This MTO project is to rehabilitate deteriorating pavement condition along Highway 403 from 0.9 km west of Jerseyville Road in Brant Country to Wilson Street in Hamilton

The planned MTO rehabilitation work includes:

- Pavement rehabilitation along Highway 403 for approximately 15 km;
- Pavement resurfacing of the Highway 403/52 Interchange ramps;
- Retrofitting of conventional street lighting to LED illumination at Wilson Street;
- Roadside safety improvements; and
- Pipe sub-drain installation under the Sunnyridge and Alberton Structures.

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**SUBJECT: Ministry of Transportation Provincial Highway Projects Update
(PW20063(a)) (City Wide) – Page 3 of 3**

All planned works are within MTO property and no City property impacts are anticipated.

Construction is anticipated to start in May 2022, with an expected duration of 90 work days. Work will be conducted at night through nightly single lane closures. Traffic will be reinstated to existing lane configurations for the daytime, after the completion of night shift work. Refer to Appendix “A” attached to Report PW20063(a) for project location and detour mapping.

QEW Burlington Skyway Bridge Southbound Lane:

The MTO project is to replace expansion joints at the south abutment of the QEW Skyway Bridge.

The MTO is expected to start construction in Summer/Fall 2022 and work is expected to last approximately three months. The construction will result in nightly southbound lane closure on the QEW and full closures on select weekends.

The MTO and City will develop a robust construction and detour communications plan to inform the public of the construction, closure and detour.

Burlington Canal Lift Bridge Deck Replacement:

This PWGSC project is to replace the existing lift bridge deck which has exceeded its lifespan.

Construction will be conducted during the winter when shipping is not active and expected to commence on January 1, 2023 until the end of March 2023. During construction, the bridge deck will be raised and pinned up in place, resulting in a closure of Eastport Drive.

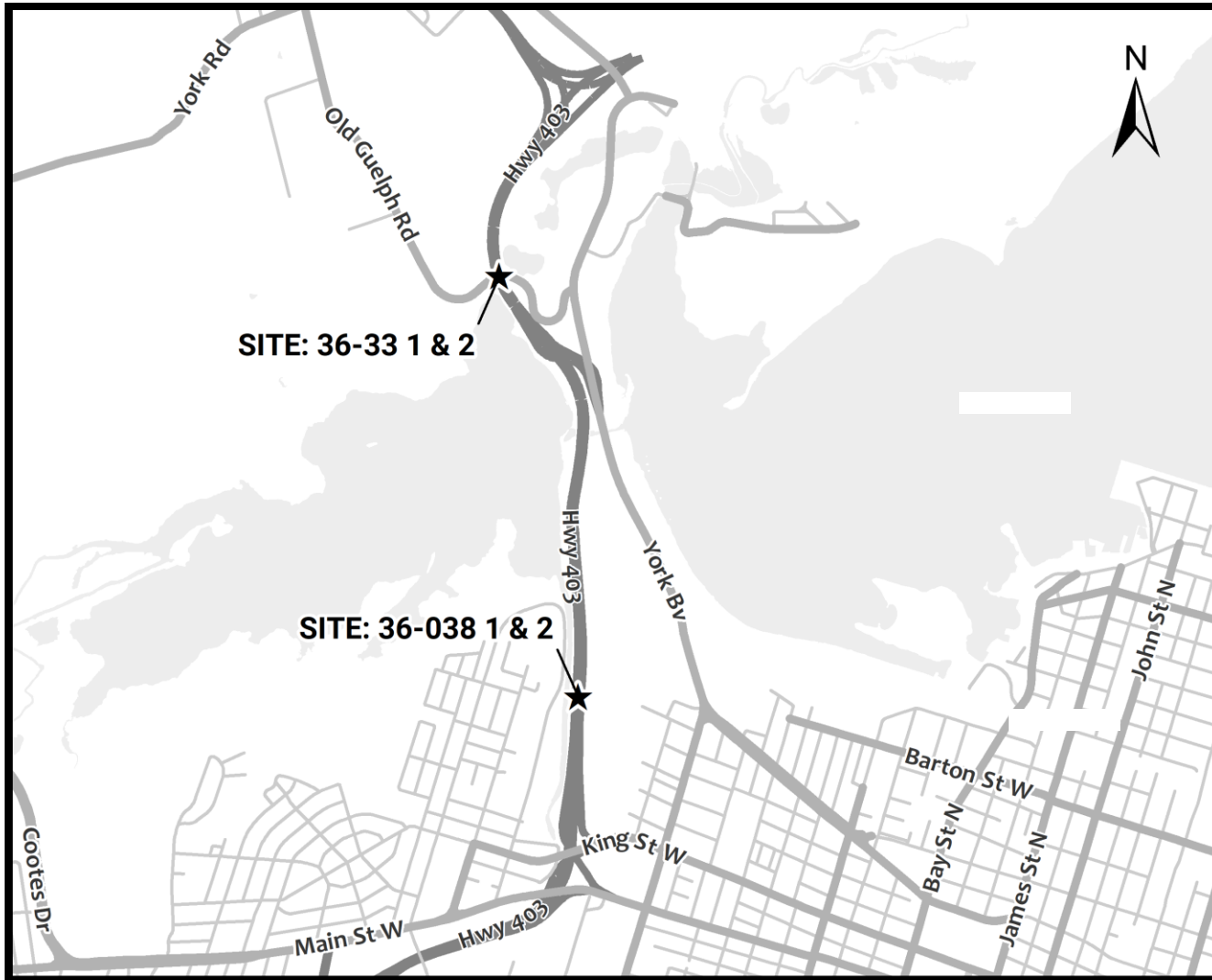
PWGSC has engaged AECOM Canada Ltd. to design and plan the construction work, including a traffic management plan in consultation with the City and the City of Burlington.

The detour route planning is on-going and has not yet been finalized. However, a robust communications plan will be utilized to inform the public of the construction, closure and detour routing in advance of the start of work.

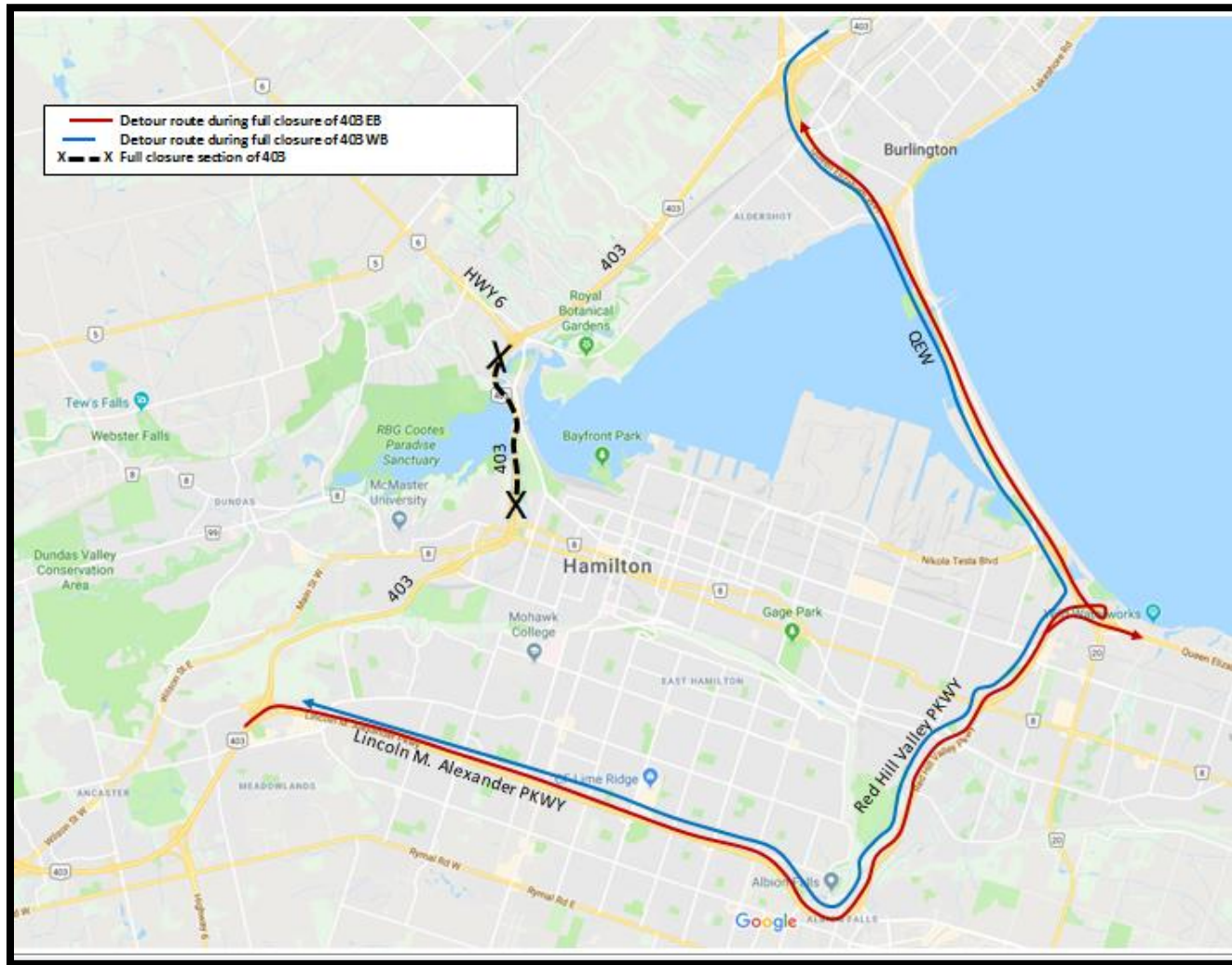
APPENDICES AND SCHEDULES ATTACHED

Appendix “A” to Report PW20063(a) – Project Locations and Detour Route Map

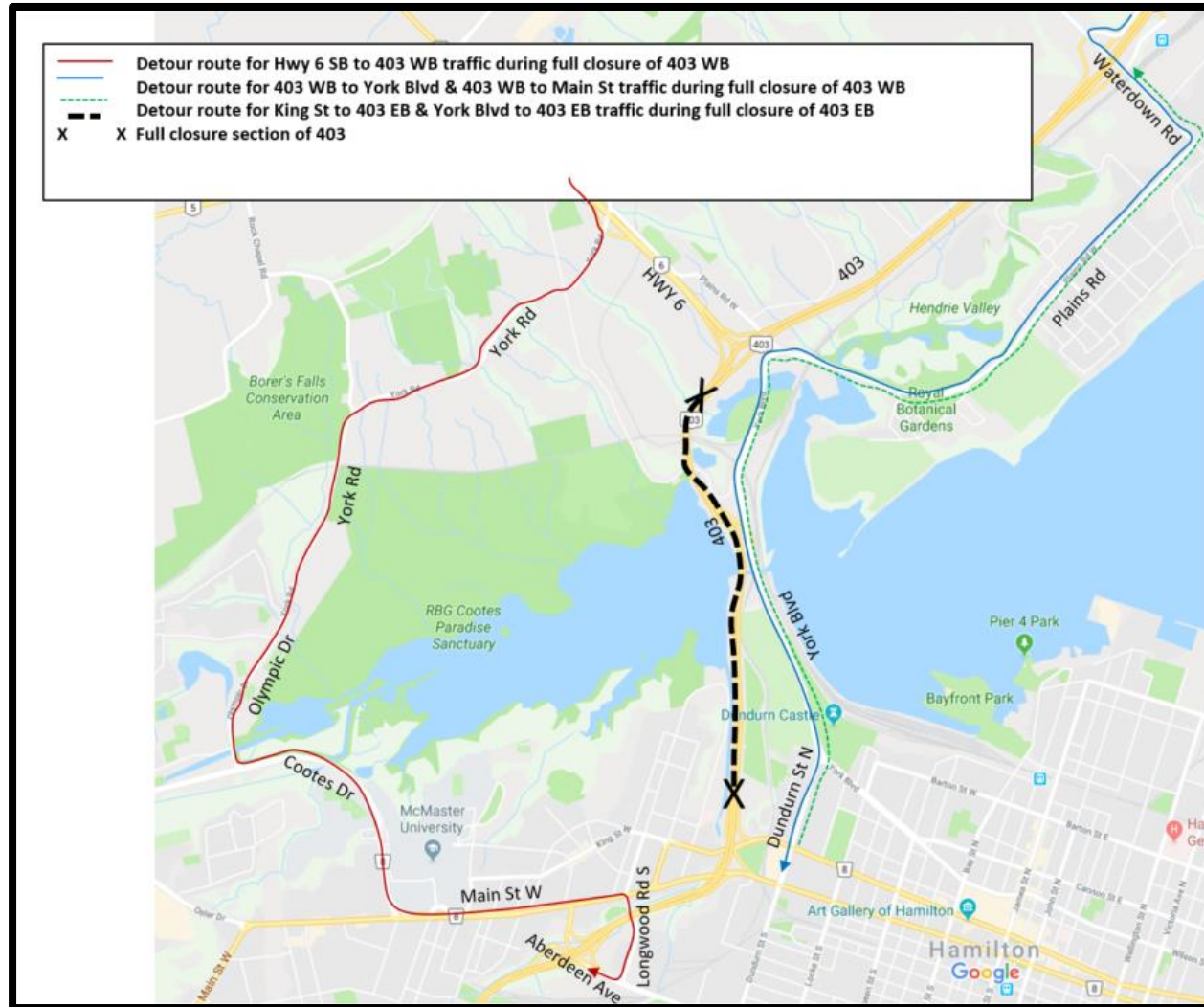
Project Locations – Old Guelph Road and Maclin Street Overpass Bridge Rehabilitation



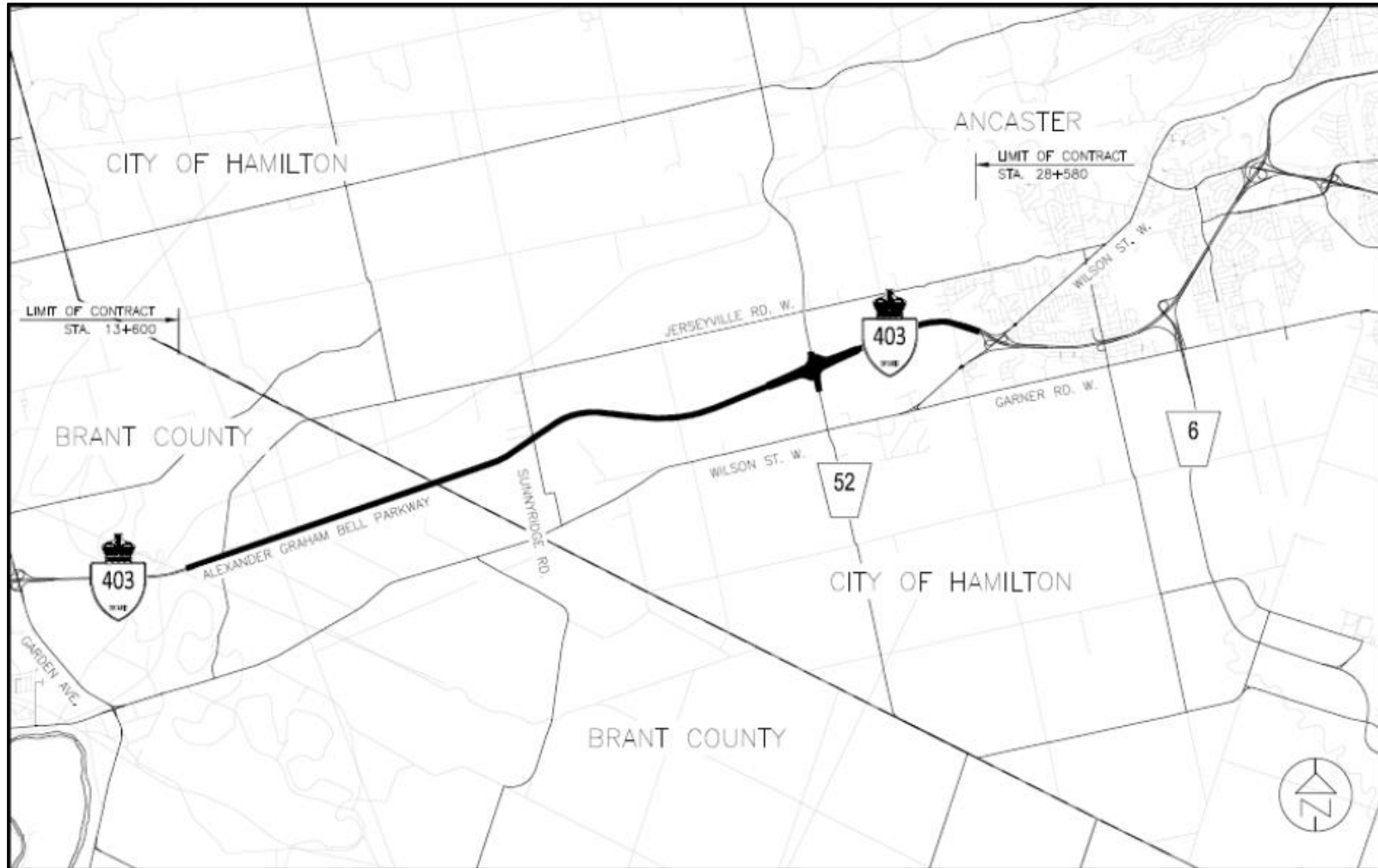
Detour Route – Old Guelph Road and Maclin Street Overpass Bridge Rehabilitation



Detour Route – Old Guelph Road and Maclin Street Overpass Bridge Rehabilitation




Project Location – Wilson Street to Jerseyville Road Resurfacing





INFORMATION REPORT

TO:	Chair and Members Public Works Committee
COMMITTEE DATE:	April 4, 2022
SUBJECT/REPORT NO:	2020 Bridge Ontario Structure Inspection Manual Summary Reports (PW22020) (City Wide)
WARD(S) AFFECTED:	City Wide
PREPARED BY:	Rafael Sandoval (905) 546-2424 Ext. 2508
SUBMITTED BY:	Susan Jacob Acting Director, Engineering Services Division Public Works Department
SIGNATURE:	

COUNCIL DIRECTION

In January 2020, City of Hamilton (City) Council approved Policy HR-01-09, Sharing of Consultant Reports with Identified Imminent Risk to Human Health or Safety, which requires staff to ensure Council is promptly and appropriately informed of any identified imminent danger to human health or safety.

Public Works Policy PW-P-008-001 - Sharing of Consultant Reports with Identified Imminent Risks to Human Health or Safety - requires that any member of Public Works staff who receive reports from consultants which identify an imminent danger to human health or safety share the reports with Council. Imminent in the Policy is defined as a circumstance or condition that is certain to happen soon.

The purpose of this information report is to inform Council regarding a number of safety concerns identified through the structural inspection program.

INFORMATION

Ontario Regulation 104/97, s. 3., states *that every bridge shall be kept safe and in good repair, and as such, works identified herein have been repaired.*

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**SUBJECT: 2020 Bridge Ontario Structure Inspection Manual Summary Reports
(PW22020) (City Wide) - Page 2 of 3**

O Reg. 104/97, s.3. also requires *that every bridge be inspected at least once every second calendar year to evaluate structural integrity, safety and condition.* Accordingly, the City's Engineering Services Division maintains a systematic inspection program of the structures on the roadway network.

Currently, the inspection program is divided into four groups, geographically distributed throughout the City. Two groups, or half of the inventory, are inspected annually. Inspections are carried out under the direction of a professional engineer and in accordance with the Ontario Structure Inspection Manual (OSIM).

In addition to the regulatory OSIM inspections, the City requires the engineer to complete less-involved field inspections on structures not owned by the City to ensure that those bridges are safe for use.

The Terms of Reference for each inspection mandates engineering consultants to immediately notify the City upon finding any critical performance deficiency or imminent safety condition, and in advance of submittal of the final summary report. It is understood that health and safety deficiencies marked by the engineer as "now" are to be considered as imminent.

For inspections required in 2020, the City retained Morrison Hershfield Limited and Wood Environmental & Infrastructure Solutions, from the Professional and Consultant Services Roster. Final summary reports for each consultant are provided in Appendices "A" and "B" attached to Report PW22020.

Morrison Hershfield Limited inspected 94 City-owned structures; 12 structures were noted with urgent and/or critical works as defined by inspection standards. However, it should be noted that only one issue related to delaminated concrete over the Lincoln Alexander Expressway at Bridge 289 - Upper Sherman Avenue was flagged as now (imminent). The noted issue was communicated to Transportation, Operations & Maintenance in September 2020 and was addressed by removing loose concrete and completing repairs through use of Procurement Policy # 10 – Emergency Procurements.

Wood Environmental & Infrastructure Solutions inspected 129 structures, including 32 structures not owned by the City; 12 structures, including 2 non-City-owned bridges were noted with urgent and/or critical works. However, it should be noted that only one issue per each of the following three structures were flagged as imminent: Bridge 234 – South Service Road (257 m east of Jones Road), Bridge 244 – Highway # 8 (15 m west of Fifty Road), and Bridge 314 - Claremont Access (over Charlton Avenue). Safety issues related to performance deficiencies of the steel beam guide rail at Bridges 234 and 244, and a missing utility access hole lid at Bridge 314.

**SUBJECT: 2020 Bridge Ontario Structure Inspection Manual Summary Reports
(PW22020) (City Wide) - Page 3 of 3**

Transportation, Operations & Maintenance were notified of the noted issues for immediate attention. All imminent health and safety deficiencies were addressed and completed between January and early March 2022.

The City maintains \$2M in the annual Bridge & Culvert Maintenance account to address minor rehabilitation and maintenance works.

APPENDICES AND SCHEDULES ATTACHED

Appendix “A” to Report PW22020 - 2020 Overall Summary Report Batches 1A & 1B by Morrison Hershfield Limited, dated June 2021.

Appendix “B” to Report PW22020 - 2020 Overall Summary Report Batches 1C & 1D by Wood Environmental & Infrastructure Solutions, dated November 2021.



Hamilton

The City of Hamilton

**Consulting Engineering Services for
Bridges and Culverts OSIM Inspections
(2020)**

OVERALL SUMMARY REPORT

1805361.11

June 2021



FOREWORD

This report and all associated documents (herein “the Report”) were prepared by Morrison Hershfield Limited for the sole purpose stated in the Report, for exclusive use by The City of Hamilton (City) and may not be reproduced in whole or in part, or used or relied upon in whole or in part by any party other than the City for any purpose whatsoever without the express permission from the City in writing.

The inspection observations, comments, ratings, priorities, and the like, reflect the best judgment of Morrison Hershfield and its employees. As with any such work, there may be some subjectivity, and priorities may vary depending on mitigating perspectives or criteria.

Cost estimates are preliminary indicative costs for long-range budgeting purposes only. The difficulties involved in estimating future construction costs without a detailed analysis and final engineering design are well established. This must be taken into account when considering the preliminary costs contained herein.

Actual maintenance, repair, and rehabilitation choices made by the City will depend on many parameters and constraints, such as: available funding, best practices, life-cycle cost minimization, minimum condition standards, and the like.



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A. Bridge List with Associated Works



Hamilton

1. EXECUTIVE SUMMARY

The City of Hamilton (City) maintains a comprehensive inventory of all its bridge and culvert structures. In accordance with the Ontario Regulation 104/97, the City has an ongoing program for the regular inspections of all its structures. The City uses the data collected from these inspections to assist in the development of bridge and culvert maintenance and rehabilitation programs. The ongoing inspections are intended to monitor deterioration and to identify potential structural and safety issues before they become a problem.

A total of ninety-four (94) structures were inspected in accordance with the Ontario Structure Inspection Manual (OSIM), including: twenty-nine (29) for Batch 1A – Railway structures, forty-seven (47) for Batch 1B – Expressway structures, and eighteen (18) for 2020 Additional structures. This report presents the results of the 2020 inspection of these structures. Based on a review of our inspection findings, recommendations were developed for structures that require maintenance, rehabilitation, or replacement. Cost estimates were only considered for structures that require rehabilitation or replacement.

The majority of the inspected structures were found to be in fair to good condition requiring only minor repair or maintenance in the short term.

Bridges and culverts, like all capital assets, require ongoing maintenance, as well as periodic repair and rehabilitation. The timing of such work should be coordinated such that the overall life cycle costs are minimized within the framework of acceptable performance criteria. It is neither necessary, practical, nor financially prudent to insist that all structures be in “pristine” condition at all times.



Hamilton

2. INTRODUCTION

Morrison Hershfield Limited (MH) was retained by The City of Hamilton (City) to inspect a total of ninety-four (94 structures) for the City of Hamilton's 2020 Structure Inspection Program. A list of the structures inspected including time, weather, date of inspection, and type of structures, can be found in the Bridge List with Associated Works spreadsheet in Appendix "A".

Scope of Work

The scope of work, as defined in The City's Terms of Reference, and the MH proposal dated June 25, 2020, is generally as follows:

- 1) Perform detailed visual inspections of all the structures in accordance with OSIM, noting any defects, deteriorations and/or deficiencies.
- 2) Compile field observations of all relevant structural data into an OSIM style report for each structure via Stantec's BMS database software, including:
 - Verifying inventory data.
 - Assessing the individual condition state (including criticality ratings) of each structural element, in addition to an overall Bridge Condition Index (BCI) for each structure.
 - Identify bridges and culverts that are underperforming (in terms of condition, capacity, and level of service).
 - Identify any public safety concerns and recommend immediate actions required by the City.
 - Identifying maintenance needs and additional investigations.
 - Recommending rehabilitation improvements and estimated costs to bring the existing structure to an improved or desirable level of service, where appropriate.
 - Compiling visual records using digital photographs.
- 3) Prepare an Overall Summary Report summarizing the findings presented in the individual OSIM reports (e.g., list of urgent and critical works to be completed now or within one year, maintenance and rehabilitation needs, etc.).
- 4) Verify and update the City's Master Bridge List, based on the inspection findings.

Basic Information

Information on the structures was obtained from data provided by the City of Hamilton and supplemented by site measurements/investigations.



Hamilton

3. QUALIFICATIONS & EXPERIENCES OF PROJECT MANAGER & PROJECT TEAM

3.1. Staff Experience

The Project Manager or, **Scott Quach, P. Eng.**, is a Principal and Project Manager of Morrison Hershfield. Scott is a Senior Structural Engineer with over 32 years' experience in structural inspection and rehabilitation design of bridges and culverts. His inspection experience includes managing and performing detailed visual inspections, condition surveys, and structural inspections on more than 1000 bridges, 700 culverts, and 20 overhead sign support structures for the Ministry of Transportation, City of Toronto, Toronto Transit Commission, and various government agencies and authorities. Scott is the engineer of record and served as one of the Lead Inspectors for this project.

Randy Yu, P. Eng. was responsible for Quality Control and served as the Quality Verification Engineer (QVE) for this project. Randy is the Department Manager for Transportation Structures Department at MH and brings over 38 years of transportation structures experience to the project.

Paul Locham, C.E.T. was a Lead Field Inspector for this project. Paul is a Principal of Morrison Hershfield and brings over 22 years' experience to the project. He has been involved in numerous projects as Construction Administrator and Site Inspector, having worked in projects for various municipalities such as the City of Mississauga, City of Toronto, and TTC.

Tien Nguyen, G.E.I.T was a **Site Inspector** for this project. Tien joined the Transportation Structures Department at MH in 2015. He assisted the team assigned to this project with various tasks including field inspection and report preparation.

Nerujan Sivanesan, E.I.T. was a **Site Inspector** for this project. Nerujan joined the Transportation Structures Department at MH in 2016. He assisted the team assigned to this project with various tasks including field inspection and report preparation.

Eugene Tu, G.E.I.T. was a **Site Inspector** for this project. Eugene joined the Transportation Structures Department at MH in 2017. He assisted the team assigned to this project with various tasks including field inspection and report preparation.



Hamilton

4. DETAILED VISUAL INSPECTIONS

4.1. General

Detailed visual inspections were performed in accordance with element and condition classifications as prescribed in the Ontario Structure Inspection Manual (OSIM), May 2018 Revision. Non-destructive means were used to establish the scale of deterioration (e.g., by hammer sounding), where possible and all site observations were noted and recorded. Field measurements were taken on all structures where no drawings were available and used to verify measurements from previous OSIM inspection reports. Each element of the listed structures was inspected and quantified in accordance with the procedures and format set out in the OSIM.

4.2. Summary of Observations and Recommendations

Detailed field observations and remedial recommendations are identified per individual site in individual OSIM reports, as well as the Bridge List with Associated Works spreadsheet, attached in Appendix "A". Appraisal summaries identifying maintenance and repair needs are as described in the ensuing sections of this report.



Hamilton

5. STRUCTURE APPRAISALS AND IDENTIFICATION OF URGENT AND CRITICAL WORKS

A total of ninety-four (94) sites, seventy-two (72) bridges and twenty-two (22) culverts, were inspected. Based on a review of the inspection findings, recommendations and/or cost estimates were developed for structures that require maintenance, rehabilitation, or replacement.

5.1. Urgent and Critical Works

The structures recommended with urgent and/or critical work(s) are to be completed “now” or within one year based on the observed site conditions noted during the visual inspection and assessment by the Engineer of Record. Urgent and critical works for the recommended structures are assigned a Critical Risk Rating of High, Medium, or Low and the recommended structures are ranked overall by a Critical Risk Ranking. Structures recommended with urgent and critical works shall include items such as structures with pedestrian and/or vehicular hazards, structures believed to have a Load Carrying Capacity deficiency for single-unit and two-unit vehicles under normal traffic as defined in Section 14 of the Canadian Highway Bridge Design Code (CHBDC), any deficiencies if left unattended for more than one year, may trigger a structural failure/ collapse, full/partial bridge closure, or repairs/rehabilitation works equivalent to 20% of the total bridge replacement cost, etc.

A total of twelve (12) sites, ten (10) bridges and two (2) culverts, are recommended with urgent and/or critical works as shown in Table 2 below and can be seen under recommended maintenance and recommended rehabilitation/replacement in Appendix “A”.



Table 1: Urgent and Critical Works

Struct. No.	Batch	Structure Name	Element	Type of Work	Description of Work	Performance Deficiency	Timing (Years)	Critical Risk Rating	Critical Risk Ranking
289*	1B	UPPER SHERMAN AVE	Barrier Walls	17 – Scaling (Loose Concrete/ACR steel)	Scale delaminated concrete over LINC traffic lanes.	Pedestrian/vehicular Hazard	Now	High	1
			Deck Top	Minor Rehab	Repair deteriorated concrete on both barrier walls.	None	<1	High	
159*	Additional	REGIONAL 56 RD	Barrels	Minor Rehab	Installation of temporary support struts.	4 – Continuing Movements	1	High	2
216	1B	Red Hill Valley Pkwy SB Off-Ramp to King St	Hand Railings Interior	3 – Railing System Repair	Replace north hand railing at east approach.	None	1	High	3
			Barrier Wall	8 – Concrete Repair	Repair damaged section at northeast corner.	None	1	High	
224	1B	Pedestrian Bridge over QEW (Red Hill Creek Expressway)	Approach Slabs	18 – Other Maintenance	Rectify trip hazard.	Pedestrian/vehicular Hazard	1	High	4
			Embankments	13 – Erosion Control at Bridges	Repair scour at east approach slab.	Pedestrian/vehicular Hazard	1	High	
299	1A	Sydenham Rd	Barrier/Railing Systems	18 – Other Maintenance	Remove trip hazard at NE & SE app sidewalks.	Pedestrian/vehicular Hazard	1	High	5
			Approach Sidewalk/curb	3 – Railing System Repair	Extend NE SBGR to close gap on railing at North end.	Pedestrian/vehicular Hazard	1	High	



Struct. No.	Batch	Structure Name	Element	Type of Work	Description of Work	Performance Deficiency	Timing (Years)	Critical Risk Rating	Critical Risk Ranking
294	Additional	Rousseaux St	Embankments	13 – Erosion Control at Bridges	Fill scour between end of SE concrete post & south sidewalk.	Pedestrian/vehicular Hazard	1	High	6
			Sidewalk & medians	18 – Other Maintenance	Remove trip hazard at east end.	Pedestrian/vehicular Hazard	1	Medium	
307	1A	Main St W	Beams/MLE's-Girders	17 – Scaling (Loose Concrete/ACR steel)	Scale delaminated concrete on 1st & 3rd girder from north.	Pedestrian/vehicular Hazard	1	Medium	7
288	1B	Upper Wentworth St.	Approach Sidewalk/curb	18 – Other Maintenance	Remove pedestrian trip hazard at end of SW approach sidewalk.	Pedestrian/vehicular Hazard	1	Medium	8
210	1B	Mount Albion Rd (West Structure)	Approach Sidewalk/curb	18 – Other Maintenance	Remove trip hazard on NW approach sidewalk.	Pedestrian/vehicular Hazard	1	Medium	9
			Hand Railings	3 – Railing System Repair	Replace missing railing bolts & secure south railing.	Pedestrian/vehicular Hazard	1	Medium	
211	1B	Mount Albion Rd (central Structure)	Hand Railings	3 – Railing System Repair	Secure north & south railing at east approach & repair broken post at SE corner.	Pedestrian/vehicular Hazard	1	Medium	10
287	1B	Upper Wellington St	Approach Sidewalk/curb	18 – Other Maintenance	Repair trip hazard @ SE & fill void @ SW	Pedestrian/vehicular Hazard	1	Low	11
184	1A	Macnab St N	Approach Sidewalk/curb	18 – Other Maintenance	Eliminate trip hazard at NW & NE approach sidewalks.	Pedestrian/vehicular Hazard	1	Low	12

*For Site 289, Loose concrete areas over the traffic lanes were reported to the City of Hamilton on September 18, 2020.

*For Site 159, 2019 OSIM report stated: "Structure planned for replacement within two years" (2021). If the structure is not being replace, then install temporary struts.



Hamilton

5.2. Recommended Regular Maintenance

The structures recommended for maintenance are based on the observed site conditions noted during the visual inspections. Routine maintenance needs include items such as: cleaning debris from structure elements, patching small/shallow potholes, scaling (loose concrete or ACR steel), repairing scours, removing vegetation from streams, etc.

A total of twenty-one (21) bridges in Batch A, thirty-three (33) bridges and three (3) culverts in Batch B, and three (3) bridges and nine (9) culverts in Additional are recommended for maintenance as shown in Table 2 below and in Appendix "A". It should be noted that maintenance work presented previously in Table 1 under section 5.1 Urgent and Critical Works of the Report are not repeated in Table 2.



Table 2: Recommended Regular Maintenance

Struct. No.	Structure Name	Maintenance Description	Timing (Year(s))
BATCH A			
036	MIDDLETOWN RD	Monitor rotation of end panels at all corners of retaining walls.	2
037	WEIRS LN	Repair/replace damaged hazard signs.	1
153	RED HILL VALLEY PKWY CPR OVERHEAD	Tight loose nut on bearing plate anchor bolts.	2
		Repair disconnected conduit at northeast quadrant.	2
164	KENILWORTH AV S	Repair loose connection at north end of railing.	2
174	MAIN STREET NORTH BRIDGE	Remove debris on abutment bearing seats.	2
		Reconnect utility casing.	2
177	CHATHAM ST	Remove debris from seals.	2
180	PEDESTRIAN BRIDGE OVER CNR TRACKS (MARY ST)	Replace junction box cover at south abutment.	2
		Tighten and replacing missing nuts.	1
184	MACNAB ST N	Replace missing bolt and end caps.	2
		Secure railing at north staircase.	2
186	PEDESTRIAN BRIDGE OVER CNR TRACKS (EMERALD ST N)	Replace missing bolts on diagonal bracings.	2
		Cleaning & re-coating railing.	2
		Replace nails in wood with wood screws.	2
245	RIDGE RD	Remove debris from seals.	2
		Repair trip hazard at east approach.	2
273	SHERATON HOTEL JACKSON SQUARE PEDESTRIAN BRIDGE	Reset a few false ceiling panels.	2
		Replace torn and damaged roof sections.	2
276	NEWMAN RD	Replace end cap at north end of west railing.	2
299	SYDENHAM RD	Replace missing bolt on railing post.	2
		Remove debris from seals.	2
307	MAIN ST W	Patch potholes.	1
310	YORK BV	Remove debris from drains.	2
		Remove debris from seals.	2
315	CLAREMONT AC	Reconnect/secure railing at south end.	2
		Repair scour at southwest corner.	2
332	BIRCH AV	Replace wood at northeast corner.	2
391	GOVERNOR'S RD	Remove debris from seals.	2



Struct. No.	Structure Name	Maintenance Description	Timing (Year(s))
449	HIGHWAY NO. 52	Clean and Coat SE Abutment bearing.	2
		Replace missing bolt @ 6 th post from south, on west rail.	2
		Repair scour in front of north abutment.	2
		Remove debris from seals.	2
451	HIGHWAY NO. 5 E	Repair scour at west embankment.	2
474	FERGUSON AV N	Repair trip hazard on approach sidewalks.	2
BATCH B			
201	RHVP SB OFF-RAMP TO STONE CHURCH RD	Repair West barrier wall on North approach at impact damage section.	1
204 – NB	RHVP TWIN VIA DUCT NORTHBOUND BRIDGE	Extend asphalt drainage pipe away from abutment	2
		Remove debris from seals under maintenance	2
204 – SB	RHVP TWIN VIA DUCT SOUTHBOUND BRIDGE	Extend asphalt drainage pipe away from abutment.	2
		Repair scour at southeast embankment.	2
		Remove debris from joints under maintenance.	2
205	GREENHILL AV	Repair scour at southeast embankment.	2
		Replace missing armouring at northwest corner.	2
		Remove debris from seals.	2
212	MOUNT ALBION RD (EAST STRUCTURE)	Monitor longitudinal cracks at northeast corner of deck.	2
		Remove debris as part of maintenance.	2
216	COLTER STREET FOOTBRIDGE	Repair damaged section at north east approach guiderail.	1
217	QUEENSTON RD ON-RAMP TO SB RHVP	Replace missing railing bolt.	2
		Repair drainage tube at southwest.	2
		Repair scour at north embankment.	2
		Remove debris from seals.	2
218	RED HILL VALLEY PKWY SB OFF-RAMP TO QUEENSTON RD	Replace missing bolts on hand railings.	2
		Repair scour at northwest corner.	2
220	RHVP SOUTHBOUND BRIDGE	Remove debris from abutment bearing seats.	2
		Repair scour in front of north abutment.	2
		Remove debris from seals.	2
221	RHVP NORTHBOUND STRUCTURE 1	Repair scour at north abutment and piers.	2
222	RHVP NORTHBOUND STRUCTURE 2	Close box girder hatch and install new bolts.	1
		Repair scours in front of south abutment and southeast embankment.	2



Struct. No.	Structure Name	Maintenance Description	Timing (Year(s))
		Clean/remove debris from joint seals.	2
283	UPPER PARADISE RD	Patch pothole on south approach on SBL.	2
		Replace broken box cover on west barrier wall at north end.	2
		Remove debris from EJ.	2
		Repair broken section of retaining wall.	2
284	GARTH ST	Repair pedestrian trip hazard on SW approach sidewalk.	1
		Replace broken junction box covers and missing bolts.	2
		Patch potholes.	1
		Remove debris from seals.	2
285	WEST 5 TH ST	Replace missing railing bolts on barrier walls.	2
		Replace missing railing bolts on SBGR.	2
286	UPPER JAMES ST	Remove/clean bird droppings behind bearings.	2
287	UPPER WELLINGTON ST	Replace missing cover plate at NE light pole.	2
		Replace damaged wooden post.	2
		Clean joint seals.	2
288	UPPER WENTWORTH ST	Remove debris from seals	2
289	UPPER SHERMAN AV	Patch pothole on north approach.	2
		Remove debris from seals.	2
290	UPPER GAGE AV	Replace missing cover on light pole.	2
		Replace missing bolts on east and west hand railings.	2
		Remove debris from seals.	2
		Eliminate trip hazard at north and south end of east approach sidewalk.	2
291	UPPER OTTAWA ST	Replace missing railing bolts and broken end cap.	2
		Clear tree branches that encroach bridge at southwest embankment.	2
		Remove debris from seals.	2
		Replace leaking seals.	2
293	MOHAWK RD	Replace missing bolts on south junction box.	2
		Replace bolt on 3rd post from north at east rail.	2



Struct. No.	Structure Name	Maintenance Description	Timing (Year(s))
		Reset broken south concrete slope paving.	2
		Remove debris from seals.	2
324	KING ST E	Patch pothole at west approach.	2
		Remove debris from north deck drain.	2
		Remove debris from joint seals.	2
		Remove trip hazard on northeast sidewalk.	2
		Remove debris atop west abutment seat.	2
325	QUEENSTON RD	Replace missing bolts on junction box.	2
		Replace damaged section at NE SBGR.	2
		Replace missing bolts on railings.	2
		Remove debris from deck drains under maintenance.	2
		Patch potholes on bridge deck under maintenance.	1
		Replace missing bolt on west joint armoring at southwest approach.	2
		Remove debris from joint seals.	2
		Patch potholes at east approach under maintenance.	1
377	KING ST E	Remove tree debris from south inlet.	2
378	BARTON ST E	Replace missing bolts on railings.	2
		Replace missing section on north railing and secure rail to posts.	2
		Remove debris from joint seals.	2
		Patch core hole on north sidewalk.	2
459	PEDESTRIAN TUNNEL UNDER LINCOLN M. ALEXANDER PY (GREENCEDAR DR)	Replace broken fence cap on north fence (EB Bridge) at west end.	2
460	PEDESTRIAN BRIDGE OVER LINCOLN M. ALEXANDER PY (FIONA CRES)	Replace missing junction box cover on north lamp post.	2
461	LINCOLN M. ALEXANDER PY CULVERT	Repair pothole under maintenance.	2
462	DARTNALL ON-RAMP TO WB LINC	Repair scour southwest and northeast embankments.	2
465*	PEDESTRIAN BRIDGE OVER HWY 403	Scale loose concrete on North girder over Hwy 403 WB Lane 2 & West Shoulder Area at Hwy 403 WB	Now
		Eliminate pedestrian trip hazard at east end of deck.	1
467	PRITCHARD RD	Replace outward leaning posts on damaged section at northeast approach guiderail.	2
		Repair damaged steel beam section at northeast.	2



Struct. No.	Structure Name	Maintenance Description	Timing (Year(s))
468	DARTNALL RD	Replace missing bolts on east railing.	2
		Tighten loose bolt on northwest approach guiderail.	2
		Remove debris from joint seals.	2
475	PEDESTRIAN BRIDGE OVER LINCOLN M. ALEXANDER PY (ARBOUR RD)	Replace missing timber section on east railing.	2
		Replace missing screws at centre pier steel plate.	2
ADDITIONAL			
008	Wilson St W	Reconnect post & replace damaged sections.	1
		Fix leaning sign.	1
108	Indian TL	Install hazard sign at SW corner & replace NW sign.	1
		Replace/ repair locally damage sections of SBGR.	1
111	MINERAL SPRINGS RD	Patch potholes on approach and deck wearing surface.	1
		Trim tree branches on east railing at north end.	2
		Repair scour at northeast exposed end of culvert.	2
113	SULPHUR SPRINGS RD	Smoothen uneven gravel surface.	1
		Repack bottom of gabion wall.	1
151	PEDESTRIAN BRIDGE OVER CREEK (PARKSIDE DR)	Repair scour and replace broken gabion baskets.	2
159	REGIONAL 56 RD	Replace sign at northwest corner.	2
		Replace missing post on east railing at south approach road.	2
261	UPPER JAMES ST	Repair torn steel section of SBGR at northwest end.	1
277	OLD DUNDAS RD	Repair scour at southwest and southeast corners of railing.	2
294	ROUSSEAU ST	Replace damaged hazard sign at end of northeast SBGR.	1
		Replace damaged steel offset post and missing bolt.	2
346	CENTRE RD	Remove all loose stone facing off railing posts.	2
350	CENTRE RD	Repair steel beam guiderail.	2
397	GLANCASTER RD	Repair scour at west embankment.	2

*For Site 465, Loose concrete areas over the traffic lanes were reported to the City of Hamilton on October 2nd, 2020 and removed as of Fall 2020.



5.3. Recommended Rehabilitation & Replacement

Based on the results of the structural inspections, a list has been developed for the thirty-two (32) structures, twenty-two (22) bridges and ten (10) culverts, requiring major or minor rehabilitation work as shown below in Table 3 and in Appendix "A". The rehabilitation/replacement recommendations are listed with a priority rating from 1 to 32 (1 being the top priority), which are based on the severity of the observed conditions and the work required for each structure. Prioritization of work for each structure considers the extent of deterioration, particularly those items that relate to safety issues. Higher priority is generally assigned to items that are directly related to public safety. An estimate of the repair/replacement costs for each of the structures in this list has been completed for budgeting purposes. Additional remarks are included for sites with ongoing or upcoming work under separate assignments.

The following cost estimates for the recommended rehabilitation/replacement works were based on the extent of deterioration, required traffic control, and access protection as well as the unit costs provided in Stantec's BMS software. A detailed inspection (including a detailed bridge deck condition survey) and detailed engineering designs, as well as site specific requirements for staging, detours, etc. would be required to determine more accurate rehabilitation work scope and pricing. Furthermore, it is well known that future estimating of project costs are difficult due to the unique conditions of each individual contract and the influence of local and global markets on labour and construction materials. It is not possible to predict future construction cost escalation with any certainty in the estimate, which can also intensify depending on the lag time between the design and advertised period.



Table 3: Recommended Work Priority Ranking

Work Priority Ranking	Struct. No.	Batch	Structure Name	Work Category	Timing	Recommended Work Description	Cost (\$)	Remarks
1	289	1B	UPPER SHERMAN AVE	Minor Rehab	< 1 year	Repair deteriorated concrete on both east and west barriers walls.	45,600.00	
2	159	Additional	REGIONAL 56 RD	Replacement	1 – 5 years	<p>Replace culvert barrel. If culvert is not replaced, installation of temporary support struts is recommended.</p> <p>Repave asphalt wearing surface atop culvert and approaches.</p> <p>Replace Northwest & Southwest gabions walls.</p> <p>Install gabions at Northeast and Southeast ends.</p>	590,420.00	2019 OSIM Report stated: "Structure planned for replacement within two years" (2021). Significant increase in north and south wall rotation from 2019 to 2020.
3	346	Additional	CENTRE RD	Major Rehab	1 – 5 years	<p>Replace girder 5 and 6 from east.</p> <p>Patch repair girders 1 to 4 and 7 to 10 from east.</p> <p>Repave asphalt wearing surface.</p> <p>Replace overlay with new structural slab.</p> <p>Replace railing system & sidewalk.</p>	551,575.00	Structural evaluation and load posting have been completed under a separate assignment.
4	451	1A	HIGHWAY NO. 5 E	Major Rehab	1 – 5 years	<p>Replace bridge deck, expansion joint systems, abutment bearings, sidewalks and curbs, and barrier railing systems.</p> <p>Patch repair on girders, abutments, and piers.</p> <p>Repave wearing surface and install new waterproofing system.</p>	3,142,005.00	Emergency remedial repair of deck is ongoing. Bridge is scheduled for replacement in 2024.



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Work Priority Ranking	Struct. No.	Batch	Structure Name	Work Category	Timing	Recommended Work Description	Cost (\$)	Remarks
5	452	1A	CENTENNIAL PY	Major Rehab	1 – 5 years	Replace Expansion Joint systems. Repair deteriorated concrete on deck top, soffit, piers, beams, diaphragms, abutments, ballast walls, wingwalls, barrier, approach curb, and sidewalks. Repave deck and approach wearing surface	907,262.00	Bridge scheduled for rehabilitation (1-5 years).
6	108	Additional	INDIAN TL	Replacement	1 – 5 years	Replace culvert barrel, headwall and wingwalls.	250,200.00	Pending temporary shoring scheduled to be installed in 2021.
7	282	1B	LONGWOOD RD S	Major Rehab	1 – 5 years	Patch repair on abutment, pier, soffit, approach slab, sidewalk/curbs, and barrier wall. Repave approach and deck wearing surface. Construct concrete overlay on deck. Replace barrier railings and Expansion Joint system. Recoat end girder and diaphragms.	3,055,080.00	Temporary Holding Strategy Design is ongoing. Scheduled to be rehabilitated in 2021-2022.
8	113	Additional	SULPHUR SPRINGS RD	Major Rehab	1 – 5 years	Replace timber post delineators with a steel beam guard rail system. Replace Northeast gabion retaining wall. Repair deteriorated concrete in culvert barrel & inlet components. Excavate and reconnect dislodged CSP on south wall near west end.	569,700.00	



Work Priority Ranking	Struct. No.	Batch	Structure Name	Work Category	Timing	Recommended Work Description	Cost (\$)	Remarks
9	350	Additional	CENTRE RD	Major Rehab	1 – 5 years	Patch repair deck and soffit. Repave asphalt and replace waterproof system. Repave approach road. Replace railings.	170,350.00	
10	111	Additional	MINERAL SPRINGS RD	Major Rehab	1 – 5 years 6–10 years	Repave deck and approach wearing surfaces. Repair deteriorated concrete on barrier posts, curbs, barrel, & Retaining wall. Repair deteriorated steel on railings.	77,211.00	
11	307	1A	MAIN ST W	Major Rehab	1 – 5 years	Patch repair on deck top, approach slabs & retaining walls. Repave deck & approach wearing surface. Replace railing system, barrier posts, damaged section of SBGRs, sidewalk & curbs. Recoat structural steel.	602,362.00	
12	177	1A	CHATHAM ST	Minor Rehab	6-10 years	Repair deteriorated concrete on end soffit and pier caps/shafts.	53,615.00	



Work Priority Ranking	Struct. No.	Batch	Structure Name	Work Category	Timing	Recommended Work Description	Cost (\$)	Remarks
13	324	1B	KING ST E	Minor Rehab	6-10 years	<p>Repair deteriorated concrete on sidewalks, centre median, and barrier walls.</p> <p>Repair/reconstruct EJ at Northwest Corner on Curb and Sidewalk.</p> <p>Resurface asphalt wearing surface.</p>	193,278.00	
14	274	1A	YORK BV	Major Rehab	6-10 years	<p>Replace existing concrete overlay with asphalt and w/p system.</p> <p>Repair deteriorated concrete on soffit, deck top, abutment wall, pier, barriers, sidewalk, median, approach slabs & approach sidewalk.</p> <p>Replace longitudinal seal.</p>	1,308,300.00	
15	186	1A	PEDESTRIAN BRIDGE OVER CNR TRACKS (EMERALD ST N)	Major Rehab	6-10 years	Clean and recoat truss members and connections, steel floor beams, bracing, steel pier and steel staircases.	243,400.00	
16	277	Additional	OLD DUNDAS RD	Major Rehab	6-10 years	Recommend repair deteriorated concrete areas in culvert barrel.	32,950.00	
17	459	1B	PEDESTRIAN TUNNEL UNDER LINCOLN M. ALEXANDER PY (GREENCEDAR DR)	Minor Rehab	1 - 5 years	Repair deteriorated concrete on interior and exterior barrier walls.	34,820.00	



Work Priority Ranking	Struct. No.	Batch	Structure Name	Work Category	Timing	Recommended Work Description	Cost (\$)	Remarks
18	201	1B	RHVP SB OFF-RAMP to STONE CHURCH RD	Minor Rehab	1 – 5 years	Patch repair west barrier wall at north end (impact damage location).	6,240.00	
19	164	1A	KENILWORTH AV S	Minor Rehab	1 – 5 years	Repair deteriorated concrete on abutment walls, wingwalls, piers, retaining walls, approach curbs and sidewalk. Replace railing along center median. Recoat/repair areas of loss coating on girders.	117,890.00	
20	294	Additional	ROUSSEAU ST	Major Rehab	1 – 5 years	Repair deteriorated concrete in culvert barrel.	70,000.00	
21	007	Additional	CONCESSION 7 W	Replacement	6–10 years	Replace culvert. Install new guiderail, gabion retaining walls and riprap. Repave approach road and roadway atop culvert.	243,890.00	Temporary shoring installed in 2019.
22	008	Additional	WILSON ST W	Major Rehab	6–10 years	Repair deteriorated concrete in barrel. Construct a headwall at the inlet/out.	201,500.00	
23	332	1A	BIRCH AV	Minor Rehab	1 – 5 years	Rehab the soffit, girders, stringers, abutment walls and retaining walls. Replace lower bracings. Clean, repair/reinforce and coat piers.	192,305.00	



Work Priority Ranking	Struct. No.	Batch	Structure Name	Work Category	Timing	Recommended Work Description	Cost (\$)	Remarks
24	403	Additional	HARRISON RD	Replacement	6-10 years	Replace culvert, inlet & outlet components, wearing surface. Temporarily remove & salvage new SBGR.	568,125.00	
25	150	Additional	TAPLEYS TOWN RD	Major Rehab	6-10 years	Repair/replace deteriorated steel girders. Repair structural steel coating. Repair deteriorated concrete on deck and soffit.	261,650.00	Additional girder supports installed 2018-19.
26	117	1A	OLD GUELPH RD	Major Rehab	1 - 5 years	Repair concrete deterioration on abutment walls, wingwalls, piers, retaining walls, approach curbs and sidewalk. Replace railing along center median. Recoat/repair areas of loss coating on girders.	266,775.00	
27	397	Additional	GLANCASTER RD	Minor Rehab	1 - 5 years	Install new barrier system at east and west end and new gabion baskets at all four quadrants	32,000.00	
28	330	1A	BIRCH AV	Minor Rehab	6-10 years	Repair deteriorated concrete on abutment walls, ballast walls, curbs, retaining walls and west pier. Repair steel at east pier and north and south girders. Coat bottom section of east pier within splash zone.	102,030.00	



Work Priority Ranking	Struct. No.	Batch	Structure Name	Work Category	Timing	Recommended Work Description	Cost (\$)	Remarks
29	245	1A	RIDGE RD	Minor Rehab	1 – 5 years	Repave asphalt at ponding areas. Rectify water ponding area on sidewalk.	17,176.00	
30	036	1A	MIDDLETOWN RD	Minor Rehab	1 – 5 years	Recommend fill gap with grout between bottom of precast retaining wall and top of gravity stone retaining wall.	13,420.00	
31	325	1B	QUEENSTON RD	Major Rehab	1 – 5 years	Patch repair on soffit, sidewalks & curbs. Replace longitudinal seal and barrier railings Repave asphalt wearing surface & replace waterproofing on deck Repave approach roads	809,888.00	
32	331	1A	BIRCH AV	Replacement	1 – 5 years	Remove bridge with abandoned railway track.	100,000.00	



5.4. Recommended Further Investigations

A total of twelve (12) sites, seven (7) bridges and five (5) culverts, are recommended for further investigations based on their current condition, as shown in Table 4 below.

Table 4: Recommended Further Investigations

Struct. No.	Batch	Structure Name	Investigation Description	Timing
007	Additional	CONCESSION 7 W	Monitoring of Deformations, Settlements and Movements as part of Biennial Inspection	2 years
108	Additional	INDIAN TL	Monitoring of Deformations, Settlements and Movements annually pending rehabilitation	1 year
111	Additional	MINERAL SPRINGS RD	Monitoring of Deformations, Settlements and Movements as part of Biennial Inspection	2 years
113	Additional	SULPHUR SPRINGS RD	Monitoring of Deformations, Settlements and Movements as part of Biennial Inspection	2 years
212	1B	MOUNT ALBION RD (EAST STRUCTURE)	Monitoring Crack Widths as part of Biennial Inspection	2 years
274	1A	YORK BV	Detailed Deck Condition Survey	Within 2 Years
294	Additional	ROUSSEAU ST	Monitoring of Deformations, Settlements and Movements as part of Biennial Inspection	2 years
307	1A	MAIN ST W	Detailed Deck Condition Survey	Within 4 Years
346	Additional	CENTRE RD	Close-up inspection of beam underside	Within 2 Years
350	Additional	CENTRE RD	Detailed Deck Condition Survey	1 to 5 Years
			Structure Evaluation	Within 1 Years
449	1A	HIGHWAY NO. 52	Monitoring Crack Widths as part of Biennial Inspection	2 years
451	1A	Highway NO. 5E	Structure Evaluation	Within 1 to 2 Years



Hamilton

6. CONCLUSIONS

The main objective of the Bridges and Culverts OSIM Inspections Program is to identify all current functional, structural, and safety deficiencies and/or defects of the structures that are evident from visual inspections, and to propose a remedial strategy for each structure, with a preliminary timeframe for the remedial work.

The vast majority of the inspected structures were found to be in fair to good condition requiring only minor maintenance or repairs in the short term.

It is recognized that one of the main purposes of regular inspections is to identify changes in the condition of the structure; therefore, the importance of having a qualified inspector assess the condition of the structures cannot be over-emphasized. The rehabilitation/replacement prioritizations presented in this report are primarily based on the assessed overall condition, as well as the condition of specific elements and their relationship to functional performance and safety.

It should be noted that the inspection results, recommendations, and cost estimates presented in this report are based on the visual field assessments as well as normal engineering judgment and practice at the time of the inspection and report. As such, the findings and recommendations should be considered preliminary; a more detailed engineering investigation (detailed condition surveys, etc.) would be required to furtherly assess the condition, yielding a more precise cost estimate and rehabilitation work scope.

It is recommended that the structures be re-appraised by a qualified structural engineer every two years. This inspection along with regular appraisals of structures will help to facilitate the establishment of an efficient capital improvement and maintenance program, which provides good serviceability, adequate safety, and a cost effective use of available capital improvement and maintenance funds.

Bridges and culverts, like all capital assets, require ongoing maintenance, as well as periodic repair and rehabilitation. The timing of such work should be coordinated such that the overall life cycle costs are minimized within the framework of acceptable performance criteria. It is neither necessary, practical, nor financially prudent to insist that all structures be in "pristine" condition at all times.



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The City of Hamilton's pro-active bridge and culvert management plans will ensure that appropriate preventative and rehabilitation measures are carried out to provide safe, acceptable service, in a cost-effective manner, making the best use of limited resources.



Scott S. Quach, P.Eng.

Project Manager



APPENDIX A

Bridge List with Associated Works



STRUCTURE ID	STREET NAME	BRIDGE OR CULVERT	OSIM INSPECTION (DATE)	Time	Weather	Temp. (°C)	RECOMMENDED MAINTENANCE	TIMING	RECOMMENDED REHAB./REPLACEMENT	TIMING	ESTIMATED COST
Batch A											
36	MIDDLETOWN RD	Bridge	2020-09-11	1 hr	Sunny	16	Monitor rotation of end panels at all corners of retaining walls.	2 years	Recommend fill gap with grout between bottom of precast retaining wall and top of gravity stone retaining wall.	1 - 5 year	\$13,240.00
37	WEIRS LN	Bridge	2020-09-11	1 hr	Sunny	26	Repair/replace damaged hazard signs.	1 year			
117	OLD GUELPH RD	Bridge	2020-09-03	1 hr	Sunny	26			Replace expansion joints. Clean and coat girder ends. Repair deck soffit, approach slabs and diaphragms. Repave deck and approach wearing surface.	1 - 5 year	\$266,775.00
152	RED HILL VALLEY PKWY CNR OVERHEAD	Bridge	2020-09-24	1 hr 15min	Partly Sunny	26					
153	RED HILL VALLEY PKWY CPR OVERHEAD	Bridge	2020-09-23	1 hr 15min	Sunny	25	Tight loose nut on bearing plate anchor bolts. Repair disconnected conduit at northeast quadrant.	2 years 2 years			
164	KENILWORTH AV S	Bridge	2020-09-10	1 hr	Cloudy	20	Repair loose connection at north end of railing.	2 years	Repair concrete deterioration on abutment walls, wingwalls, piers, retaining walls, approach curbs and sidewalk. Replace railing along center median. Recoat/repair areas of loss coating on girders.	1 - 5 year	\$117,890.00
174	PEDESTRIAN BRIDGE OVER CPR TRACKS (PEARL ST S)	Bridge	2020-09-29	1hr 15min	Sunny	17	Remove debris on abutment bearing seats. Reconnect utility casing.	2 years 2 years			
177	CHATHAM ST	Bridge	2020-09-29	1hr	Sunny	17	Remove debris from seals	2 years	Repair deteriorated concrete on end soffit and pier caps/shafts.	6 - 10 year	\$53,615.00
180	PEDESTRIAN BRIDGE OVER CNR TRACKS (MARY ST)	Bridge	2020-09-30	1hr	Sunny	17	Replace junction box cover at south abutment Tighten and replacing missing nuts.	2 years 1 year			
184	MACNAB ST N	Bridge	2020-09-30	1hr	Sunny	17	Replace missing bolt and end caps. Eliminate trip hazard at northwest and northeast sidewalks.	2 years 1 year			
185	BAY ST N	Bridge	2020-09-29	1hr 15 min	Sunny	17					
186	PEDESTRIAN BRIDGE OVER CNR TRACKS (EMERALD ST N)	Bridge	2020-09-30	1hr	Sunny	17	Secure railing at north staircase. Replace missing bolts on diagonal bracings. Cleaning & re-coating railing. Replace nails in wood with wood screws.	2 years 2 years 2 years 2 years	Clean and recoat truss members and connections, steel floor beams, bracing, steel pier and steel staircases.	6 - 10 year	\$243,400.00

STRUCTURE ID	STREET NAME	BRIDGE OR CULVERT	OSIM INSPECTION (DATE)	Time	Weather	Temp. (°C)	RECOMMENDED MAINTENANCE	TIMING	RECOMMENDED REHAB./REPLACEMENT	TIMING	ESTIMATED COST
Batch A											
245	RIDGE RD	Bridge	2020-09-10	1hr	Cloudy	20	Remove debris from seals. Repair trip hazard at east approach.	2 years 2 years	Repave asphalt at ponding areas and rectify water ponding area on sidewalk.	1 - 5 year	\$17,176.00
272	CITY CENTRE PEDESTRIAN BRIDGE	Bridge	2020-09-29	1hr	Sunny	17					
273	SHERATON HOTEL JACKSON SQUARE PEDESTRIAN BRIDGE	Bridge	2020-09-29	1hr	Sunny	17	Reset a few false ceiling panels. Replace torn and damaged roof sections.	2 years 2 years			
274	YORK BV	Bridge	2020-09-03	1hr 15 min	Sunny	26			Replace existing concrete overlay with asphalt and w/p system. Replace longitudinal seal. Repair deteriorated concrete on soffit, decktop, abutment wall, pier, barriers, sidewalk, median, approach slabs & approach sidewalk.	6 - 10 year	\$1,308,300.00
276	NEWMAN RD	Bridge	2020-09-03	1hr	Sunny	26	Replace end cap at north end of west railing	2 years			
299	SYDENHAM RD	Bridge	2020-09-01	1hr 30min	Partly Sunny	25	Replace missing bolt on railing post. Close gap between northeast SBGR and north railing. Remove debris from seals. Remove trip hazard at northeast and southeast approach.	2 years 1 year 2 years 1 year			
307	MAIN ST W	Bridge	2020-09-29	1hr	Sunny	17	Scale delaminated concrete on 1st and 3rd girder from north Patch potholes.	1 year 1 year	Repair deck top, approach slabs & retaining walls. Replace railing system, barrier posts, damaged section of SBGRs, sidewalk & curbs. Recoat structural steel. Repave deck & approach wearing surface.	1 - 5 year	\$602,362.00
310	YORK BV	Bridge	2020-09-03	2hr 15min	Sunny	26	Remove debris from drains. Remove debris from seals.	2 years 2 years			
315	CLAREMONT AC	Bridge	2020-08-31	1hr 30min	Partly Sunny	28	Reconnect/secure railing at south end. Repair scour at southwest corner.	2 years 2 years			
330	BIRCH AV	Bridge	2020-09-30	1 hr	Sunny	17			Repair deteriorated concrete on abutment walls, ballast walls, curbs, retaining walls and west pier. Repair steel at east pier and north and south girders. Coat bottom section of east pier within splash zone.	6 - 10 year	\$102,030.00
331	BIRCH AV	Bridge	2020-09-30	1hr 30min	Sunny	17			Replacement.	1 - 5 year	\$100,000.00

STRUCTURE ID	STREET NAME	BRIDGE OR CULVERT	OSIM INSPECTION (DATE)	Time	Weather	Temp. (°C)	RECOMMENDED MAINTENANCE	TIMING	RECOMMENDED REHAB./REPLACEMENT	TIMING	ESTIMATED COST
Batch A											
332	BIRCH AV	Bridge	2020-09-30	1 hr	Sunny	17	Replace wood at northeast corner.	2 years	Rehab soffit, girders, stringers, abutment walls and retaining walls. Replace lower bracings. Clean, repair/reinforce and coat piers.	1 - 5 year	\$192,305.00
391	GOVERNOR'S RD	Bridge	2020-09-04	1hr 30min	Partly Sunny	23	Remove debris from seals	2 years			
449	HIGHWAY NO. 52	Bridge	2020-09-11	1hr 30min	Sunny	16	Clean and Coat SE Abutment bearing Replace missing bolt @ 6th post from south, on west rail. Repair scour in front of north abutment Remove debris from seals	2 years 2 years 2 years 2 years			
451	HIGHWAY NO. 5 E	Bridge	2020-09-04	1 hr	Partly Sunny	23	Repair scour at west embankment.	2 years	Replace deck top, sidewalks and curbs , barrier railing systems, expansion joint systems, and bearings. Repave wearing surface and install new waterproofing system. Patch repair on girders, abutments and piers.	1 - 5 year	\$3,142,005.00
452	CENTENNIAL PY	Bridge	2020-09-10	1 hr 20min	Cloudy	20			Replace EJ systems. Repave deck and approach wearing surface. Repair deteriorated concrete on decktop, soffit, piers, beams, diaphragms, abutments, ballast walls, wingwalls , barrier, approach curb, and sidewalks.	1 - 5 year	\$907,262.00
474	FERGUSON AV N	Bridge	2020-09-30	1 hr 15min	Sunny	17	Repair trip hazard on approach sidewalks	2 years			

STRUCTURE ID	STREET NAME	BRIDGE OR CULVERT	OSIM INSPECTION (DATE)	Time	Weather	Temp. (°C)	RECOMMENDED MAINTENANCE	TIMING	RECOMMENDED REHAB./REPLACEMENT	TIMING	ESTIMATED COST
Batch B											
134	KING ST ON-RAMP TO NB RHVP (CULVERT)	Culvert	2020-09-22	45min	Partly Sunny	22					
200	STONE CHURCH RD ON-RAMP TO NB/SB RHVP	Bridge	2020-09-17	1 hr	Sunny	19					
201	RHVP SB OFF-RAMP to STONE CHURCH RD	Bridge	2020-09-17	1 hr 5min	Sunny	19	Repair west barrier wall at impact damage section.	1 year	Patch repair west barrier wall at north end (impact damage location).	1 - 5 year	\$6,240.00
202	RHVP SB OFF-RAMP to STONE CHURCH RD	Bridge	2020-09-17	2 hrs	Sunny	19					
203	MUD ST/STONE CHURCH RD ON-RAMP TO SB RHVP	Bridge	2020-09-17	1 hr 30min	Sunny	19					
204 - NB	RHVP TWIN VIA DUCT NORTHBOUND BRIDGE	Bridge	2020-09-21	2hrs	Sunny	20	Extend asphalt drainage pipe away from abutment.	2 years			
							Remove debris from seals under maintenance.	2 years			
204 - SB	RHVP TWIN VIA DUCT SOUTHBOUND BRIDGE	Bridge	2020-09-21	2hrs	Sunny	20	Extend asphalt drainage pipe away from abutment.	2 years			
							Repair scour at southeast embankment.	2 years			
							Remove debris from joints under maintenance.	2 years			
205	GREENHILL AV	Bridge	2020-09-17	1 hr 10min	Sunny	19	Repair scour at southeast embankment.	2 years			
							Replace missing armouring at northwest corner.	2 years			
							Remove debris from seals.	2 years			
210	MOUNT ALBION RD (WEST STRUCTURE)	Bridge	2020-09-21	1 hr 10min	Sunny	20	Remove trip hazard at NW.	2 years			
							Replace missing railing bolts & secure south railing.	2 years			
211	MOUNT ALBION RD (CENTRAL STRUCTURE)	Bridge	2020-09-21	1 hr 35min	Sunny	20	Secure north and south railing at east approach and repair broken at southeast.	1 year			
212	MOUNT ALBION RD (EAST STRUCTURE)	Bridge	2020-09-22	1 hr 15min	Partly Sunny	22	Monitor longitudinal cracks at northeast corner of deck.	2 years			
							Remove debris as part of maintenance.	2 years			
213	RED HILL VALLEY PKWY CULVERT	Culvert	2020-09-22	1 hr 20min	Partly Sunny	22					
214	KING ST ON-RAMP TO NB RHVP (CULVERT)	Culvert	2020-09-22	1 hr 15min	Partly Sunny	22					
215	KING ST ON-RAMP TO SB RHVP	Bridge	2020-09-22	1 hr	Partly Sunny	22					
216	RED HILL VALLEY PKWY SB OFF-RAMP TO KING ST	Bridge	2020-09-22	1 hr	Partly Sunny	22	Repair damaged section on barrier wall at northeast corner.	1 year			
							Replace north hand railing at east approach.	1 year			
							Repair damaged section at north east approach guiderail.	1 year			

STRUCTURE ID	STREET NAME	BRIDGE OR CULVERT	OSIM INSPECTION (DATE)	Time	Weather	Temp. (°C)	RECOMMENDED MAINTENANCE	TIMING	RECOMMENDED REHAB./REPLACEMENT	TIMING	ESTIMATED COST
Batch B											
217	QUEENSTON RD ON-RAMP TO SB RHVP	Bridge	2020-09-23	1 hr	Sunny	25	Replace missing railing bolt. Repair drainage tube at southwest. Repair scour at north embankment. Remove debris from seals.	2 years 2 years 2 years 2 years			
218	RED HILL VALLEY PKWY SB OFF-RAMP TO QUEENSTON RD	Bridge	2020-09-23	1 hr	Sunny	25	Replace missing bolts on hand railings. Repair scour at northwest corner.	2 years 2 years			
219	RED HILL VALLEY PKWY CULVERT	Bridge	2020-09-23	1 hr	Sunny	25					
220	RHVP SOUTHBOUND BRIDGE	Bridge	2020-09-24	1 hr 50min	Partly Sunny	26	Replace missing anchor bolts and realign displaced bearing plate at SE corner. Repair scour in front of north abutment. Remove debris from seals.	2 years 2 years 2 years			
221	RHVP NORTHBOUND STRUCTURE 1	Bridge	2020-09-24	1 hr 30min	Partly Sunny	26	Repair scour at north abutment and piers.	2 years			
222	RHVP NORTHBOUND STRUCTURE 2	Bridge	2020-09-24	2hr 30min	Partly Sunny	26	Close box girder hatch and install new bolts. Repair scours in front of south abutment and southeast embankment. Clean/remove debris from joint seals.	1 year 2 years 2 years			
224	PEDESTRIAN BRIDGE OVER QEW (RED HILL CREEK EXPRESSWAY TRAIL)	Bridge	2020-09-24	2hr 20min	Partly Sunny	26	Repair scour at east approach slab. Rectify trip hazard at east approach sidewalk	1 year 1 year			
282	LONGWOOD RD S	Bridge	2020-10-01	1 hr	Sunny	26			Patch repair on abutment, pier, soffit, approach slab, sidewalk/curbs and barrier wall. Repave approach and deck wearing surface. Construct concrete overlay on deck. Recoat end girder and diaphragms. Replace barrier railings and EJ system.	1 - 5 year	\$3,055,080.00
283	UPPER PARADISE RD	Bridge	2020-09-08	1 hr 30min	Cloudy	17	Patch pothole on south approach on SBL. Replace broken box cover on west barrier wall at north end. Remove debris from EJ. Repair broken section of retaining wall.	2 years 2 years 2 years 2 years			

STRUCTURE ID	STREET NAME	BRIDGE OR CULVERT	OSIM INSPECTION (DATE)	Time	Weather	Temp. (°C)	RECOMMENDED MAINTENANCE	TIMING	RECOMMENDED REHAB./REPLACEMENT	TIMING	ESTIMATED COST
Batch B											
284	GARTH ST	Bridge	2020-09-08	1 hr 15min	Cloudy	17	Replace broken junction box covers and missing bolts. Patch potholes. Remove debris from seals. Repair pedestrian trip hazard on SW approach sidewalk.	2 years 1 year 2 years 1 year			
285	WEST 5TH ST	Bridge	2020-09-09	1 hr 15min	Cloudy	16	Replace missing railing bolts on barrier walls. Replace missing railing bolts on SBGR.	2 years 2 years			
286	UPPER JAMES ST	Bridge	2020-09-09	1 hr 15min	Cloudy	16	Remove/clean bird droppings behind bearings.	2 years			
287	UPPER WELLINGTON ST	Bridge	2020-09-09	1 hr 15min	Cloudy	16	Repair trip hazard @ SE & fill void @ SW. Replace missing cover plate at NE light pole. Replace damaged wooden post. Clean joint seals.	1 year 2 years 2 years 2 years			
288	UPPER WENTWORTH ST	Bridge	2020-09-09	1 hr 20min	Cloudy w/ precipitation	16	Remove debris from seals. Remove pedestrian trip hazard at end of SW approach sidewalk.	2 years 1 year			
289	UPPER SHERMAN AV	Bridge	2020-09-18	2 hrs	Sunny	15	Patch pothole on north approach. Remove debris from seals. Scale delam on east barrier wall over LINC traffic lanes.	2 years 2 years NOW	Repair deteriorated concrete on both east and west barriers walls.	< 1 year	\$45,600.00
290	UPPER GAGE AV	Bridge	2020-09-18	1 hr 15min	Sunny	15	Replace missing cover on light pole. Replace missing bolts. Remove debris from seals. Eliminate trip hazard at north and south end of east approach sidewalk.	2 years 2 years 2 years 2 years			
291	UPPER OTTAWA ST	Bridge	2020-09-18	1 hr 15min	Sunny	15	Replace missing railing bolts and broken end cap. Clear tree branches that encroach bridge at southwest embankment. Remove debris from seals. Replace leaking seals.	2 years 2 years 2 years 2 years			

STRUCTURE ID	STREET NAME	BRIDGE OR CULVERT	OSIM INSPECTION (DATE)	Time	Weather	Temp. (°C)	RECOMMENDED MAINTENANCE	TIMING	RECOMMENDED REHAB./REPLACEMENT	TIMING	ESTIMATED COST
Batch B											
293	MOHAWK RD	Bridge	2020-09-03	1 hr 30min	Sunny	26	Replace missing bolts on south junction box. Replace bolt on 3rd post from north at east rail. Reset broken south concrete slope paving. Remove debris from seals.	2 years 2 years 2 years 2 years			
324	KING ST E	Bridge	2020-09-23	1 hr 30min	Sunny	25	Patch pothole at west approach. Remove debris from north deck drain. Remove debris from joint seals. Remove trip hazard on northeast sidewalk.	2 years 2 years 2 years 2 years	Repair deteriorated concrete on sidewalks, centre median, and barrier walls, and resurface asphalt wearing surface. Repair/reconstruct EJ at Northwest Corner on Curb and Sidewalk.	6 - 10 year	\$193,278.00
325	QUEENSTON RD	Bridge	2020-09-23	1 hr 45min	Sunny	25	Remove debris atop west abutment seat. Replace missing bolts on junction box. Replace damaged section at NE SBGR. Replace missing bolts on railings. Remove debris from deck drains under maintenance. Patch potholes on bridge deck under maintenance. Replace missing bolt on west joint armoring at southwest approach. Remove debris from joint seals. Patch potholes at east approach under maintenance.	2 years 2 years 2 years 2 years 2 years 1 year 1 year 2 years 1 year	Patch repair on sidewalks & curbs, & soffit. Replace longitudinal seal and barrier railings. Repave asphalt & replace waterproofing on deck. Repave approach roads.	1 - 5 year	\$809,888.00
373	STONE CHURCH RD	Culvert	2020-09-16	1 hr 10min	Partly Sunny	23					
377	KING ST E	Culvert	2020-09-22	1 hr 45min	Partly Sunny	22	Remove tree debris from south inlet.	2 years			
378	BARTON ST E	Bridge	2020-09-23	2 hrs 10min	Sunny	25	Replace missing bolts on railings. Replace missing section on north railing and secure rail to posts. Remove debris from joint seals. Patch core hole on north sidewalk.	2 years 2 years 2 years 2 years			
459	PEDESTRIAN TUNNEL UNDER LINCOLN M. ALEXANDER PY (GREENCEDAR DR)	Bridge	2020-09-08	1 hr 40min	Cloudy	17	Replace broken fence cap on north fence (EB Bridge) at west end.	2 years	Repair deteriorated concrete on interior and exterior barrier walls.	1 - 5 year	\$34,820.00

STRUCTURE ID	STREET NAME	BRIDGE OR CULVERT	OSIM INSPECTION (DATE)	Time	Weather	Temp. (°C)	RECOMMENDED MAINTENANCE	TIMING	RECOMMENDED REHAB./REPLACEMENT	TIMING	ESTIMATED COST
Batch B											
460	PEDESTRIAN BRIDGE OVER LINCOLN M. ALEXANDER PY (FIONA CRES)	Bridge	2020-09-09	1 hr 15min	Cloudy	16	Replace missing junction box cover on north lamp post.	2 years			
461	LINCOLN M. ALEXANDER PY CULVERT	Culvert	2020-09-16	1 hr	Partly Sunny	23	Repair pothole under maintenance.	2 years			
462	DARTNALL ON-RAMP TO WB LINC	Culvert	2020-09-16	1 hr	Partly Sunny	23	Repair scour southwest and northeast embankments.	2 years			
463	DARTNALL ON-RAMP TO WB LINC	Culvert	2020-09-16	1 hr	Partly Sunny	23					
465	PEDESTRIAN BRIDGE OVER HWY 403	Bridge	2020-10-01	2 hrs 50min	Sunny	26	Scale loose concrete on girders over Hwy 403 WB. Eliminate pedestrian trip hazard at east end.	NOW 1 year			
467	PRITCHARD RD	Bridge	2020-09-16	1 hr 40min	Partly Sunny	23	Replace outward leaning posts on damaged section at northeast approach guiderail. Repair damaged steel beam section at northeast.	2 years 2 years			
468	DARTNALL RD	Bridge	2020-09-18	1 hr 15min	Sunny	15	Replace missing bolts on east railing. Tighten loose bolt on northwest approach guiderail. Remove debris from joint seals.	2 years 2 years 2 years			
475	PEDESTRIAN BRIDGE OVER LINCOLN M. ALEXANDER PY (ARBOUR RD)	Bridge	2020-09-18	1 hr 30min	Sunny	15	Replace missing timber section. Replace missing screws at centre pier steel plate.	2 years 2 years			

STRUCTURE ID	STREET NAME	BRIDGE OR CULVERT	OSIM INSPECTION (DATE)	Time	Weather	Temp. (°C)	RECOMMENDED MAINTENANCE	TIMING	RECOMMENDED REHAB./REPLACEMENT	TIMING	ESTIMATED COST
Additional											
7	CONCESSION 7 W	Culvert	2020-09-04	1 hr	Partly Sunny	23			Replace culvert. Install new guiderail, gabion retaining walls and riprap. Repave approach road and roadway atop culvert.	6 - 10 year	\$243,890.00
8	WILSON ST W	Culvert	2020-09-04	35min	Partly Sunny	23	Fix leaning sign. Reconnect post and replace damaged sections.	1 year 1 year	Repair deteriorated concrete in barrel. Construct a headwall at the inlet/out.	6 - 10 year	\$201,500.00
108	INDIAN TL	Culvert	2020-09-04	1 hr	Partly Sunny	23	Replace hazard marker signs at NE and SW corners. Replace/repair locally damaged sections.	1 year 1 year	Replace culvert barrel, headwall and wingwalls.	1 - 5 year	\$250,200.00
111	MINERAL SPRINGS RD	Culvert	2020-09-11	35min	Sunny	16	Patch potholes on approach and deck wearing surface. Trim tree branches on east railing at north end. Repair scour at northeast exposed end of culvert.	1 year 2 years 2 years	Repave approach and deck wearing surface. Repair deteriorated concrete on barrier posts, curbs, barrel, and retaining wall. Repair deteriorated steel on railings.	1 - 5 year 6 - 10 year	\$77,211.00
113	SULPHUR SPRINGS RD	Culvert	2020-09-11	1 hr	Sunny	16	Smoothen uneven gravel surface. Repack bottom of gabion wall.	1 year 1 year	Replace timber post delineators with SBGR. Replace NE gabion RW & repair deteriorated concrete in culvert barrel & inlet components, & excavate and reconnect dislodged CSP on south wall.	1 - 5 year	\$569,700.00
150	TAPLEYTOWN RD	Bridge	2020-09-10	1 hr	Cloudy	16			Repair/replace deteriorated steel girders. Repair structural steel coating and deteriorated concrete on deck interior and exterior soffit.	6 - 10 year	\$261,650.00
151	PEDESTRIAN BRIDGE OVER CREEK (PARKSIDE DR)	Bridge	2020-09-04	1 hr	Partly Sunny	23	Repair scour and replace broken gabion baskets.	2 years			
159	REGIONAL 56 RD	Culvert	2020-10-01	40min	Sunny	26	Replace sign at northwest corner. Replace missing post.	2 years 2 years	Replace culvert barrel. If culvert is not replaced, installation of temporary supports struts is recommended. Repave asphalt wearing surface atop culvert and approaches. Replace Northwest & Southwest gabions walls. Install gabions at Northeast and Southeast ends.	1 - 5 year	\$590,420.00
258	WINDWOOD DR	Culvert	2020-10-01	35min	Sunny	26					
259	WHITWELL WAY	Culvert	2020-10-01	45min	Sunny	26					
260	GREAT OAK TRAIL	Culvert	2020-10-01	30min	Sunny	26					
261	UPPER JAMES ST	Culvert	2020-09-25	1 hr 10min	Sunny	26	Repair torn steel section of SBGR at northwest end.	1 year			
277	OLD DUNDAS RD	Culvert	2020-09-01	1 hr 30min	Partly Sunny	25	Repair scour at southwest and southeast corners of railing.	2 years	Repair deteriorated concrete areas in culvert barrel.	6 - 10 year	\$32,950.00

STRUCTURE ID	STREET NAME	BRIDGE OR CULVERT	OSIM INSPECTION (DATE)	Time	Weather	Temp. (°C)	RECOMMENDED MAINTENANCE	TIMING	RECOMMENDED REHAB./REPLACEMENT	TIMING	ESTIMATED COST
Additional											
294	ROUSSEAU ST	Culvert	2020-09-01	1 hr	Partly Sunny	25	Replace damaged hazard sign at end of northeast SBGR. Replace damaged steel offset post and missing bolt. Fill scour between end of concrete post and south sidewalk.	1 year 2 years 1 year	Repair deteriorated concrete in culvert barrel.	1 - 5 year	\$70,000.00
346	CENTRE RD	Bridge	2020-09-04	1 hr 20min	Partly Sunny	23	Remove all loose stone facing off railing posts.	2 years	Replace girder 5 and 6 from east & patch repair remaining girders, repave asphalt , replace overlay with new structural slab, replace railing system & sidewalk.	1 - 5 year	\$551,575.00
350	CENTRE RD	Bridge	2020-09-04	1 hr	Partly Sunny	23	Repair steel beam guiderail.	2 years	Patch repair deck, repave asphalt and replace waterproof system. Repave approach road. Replace railings Repair soffit.	1 - 5 year	\$170,350.00
397	GLANCASTER RD	Culvert	2020-09-25	40 min	Sunny	26	Repair scour at west embankment.	2 years	Install new barrier system at east and west end and new gabion baskets at all four quadrants.	1 - 5 year	\$32,000.00
403	HARRISON RD	Culvert	2020-09-25	30 min	Sunny	26			Replace culvert, inlet & outlet components, wearing surface. Temporarily remove & salvage new SBGR.	6 - 10 year	\$568,125.00

Summary Report

2020 Hamilton OSIM Inspections - Batch 1C & 1D & Non-City
Owned Structures
Hamilton, ON
Project # IM20108021

Prepared for:

City of Hamilton

77 James Street North, Suite 320, Hamilton, ON L8R 2K3

11/23/2021

11/23/2021

Mr. Trevor McClung
Project Manager – Surface Infrastructure
City of Hamilton
77 James Street North, Suite 320
Hamilton, ON
L8R 2K3

Dear Mr. McClung,

As requested, Wood Environment & Infrastructure Solutions has carried out the 2020 OSIM inspections for Batch 1C and Batch 1D structures along with 32 non-City owned structures.

We trust that this summary report contains information that is sufficient for your purposes. Please contact the undersigned if you require clarification in any way.

Sincerely,

**Wood Environment & Infrastructure Solutions
a Division of Wood Canada Limited**

Reviewed by:



Dante Shawil, EIT
Structural Designer/Inspector



Matthew Galloway, M.Eng., P.Eng
Senior Structural Engineer



Karam Albazi, P.Eng
Senior Bridge Lead Engineer

Summary Report

2020 Hamilton OSIM Inspections - Batch 1C & 1D & Non-City Owned Structures

Hamilton, ON

Project # IM20108021

Prepared for:

City of Hamilton

77 James Street North, Suite 320, Hamilton, ON L8R 2K3

Prepared by:

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11/23/2021

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Appendices

- Appendix A – Removed Structure List
- Appendix B – Associated Structure Works List

1.0 Project Background

In 2020, Wood Environment & Infrastructure Solutions (Wood) was retained by the City of Hamilton (City) to perform and detailed visual inspection (OSIM) and data collection for 97 structures. Additionally, the City also requested that the inspection of 32 non-City owned structures be completed as part of this assignment. An OSIM inspection was not carried out for the non-City owned structures and only the urgent/critical work was identified for these structures within this summary report. Individual reports shall be consulted for any details.

Data for all OSIM inspected structures, including full inventory, as well as condition, recommended repairs, and cost of repairs have been recorded in the City's database.

The lead inspectors involved in the inspection of all structures are experienced and have received certification through the OGRA Bridge Inspection Course (TM45). These inspectors were

- Moustapha Ary, M.ASc, P.Eng.
- Khaled Kallas, EIT;
- Ryan Kohler, EIT;
- Nathan Kranendonk, EIT; and
- Dante Shawil, EIT.

The name of at least one of these inspectors should appear on the OSIM inspection forms.

Furthermore, a review was carried out by the following Engineers:

- Matthew Galloway, M.Eng., P.Eng. – Engineer of Record
- Karam Albazi, P.Eng. – QA / QC

The original inventory list of structures for and OSIM inspection given by the City included a total of 97 structures (70 for Batch 1C and 27 for Batch 1D). After Wood inspections, the total number of structures inspected was reduced to 83 structures (56 for Batch 1C and 27 for Batch 1D). A list of the structures that were removed from the 2020 inspection including the reason for removal are in **Appendix 'A'**.

For the 32 non-City owned structures, all 32 were inspected.

As prescribed in the Ontario Structure Inspection Manual (OSIM), the structure investigations began with a detailed visual inspection of all structures. Inventory of bridge components, as well as all quantities, were checked against previous OSIM inspections and updated as required.

A list of all the structures and their date of inspection has been included in Appendix 'A'.

Many structures were found to be in overall good condition. However, several of the structures were noted to possess deficiencies and exhibited deterioration. Two (2) structures, #046 (Christina Avenue – 10m South of Willow Lane) and #246 (Glover Road – 335m South of Barton Street), were identified for full replacement. Many other structures have sustained deterioration but are still in a condition which can be fully rehabilitated.

If these deteriorated structures are left without maintenance or rehabilitation longer than the period recommended in the individual inspection reports, they will likely deteriorate further and be at a higher risk of requiring full replacement.

Common deficiencies noted include delamination, cracking, and spalling of concrete in most elements of the structure, particularly in areas with more severe environments. Exposure to water and salt spray often correlates with these common deficiencies.

A limited number of structures traversing watercourses were partially blocked with excess vegetation growth as well as debris within the stream or river. Furthermore, there are several structures with erosion and unstable embankments. Remediation, in the form of soil stabilization is recommended at these structures. For structures with blocked streams and waterways, refer to **Section 5.0 – Recommended Maintenance** for a table identifying all maintenance needs. For structures with erosion and/or unstable embankments, refer to **Appendix 'B'** for list of all structures and associated works.

No structures have been recommended for immediate load restriction posting in this set of inspections; however, additional investigations have been recommended for several structures to provide improved data for the determination of rehabilitation work as well as potential load restriction postings. For structures recommended for additional investigations, refer to **Section 6.0 – Recommended Additional Investigations**.

A detailed priority list for all the structures in Batch 1C and Batch 1D and their corresponding recommended work has been included in **Section 7.0 – Recommended Priority List and Associated Works**. The list was organized with the more urgent work towards the top based firstly on the recommended timeline to complete the work and then by engineering judgement.

2.0 Structure Replacement

Based on our investigations, two (2) structures were recommended for replacement.

Table 1 - Structures Recommended to be Replaced

Structure No.	Structure Name	Years	Total Cost	Work Type
#046	CHRISTINA AV	3-5 yrs	\$ 310,000.00	Replacement
#246	GLOVER RD	6-10 yrs	\$ 250,000.00	Replacement

Structure #046 is recommended for replacement due to its existing condition and very low vertical clearance. Rehabilitation would be extremely difficult, inefficient, and the quality of work could suffer due to the vertical clearance. A replacement would better serve the City in the long run.

Structure #246 was recommended for replacement for similar reasons as #046, however, the structure is in better condition, so a replacement is not as urgent.

3.0 Structure Removal

Based on our investigations, no structures were recommended for removal.

However, it is assumed that structure #457 (currently closed) is scheduled for a rehabilitation or replacement. If not, the structure should be removed rather than abandoned to ensure that it does not collapse or wash away into the watercourse.

4.0 List of Urgent and Critical Works

Based on our inspections, the following Table 2 provides a list of structures requiring work to be completed "now" or within one year. All City owned structures work is considered as Minor Rehabilitation.

Table 2 – List of Urgent and Critical Works

Structure No.	Structure Name	Specific Location	Structure Type	Element	Recommended Work	Timeline
40	Arvin Avenue	210m West of Fruitland Road	Culvert	Barriers	Fill bases of SBGR posts	< 1

132	Quigley Road	70m North of Veevers Drive	Culvert	Barriers	Replace wooden posts	< 1
233	North Service Road	75m West of Dartmouth Gate	Culvert	Outlet Components Barriers	Replace NE outlet duct Install barriers on both sides	< 1 < 1
234	South Service Road	257m East of Jones Road	Culvert	Barriers	Repair impacted portion of SBGR	NOW
244	Hwy 8	15m West of Fifty Road	Culvert	Barriers	Repair impacted portion of SBGR	NOW
314	Claremont Access	over Charlton Avenue East	Bridge	Retaining Walls Misc.	Add railings along retaining walls Cover hole near NE wingwall	< 1 NOW
316	Claremont Access	over Stinson Street	Bridge	Soffit	Scale loose concrete	< 1
317	Sherman Access (West End) - Hairpin Bend to Eastbound	over Sherman Access	Bridge	Soffit	Scale loose concrete	< 1
329	Burlington Street Overpass centred approx. over Wilcox Street	275m West of Wilcox Street to 300m East of Wilcox Street	Bridge	Soffit	Scale loose concrete	< 1
392	Claremont Access	1100m South of Young Street	Bridge	Abutment	Reposition or replace shear block bad	< 1
NON-CITY OWNED STRUCTURES						
305	DUNDURN STREET SOUTH RAIL STRUCTURE		Bridge	Bearings Wingwalls	Investigate rotated bearing Invest. wide crack on SW wingwall	< 1 < 1
306	DUNDURN STREET SOUTH RAIL STRUCTURE		Bridge	Abutments Embankments	Invest. leakage of backfill material at South abutment and repair Investigate South embankment for stability and repair as required	< 1 < 1

5.0 Recommended Maintenance

The following Table 3 identifies all structures requiring maintenance.

Table 3 – List of Recommended Maintenance Work

Structure No.	Structure Name	Specific Location	Structure Type	Element	Recommended Work	Timeline (years)
49	Collegiate Avenue	30m West of Donn Avenue	Bridge	Drainage	Fill deck drains	2
89	Creighton Road	30m South of Mill Street	Bridge	Barriers	Tighten bolts	1
93	Park Street East	110m West of York Road	Culvert	Retaining Walls	Remove vegetation	2
132	Quigley Road	70m North of Veevers Drive	Culvert	Streams and Waterways	Remove debris	1
133	Quigley Road	0.5N of Munn's Avenue	Culvert	Streams and Waterways	Remove debris	1
135	Lake Avenue North	55m North of Huckleberry Drive	Culvert	Streams and Waterways	Remove debris	1
				Barrels	Remove sediment build up	2
228	North Service Road-QEW-South Service Road	108m West of Lewis Road	Culvert	Barrels	Remove vegetation	2
231	North Service Road	280m West of Waterford Crescent	Culvert	Streams and Waterways	Remove vegetation	2
233	North Service Road	75m West of Dartmouth Gate	Culvert	Streams and Waterways	Remove vegetation	2
248	King Street West	145m West of Bond Street	Bridge	Sidewalks and Medians	Remove debris	2
303	Pedestrian Rail Trail Bridge over Main Street West	105m South of Osler Drive	Bridge	Bearings	Remove debris/vegetation	2

313	Arkledun Avenue (Jolley Cut)	over Claremont Access	Bridge	Joints - Seals	Remove debris/vegetation	1
318	Claremont Access	over James Mountain Road	Bridge	Drainage	Remove debris/vegetation	2
				Joints - Seals	Remove debris/vegetation	1
319	Concession Street	over Sherman Access Cut	Bridge	Barrier/Parapet Walls	Secure Northwest Precast Cap	1
321	Pedestrian Trail Bridge over Kenilworth Access	1100m West of Lawrence Road	Bridge	Deck Wearing Surface	Remove debris/vegetation	1-5
326	Nikola Tesla Blvd Overpass	535m West of Kenilworth Ave.	Bridge	Drainage	Remove debris/vegetation	2
	centred over Kenilworth Avenue	to 225m East of Kenilworth Ave.		Joints - Seals	Remove debris/vegetation	2
				Joints - Modular Seal	Remove debris/vegetation	2
327	Nikola Tesla Blvd Overpass	500m West of Strathearne Avenue	Bridge	Joints - Seals	Remove debris/vegetation	2
	centred over Strathearne Avenue	to 900m East of Strathearne Avenue				
328	Industrial Drive	240m East of Gage Avenue North	Bridge	Joints - Seals	Remove debris/vegetation	2
329	Burlington Street Overpass	275m West of Wilcox Street	Bridge	Joints - Seals	Remove debris/vegetation	2
	centred approx. over Wilcox Street	to 300m East of Wilcox Street				
367	King Street West	130m East of Centennial Parkway	Bridge	Embankments	Remove tree at NW	1
				Streams and Waterways	Remove rock wall under bridge	2
368	King Street East	40m East of Elm Avenue	Bridge	Streams and Waterways	Remove debris/vegetation	2
392	Claremont Access	1100m South of Young Street	Bridge	Drainage	Remove debris/vegetation	2
				Joints - Seals	Remove debris/vegetation	1
453	Centennial Parkway	820m North of Ridge Road	Culvert	Embankments	Remove debris/vegetation	2
				Streams and Waterways	Remove debris/vegetation	1
458	York Boulevard	500m North of Valley Inn Road	Bridge	Drainage	Remove debris/vegetation	1
				Joints - Seals	Remove debris/vegetation	1

6.0 Recommended Additional Investigations

The following Table 4 identifies all structures requiring additional investigations.

Table 4 – List of Recommended Additional Investigations

Structure No.	Structure Name	Structure Type	Due Date / Timeline	Recommended Evaluation	Priority	Comments	Estimated Cost
48	Jones Street	Bridge	Dec. 2022	Detailed Deck Condition Survey	Normal	Determine condition	\$ 35,000.00
			Dec. 2022	Concrete Substructure Condition Survey	Normal	Determine condition	\$ 15,000.00
49	Collegiate Avenue	Bridge	Dec. 2022	Detailed Deck Condition Survey	Normal	For rehabilitation	\$ 15,000.00
			Dec. 2022	Structure Evaluation	Normal	For rehabilitation	\$ 15,000.00
86	Cross Street	Culvert	Dec. 2022	Detailed Deck Condition Survey	Normal	Determine condition	\$ 35,000.00

			Dec. 2022	Concrete Substructure Condition Survey	Normal	Determine condition	\$ 8,000.00
			Dec. 2022	Structure Evaluation	Normal	Price will increase if no drawings are available	\$ 5,000.00
			As part of OSIMs	Monitoring of Deformations, Settlement and Movements	Normal	Monitor during OSIMs	
90	McMurray Street	Bridge	Dec. 2022	Concrete Substructure Condition Survey	Normal	For rehabilitation	\$ 35,000.00
			As part of OSIMs	Monitoring of Deformations, Settlement and Movements	Normal	Monitor North Abutment & SE Retaining Wall during OSIMs	
91	Ogilvie Street	Bridge	Dec. 2022	Detailed Deck Condition Survey	Normal	Determine condition	\$ 13,000.00
			Dec. 2022	Non-Destructive Delamination Survey of Deck	Normal	Chain drag exposed concrete deck	\$ 3,000.00
232	South Service Road	Culvert	Nov. 2022	Structure Evaluation	Normal	Due to cracking at mid-span	\$ 5,000.00
			As part of OSIMs	Monitoring Crack Widths	Normal	Monitor during OSIMs	
235	South Service Road	Culvert	As part of OSIMs	Monitoring of Deformations, Settlement and Movements	Normal	Monitor during OSIMs	
			Nov. 2022				
248	King Street West	Bridge	Dec. 2022	Detailed Deck Condition Survey	Normal	Bottom-up defects observed on asphalt	\$ 15,000.00
			Dec. 2022	Concrete Substructure Condition Survey	Normal	Determine condition	\$ 12,000.00
297	Main Street	Bridge	Dec. 2022	Detailed Deck Condition Survey	Normal	For rehabilitation	\$ 20,000.00
			Dec. 2022	Structure Evaluation	Normal	For rehabilitation	\$ 15,000.00
301	Cootes Drive	Bridge	Dec. 2022	Detailed Deck Condition Survey	Normal	For rehabilitation	\$ 25,000.00
313	Arkledun Avenue	Bridge	Dec. 2022	Detailed Deck Condition Survey	Normal	For rehabilitation	\$ 35,000.00
320	Kenilworth Access	Bridge	Dec. 2022	Detailed Deck Condition Survey	Normal	For rehabilitation	\$ 30,000.00
			Dec. 2022	Concrete Substructure Condition Survey	Normal	For rehabilitation	\$ 10,000.00
			Dec. 2022	Structure Evaluation	Normal	For rehabilitation	\$ 10,000.00
372	Wilson Street East	Culvert	Dec. 2022	Concrete Substructure Condition Survey	Normal	For rehabilitation	\$ 10,000.00
			As part of OSIMs	Monitoring of Deformations, Settlement and Movements	Normal	Monitor during OSIMs	
392	Claremont Access	Bridge	As part of OSIMs	Monitoring of Deformations, Settlement and Movements	Normal	East abutment, bearing 8 from North during OSIMs	
455	Macklin Street N/Private Leg	Bridge	Dec. 2022	Concrete Substructure Condition Survey	Normal	GPR survey of channel lining	\$ 20,000.00
						TOTAL COST	\$ 386,000.00

7.0 Recommended Priority List

The following Table 5 identifies all recommended work in priority sequence.

Table 5 – List of Recommended Priority List

PRIORITY RANKING	ID.	STRUCTURE NAME	INSPECTION DATE	WORK CATEGORY	TIMING	BCI	ESTIMATED TOTAL COST (\$)	COMMENTS*
1	046	CHRISTINA AV	2021-01-13	Replacement	1-5 yrs	52.84	\$309,700.00	Significant deterioration observed within barrel. Low vertical clearance would make rehabilitation very difficult and expensive.
2	246	GLOVER RD	2021-01-13	Replacement	6-10 yrs	64.46	\$243,315.00	1-5 yrs: install barriers on side of road 6-10 yrs: replace culvert
3	137	OLD ANCASTER RD	2021-03-02	Minor Rehab.	< 1 yr	66.26	\$42,100.00	< 1 yr: repair damaged SBGR section 6-10 yrs: concrete repairs in barrel
4	234	SOUTH SERVICE RD	2020-11-27	Minor Rehab.	< 1 yr	67.72	\$49,100.00	< 1 yr: repair SBGR impact damage 1-5 yrs: stabilize south embankments, replace retaining walls, concrete repair in barrel
5	244	HWY 8	2021-01-14	Minor Rehab.	< 1 yr	71.50	\$32,300.00	< 1 yr: repair impacted SBGR at NW 1-5 yrs: repave wearing surface, add pedestrian crossing at South side of intersection
6	300	COOTES DR	2021-01-08	Minor Rehab.	< 1 yr	71.78	\$125,040.00	< 1 yr: Install SBGR North side 1-5 yrs: replace wearing surface 6-10 yrs: concrete repairs to barrel, outlet sidewalk, deck top, repair storm sewer
7	316	CLAREMONT AC	2020-11-20	Minor Rehab.	< 1 yr	74.73	\$89,290.00	< 1 yr: scale loose concrete on soffit 1-5 yrs: repair pothole at NBL approach 6-10 yrs: concrete repairs to abutment, soffit, retaining walls, barriers, and medians
8	317	SHERMAN AC (WEST END) (HAIRPIN BEND TO EASTBOUND)	2020-11-18	Minor Rehab.	< 1 yr	73.12	\$71,050.00	< 1 yr: scale loose concrete 1-5 yrs: coat railings and posts, concrete repairs to abutment and wingwalls 6-10: concrete repairs to barriers, repair wearing surface
9	392	CLAREMONT AC	2020-11-18	Minor Rehab.	< 1 yr	81.00	\$133,350.00	< 1 yr: reposition shear block pad or replace 1-5 yrs: clean joint seals 6-10 yrs: repair approach slab, deck soffit, piers, and barriers, route & seal asphalt
10	235	SOUTH SERVICE RD	2020-11-27	Major Rehab.	< 1 yr	69.21	\$112,675.00	< 1 yr: replace failed/undermining channel, add protection or reconstruct disintegrated footing 1-5 yrs: Patch repairs and crack injections in barrel. Place rip-rap at NE embankment
11	233	NORTH SERVICE RD	2020-11-27	Minor Rehab.	< 1 yr	72.19	\$65,400.00	< 1 yr: repair NE outlet duct, install railing system at sides of roadway 6-10 yrs: seal cracks in wearing surface, concrete repairs in barrel
12	314	CLAREMONT AC	2020-11-20	Major Rehab.	< 1 yr	74.68	\$208,700.00	< 1 yr: add railings over retaining walls, replace missing manhole cover 1-5 yrs: scale loose concrete on soffit, concrete repairs on median 6-10: concrete repairs to abutment, wingwalls, retaining walls, piers, and NBL curbs

13	329	BURLINGTON ST OVERPASS centred approx over WILCOX ST	2021-03-09	Minor Rehab.	< 1 yr	73.05	\$1,571,896.00	< 1 yr: scale loose concrete on soffit 1-5 yrs: repair concrete barriers and coating on hand railing, patch soffit, recoat girders 6-10 yrs: replace joint seals and end dams
14	040	ARVIN AV	2021-01-13	Minor Rehab.	< 1 yr	80.37	\$17,150.00	< 1 yr: fill bases at SBGR posts 6-10 yrs: concrete repairs to barrier and outlet
15	132	QUIGLEY RD	2020-12-02	Minor Rehab.	< 1 yr	71.91	\$54,300.00	< 1 yr: replace wooden posts, clean stream debris at inlet 1-5 yrs: place rip-rap at SW embankments, rout and seal wearing surface 6-10 yrs: concrete repairs to barrel
16	297	MAIN ST	2021-01-08	Minor Rehab.	< 1 yr	54.00	\$171,840.00	Investig.: deck condition survey, structure eval. < 1 yr: repair sidewalk and replace gabions at SW1-5 yrs: coat structural steel, concrete repairs to soffit, fill scour hole
17	296	GOVERNOR'S RD	2021-01-08	Minor Rehab.	< 1 yr	62.28	\$405,800.00	< 1 yr: replace approach wearing surface 1-5 yrs: replace barriers, drains, and sidewalk/ext soffit, repair abutments, deck top, int soffit, replace utility piers, replace wearing surface.
18	320	KENILWORTH AC	2020-12-03	Major Rehab.	1-5 yrs	65.46	\$347,810.00	Investigations: detailed deck condition survey, concrete substructure conditon survey, structure evaluation Concrete repairs to soffit, piers, sidewalks, barriers, repairs to steel railing system
19	043	SEAMAN ST	2021-01-13	Major Rehab.	1-5 yrs	52.87	\$155,280.00	Replace CSP storm sewer, Concrete repairs to retaining walls, barrel soffit, and barrel deck top, Waterproof and repave wearing surface.
20	049	COLLEGIATE AV	2020-12-02	Major Rehab.	1-5 yrs	54.9	\$112,300.00	Investigations: detailed deck condition survey, structure evaluation Recommendations: concrete repairs to soffit, sidewalks, and retaining walls.
21	313	ARKLEDUN AV (JOLLEY CUT)	2020-11-18	Major Rehab.	1-5 yrs	71.80	\$1,274,530.00	Investigations: Detailed deck condition survey for rehabilitation project 1-5 yrs: scale loose concrete on soffit, patch repairs and crack injections 6-10 yrs: replace expansion joints
22	372	WILSON ST E	2021-04-02	Major Rehab.	1-5 yrs	56.47	\$184,200.00	1-5 yrs: repair N barrel and replace outlet end 6-10 yrs: concrete repairs in barrel, replace inlet, reconstruct/protect foundation base, clear debris and regrade stream at outlet, replace gabion retaining wall
23	90	MCMURRAY ST	2021-01-07	Major Rehab.	1-5 yrs	61.16	\$295,450.00	Planned for upcoming rehabilitation. Replace missing and secure loose stone at North abutment, repair south erosions on South abutment and rehab retaining walls
24	91	OGILVIE ST	2021-01-08	Major Rehab.	1-5 yrs	68.93	\$359,520.00	Investigations: detailed deck condition survey, delamination surveyof exposed deck top Recommendations: concrete repairs to abutments, wingwalls, soffit, deck top, and sidewalks, replace retaining wall at SW and gabions at SE
25	048	JONES ST	2020-12-02	Major Rehab.	1-5 yrs	55.08	\$288,730.00	Investigations: detailed deck condition survey, concrete substructure condition survey Recommendations: concrete repairs to deck, soffit, abutments and retaining walls, replace missing end caps on North railing

26	089	CREIGHTON RD	2021-01-05	Major Rehab.	1-5 yrs	56.79	\$671,600.00	Major rehabilitation recommended for the deck, joints, abutments, wearing surfaces, sidewalks, and barriers
27	086	CROSS ST	2021-01-07	Major Rehab.	1-5 yrs	64.02	\$220,122.00	Investigations: deck condition survey, substructure survey, structure eval., monitoring Recommendations: major rehab of culvert barrel & associated components, replacement of wearing surface, erosion control at NW and NE
28	407	QUEENSTON RD	2020-12-02	Minor Rehab.	1-5 yrs	66.28	\$160,952.00	1-5 yrs: concrete repairs in barrel, repair wearing surface 6-10 yrs: concrete repairs on approach, curbs, and barrel ends, install scour protection
29	232	SOUTH SERVICE RD	2020-11-27	Major Rehab.	1-5 yrs	69.92	\$66,172.00	Repair large area of cracking and delamination at mid-span of barrel and areas of scaling and spalls at inlet, outlet, and exposed deck top.
30	301	COOTES DR	2020-12-08	Minor Rehab.	1-5 yrs	70.28	\$286,720.00	concrete repairs on sidewalks, pier columns, abutments, soffit, deck top, and parapet walls, replace joint seals, remove collapsed tree in creek
31	044	ARVIN AV	2021-02-04	Minor Rehab.	1-5 yrs	72.91	\$24,220.00	1-5 yrs: add SBGR on North side, seal cracks in wearing surface 6-10 yrs: concrete repairs along barrel and outlet
32	042	LAKEVIEW DR	2021-01-13	Minor Rehab.	1-5 yrs	70.69	\$84,900.00	1-5 yrs: repair channel liner, re-pave approach wearing surface 6-10 yrs: concrete repairs to barrel and retaining walls
33	248	KING ST W	2021-01-05	Minor Rehab.	1-5 yrs	47.97	\$328,790.00	Concrete repairs to substructure, replace retaining walls, repair barrier posts that are not embedded
34	321	PEDESTRIAN RAIL TRAIL BRIDGE OVER KENILWORTH AC	2020-11-20	Minor Rehab.	1-5 yrs	65.13	\$302,900.00	1-5 yrs: add curbs for drainage 6-10 yrs: concrete repairs to multiple elements, replace bearings, recoat girders, replace damaged railing
35	303	PEDESTRIAN RAIL TRAIL BRIDGE OVER MAIN ST W	2021-03-02	Minor Rehab.	1-5 yrs	53.90	\$350,800.00	1-5 yrs: replace curb & sidewalks, recoat girders & floor beams, repair steel girders, repair concrete on abutments and wingwalls 6-10 yrs: replace wearing surface and waterproof deck
36	241	FRUITLAND RD	2021-01-13	Minor Rehab.	1-5 yrs	72.92	\$42,584.00	Replace wearing surface, repair sidewalks and mill to prevent trip hazard
37	085	PARKDALE AV S	2020-12-01	Minor Rehab.	1-5 yrs	91.36	\$11,000.00	Grind down sidewalk at NW approach to prevent trip hazard
38	368	KING ST E	2020-12-02	Minor Rehab.	1-5 yrs	69.92	\$61,196.00	1-5 yrs: concrete repairs to abutments, replace gabions 6-10 yrs: concrete repairs to wingwalls, curbs, and soffit, add scour protection to abutments, repair deck top defects, place rip-rap at exposed ret wall foundation

39	039	ARVIN AV	2021-01-13	Minor Rehab.	1-5 yrs	71.02	\$40,740.00	Concrete repairs to barrel soffit Waterproof deck Replace gabions at embankments
40	326	NIKOLA TELS BLVD OVERPASS centred approx over KENILWORTH AVE	2021-09-03	Minor Rehab.	1-5 yrs	73.45	\$1,268,860.00	1-5 yrs: replace joint seals 6-10 yrs: patch repairs to soffit, deck top, barriers, and pier columns, recoat structural steel
41	379	QUEENSTON RD	2020-12-02	Minor Rehab.	1-5 yrs	74.98	\$64,330.00	1-5 yrs: place rip-rap at exposed footings 6-10 yrs: concrete repairs in barrel, seal cracks in wearing surface
42	136	OGILVIE ST	2021-01-08	Minor Rehab.	1-5 yrs	71.97	\$82,080.00	1-5 yrs: repave wearing surface, replace wood barrier posts, replace SBGR section with impact damage 6-10 yrs: concrete repairs on barrel and retaining walls
43	133	QUIGLEY RD	2020-12-02	Minor Rehab.	1-5 yrs	70.54	\$134,200.00	Armour embankments at outlet, install headwalls at inlet and outlet, concrete repairs in barrel, route and seal cracks on wearing surface
44	280	CLAREMONT AC	2020-12-09	Minor Rehab.	1-5 yrs	78.30	\$99,520.00	Repair parapet wall, seal asphalt cracks, patch potholes
45	318	CLAREMONT AC	2020-12-09	Minor Rehab.	1-5 yrs	78.68	\$276,940.00	1-5 yrs: patch repairs to concrete barriers, soffit, and curb, crack injections on soffit 6-10 yrs: recoat structural steel, patch end dams and piers
46	238	GREEN RD	2020-12-03	Minor Rehab.	1-5 yrs	72.80	\$29,200.00	Seal cracks on wearing surface, fill voids under slope protection, concrete repairs to barrel
47	243	FIFTY RD	2021-01-14	Minor Rehab.	1-5 yrs	73.89	\$14,990.00	Repair edge cracks and potholes at approaches, replace missing offset block at NE, replace damaged SBGR on east side
48	94	YORK RD	2021-01-07	Minor Rehab.	1-5 yrs	69.15	\$29,780.00	Replace gabions at NW and SW
49	041	SEAMAN ST	2021-01-13	Minor Rehab.	1-5 yrs	72.67	\$40,000.00	Concrete repairs to soffit
50	322	KING ST E	2020-12-03	Minor Rehab.	1-5 yrs	78.96	\$50,370.00	1-5 yrs: replace joint seal at North, fill void at NW embankment 6-10 yrs: concrete repairs to soffit, wingwalls, retaining walls, sidewalks, and curbs
51	328	INDUSTRIAL DR	2020-11-26	Minor Rehab.	1-5 yrs	72.34	\$455,326.00	1-5 yrs: concrete repairs to abutments, wingwalls, and piers, overlay sidewalk 6-10 yrs: concrete repairs to deck top, median, retaining walls, replace approach slab, resurface asphalt
52	319	CONCESSION ST	2020-12-09	Minor Rehab.	1-5 yrs	71.95	\$129,580.00	1-5 yrs: replace sheet lagging 6-10 yrs: repair east approach slab and wearing surface

53	367	KING ST W	2020-12-02	Minor Rehab.	1-5 yrs	80.35	\$57,852.00	1-5 yrs: replace SBGR posts, install proper end treatment on NW SBGR, tighten loose bolts on steel railing 6-10 yrs replace NE gabions, concrete repairs to abutments, barriers, and soffit
54	327	NIKOLA TESLA BLVD OVERPASS centred approx over STRATHEARNE AVE	3//2021	Minor Rehab.	1-5 yrs	74.48	\$3,908,150.00	1-5 yrs: repair wearing surface, patch repair joint end dams, replace joint seals 6-10 yrs: repair concrete barriers and coating on hand railing, patch repair soffit/piers/pier caps, clean and repair deck drains.
55	135	LAKE AV N	2020-12-02	Minor Rehab.	1-5 yrs	72.63	\$92,570.00	1-5 yrs: remove debris & aggradation, replace railings, fill undermining voids on W sidewalk 6-10 yrs: fill scour hole at east end, replace SBGR posts, replace brick gutter
56	131	GREENHILL AV	2020-12-02	Minor Rehab.	1-5 yrs	73.21	\$50,560.00	1-5 yrs: replace clay pipes inside barrel and hand railing, concrete repairs to sidewalks 6-10 yrs: seal cracks in wearing surface
57	087	MOUNTAIN PARK AV	2020-12-09	Minor Rehab.	1-5 yrs	79.57	\$112,240.00	Replace deteriorated retaining wall lagging, repair concrete curbs
58	453	CENTENNIAL PY	2020-11-20	Minor Rehab.	1-5 yrs	73.72	\$59,950.00	1-5 yrs: install headwall at outlet 6-10 yrs: replace damaged SBGR and posts and missing bolts, concrete repairs to barrel and curbs
59	323	LAWRENCE RD	2020-12-03	Minor Rehab.	1-5 yrs	73.33	\$147,580.00	Replace current railing system with parapet wall, concrete repairs to abutments, wingwalls, sidewalks, curbs, and soffit, remove railing on barrier between pier columns.
60	458	YORK BV	2021-02-02	Minor Rehab.	1-5 yrs	73.29	\$1,126,070.00	1-5 yrs: replace SBGR at NE and NW 6-10 yrs: concrete repairs to exterior soffit, parapet walls, and curbs. Replace median.
61	333	WOODWARD AV	2021-02-04	Minor Rehab.	1-5 yrs	77.14	\$68,872.00	1-5 yrs: replace joint seals 6-10 yrs: concrete repairs to NE sidewalk, W barriers, SW wingwall, deck top, seal cracks in wearing surface
62	93	PARK ST E	2021-01-07	Minor Rehab.	1-5 yrs	70.21	\$30,000.00	1-5 yrs: replace gabions 6-10 yrs: concrete repairs to sidewalks, barrel, and retaining walls
63	334	WOODWARD AV	2021-09-04	Minor Rehab.	1-5 yrs	71.39	\$119,640.00	1-5 yrs: replace joint seals, repair sidewalks, install joint cover plate at median 6-10 yrs: concrete repairs in to piers, abutments, wingwalls, ballast walls, and end dams. Seal wearing surface cracks
64	249	NORTH SERVICE RD	2021-01-13	Minor Rehab.	1-5 yrs	72.70	\$28,600.00	Concrete repairs in barrel
65	298	SYDENHAM ST	2021-01-07	Minor Rehab.	1-5 yrs	70.55	\$109,800.00	1-5 yrs: replace CIP & timber retaining wall, replace damaged fence post, stable slope 6-10 yrs: seal wearing surface cracks

66	228	NORTH SERVICE RD	2021-01-13	Minor Rehab.	1-5 yrs	74.23	\$15,300.00	Concrete repairs in barrel
67	115	LOWER LIONS CLUB RD	2021-03-02	Minor Rehab.	1-5 yrs	67.84	\$54,100.00	Concrete repairs to barrel
68	376	PEDESTRIAN TUNNEL UNDER KING ST E	2020-12-02	Minor Rehab.	1-5 yrs	73.91	\$34,170.00	Remove trees around hand rail, replace damaged section of hand rail, repair sidewalk cracks and cracks in wearing surface
69	225	QEW-NORTH SERVICE RD - CONFEDERATION DR	2021-02-04	Minor Rehab.	1-5 yrs	72.45	\$15,268.00	Patch potholes and seal cracks on wearing surface
70	116	LOWER LIONS CLUB RD	2021-03-02	Minor Rehab.	1-5 yrs	71.86	\$38,000.00	1-5 yrs: replace NW retaining wall 6-10 yrs: concrete repairs to barrel
71	455	MACKLIN ST N/PRIVATE LEG	2021-02-02	Minor Rehab.	1-5 yrs	73.28	\$74,520.00	1-5 yrs: fill void below slope, replace steel on railings and posts 6-10 yrs: concrete repairs to abutments, wingwalls, and deck top
72	237	NORTH SERVICE RD	2021-01-14	Minor Rehab.	1-5 yrs	67.93	\$48,100.00	1-5 yrs: replace broken wood posts and disconnected posts at North SBGR 6-10 yrs: inject cracks in barrel, rehab barrier coatings, repair edge cracks on wearing surface
73	231	NORTH SERVICE RD	2020-11-27	Minor Rehab.	1-5 yrs	74.53	\$23,760.00	1-5 yrs: replace split offset blocks 6-10 yrs: concrete repairs in barrel, seal cracks on wearing surface
74	139	HUNTINGWOOD AV	2021-01-05	Minor Rehab.	1-5 yrs	71.10	\$41,320.00	Remove tree, channelize creek, remove aggradation, replace gabions, patch asphalt, concrete repairs on multiple elements
75	375	YORK RD	2021-01-08	Minor Rehab.	1-5 yrs	71.90	\$72,000.00	1-5 yrs: add armouring to SW embankment, repair asphalt surfaces 6-10 yrs: replace gabions, concrete repairs in barrel
76	236	SEABREEZE CR	2021-01-14	Minor Rehab.	1-5 yrs	74.31	\$11,460.00	1-5 yrs: replace one wood barrier post 6-10 yrs: concrete repairs to barrel
77	92	ALMA ST	2021-01-07	Minor Rehab.	1-5 yrs	72.90	\$13,000.00	Concrete repairs to abutments and retaining walls, repair barrier and hand railing
78	454	LIVINGSTONE DR	2021-01-07	Minor Rehab.	1-5 yrs	78.26	\$42,880.00	Concrete repairs to barrel and sidewalks, seal wearing surface defects, replace SBGR, and repair SW gabion
79	88	MILL ST	2021-01-05	Minor Rehab.	6-10 yrs	78.76	\$19,400.00	Concrete repairs on abutments and piers

80	448	CENTENNIAL PY	2020-11-20	Minor Rehab.	6-10 yrs	69.85	\$65,800.00	concrete repairs to barrel and curbs, repair wearing surface, replace rotated steel posts at SW, replace damaged SBGR
81	242	HWY 8	2021-01-14	Minor Rehab.	6-10 yrs	72.23	\$11,400.00	Concrete repairs to inlet and outlet, fill voids under lockblocks at outlet
82	060	BASELINE RD	2021-01-14	Minor Rehab.	6-10 yrs	74.18	\$11,800.00	Remove embankment spills and place rip-rap at embankments Route and seal cracks in approach wearing surface Inject cracks in barrel

8.0 Conclusion

In conclusion, a total of 83 structures City-owned structures were inspected in accordance with the requirements of the OSIM. The majority of these structures require some form of repair or maintenance, with a couple recommended for replacement.

In addition to the 83 City-owned structures, 32 non-City owned structures were also inspected and any urgent safety concerns were identified to the City within this summary report.

We trust that this report provides sufficient insight to the conditions of the inspected structures within the City of Hamilton.

Yours truly,

Wood Environment & Infrastructure Solutions
a Division of Wood Canada Limited

Appendix A

Removed Structure List

REMOVED STRUCTURES LIST

Structure No.	Structure Name	Reason for Removal
226	NORTH SERVICE RD-QEW-SOUTH SERVICE RD	MTO carrying out rehabilitation project in 2020/2021
227	NORTH SERVICE RD-QEW-SOUTH SERVICE RD	MTO carrying out rehabilitation project in 2020/2021
229	SOUTH SERVICE RD-QEW-NORTH SERVICE ROAD	MTO carrying out rehabilitation project in 2020/2021
230	NORTH SERVICE RD-QEW	MTO carrying out rehabilitation project in 2020/2021
239	NORTH SERVICE RD-QEW-SOUTH SERVICE RD	MTO carrying out rehabilitation project in 2020/2021
240	NORTH SERVICE RD-QEW-SOUTH SERVICE RD	MTO carrying out rehabilitation project in 2020/2021
250	NORTH SERVICE RD-QEW-SOUTH SERVICE RD	MTO carrying out rehabilitation project in 2020/2021
251	NORTH SERVICE RD-QEW-SOUTH SERVICE RD	MTO carrying out rehabilitation project in 2020/2021
252	NORTH SERVICE RD-QEW-SOUTH SERVICE RD	MTO carrying out rehabilitation project in 2020/2021
253	NORTH SERVICE RD-QEW-SOUTH SERVICE RD	MTO carrying out rehabilitation project in 2020/2021
255	NORTH SERVICE RD-QEW-SOUTH SERVICE RD	MTO carrying out rehabilitation project in 2020/2021
457	PEDESTRIAN BRIDGE OVER CREEK (VALLEY INN ROAD)	Bridge Closed.
157	BALDWIN ST	Structure Demolished.
158	COURT ST	Structure Demolished.

Appendix B

Associated Structure Works List

STRUCTURE LIST WITH ASSOCIATED WORKS

Last updated: 22-11-2021

Structure No.	Structure Name	Specific Location	Structure Type	OSIM Inspection Date	Inspection Weather	Inspection Temperature (°C)	Element	Recommended Work	Timeline (years)	Maintenance	Total Cost
39	Arvin Avenue	235m East of Fruitland Road	Culvert	2021-01-13	Cloudy	2 °C	Retaining Walls Barrels Deck Top Approach Wearing Surface Outlet Components	Replace gabions Patch repairs Waterproof deck Route and seal cracks Patch repairs and crack injections	1-5 1-5 1-5 6-10 1-5		\$ 40,740.00
40	Arvin Avenue	210m West of Fruitland Road	Culvert	2021-01-13	Cloudy	2	Barrier Posts Barrels Deck Top Outlet Components	Fill base around posts Patch repairs Waterproof deck Patch repairs	< 1 6-10 6-10 6-10		\$ 17,150.00
41	Seaman Street	175m East of Dewitt Road	Culvert	2021-01-13	Cloudy	2	Barrels	Patch repairs	1-5		\$ 40,000.00
42	Lakeview Drive	25m West of Sunnyside Avenue	Culvert	2021-01-13	Cloudy	2	Approach Wearing Surface Streams and Waterways Barrier Posts Railing Systems / Hand Railings Barrels Inlet Components Deck Wearing Surface Retaining Walls	Repave wearing surface Repair channel liner downstream Replace posts Recoat Patch repairs Patch repairs Route and seal cracks Patch repairs and crack injections	1-5 1-5 1-5 1-5 6-10 6-10 6-10 6-10		\$ 84,900.00
43	Seaman Street	410m West of Dewitt Road	Culvert	2021-01-13	Cloudy	2	Deck Top Retaining Walls Barrels Approach Wearing Surface Deck Wearing Surface	Patch repairs and waterproofing Replace storm CSP and patch repairs Patch repairs and crack injections Repave wearing surface Repave wearing surface	1-5 1-5 1-5 1-5 1-5		\$ 122,040.00
44	Arvin Avenue	295m West of Green Road	Culvert	2021-02-04	Partly Sunny	0	Barriers Outlet Components Barrier Posts Approach Wearing Surface Barrels Deck Wearing Surface Railing Systems / Hand Railings	Install barrier on North side Patch repairs Replace posts Route and seal cracks Patch repairs Route and seal cracks Recoat	< 1 6-10 1-5 1-5 6-10 1-5 1-5		\$ 24,220.00
46	Christina Avenue	10m South of Willow Lane	Culvert	2021-01-13	Cloudy	2	Barrels Approach Wearing Surface Inlet Components Outlet Components Deck Wearing Surface Deck Top	Replace culvert Route and seal cracks Replace culvert Replace culvert Route and seal cracks Patch repairs and waterproofing	1-5 1-5 1-5 1-5 1-5 1-5		\$ 309,700.00
48	Jones Street	110m West of King Street East	Bridge	2020-12-02	Clear / Sunny	-5	Deck Soffit Wingwalls - Precast Wingwalls - Gabions Abutment Walls Approach Wearing Surface Deck Wearing Surface Retaining Walls Barriers Sidewalk and Medians Curbs Deck Top	Patch repairs and crack injections Replace deteriorated sections Replace SW gabion Patch repairs and crack injections Replace wearing surface Replace wearing surface Replace disintegrated precast blocks Install missing end caps Patch repairs and crack injections Crack injections Patch repairs	1-5 1-5 1-5 1-5 1-5 1-5 1-5 < 1 6-10 6-10 1-5		\$ 288,730.00
49	Collegiate Avenue	30m West of Donn Avenue	Bridge	2020-12-02	Clear / Sunny	-5	Deck Soffit Sidewalk and Medians Retaining Walls Wingwalls Barriers Barrier Posts Drainage Embankments Drainage	Patch repairs and crack injections Replace portion of sidewalk Replace mass concrete walls, replace wood crib walls, replace gabion walls Patch repairs and crack injections Repair bent rails Patch repairs Rehabilitate Install erosion protection Fill deck drains	1-5 1-5 1-5 1-5 1-5 6-10 1-5 1-5 2	Maintenance	\$ 112,300.00

STRUCTURE LIST WITH ASSOCIATED WORKS

Last updated: 22-11-2021

Structure No.	Structure Name	Specific Location	Structure Type	OSIM Inspection Date	Inspection Weather	Inspection Temperature (°C)	Element	Recommended Work	Timeline (years)	Maintenance	Total Cost
60	Baseline Road	550m East of North Service Road	Culvert	2021-01-14	Overcast	3	Embankments Approach Wearing Surface Barrels	Remove spill around and install erosion protection at all four corners Route and seal cracks Patch repairs and crack injections	6-10 6-10 6-10		\$ 11,800.00
85	Parkdale Avenue South	over Lawrence Road	Bridge	2020-12-02	Clear / Sunny	-5	Curbs	Grind down to eliminate trip hazard	1-5		\$ 10,000.00
86	Cross Street	25m South of Alma Street	Culvert	2021-01-07	Cloudy	0	Approach Wearing Surface Approach Curb/Gutters Barrels Deck Wearing Surface Outlet Components	Replace wearing surface Replace southwest curb Patch repairs and crack injections Replace wearing surface Patch repairs and crack injections	1-5 1-5 1-5 6-10 1-5		\$ 78,012.00
87	Mountain Park Avenue	over Sherman Access Cut	Bridge	2020-12-09	Overcast	0	Retaining Walls Sidewalk and Medians	Replace lagging Crack injections	1-5 6-10		\$ 112,240.00
88	Mill Street	80m West of Wellington Street South	Bridge	2021-01-05	Cloudy	1	Abutment Walls Piers	Patch repairs and crack injections Crack injections	6-10 6-10		\$ 19,400.00
89	Creighton Road	30m South of Mill Street	Bridge	2021-01-05	Cloudy	1	Joints Retaining Walls Deck Wearing Surface Sidewalk and medians Girders Diaphragms Streams and Waterways Approach Wearing Surface Utilities Approach Slabs Deck Top Deck Soffit Barriers Embankments Barrier Posts Abutment Walls Wingwalls Coatings - Railing System Drainage Barriers	Replace joints Replace gabions Replace wearing surface Replace sidewalks Patch repairs Patch repairs Add rock protection Replace wearing surface Replace brackets Patch repairs Patch repairs Patch repairs and crack injections, replace exterior soffit Replace barriers Add rock protection Replace posts and repair concrete beneath posts Patch repairs and crack injections Crack injections Recoat Replace drains Tighten bolts	1-5 1		\$ 671,610.00
90	McMurray Street	100m South of Hatt Street	Bridge	2021-01-07	Cloudy	0	Retaining Walls Wingwalls Abutment Walls Deck Top	Replace gabions, replace deteriorated concrete Patch repairs Replace missing masonry blocks, secure loose blocks, repoint joints Patch repairs	1-5 6-10 1-5 6-10		\$ 300,450.00
91	Ogilvie Street	30m North of Governors Road	Bridge	2021-01-08	Overcast	0	Deck Top Joint Seals Joint Concrete End Dams Retaining Walls Sidewalk and medians Abutment Walls Approach Wearing Surface Approach Slabs Deck Wearing Surface Coatings - Railing System Deck Soffit Embankments Slope Protection Wingwalls	Carry out delamination survey and replace topping as required Replace Patch repairs and crack injections Replace gabions, replace masonry wall Replace Crack injections Seal cracks Repair Seal cracks Recoat localized areas Patch repairs Install erosion protection Install erosion protection Patch repairs and crack injections	1-5 1-5 6-10 1-5 1-5 6-10 1-5 6-10 1-5 6-10 6-10 1-5 1-5 1-5 6-10		\$ 359,520.00

STRUCTURE LIST WITH ASSOCIATED WORKS

Last updated: 22-11-2021

Structure No.	Structure Name	Specific Location	Structure Type	OSIM Inspection Date	Inspection Weather	Inspection Temperature (°C)	Element	Recommended Work	Timeline (years)	Maintenance	Total Cost
92	Alma Street	145m East of Sydenham Street	Culvert	2021-01-07	Cloudy	0	Barriers - Hand Railings Barriers - Railing System Retaining Walls Abutment Walls	Replace steel baseplate Install missing bolt nuts Patch repairs and crack injections Crack injections	< 1 1-5 6-10 6-10		\$ 13,000.00
93	Park Street East	110m West of York Road	Culvert	2021-01-07	Cloudy	0	Retaining Walls Outlet Components Approach Sidewalk Coatings - Railing System Barrels Sidewalk and medians Retaining Walls	Patch repair spall, replace gabion wall Patch repairs Patch repairs Recoat localized areas Crack injections Patch repairs Remove vegetation	1-5 1-5 6-10 6-10 6-10 6-10 2	Maintenance	\$ 30,000.00
94	York Road	55m North of King Street East	Culvert	2021-01-07	Cloudy	0	Signs Retaining Walls Approach Sidewalk/Curb	Install hazard signs Replace gabions Grind down concrete to remove trip hazard	1-5 1-5 1-5		\$ 29,780.00
95	Thorpe Street	60m South of Dundas Street	Bridge	2021-01-07	Cloudy	0	N/A	N/A			\$ -
115	Lower Lions Club Road	430m East of Old Dundas Road	Culvert	2021-03-02	Clear / Sunny	-3	Barrels Outlet Components Inlet Components Retaining Walls Approach Wearing Surface	Patch repairs Patch repairs Crack injections Crack injections Seal cracks	1-5 1-5 1-5 1-5 6-10		\$ 54,100.00
116	Lower Lions Club Road	240m East of Old Dundas Road	Culvert	2021-03-02	Clear / Sunny	-3	Retaining Walls Barrels Inlet Components Outlet Components	Replace Northwest retaining wall Patch repairs Patch repairs Patch repairs	1-5 6-10 6-10 6-10		\$ 38,000.00
131	Greenhill Avenue	110m West of Quigley Road	Culvert	2020-12-02	Clear / Sunny	-5	Barriers Barrels Approach Wearing Surface Deck Wearing Surface Streams and Waterways Sidewalk and Medians	Replace handrail Replace broken clay pipes, patch repairs Seal cracks Seal cracks Clean East cell to improve flow conditions Patch repairs	1-5 1-5 6-10 6-10 1-5 1-5		\$ 50,560.00
132	Quigley Road	70m North of Veevers Drive	Culvert	2020-12-02	Clear / Sunny	-5	Barrier Posts Approach Wearing Surface Barrels Embankments Slope Protection Streams and Waterways	Replace posts Seal cracks Patch repairs and crack injections Install erosion protection Install rip-rap at Southwest Remove debris	< 1 6-10 6-10 1-5 1-5 1	Maintenance	\$ 54,300.00
133	Quigley Road	0.5N of Munn's Avenue	Culvert	2020-12-02	Clear / Sunny	-5	Outlet Components Inlet Components Barrels Slope Protection Embankments Deck Wearing Surface Streams and Waterways	Install headwall Install headwall and crack injections Patch repairs and crack injections Fill voids with mass concrete Install erosion protection Seal cracks Remove debris	1-5 1-5 1-5 1-5 1-5 6-10 1	Maintenance	\$ 134,200.00
135	Lake Avenue North	55m North of Huckleberry Drive	Culvert	2020-12-02	Clear / Sunny	-5	Curbs Barriers Streams and Waterways Barrier Posts Wingwalls Approach Wearing Surface Coatings - Hand Railings Barrels Outlet Components Deck Wearing Surface Sidewalk and Medians Streams and Waterways Barrels	Replace gutter brick pan, patch repairs and crack injections Replace railing, tighten loose bolts Install erosion protection Replace wooden posts Patch repairs Repair pothole, seal cracks Recoat localized areas Patch repairs and crack injections Patch repairs Replace wearing surface Fill voids under sidewalk Remove debris Remove sediment build up	6-10 1-5 1-5 1-5 6-10 6-10 6-10 6-10 6-10 6-10 1-5 1 2	Maintenance Maintenance	\$ 93,570.00

STRUCTURE LIST WITH ASSOCIATED WORKS

Last updated: 22-11-2021

Structure No.	Structure Name	Specific Location	Structure Type	OSIM Inspection Date	Inspection Weather	Inspection Temperature (°C)	Element	Recommended Work	Timeline (years)	Maintenance	Total Cost
136	Ogilvie Street	165m South of Governors Road	Culvert	2021-01-08	Overcast	0	Approach Curb Barrier Posts Deck Wearing Surface Barriers - Railing Systems Barriers - Railing Systems Approach Sidewalk/Curb Approach Wearing Surface Coatings - Hand Railings Barrels Retaining Walls	Replace wearing surface Replace Replace wearing surface Replace Repair impact damage Patch repairs and crack injections Replace Recoat localized areas Patch repairs and crack injections Patch repairs and crack injections	1-5 1-5 1-5 1-5 < 1 1-5 1-5 1-5 6-10 6-10		\$ 82,080
137	Old Ancaster Road	285m South of Robinhood Drive	Culvert	2021-03-02	Clear / Sunny	-3	Barriers Barrels	Replace Patch repairs and crack injections	< 1 6-10		\$ 42,100.00
139	Huntingwood Avenue	40m East of Creekwood Place	Culvert	2021-01-05	Cloudy	1	Barrels Retaining Walls Streams and Waterways Approach Wearing Surface Approach Curb Approach Sidewalk Deck Wearing Surface Sidewalk and Medians	Patch repairs and crack injections Replace gabions Channelize creek, remove debris Patch repairs Crack injections Crack injections Seal cracks Patch repairs	1-5 1-5 1-5 1-5 6-10 6-10 6-10 6-10		\$ 41,320.00
225	QEW-Confederation Drive North Service Road	140m East of Centennial Parkway N	Culvert	2021-02-04	Partly Sunny	0	Deck Wearing Surface Approach Wearing Surface Curbs	Repair pothole, seal cracks Repair pothole, seal cracks Patch repairs	1-5 1-5 6-10		\$ 15,268.00
228	North Service Road-QEW-South Service Road	108m West of Lewis Road	Culvert	2021-01-13	Cloudy	2	Approach Wearing Surface Barriers - Railing Systems Barrels Inlet Components Barrels	Seal cracks Repair connection Patch repairs Patch repairs and crack injections Remove vegetation	1-5 1-5 1-5 1-5 2		\$ 15,300
231	North Service Road	280m West of Waterford Crescent	Culvert	2020-11-27	Overcast	4	Barrier Posts Approach Wearing Surface Barriers - Railing Systems Barrels Sidewalk and Medians Streams and Waterways	Replace offset blocks Seal cracks Replace impacted SBGR area Patch repairs and crack injections Replace cracked sidewalk panels Remove vegetation	1-5 6-10 6-10 6-10 1-5 2	Maintenance	\$ 23,750.00
232	South Service Road	309m East of Fruitland Road	Culvert	2020-11-27	Overcast	4	Barrels Deck Wearing Surface Outlet Components Inlet Components Streams and Waterways Embankments Approach Wearing Surface Deck Top	Patch repairs and crack injections Seal cracks Patch repairs Patch repairs Clear ends to allow for flow Install erosion protection Repair pothole, seal cracks Patch repairs	1-5 1-5 1-5 1-5 1-5 1-5 6-10 1-5		\$ 66,172.00
233	North Service Road	75m West of Dartmouth Gate	Culvert	2020-11-27	Overcast	4	Barriers - Railing Systems Utilities Barrels Deck Wearing Surface Approach Wearing Surface Streams and Waterways	Install barriers Repair duct Patch repairs and crack injections Seal cracks Seal cracks Remove vegetation	< 1 < 1 6-10 6-10 6-10 2		\$ 65,400.00
234	South Service Road	257m East of Jones Road	Culvert	2020-11-27	Overcast	4	Barriers - Railing Systems Embankments Barrels Retaining Walls Deck Wearing Surface Outlet Components Inlet Components Barrier Posts	Repair impact damage Stabilize embankments Patch repairs and crack injections Replace Repair pothole, seal cracks Patch repairs Patch repairs Replace damaged posts	< 1 1-5 1-5 1-5 6-10 6-10 6-10 1-5		\$ 49,100.00

STRUCTURE LIST WITH ASSOCIATED WORKS

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Structure No.	Structure Name	Specific Location	Structure Type	OSIM Inspection Date	Inspection Weather	Inspection Temperature (°C)	Element	Recommended Work	Timeline (years)	Maintenance	Total Cost
235	South Service Road	210m East of Dewill Drive	Culvert	2020-11-27	Overcast	4	Streams and Waterways Foundations Embankments Retaining Walls Barrels Approach Wearing Surface	Replace channel inlet Protect footing or reconstruct Install erosion protection Patch repairs Patch repairs and crack injections Seal cracks	1-5 < 1 1-5 6-10 1-5 6-10		\$ 112,675.00
236	Seabreeze Crescent	215m West of McNeilly Road	Culvert	2021-01-14	Overcast	3	Barrier Posts Inlet Components Outlet Components Barrels	Replace posts Patch repairs and crack injections Patch repairs and crack injections Patch repairs	1-5 6-10 6-10 6-10		\$ 11,460.00
237	North Service Road	680m East of Fifty Road	Culvert	2021-01-14	Overcast	3	Barrels Barriers - Railing Systems Coatings - Hand Railings Outlet Components Inlet Components Approach Wearing Surface Deck Wearing Surface	Crack injections Replace broken and disconnected posts New coat Patch repairs Patch repairs Seal cracks Seal cracks	6-10 1-5 6-10 6-10 6-10 6-10 6-10		\$ 48,100.00
238	Green Road	354m South of South Service Road	Culvert	2020-12-03	Cloudy	5	Barrels Approach Wearing Surface Deck Wearing Surface Slope Protection Inlet Components	Patch repairs Seal cracks Seal cracks Fill voids Patch repairs	6-10 1-5 1-5 1-5 6-10		\$ 29,200.00
241	Fruitland Road	208m North of Hwy 8	Culvert	2021-01-13	Cloudy	2	Approach Wearing Surface Deck Wearing Surface Coatings - Hand Railings Hand Railings Curbs Sidewalks and Medians	Replace wearing surface Replace wearing surface Replace Replace Crack injections Mill tripping hazards, crack injections	1-5 1-5 1-5 1-5 6-10 1-5		\$ 42,584
242	Hwy 8	75m East of Bridgman Lane	Culvert	2021-01-14	Overcast	3	Retaining Walls Outlet Components Inlet Components	Fill voids Patch repairs Patch repairs	6-10 6-10 6-10		\$ 11,400.00
243	Fifty Road	40m South of Hwy 8	Culvert	2021-01-14	Overcast	3	Approach Wearing Surface Barriers - Railing Systems Barrier Posts Inlet Components Outlet Components	Repair pothole, seal cracks Repair impact damage Replace offset blocks Patch repairs Patch repairs	6-10 1-5 1-5 6-10 6-10		\$ 14,990.00
244	Hwy 8	15m West of Fifty Road	Culvert	2021-01-14	Overcast	3	Deck Wearing Surface Barriers - Railing Systems Outlet Components Sidewalks and Medians Approach Wearing Surface	Replace wearing surface Repair impact damage Patch repairs and crack injections Add pedestrian crossing, patch repairs and crack injections Seal cracks	1-5 < 1 6-10 1-5 6-10		\$ 32,300.00
246	Glover Road	335m South of Barton Street	Culvert	2021-01-13	Cloudy	2	Barriers - Railing Systems Approach Wearing Surface Barrels Inlet Components Outlet Components Deck Wearing Surface Retaining Walls Sidewalks and Medians	Install barriers Seal cracks Replace culvert Replace culvert Replace culvert Seal cracks Patch repairs and crack injections Replace cracked sidewalk panels	< 1 6-10 6-10 6-10 6-10 6-10 6-10 1-5		\$ 243,315.00

STRUCTURE LIST WITH ASSOCIATED WORKS

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Structure No.	Structure Name	Specific Location	Structure Type	OSIM Inspection Date	Inspection Weather	Inspection Temperature (°C)	Element	Recommended Work	Timeline (years)	Maintenance	Total Cost
248	King Street West	145m West of Bond Street	Bridge	2021-01-05	Cloudy	1	Abutment Walls Wingwalls Approach Curb Approach Sidewalk Approach Wearing Surface Barrier/Parapet Walls Barrier Posts Barriers - Railing Systems Diaphragms Girders Deck Top Deck Wearing Surface Deck Soffit Retaining Walls Sidewalks and Medians Sidewalks and Medians	Erosion protection, patch repairs and crack injections Patch repairs Patch repairs Patch repairs and crack injections Seal cracks Patch repairs and crack injections Embed post correctly Repair impact damage Patch repairs Patch repairs and crack injections Patch repairs Seal cracks Patch repairs and crack injections Replace Crack injections Remove debris	1-5 1-5 1-5 1-5 1-5 1-5 1-5 1-5 1-5 1-5 1-5 6-10 1-5 1-5 2	Maintenance	\$ 328,790.00
249	North Service Road-QEW-South Service Road	106m East of Lewis Road	Culvert	2021-01-13	Cloudy	2.0	Barrels Inlet Components	Patch repairs and crack injections Patch repairs and crack injections	1-5 1-5		\$ 28,600
280	Claremont Access	250m West of Claremont Access	Bridge	2020-12-09	Overcast	0	Barrier/Parapet Walls Deck Top Deck Soffit Deck Wearing Surface Sidewalks and Medians	Patch repairs and crack injections Patch repairs Repair potholes, seal cracks Seal cracks Patch repairs and crack injections	1-5 1-5 6-10 1-5 6-10		\$ 99,520.00
296	Governors Road	45m East of Ogilvie Street	Bridge	2021-01-08	Overcast	0	Approach Wearing Surface Abutment Walls Utilities Barrier Posts Deck Soffit Drainage Deck Wearing Surface Slope Protection Sidewalks and Medians Wingwalls Deck Top	Replace Patch repairs and crack injections Rehab trunk sewer piers Replace Patch repairs and crack injections Replace Replace Install erosion protection Replace Patch repairs and crack injections Patch repairs	< 1 1-5 1-5 1-5 1-5 1-5 1-5 1-5 1-5 1-5 1-5		\$ 405,800.00
297	Main Street	120m South of Governors Road	Bridge	2021-01-08	Overcast	0	Deck Soffit Sidewalks and Medians Coatings - Structural Steel Slope Protection Streams and Waterways Abutment Walls Approach Slabs Approach Wearing Surface Utilities Barrier/Parapet Walls Barrier Posts Deck Top Deck Wearing Surface	Patch repairs and crack injections Repair trip hazard, patch repairs and crack injections Recoat Replace Install erosion protection Patch repairs and crack injections Patch repairs Seal cracks Replace insulated pipe between Girders 4 & 5 Patch repairs Patch repairs and crack injections Patch repairs Seal cracks	1-5 < 1 1-5 < 1 1-5 6-10 6-10 1-5 1-5 6-10 6-10 6-10 1-5		\$ 171,840.00

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Structure No.	Structure Name	Specific Location	Structure Type	OSIM Inspection Date	Inspection Weather	Inspection Temperature (°C)	Element	Recommended Work	Timeline (years)	Maintenance	Total Cost
298	Sydenham Street	140m North of Alma Street	Culvert	2021-01-07	Cloudy	0	Retaining Walls Embankments Barriers - Railing Systems Approach Sidewalks Approach Wearing Surface Barrier Posts Barrels Outlet Components Deck Wearing Surface	Replace at outlet Install erosion protection Replace Patch repairs and crack injections Seal cracks Replace Patch repairs and crack injections Patch repairs Seal cracks	1-5 1-5 1-5 6-10 6-10 6-10 6-10 6-10 6-10		\$ 109,800.00
300	Cootes Drive	185m East of Olympic Drive	Bridge	2021-01-08	Overcast	0	Deck Top Approach Wearing Surface Barriers - Railing Systems Barrels Outlet Components Deck Wearing Surface Sidewalks and Medians	Patch repairs Replace Construct railing system on North side Patch repairs and crack injections Patch repairs Seal cracks Crack injections	6-10 1-5 < 1 6-10 6-10 6-10 6-10		\$ 125,040.00
301	Cootes Drive	600m East of Olympic Drive	Bridge	2021-01-08	Overcast	0	Sidewalks and Medians Barrier/Parapet Walls Piers Slope Protection Approach Guiderail Deck Soffit Joints - Concrete End Dams Abutment Walls Joints - Seals Barrier Posts Railing Systems Deck Top Curbs Streams and Waterways	Patch repairs, waterproof and pave under asphalt sidewalks Patch repairs and crack injections Patch repairs and crack injections Repair gabions Non-standard end treatment Patch repairs and crack injections Crack injections Patch repairs Replace Tighten bolts Tighten bolts Patch repairs Patch repairs and crack injections Remove debris/vegetation	1-5 1-5 1-5 1-5 1-5 1-5 1-5 1-5 1-5 1-5 1-5 6-10 1-5 < 1		\$ 286,720.00
303	Pedestrian Rail Trail Bridge over Main Street West	105m South of Osler Drive	Bridge	2021-03-02	Cloudy	-3	Wingwalls Deck Soffit Curbs Coatings - Structural Steel Abutment Walls Girders Ballast Walls Floor Beams Deck Wearing Surface Bearings	Patch repairs and crack injections Replace Replace Recoat Repair steel Repair steel Repair potholes, seal cracks Remove debris/vegetation	1-5 1-5 6-10 1-5 1-5 1-5 1-5 6-10 1-5 2	Maintenance	\$ 350,800.00
313	Arkledun Avenue (Jolley Cut)	over Claremont Access	Bridge	2020-11-18	Overcast	-2	Abutment Walls Deck Soffit Joints - Seals Joints - Concrete End Dams Joints - Armoring Sidewalks and Medians Approach Sidewalks Deck Wearing Surface Piers Barrier/Parapet Walls Ballast Walls Retaining Walls Embankments Deck Top Coatings - Hand Railings Hand Railings Approach Wearing Surface Approach Curb Approach Slabs Wingwalls Joints - Seals	Patch repairs and crack injections Patch repairs and crack injections Replace Patch repairs and crack injections Replace Patch repairs and crack injections Seal cracks Patch repairs Patch repairs and crack injections Patch repairs and crack injections Patch repairs and crack injections Extend rip-rap areas Patch repairs Recoat Replace broken and missing end caps, replace missing anchor bolts Seal cracks Patch repairs Patch repairs Patch repairs and crack injections Remove debris/vegetation	1-5 1-5 6-10 6-10 6-10 6-10 1-5 1-5 1-5 1-5 1-5 1-5 1-5 1-5 6-10 1-5 1-5 1-5 1-5 1-5 1-5 1		\$1,274,530.00

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Structure No.	Structure Name	Specific Location	Structure Type	OSIM Inspection Date	Inspection Weather	Inspection Temperature (°C)	Element	Recommended Work	Timeline (years)	Maintenance	Total Cost
314	Claremont Access	over Charlton Avenue East	Bridge	2020-11-20	Clear / Sunny	15	Barrier/Parapet Walls Approach Wearing Surface Railing Systems Curbs Retaining Walls Piers Deck Wearing Surface Deck Soffit Deck Top Wingwalls Abutment Walls	Patch repairs and crack injections Seal cracks Replace missing nuts, replace manhole cover, extend railing system Patch repairs Patch repairs and crack injections Patch repairs and crack injections Replace Patch repairs and crack injections Patch repairs Patch repairs and crack injections Patch repairs and crack injections	1-5 1-5 < 1 6-10 6-10 6-10 6-10 1-5 6-10 6-10 6-10		\$ 208,700.00
316	Claremont Access	over Stinson Street	Bridge	2020-11-20	Clear / Sunny	15	Abutment Walls Approach Slabs Approach Wearing Surface Barrier/Parapet Walls Deck Soffit Joints - Concrete End Dams Retaining Walls	Patch repairs and crack injections Patch repairs Repair potholes, seal cracks Patch repairs and crack injections Scale loose concrete, patch repairs and crack injections Patch repairs Patch repairs and crack injections	6-10 6-10 6-10 6-10 < 1 6-10 6-10		\$ 89,290.00
317	Sherman Access (West End) - Hairpin Bend to Eastbound	over Sherman Access	Bridge	2020-11-18	Overcast	-2	Abutment Walls Hand Railings Wingwalls Approach Slabs Approach Wearing Surface Barrier/Parapet Walls Deck Top Deck Soffit Deck Wearing Surface	Patch repairs and crack injections Repair steel Patch repairs and crack injections Patch repairs Seal cracks Patch repairs and crack injections Patch repairs Scale loose concrete, patch repairs and crack injections Seal cracks	1-5 1-5 1-5 6-10 6-10 6-10 6-10 < 1 6-10		\$ 71,050.00
318	Claremont Access	over James Mountain Road	Bridge	2020-12-09	Overcast	0	Barrier/Parapet Walls Curbs Embankments Abutment Walls Piers Joints - Concrete End Dams Deck Soffit Coatings - Structural Steel Drainage Joints - Seals	Patch repairs and crack injections Patch repairs and crack injections Install erosion protection Patch repairs and crack injections Patch repairs Patch repairs and crack injections Patch repairs and crack injections Recoat Remove debris/vegetation Remove debris/vegetation	1-5 1-5 1-5 6-10 6-10 6-10 1-5 1-5 2 1	Maintenance Maintenance	\$ 276,940.00
319	Concession Street	over Sherman Access Cut	Bridge	2020-12-09	Overcast	0	Retaining Walls Approach Sidewalks Approach Wearing Surface Approach Slabs Sidewalks and Medians Railing Systems Barrier/Parapet Walls Barrier/Parapet Walls	Replace Patch repairs and crack injections Seal cracks Patch repairs Patch repairs and crack injections Replace missing bolts Patch repairs and crack injections Secure Northwest Precast Cap	1-5 6-10 6-10 6-10 6-10 1-5 1-5 1	Maintenance	\$ 129,580.00
320	Kenilworth Access	over Sherman Access EB Off-Ramp	Bridge	2020-12-03	Cloudy	5	Deck Soffit Barrier Posts Piers Deck Wearing Surface Barrier/Parapet Walls Curbs Abutment Walls Railing Systems Coatings - Hand Railings Approach Slabs Wingwalls Sidewalks and Medians Deck Top Approach Wearing Surface	Patch repairs and crack injections Replace when parapet walls are replaced Patch repairs and crack injections Replace Replace Replace when parapet walls are replaced Patch repairs and crack injections Replace Replace Replace Patch repairs Patch repairs and crack injections Patch repairs and crack injections Patch repairs Seal cracks	1-5 1-5 1-5 1-5 1-5 1-5 1-5 1-5 1-5 6-10 6-10 1-5 6-10 1-5		\$ 347,810.00

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Structure No.	Structure Name	Specific Location	Structure Type	OSIM Inspection Date	Inspection Weather	Inspection Temperature (°C)	Element	Recommended Work	Timeline (years)	Maintenance	Total Cost
321	Pedestrian Trail Bridge over Kenilworth Access	1100m West of Lawrence Road	Bridge	2020-11-20	Clear / Sunny	15	Deck Wearing Surface Piers Coatings - Structural Steel Retaining Walls Abutment Walls Ballast Walls Bearings Wingwalls Railing Systems Girders Deck Soffit Deck Wearing Surface	Add curb, seal cracks Patch repairs and crack injections Recoat Patch repairs and crack injections Patch repairs and crack injections Patch repairs and crack injections Replace Patch repairs and crack injections Replace bent steel Repair steel Patch repairs and crack injections Remove debris/vegetation	1-5 1-5 6-10 6-10 6-10 6-10 6-10 6-10 6-10 6-10 6-10 6-10 1-5	Maintenance	\$ 302,900.00
322	King Street East	over Kenilworth Avenue South	Bridge	2020-12-03	Cloudy	5	Wingwalls Deck Soffit Embankments Joints - Seals Retaining Walls Sidewalks and Medians	Crack injections Patch repairs Fill void Replace Patch repairs and crack injections Patch repairs and crack injections	6-10 6-10 1-5 1-5 6-10 6-10		\$ 50,370.00
323	Lawrence Road	over Kenilworth Avenue South	Bridge	2020-12-03	Cloudy	5	Railing Systems Abutment Walls Wingwalls Approach Wearing Surface Barrier/Parapet Walls Barrier Posts Deck Soffit Piers Retaining Walls Sidewalks and Medians	Replace with crash-test barrier Patch repairs and crack injections Patch repairs and crack injections Seal cracks Replace with crash-test barrier Replace with crash-test barrier Patch repairs and crack injections Remove railing system between columns Patch repairs and crack injections Patch repairs and crack injections	1-5 6-10 6-10 1-5 1-5 1-5 6-10 1-5 6-10 1-5		\$ 147,580.00
326	Nikola Tesla Blvd Overpass centred over Kenilworth Avenue	535m West of Kenilworth Ave. to 225m East of Kenilworth Ave.	Bridge	2021-03-09	Partly Sunny	5	Joints - Seals Abutment Walls Wingwalls Approach Slabs Approach Wearing Surface Electrical Barrier/Parapet Walls Deck Top Deck Soffit Deck Wearing Surface Joints - Concrete End Dams Piers Retaining Walls Joints - Modular Seal Drainage Joints - Seals Joints - Modular Seal	Replace Patch repairs and crack injections Patch repairs and crack injections Patch repair Seal cracks Replace broken utility covers Patch repairs and crack injections Patch repairs Patch repairs and crack injections Repair potholes, seal cracks Patch repairs and crack injections Recoat steel Patch repairs and crack injections Replace Remove debris/vegetation Remove debris/vegetation Remove debris/vegetation	1-5 1-5 6-10 6-10 6-10 1-5 6-10 6-10 1-5 6-10 6-10 6-10 6-10 1-5 2 2 2	Maintenance Maintenance Maintenance	\$1,268,860.00

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Structure No.	Structure Name	Specific Location	Structure Type	OSIM Inspection Date	Inspection Weather	Inspection Temperature (°C)	Element	Recommended Work	Timeline (years)	Maintenance	Total Cost
327	Nikola Tesla Blvd Overpass centred over Strathearne Avenue	500m West of Strathearne Avenue to 900m East of Strathearne Avenue	Bridge	2021-03-09	Partly Sunny	5	Barrier/Parapet Walls Barrier/Parapet Walls Railing Systems Diaphragms Girders Coatings - Railing Systems Deck Soffit Deck Wearing Surface Joints - Armoring Joints - Concrete End Dams Joints - Seals Piers Retaining Walls Wingwalls Approach Slabs Approach Wearing Surface Utilities Deck Top Drainage Joints - Seals	Remove exposed metal bar Patch repairs and crack injections Replace section Patch repairs and crack injections Patch repairs and crack injections Recoat Patch repairs and crack injections Repair potholes, seal cracks Replace/repair broken armoring Patch repairs and crack injections Replace Patch repairs and crack injections Patch repairs and crack injections Patch repairs Seal cracks Replace broken utility covers Patch repairs Repair broken grate bars Remove debris/vegetation	< 1 1-5 1-5 6-10 6-10 6-10 6-10 1-5 6-10 1-5 1-5 6-10 6-10 6-10 6-10 6-10 6-10 1-5 6-10 1-5 2		\$3,908,150.00
328	Industrial Drive	240m East of Gage Avenue North	Bridge	2020-11-26	Overcast	8	Abutment Walls Wingwalls Approach Slabs Deck Top Piers Sidewalks and Medians Barrier/Parapet Walls Hand Railings Deck Soffit Retaining Walls Joints - Concrete End Dams Approach Sidewalks Approach Curb Joints - Seals	Patch repairs and crack injections Patch repairs and crack injections Replace Patch repairs Patch repairs and crack injections Replace Patch repairs and crack injections Replace missing bolts Crack injections Patch repairs and crack injections Patch repairs and crack injections Replace Patch repairs Remove debris/vegetation	1-5 1-5 6-10 6-10 1-5 1-5 6-10 1-5 6-10 6-10 1-5 6-10 2	Maintenance	\$ 455,362.00
329	Burlington Street Overpass centred approx. over Wilcox Street	275m West of Wilcox Street to 300m East of Wilcox Street	Bridge	2021-03-09	Partly Sunny	5	Barrier/Parapet Walls Abutment Walls Diaphragms Girders Deck Soffit Ballast Walls Wingwalls Approach Wearing Surface Approach Curb Barrier/Parapet Walls Deck Soffit Railing Systems Coatings - Railing Systems Deck Top Drainage Joints - Armoring Deck Wearing Surface Joints - Concrete End Dams Joints - Seals Piers Retaining Walls Curbs Joints - Seals	Patch repairs and crack injections Patch repairs and crack injections Patch repairs and crack injections Repair steel Patch repairs and crack injections Patch repairs and crack injections Patch repairs and crack injections Seal cracks Patch repairs and crack injections Repair concrete at exposed light pole base Scale loose concrete Replace section Recoat Patch repairs Clear drains Replace/repair broken armoring Seal cracks Patch repairs Replace Patch repairs and crack injections Patch repairs and crack injections Patch repairs and crack injections Remove debris/vegetation	1-5 1-5 1-5 1-5 1-5 1-5 6-10 6-10 6-10 6-10 6-10 1-5 1-5 6-10 6-10 6-10 6-10 6-10 6-10 6-10 6-10 6-10 6-10 6-10 2		\$1,571,896.00

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Structure No.	Structure Name	Specific Location	Structure Type	OSIM Inspection Date	Inspection Weather	Inspection Temperature (°C)	Element	Recommended Work	Timeline (years)	Maintenance	Total Cost
333	Woodward Avenue	over Burlington Street East	Bridge	2021-02-04	Partly Sunny	5	Joints - Seals Wingwalls Approach Wearing Surface Barrier/Parapet Walls Deck Top Deck Soffit Deck Wearing Surface	Replace Patch repairs and crack injections Seal cracks Patch repairs and crack injections Patch repairs Patch repairs Seal cracks	1-5 6-10 6-10 6-10 6-10 6-10 6-10		\$ 68,872.00
334	Woodward Avenue	at Beach Boulevard/Eastport Drive	Bridge	2021-04-09	Overcast	5	Joints - Armoring Barrier/Parapet Walls Joints - Seals Abutment Walls Ballast Walls Approach Wearing Surface Diaphragms Girders Deck Soffit Deck Wearing Surface Joints - Concrete End Dams Piers Sidewalks and Medians	Install cover plate Patch repairs and crack injections Replace Patch repairs and crack injections Patch repairs and crack injections Seal cracks Patch repairs Patch repairs and crack injections Patch repairs and crack injections Seal cracks Install cover plate Patch repairs and crack injections Patch repairs and crack injections	1-5 1-5 1-5 6-10 6-10 6-10 6-10 6-10 6-10 6-10 6-10 6-10 1-5		\$ 119,640.00
367	King Street West	130m East of Centennial Parkway	Bridge	2020-12-02	Clear / Sunny	-5	Retaining Walls Barrier Posts Abutment Walls Approach Curb Approach Sidewalks Hand Railings Railing Systems Deck Top Deck Soffit Sidewalks and Medians Approach Wearing Surface Deck Wearing Surface Embankments Streams and Waterways	Replace gabion at NE and NW Replace Patch repairs and crack injections Patch repairs Patch repairs and crack injections Tighten bolts Install proper end treatment Patch repairs Patch repairs and crack injections Crack injections Seal cracks Seal cracks Remove tree at NW Remove rock wall under bridge	6-10 1-5 6-10 1-5 6-10 1-5 1-5 6-10 6-10 6-10 1-5 6-10 1 2	Maintenance Maintenance	\$ 57,852.00
368	King Street East	40m East of Elm Avenue	Bridge	2020-12-02	Clear / Sunny	-5	Retaining Walls Curbs Deck Soffit Deck Top Wingwalls Abutment Walls Streams and Waterways	Replace gabion wall, Install erosion protection Crack injections Patch repairs and crack injections Patch repairs Patch repairs Install erosion protection Remove debris/vegetation	1-5 6-10 6-10 6-10 6-10 1-5 2	Maintenance	\$ 61,196.00
372	Wilson Street East	1700m East of Rousseaux St. South	Culvert	2020-04-01	Overcast	0	Inlet Components Outlet Components Retaining Walls Barrels Streams and Waterways Approach Wearing Surface Deck Wearing Surface Embankments Foundations	Reconstruct inlet Reconstruct outlet Replace gabions Patch repairs and crack injections Clear debris and fill base to prevent pooling of water Seal cracks Seal cracks Add slope protection Reconstruct base at SE	6-10 1-5 6-10 1-5 6-10 6-10 6-10 6-10 6-10		\$ 184,200.00
375	York Road	100m North of Watsons Lane	Culvert	2021-01-08	Overcast	0	Embankments Approach Wearing Surface Deck Wearing Surface Barrels Retaining Walls	Install erosion protection Repave wearing surface Repave wearing surface Patch repairs and crack injections Replace gabions	1-5 1-5 1-5 6-10 6-10		\$ 72,000.00
376	Pedestrian Tunnel under King Street East	145m West of Lawrence Road	Culvert	2020-12-02	Clear / Sunny	-5	Hand Railings Deck Wearing Surface Sidewalks and Medians	Replace damaged railing and remove tree Seal cracks Crack injections	1-5 6-10 6-10		\$ 34,170.00

STRUCTURE LIST WITH ASSOCIATED WORKS

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Structure No.	Structure Name	Specific Location	Structure Type	OSIM Inspection Date	Inspection Weather	Inspection Temperature (°C)	Element	Recommended Work	Timeline (years)	Maintenance	Total Cost
379	Queenston Road	120m East of Riverdale Drive	Culvert	2020-12-02	Clear / Sunny	-5	Foundations Approach Curb Approach Sidewalk Barrels Outlet Components Curbs Approach Wearing Surface Deck Wearing Surface	Install erosion protection Patch repairs and crack injections Repair settlement Patch repairs and crack injections Patch repairs Crack injections Seal cracks Seal cracks	1-5 6-10 < 1 6-10 6-10 6-10 6-10 6-10		\$ 64,330.00
392	Claremont Access	1100m South of Young Street	Bridge	2020-11-18	Overcast	-2	Retaining Walls Piers Deck Wearing Surface Deck Soffit Barrier/Parapet Walls Utilities Approach Wearing Surface Approach Slabs Abutment Walls Drainage Joints - Seals	Patch repairs Patch repairs Seal cracks Patch repairs and crack injections Patch repairs and crack injections Replace covers Seal cracks Patch repairs Reposition shear block pad, install restraints Remove debris/vegetation Remove debris/vegetation	6-10 6-10 1-5 6-10 6-10 1-5 6-10 6-10 6-10 < 1 2 1	Maintenance Maintenance	\$ 133,350.00
407	Queenston Road	320m East of Lake Avenue Drive	Culvert	2020-12-02	Clear / Sunny	-5	Barrels Approach Wearing Surface Retaining Walls Approach Curb Deck Wearing Surface Foundations Sidewalk and Medians	Patch repairs and crack injections Seal cracks Replace gabions at SW, install gabions at SE Patch repairs and crack injections Seal cracks Install erosion protection Crack injections	1-5 1-5 1-5 6-10 6-10 6-10 6-10		\$ 160,952.00
448	Centennial Parkway	660m North of Ridge Road	Culvert	2020-11-20	Clear / Sunny	15	Railing Systems Barrier Posts Barrels Outlet Components Deck Wearing Surface Curbs	Replace Replace Patch repairs and crack injections Patch repairs and crack injections Seal cracks Patch repairs and crack injections	6-10 1-5 6-10 6-10 6-10 6-10		\$ 65,800.00
453	Centennial Parkway	820m North of Ridge Road	Culvert	2020-11-20	Clear / Sunny	15	Outlet Components Approach Wearing Surface Barrier Posts Railing Systems Barrels Deck Wearing Surface Curbs Embankments Streams and Waterways	Install headwall Seal cracks Replace Replace damaged barrier and install missing bolts Patch repairs and crack injections Seal cracks Patch repairs and crack injections Remove debris/vegetation Remove debris/vegetation	1-5 6-10 6-10 6-10 6-10 6-10 6-10 2 1	Maintenance Maintenance	\$ 59,950.00
454	Livingstone Drive	10m West of Sydenham Street	Culvert	2021-01-07	Cloudy	0	Embankments Approach Curb Approach Sidewalk Railing Systems Barrels Approach Wearing Surface	Repair SW gabion Patch repairs Crack injections Replace Patch repairs and crack injections Seal cracks	1-5 6-10 6-10 1-5 6-10 6-10		\$ 45,880.00
455	Macklin Street North / Private Leg	45m East of Macklin Street North	Bridge	2021-02-02	Overcast	1	Embankments Barrier Posts Abutment Walls Wingwalls Approach Slabs Approach Wearing Surface Barrier/Parapet Walls Railing Systems Coatings - Railing Systems Deck Top Deck Soffit Deck Wearing Surface Curbs	Fill voids Replace Patch repairs and crack injections Crack injections Patch repairs Seal cracks Patch repairs and crack injections Replace deformed portions Recoat Patch repairs Patch repairs and crack injections Seal cracks Patch repairs and crack injections	1-5 6-10 6-10 6-10 6-10 6-10 6-10 1-5 1-5 6-10 6-10 6-10 6-10		\$ 74,520.00



Hamilton

MINUTES WASTE MANAGEMENT ADVISORY COMMITTEE

Thursday December 16, 2021

1:30 p.m.

Due to COVID-19 and the Closure of City Hall

All electronic meetings can be viewed at the City's YouTube Channel:

<https://www.youtube.com/user/InsideCityofHamilton>

Present: Chair: Councillor Maria Pearson
Vice-Chair: Councillor John-Paul Danko
Members: Kevin Hunt
Lynda Lukasik

**Absent with
Regrets:** Councillor Nrinder Nann

Also Present: Angela Storey, Director, Waste Management
Joel McCormick, Manager of Waste Collection
Catherine McCausland, Manager of Waste Processing and
Disposal
Rob Conley, Senior Project Manager, Landfills
Ryan Kent, Manager of Waste Policy and Planning
Raffaella Morello, Senior Project Manager, Waste Operations

1. **CHANGES TO THE AGENDA**

There were no changes to the agenda.

2. **DECLARATIONS OF INTEREST**

There were no declarations of interest.

3. APPROVAL OF MINUTES OF PREVIOUS MEETING**(i) September 30, 2021****(Hunt/Lukasik)**

That the Minutes of the September 30, 2021 meeting of the Waste Management Advisory Committee be approved, as presented.

CARRIED**4. COMMUNICATIONS****(i) Information from the Office of the City Clerk respecting the All Advisory Committees Meeting Minutes held on Sept 27, 2021****(Danko/Lukasik)**

That Information from the Office of the City Clerk respecting the All Advisory Committees Meeting Minutes held on Sept 27, 2021, be received.

CARRIED**5. CONSENT ITEMS****(i) Solid Waste Management Master Plan - Status of 2020 SWMMP Action Items (Item 6.1)**

Staff provided information on the status of the 2020 Solid Waste Management Master Plan action items.

(Hunt/Lukasik)

That the Solid Waste Management Master Plan Status of 2020 Action Items, be received.

CARRIED**6. DISCUSSION ITEMS****(Hunt/Lukasik)**

That the following discussion items, be received.

(i) Waste-Free Ontario Act Updates (Item 8.1)

Staff presented information on the proposed amendments to the producer responsibility regulations for tires, batteries and electrical and electronic equipment made under the Resource Recovery and Circular Economy Act, 2016. The Ministry of the Environment, Conservation and Parks (MECP) is proposing to make these changes which are intended to reflect

market conditions, remove outdated content, and align administrative and technical provisions between the regulations.

Staff provided an update on the Hazardous and Special Products (HSP) Regulation. The producer responsibility program for Hazardous and Special Products is currently in its transition period which ends in December 2022. The City will continue to operate its household hazardous waste depots until the end of the current service contract which expires on September 30, 2022. Staff is planning to share a report with Council by Q2-2022 to provide information on the options on whether the City shall continue to operate the Household Hazardous Waste Depots for the products that are not covered under the HSP Regulation once the contract expires.

(ii) Operations Update (Item 8.2)

(a) Waste Collection Service Operations

Staff informed the Committee that the seasonal leaf and yard waste program concluded on December 6, 2021. Leaf and yard waste collection was temporarily reinstated between December 13th to 24th, 2021 due to storm events that occurred in mid-December 2021.

Residents can drop-off leaf and yard waste at the City's Community Recycling Centres year-round at no charge.

Curbside collection of Christmas trees is scheduled during the weeks of January 3rd and January 10th, 2022.

(b) Waste Processing and Disposal Service Operations

Staff provided information on the City's waste processing service operations:

1) Central Composting Facility (CCF) Updates

- The CCF passed the required annual source testing which models odour impacts in the local environment.
- The City received approval from the MECP for a temporary increase of 1000 metric tonnes of processing capacity at the CCF to receive organic waste from the City's green bin program.
- Staff is developing a budget estimate for a project to upgrade the CCF's odour management system.

- 2) Material Recycling Facility (MRF) Updates
 - The MRF will begin accepting merchant cardboard materials in December 2021, which will provide small revenue for the City.
- 3) Transfer Stations/Community Recycling Facilities Updates
 - The Reuse Store at the Mountain Community Recycling Centre re-opened on December 1, 2021.
 - Staff is reviewing the land requirements for the expansion of an additional Transfer Station/Community Recycling Centre.
- 4) Glanbrook Landfill Updates
 - The City will issue a Request for Proposal for the design and construction of Cells C, D and E within stage 3 at Glanbrook Landfill. Construction is expected to begin in Q2-2022.

(c) Promotion and Education

Staff provided an update on the 2022-2023 Recycling and Waste Calendar. The calendar will include information on the waste management programs such as waste collection safety, reducing contamination in the blue box program, waste reduction tips, and the Provincial Blue Box program changes. The calendar will be mailed in early March. The calendar will include 12 trash tags and residents will be able to request an additional 14 trash tags.

(d) Solid Waste Collection Design Requirements

Staff reported that the Waste Collection Design Requirements was approved by Council on November 10, 2021. Meetings were held in December 2021 with representatives from the Development Industry and staff in the Planning and Economic Development Department to provide information on the new design requirements.

Staff provided an update that three locations in Ward 2 were reviewed to determine if these sites will be able to comply with the new front-end bin waste diversion program.

CARRIED

**Waste Management Advisory Committee
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8. ADJOURNMENT

(Danko/Lukasik)

That, there being no further business, the meeting be adjourned at 2:15 p.m.

CARRIED


Respectfully submitted,

Councillor M. Pearson
Chair, Waste Management Advisory Committee

Raffaella Morello
Senior Project Manager-Waste Operations, Waste Policy and Planning
Waste Management Division, Public Works Department



CITY OF HAMILTON
PUBLIC WORKS DEPARTMENT
Transportation Operations and Maintenance Division

TO:	Chair and Members Public Works Committee
COMMITTEE DATE:	April 4, 2022
SUBJECT/REPORT NO:	Addressing Traffic Speed and Volume on Harbour Front Drive (PW22017) (Ward 2) (Outstanding Business List Item)
WARD(S) AFFECTED:	Ward 2
PREPARED BY:	Brad Wyllie (905) 546-2424 Ext. 1713 Josip Kafadar (905) 546-2424 Ext. 5781 Peter Locs (905) 546-2424 Ext. 6015
SUBMITTED BY:	Mike Field Acting Director, Transportation Operations & Maintenance Public Works Department
SIGNATURE:	

RECOMMENDATIONS

- (a) That the following roadway safety improvements be approved and implemented along Harbour Front Drive at a total cost of \$40,000.00 funded from the Ward 2 Area Rating Reserve, Dept. ID 108052:
- (i) One speed cushion on Harbour Front Drive located approximately 80 metres north of Bay Street, a yellow centreline for the entirety of Harbour Front Drive, and cyclist wayfinding signage completed in 2022 at an estimated total cost of \$10,000; and
 - (v) A Type D Pedestrian Crossover (PXO) and raised crosswalk, on Harbour Front Drive at the marina access roadway with appropriate pedestrian connection to the Bayfront Park west parking lot, designed in 2022 and constructed in 2023 at an estimated cost of \$30,000.
- (b) That the Outstanding Business List Item respecting Traffic Speed and Volume on Harbour Front Drive, be considered complete and removed from the Public Works Committee Outstanding Business List.

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**SUBJECT: Addressing Traffic Speed and Volume on Harbour Front Drive
(PW22017) (City Wide) – Page 2 of 5**

EXECUTIVE SUMMARY

The City of Hamilton (City) approved the Vision Zero Action Plan in February 2019, which is a comprehensive road safety plan to eliminate collisions that involve serious injuries or fatalities. As part of this program, proactive roadway safety improvements should be considered particularly in areas where there is a high volume of vulnerable road users.

Transportation, Operations & Maintenance completed a review of Harbour Front Drive to identify opportunities to implement roadway safety measures to improve the overall safety for all modes of travel. Due to the amenities in the vicinity, including Bayfront Park and the Waterfront Trail, the roadway is heavily utilized by pedestrians and cyclists.

The review identified that Harbour Front Drive has many opportunities for improvement to protect vulnerable road users and to calm vehicle traffic. These potential improvements include new pavement markings, signs, a speed cushion and a PXO with a complimentary raised crosswalk.

Combined, the safety enhancements recommended in Report PW22017 will serve to better protect vulnerable road users and are in alignment with the City of Hamilton's Vision Zero principals.

Alternatives for Consideration – See Page 4**FINANCIAL – STAFFING – LEGAL IMPLICATIONS**

Financial: The recommendations in Report PW22017 are estimated to cost \$40,000 and proposed to be funded from the Ward 2 Area Rating Reserve Dept. ID 108052, which has sufficient funds required to support the capital improvements.

Staffing: N/A

Legal: N/A

HISTORICAL BACKGROUND

On November 15, 2021 Transportation, Operations and Maintenance was directed by Public Works Committee through a motion to explore options utilizing a Vision Zero lens on Harbour Front Drive with the objective of further enabling appropriate vehicle speed limit compliance and enhancing the safety and comfort of vulnerable road users and to report back in Q1, 2022. Report PW22017 is the follow up to this direction.

**SUBJECT: Addressing Traffic Speed and Volume on Harbour Front Drive
(PW22017) (City Wide) – Page 3 of 5**

POLICY IMPLICATIONS AND LEGISLATED REQUIREMENTS

None

RELEVANT CONSULTATION

The following internal parties have been consulted in the development of this report:

- Public Works Department, Environmental Services Division; Parks & Cemeteries Section
- Public Works Department, Transit Division; Transit Planning & Infrastructure Section

ANALYSIS AND RATIONALE FOR RECOMMENDATION

Harbour Front Drive's existing conditions were reviewed and opportunities for safety improvements were examined through the lens of Vision Zero roadway safety principles.

Harbour Front Drive is a 400-metre-long unique local roadway that provides access to many points of interest including Bayfront Park and the Waterfront Trail. The roadway serves as the main access point from Bay Street and is heavily utilized by vehicles, pedestrian and cyclists – particularly in the spring, summer and fall.

Due to the width of the roadway and downhill grade, vehicles entering the park via Harbour Front Drive may unintentionally travel at a higher rate of speed. Incorporating a centreline on Harbour Front Drive, particularly through the curved section, will assist motorists to properly navigate the roadway as well as visually reduce the lane width available which may serve to reduce operating speeds. Additionally, the installation of a speed cushion and raised crosswalk will require motorists to reduce their speeds as they travel on this roadway. Due to the slope and curvature of the roadway, one speed cushion is proposed approximately 80 metres north of Bay Street, where roadway geometrics are favourable for installation.

On Harbour Front Drive there is increased cyclist traffic entering/exiting Bay Street; however, there are no formal bike lanes/facilities on Harbour Front Drive. There is insufficient road width to install bike lanes and it is recommended that bicycle wayfinding signage is installed to provide guidance to cyclists as well as alert drivers to the presence of active transportation trips. The wayfinding signage will instruct vehicles to share the roadway.

The intersection of Harbour Front Drive and the marina access road was observed to be regularly utilized by pedestrians accessing the Bayfront Park east parking lot and the

**SUBJECT: Addressing Traffic Speed and Volume on Harbour Front Drive
(PW22017) (City Wide) – Page 4 of 5**

Waterfront Trail. A review explored methods to increase improve pedestrian safety and connectivity to the parking lot and based on the review it is recommended that a Type D Pedestrian Crossover (PXO) crossing Harbour Front Drive on the east side of the intersection with pedestrian connections to the parking lot.

The implementation of a Type D PXO would provide pedestrians with the right of way while vehicles travelling on Harbour Front Drive vehicles will still travel freely in the absence of a pedestrian. Additionally, to further enhance pedestrian safety and further calm vehicular traffic, it is recommended that a raised crosswalk be incorporated into the PXO. The access to the Bayfront Park east parking lot was examined as the existing driveway is approximately 21 metres in width and permits vehicles to enter and exist the lot at a high rate of speed. A landing pad for pedestrians is proposed to be constructed at the west limit of the lot access, which will serve to narrow the driveway while providing pedestrians a safe access to the parking lot when utilizing the PXO. A larger stop bar and a painted median will also be installed to better delineate the access and improve egress and ingress from the parking lot.

ALTERNATIVES FOR CONSIDERATION

Committee could approve portions of the recommendations within this report; however, this would reduce the overall safety enhancements and connectivity for all roadway users.

Financial: Financials are dependant on Council's decision on what measures to alter/remove.

Staffing: N/A

Legal: N/A

ALIGNMENT TO THE 2016 – 2025 STRATEGIC PLAN

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Economic Prosperity and Growth

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Healthy and Safe Communities

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**SUBJECT: Addressing Traffic Speed and Volume on Harbour Front Drive
(PW22017) (City Wide) – Page 5 of 5**

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APPENDICES AND SCHEDULES ATTACHED

N/A



CITY OF HAMILTON
PUBLIC WORKS DEPARTMENT
Transportation Operations and Maintenance Division

TO:	Chair and Members Public Works Committee
COMMITTEE DATE:	April 4, 2022
SUBJECT/REPORT NO:	Red Light Camera Program - New Sites for 2022 (PW22018) (City Wide)
WARD(S) AFFECTED:	City Wide
PREPARED BY:	Peter Locs (905) 546-2424 Ext. 6015 Josip Kafadar (905) 546-2424 Ext. 5781 Khaled Hawash (905) 546-2424 Ext. 2064
SUBMITTED BY:	Mike Field Acting Director, Transportation, Operations & Maintenance Public Works Department
SIGNATURE:	

RECOMMENDATION

That the following locations be approved for the installation of red-light cameras in 2022:

- (a) Paramount Drive and Winterberry Drive – Eastbound (Ward 9);
- (b) Highway 8 and Gray Road – Eastbound (Ward 10);
- (c) Barton Street and Fruitland Road – Eastbound (Ward 10);
- (d) Upper James Street and Airport Road East – Southbound (Ward 11);
- (e) Garner Road East and Southcote Road – Westbound (Ward 12);
- (f) Wilson Street West and Highway 52/Trinity Road South – Northbound (Ward 12);
- (g) Cootes Drive and Dundas Street/East Street North – Westbound (Ward 13);
- (h) Stone Church Road West and Upper Paradise Road – Southbound (Ward 14);
- (i) Garth Street and Fennell Avenue West/Scenic Drive – Northbound (Wards 8/14);
and,
- (j) Highway 5 East and Hamilton Street North – Westbound (Ward 15).

EXECUTIVE SUMMARY

The City of Hamilton (City) has been operating a Red-Light Camera (RLC) program since November 2000 as part of a municipal partnership. The intent of the program is to

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**SUBJECT: Red Light Camera Program - New Sites for 2022
(PW22018) (City Wide) – Page 2 of 7**

improve roadway safety by reducing right-angle collisions at signalized intersections, which are caused by drivers failing to obey the red traffic signal.

At the October 28, 2015 meeting of Council (Report PW15073), the RLC program was approved to continue and expand at a rate of five new site installations per year. RLC site selection is based on industry guidelines and best practices with the objective to identify and rank all signalized intersections that have the most potential for reducing the number of angle collisions, while considering the potential increase in rear-end collisions post installation. The locations with the highest potential to improve roadway safety and also found to be technically suitable for installation of an RLC are listed in Appendix “A” to Report PW22018.

Based on the evaluation process, Transportation, Operations & Maintenance are recommending the final selection of ten (10) sites for RLC installation to begin in 2022.

Alternatives for Consideration – See Page 6

FINANCIAL – STAFFING – LEGAL IMPLICATIONS

Financial: The recommendation in Report PW22018 can be achieved without impact on the municipal tax levy. The RLC reserve continues to fund traffic safety initiatives throughout the City in alignment with the Hamilton Strategic Road Safety Program and Vision Zero Action Plan. The addition of ten (10) new sites will add approximately \$820K annually in costs and will be funded by the RLC Reserve.

Staffing: The RLC Program is managed by the Transportation, Operations & Maintenance Division in the Public Works Department. No additional Public Works staff will be required to operate the new sites.

The Provincial Offences Administration (POA) section in Corporate Services currently recovers court administration and prosecution staff costs from the RLC program. In 2020 there were approximately 19,500 RLC charges filed in Hamilton under POA. The charges present resource burden as defendants may request early resolution, meeting with a prosecutor, and/or request a trial. The installation of ten (10) new cameras will have an impact on Provincial Offences Administration (POA) and Legal Services. The planned expansion of the RLC will increase resource pressures in POA and Legal Services. Each group respectively will monitor operations and update staffing requirements if required through the annual operating budget cycle process.

Legal: N/A

**SUBJECT: Red Light Camera Program - New Sites for 2022
(PW22018) (City Wide) – Page 3 of 7**

HISTORICAL BACKGROUND

On October 28, 2015 (Report PW15073) Council approved the extension of the RLC program for the period 2017-2021 and authorized staff to enter an agreement with Traffipax LLC for this period which included the costs to expand the number of sites over the five (5) year term. Further, Council approved Report PW15013 recommending five (5) new red-light camera sites be installed annually from 2017 to 2021 inclusive.

In June 2019, Council approved Report PW19055 which included the latest five RLC locations which were installed in 2019.

In July 2020, the City of Toronto, as the lead partner in the municipal partnership, executed a contract with Traffipax LLC that enables radar-equipped RLC technology which offers lower maintenance costs and increased flexibility for RLC site selection.

On December 16, 2020, Council approved Report PW20077 which allowed the extension of the existing contract with Traffipax LLC to December 31, 2026, enabled the use of radar-equipped RLC technology for new RLC installations and conversion of existing RLC locations to radar-equipped RLC technology.

In March 2021 the City's contract with Traffipax LLC was renewed to December 31, 2026. RLC site selections for 2020 and 2021 was deferred pending the extension of the contract and the availability of the radar-equipped RLC technology to inform and guide subsequent site selection.

POLICY IMPLICATIONS AND LEGISLATED REQUIREMENTS

There are no implications to current policies or changes to current legislation required to add RLC sites in the City.

RELEVANT CONSULTATION

Under the current program, there were approximately 19,500 RLC charges filed in 2020 at 32 locations in the City under the POA. From these filings, the defendant can choose to pay the fine, request an Early Resolution Meeting with a prosecutor and/or request a trial. It is also important to note that charges filed in the calendar year may not be dealt with in the court process until sometime thereafter. With the increase of ten (10) additional RLC's in 2022, there is a potential for an estimated increase of approximately 6,000 additional charges filed annually once all the cameras have been installed. This increase will have an impact on POA and Legal Services resourcing in order to support the processing of the increased RLC volume.

**SUBJECT: Red Light Camera Program - New Sites for 2022
(PW22018) (City Wide) – Page 4 of 7**

Hamilton utilizes an Administrative Monetary Penalty System for parking and licensing violations which has proven to be an efficient process for resolving parking/licensing ticket disputes. Currently AMPS is not available for processing RLC violations; however, the City, along with other participating municipalities and organizations, including the Ontario Traffic Council (OTC), have been in contact with the Ministry of Transportation, requesting the use of the AMPS to process RLC and Automated Speed Enforcement (ASE) violations. The request includes legislative amendments that would direct the revenue from RLC/ASE penalties to municipalities.

The latest indication from the MTO is that AMPS may be available to process RLC/ASE in 2022/2023. However, the City would need to review and develop a program to accommodate this change. It is the opinion of Transportation, Operations & Maintenance, Legal Services and POA, that the operation of AMPS would not be ready for operation until the Q2/Q3 of 2023. Enabling AMPS for RLC/ASE would be of great benefit as it would likely provide resourcing and financial sustainability.

Transportation, Operations & Maintenance staff have also consulted with the City of Toronto and they have confirmed that they can process the images from the ten (10) additional RLC sites in Hamilton.

ANALYSIS AND RATIONALE FOR RECOMMENDATION

Red light running is a major cause of angle collisions, which are one of the most severe collision types and often result in serious injuries. A review of the City's most recent five years of collision data (2015 to 2019) showed that City-wide, an average of 500 right-angle collisions occurred per year at signalized intersections and an average of 167 of these collisions resulted in injuries.

An evaluation of collision data at RLC locations between 2019 and 2021 identified on average right-angle collisions were reduced by 58% and injury/fatal collisions associated with this type of collision were reduced by 65% compared to the three-year period before the camera was installed. The full 2019-2021 collision summary is shown in Appendix "B" to Report PW22018.

The RLC program is a safety initiative that is part of the Hamilton Strategic Road Safety Program. Revenue generated from the program is used to fund other road safety initiatives identified by the Hamilton Strategic Road Safety Program.

Consequently, Council's previous direction to install five (5) RLC sites per year remains outstanding for both 2020 and 2021 resulting in the request to install ten (10) RLC sites beginning in 2022.

**SUBJECT: Red Light Camera Program - New Sites for 2022
(PW22018) (City Wide) – Page 5 of 7**

A key benefit in implementing RLC is achieved when a wide-spread change in driver behaviour at all signalized intersections is achieved. The spill over or halo effect occurs after the cameras have been in service for several years. The keys to achieving this broad-based change are: sufficient numbers of cameras; cameras relatively widely distributed across a geographical area; publicity or word-of-mouth to spread the information; and, sufficient time for the effect to take hold.

The process for site selection is based on the recommendations of the Highway Safety Manual utilizing safety performance functions and according to industry best practices. The objective is to identify and rank all signalized intersections that have the most potential for safety improvement by reducing the number of angle collisions, while considering the potential increase in rear-end collisions after installation of RLC's. Right angle collision patterns are evaluated for the direction of the at-fault driver to further identify the best direction for the camera at the highest ranked locations.

The choice of candidate sites for RLC were determined using the collision data in combination with the strategies noted above to encourage wide-spread change in driver behaviour and improve over-all roadway safety. The list of candidate sites are shown in Appendix "A" to Report PW22018.

The final choice of location of sites is contingent upon the camera vendor's recommendations about the suitability of sites for camera installation. Factors such restricted sightlines, curvature of the road, driveways, overhead restrictions and narrow right-of-ways can preclude an otherwise high-ranking location from being a suitable candidate

Based on this evaluation process, the following ten locations were selected:

- Paramount Drive and Winterberry Drive – Eastbound (Ward 9);
- Highway 8 and Gray Road – Eastbound (Ward 10);
- Barton Street and Fruitland Road – Eastbound (Ward 10);
- Upper James Street and Airport Road East – Southbound (Ward 11);
- Garner Road East and Southcote Road – Westbound (Ward 12);
- Wilson Street West and Highway 52/Trinity Road South – Northbound (Ward 12);
- Cootes Drive and Dundas Street/East Street North – Westbound (Ward 13);
- Stone Church Road West and Upper Paradise Road – Southbound (Ward 14);
- Garth Street and Fennell Avenue West/Scenic Drive – Northbound (Wards 8/14);
- and,
- Highway 5 East and Hamilton Street North – Westbound (Ward 15)

**SUBJECT: Red Light Camera Program - New Sites for 2022
(PW22018) (City Wide) – Page 6 of 7**

ALTERNATIVES FOR CONSIDERATION

Council could consider approving only five (5) new locations for implementation in 2022 which would omit five (5) of the selected site locations.

Financial: Reducing the proposed quantity of RLC location from ten (10) to five (5) can be achieved without impact on the municipal tax levy. The RLC reserve continues to fund traffic safety initiatives throughout the City in alignment with the Hamilton Strategic Road Safety Program and Vision Zero Action Plan. The addition of five (5) new sites will add approximately \$410K annually in costs and will be funded by the RLC Reserve.

Based on prioritization from the selection criteria, if the list is reduced from ten (10) to five (5), the following proposed RLC locations to be installed in 2022, should this alternative be chosen:

1. Highway 8 and Gray Road – Eastbound (Ward 10)
2. Garner Road East and Southcote Road – Westbound (Ward 12)
3. Cootes Drive and Dundas Street/East Street North – Westbound (Ward 13)
4. Stone Church Road West and Upper Paradise Road – Southbound (Ward 14)
5. Garth Street and Fennell Avenue West/Scenic Drive – Northbound (Wards 8/14)

Staffing: As with ten (10) new location, reducing to five (5) new locations, no additional Public Works staff will be required to operate the new sites. Reducing the total number of sites would lower the impacts that expansion has on POA and Legal Services by 50%.

Legal: N/A

ALIGNMENT TO THE 2016 – 2025 STRATEGIC PLAN

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APPENDICES AND SCHEDULES ATTACHED

Appendix “A” to Report PW22018 – List of Red-Light Camera Candidate Sites

Appendix “B” to Report PW22018 – Collision Summary for Existing Red-Light Camera Locations (2019-2021)

List of Red Light Camera Candidate Sites

Location	Ward	Directions for Evaluation
Centennial Parkway North and South Service Road	5	Northbound
Greenford Drive and Queenston Road	5	Westbound, Eastbound
Barton Street East and Nash Road North	5	Eastbound
Nash Road South and Queenston Road	5	Eastbound, Southbound
Lake Avenue Drive and Queenston Road	5	Westbound, Eastbound
Highland Road East and Upper Centennial Parkway	9	Southbound
Paramount Drive and Winterberry Drive	9	Eastbound
Gray Road and Highway No. 8	10	Westbound/ Eastbound
Barton Street and Fruitland Road	10	Southbound, Eastbound
Highway No. 8 and Millen Road	10	Eastbound
Barton Street and Green Road	10	Westbound
Airport Road East and Upper James Street	11	Southbound, Northbound
Binbrook Road and Regional 56 Road	11	Southbound, Eastbound
Garner Road West and Shaver Road	12	Southbound
Garner Road East and Southcote Road	12	Westbound, Northbound
Wilson Street West and Highway 52 / Trinity Road South	12	Northbound
Dundas Street and Main Street	13	Southbound, Northbound
Cootes Drive and Dundas Street	13	Westbound
Stone Church Road West and Upper Paradise Road	14	Westbound, southbound, Northbound
Garth Street and Fennell Avenue West / Scenic Drive	14	Northbound
Hamilton Street North (N/S) and Highway No. 5 East	15	Westbound, Southbound
Evans Road and Highway No. 5 East	15	Westbound

Collision Summary for Existing Red Light Camera Locations (2019-2021)

Location	Date Installed	Right Angle Collisions			Right Angle Injury/Fatal Collisions			Total Violations
		3 Year Before	2019-2021	% Change	3 Year Before	2019-2021	% Change	2019-2021 ***
Stone Church Road East & Upper Wentworth Street	21-Jul-08	1	3	200%	0	3	increased	298
Mud Street West & Paramount Drive	21-Jul-08	3	2	-33%	2	2	0%	442
Cannon Street West & Hess Street North	19-Aug-08	9	3	-67%	5	3	-40%	5743
Burlington Street East & Gage Avenue North	19-Aug-08	8	2	-75%	7	1	-86%	729
Dundurn Street South & King Street West	17-Aug-09	13	3	-77%	7	3	-57%	4937
Dundurn Street South & Main Street West	17-Aug-09	5	0	-100%	5	0	-100%	6606
Bay Street South & Main Street West (EB)	12-Oct-10	4	5	25%	2	4	100%	1650
Cannon Street East & Kenilworth Avenue North	12-Oct-10	8	7	-13%	6	2	-67%	1741
Bay Street South & Main Street West (NB)	16-Oct-12	6	5	-17%	4	4	0%	615
Main Street East & Sanford Avenue South	16-Oct-12	3	1	-67%	1	0	-100%	1703
Brantdale Avenue & Upper James Street ¹	16-Oct-12	0	0	0%	0	0	0%	2947
Longwood Road South & Main Street West	12-Nov-13	1	2	100%	1	1	0%	251
Mohawk Road East & Upper Gage Avenue	12-Nov-13	3	2	-33%	2	1	-50%	432
Fennell Avenue East & Upper Gage Avenue	28-Nov-14	7	1	-86%	5	1	-80%	384
Mohawk Road East & Upper Wellington Street	5-Dec-14	6	1	-83%	5	1	-80%	900
King Street East & Lawrence Road/RHVP	5-Dec-14	3	0	-100%	3	0	-100%	968
King Street West & Macklin Street South	7-Jan-15	5	0	-100%	5	0	-100%	4815
Mohawk Road East & Upper Wentworth Street	13-Feb-15	1	1	0%	1	1	0%	750
Main Street East & Wellington Street South	13-Feb-15	10	14	40%	5	9	80%	1504

¹ Red-light camera at Upper James Street & Brantdale Avenue was decommissioned on Oct 28, 2021.

Location	Date Installed	Right Angle Collisions			Right Angle Injury/Fatal Collisions			Total Violations
		3 Year Before	2019-2021	% Change	3 Year Before	2019-2021	% Change	2019-2021 ***
Dundas Street East & Mill Street North	14-Jul-17	2	0	-100%	2	0	-100%	2234
Charlton Avenue East & John Street South	3-Aug-17	2	2	0%	2	2	0%	845
Mohawk Road West & Upper Paradise Road	3-Aug-17	2	2	0%	1	1	0%	665
Highway 8 & Green Road	14-Aug-17	5	2	-60%	4	0	-100%	1485
Hess Street North & York Boulevard	30-Aug-17	9	4	-56%	8	2	-75%	3734
Twenty Road West & Upper James Street	10-Sep-18	5	3	-40%	2	2	0%	1326
Fennell Avenue West & Upper James Street	10-Sep-18	1	2	100%	1	1	0%	1449
Stone Church Road East & Upper Gage Avenue	10-Oct-18	3	2	-33%	1	2	100%	750
Wentworth Street North & Wilson Street	23-Oct-18	4	4	0%	3	4	33%	345
Cannon Street West & James Street North	10-Dec-18	0	2	increased	0	1	increased	735
* Main Street North & Queen Street East	13-Dec-19	3	1	-67%	1	1	0%	4449
* Barton Street East & Ottawa Street North	13-Dec-19	6	3	-50%	4	2	-50%	2768
** Catharine Street North & King Street East	8-Jan-20	7	0	-100%	6	0	-100%	2087
** Sanford Avenue North & Wilson Street	5-Mar-20	4	1	-75%	2	0	-100%	118
ALL RLC LOCATIONS COMBINED		149	80	-46%	103	54	-48%	60405

* After Period collision statistics for 2020-2021 only

** After Period collision statistics for 2021 only

*** Violation totals include partial years based on installation date



TRUCK ROUTE SUB-COMMITTEE REPORT 22-001

**9:30 a.m.
March 28, 2022
Council Chambers
Hamilton City Hall**

Present: Councillors J. Farr (Chair), N. Nann (Vice-Chair), T. Jackson, B. Johnson, S. Merulla, M. Pearson, and M. Wilson

THE TRUCK ROUTE SUB-COMMITTEE PRESENTS REPORT 22-001 AND RESPECTFULLY RECOMMENDS:

- 1. Truck Route Master Plan Update (PED19073(c)) (City Wide) (Item 8.1)**
 - (a) That “Alternative Five - Ring Road Concept with Positive Guidance Concept” attached as Appendix “A” to Truck Route Sub-Committee Report 22-001 be adopted as the Recommended Truck Route Network;
 - (b) That the Draft October 29, 2021 City of Hamilton Truck Route Master Plan (TRMP) Update, attached as Appendix “A” to Truck Route Sub-Committee Report 22-001 from November 29, 2021, be amended to reflect the Ring Road Concept with Positive Guidance Concept Recommended Truck Route Network;
 - (c) That the General Manager of the Planning and Economic Development Department be authorized to file the City of Hamilton Truck Route Master Plan (TRMP) Update as amended with the Municipal Clerk for a minimum thirty-day public review period to formally complete the Class Environmental Assessment (EA) process;
 - (d) That the Transportation Operations and Maintenance (TOM) Division develop a truck route signing implementation strategy and that the estimated cost of \$350 K for signage modifications and installations be funded from the Unallocated Capital Levy Reserve Account #108020;
 - (e) That the Transportation Operations and Maintenance (TOM) Division prepare an amendment to the City of Hamilton Traffic By-law 01-215 for consideration by Council to incorporate the Recommendations within the Truck Route Master Plan (TRMP) Update;
 - (f) That, where truck routes have been identified along various roads within the Recommended Truck Route Network (TRN) - Future Conditions, as presented in Appendix “A” attached to Truck Route Sub-Committee Report 22-001, that these roadways are planned and designed with the
Public Works Committee – April 4, 2022

appropriate roadway and pavement structure to support truck movement and reflect a Complete-Livable-Better Streets and Vision Zero approach;

- (g) That Hamilton Police Services (HPS) be requested to review and develop an enhanced commercial vehicle enforcement strategy in collaboration with Transportation Planning (TP) and Transportation Operation and Maintenance (TOM);
- (h) That Item ACI, respecting Public Works Report 21-016, Item 6 (PED19073(b)), staff to review the recommendations in PED19073(b) with prioritization given to the Terms of Reference ratified by Council, including an analysis that would permit a ring road approach for the Truck Route Master Plan Update and report back to the Truck Route Sub-committee, be identified as completed and removed from the Public Works Committee Outstanding Business List.
- (i) ***That staff be directed to develop a framework and associated criteria that can be used to evaluate changes to the approved Truck Route Network in order to inform future revisions to the truck route network; and***
- (j) ***That the criteria be presented to the Truck Route Sub-Committee by Q3 2022 with the results of the evaluation being completed no later than 2024.***

2. Initiation of Municipal Class Environmental Assessment for a new arterial roadway in Glanbrook connecting the Airport Employment Growth District to the Red Hill Business Park (Added Item 11.1)

WHEREAS, effective goods movement supports local, regional and international markets and contributes to Hamilton's economic prosperity and growth;

WHEREAS, a new arterial roadway connecting Highway 6 South between the Airport Employment Growth District (AEGD) and the Red Hill Business Park and the broader Provincial highway system, which would improve the efficiency of moving goods while mitigating impacts of truck traffic on existing rural roadways in Glanbrook;

WHEREAS, the 2018 City-wide Transportation Master Plan identifies a conceptual link within the strategic road network map to connect the Hamilton International Airport and employment growth district to the Provincial Highway Network;

WHEREAS, a new arterial roadway would provide efficient connectivity between employment lands, intermodal hubs and the highway system and fills a gap in the goods movement network in the Glanbrook area;

WHEREAS, a new arterial roadway would assist in minimizing the impact of heavy-freight vehicles on the quality of life of residents within rural communities;

WHEREAS, growth in employment lands could be supported by improved inter-connectivity through a combination of new transportation corridors, road capacity enhancements and/or urbanization of rural cross-sections;

THEREFORE, BE IT RESOLVED:

That staff be directed to develop a Terms of Reference for a Municipal Class Environmental Assessment for an arterial roadway link between the Airport Employment Growth District (AEGD) and the Red Hill Business Park and that funding to complete the study be considered as part of the 2023 Capital Budget.

FOR INFORMATION:

(a) CHANGES TO THE AGENDA (Item 2)

The Committee Clerk advised of the following changes to the agenda:

5. COMMUNICATIONS (Item 5)

The following added Communications Items respecting the Truck Route Master Plan Updated are to be received and referred to the consideration of Item 8.1 - Truck Route Master Plan Update (PED19073(c)) (City Wide):

- 5.1(b) Steven Oliver
- 5.1(c) Marie Nash, Interim CEO, Hamilton Chamber of Commerce
- 5.1(d) Tanya Ritchie
- 5.1(e) Rene Lemay, Plant Manager, Bunge

6. DELEGATION REQUESTS (Item 6)

The following added Delegation Requests respecting Item 8.1 - Truck Route Master Plan Update (PED19073(c)) (City Wide) are for today's meeting:

- 6.1(a)(b) Lynda Lukasik, Environment Hamilton
- 6.1(a)(c) Leah Avery
- 6.1(a)(d) Robert Iszkula
- 6.1(a)(e) Sean Burak
- 6.1(a)(f) Geoffrey Knapper, Hamilton Industrial Environmental Organization
- 6.1(a)(g) Kyle Reid, ArcelorMittal Dofasco
- 6.1(a)(h) Tanya Ritchie - WITHDRAWN

- 6.1(a)(i) Cameron Kroetsch
- 6.1(a)(j) Hugh Loomans, Sylvite Agri Services
- 6.1(a)(k) Lak Shoan, Ontario Trucking Association
- 6.1(a)(l) Gabe Pitura, Residents of Dickenson Road E. Committee member
- 6.1(a)(m) John Laudonio - WITHDRAWN
- 6.1(a)(n) Alex Matheson
- 6.1(a)(o) Brenda Byrne, Grain Farmers of Ontario

Items 6.1(a)(h) and 6.1(a)(m), delegation requests from Tanya Ritchie and John Laudonio have been WITHDRAWN at the request of the delegates.

11. MOTIONS (Item 11)

- 11.1 Initiation of Municipal Class Environmental Assessment for a new arterial roadway in Glanbrook connecting the Airport Employment Growth District to the Red Hill Business Park

This item was omitted from the agenda in error as it was presented as a Notice of Motion at the November 29, 2021 Meeting.

CHANGE TO THE ORDER OF ITEMS:

9. PUBLIC HEARINGS / DELEGATIONS

In order to accommodate a delegates previously arranged appointment, the delegation from Alex Matheson (request 6.1(a)(n)), once approved will be heard first.

The agenda for the March 28, 2022 Truck Route Sub-Committee meeting was approved, as amended.

(b) DECLARATIONS OF INTEREST (Item 3)

There were no declarations of interest.

(c) APPROVAL OF MINUTES OF PREVIOUS MEETING (Item 4)

(i) November 29, 2021 (Item 4.1)

The Minutes of the November 29, 2021 meeting of the Truck Route Sub-Committee were approved, as presented.

(d) COMMUNICATIONS (Item 5)

(i) The following Communications Items, respecting the Truck Route Master Plan Updated, were received and referred to consideration of Item 8.1 - Truck Route Master Plan Update (PED19073(c)) (City Wide):

- (1) Deborah Martin (Item 5.1(a))
- (2) Steven Oliver (Added Item 5.1(b))
- (3) Marie Nash, Interim CEO, Hamilton Chamber of Commerce (Added Item 5.1(c))
- (4) Tanya Ritchie (Added Item 5.1(d))
- (5) Rene Lemay, Plant Manager, Bunge (Added Item 5.1(e))

(e) DELEGATION REQUESTS (Item 6)

(i) The following delegation requests, respecting Item 8.1 - Truck Route Master Plan Update (PED19073(c)) (City Wide), were approved for today's meeting:

6.1(a) Virtual Delegation Requests:

- (1) Larissa Fenn, Hamilton Oshawa Port Authority (Item 6.1(a)(a))
- (2) Lynda Lukasik, Environment Hamilton (Added Item 6.1(a)(b))
- (3) Leah Avery (Added Item 6.1(a)(c))
- (4) Robert Iszkula (Added Item 6.1(a)(d))
- (5) Sean Burak (Added Item 6.1(a)(e))
- (6) Geoffrey Knapper, Hamilton Industrial Environmental Organization (Added Item 6.1(a)(f))
- (7) Kyle Reid, ArcelorMittal Dofasco (Added Item 6.1(a)(g))
- (8) Cameron Kroetsch (Added Item 6.1(a)(i))
- (9) Hugh Loomans, Sylvite Agri Services (Added Item 6.1(a)(j))
- (10) Lak Shoan, Ontario Trucking Association (Added Item 6.1(a)(k))
- (11) Gabe Pitura, Residents of Dickenson Road E. Committee member (Added Item 6.1(a)(l))
- (12) Alex Matheson (Added Item 6.1(a)(n))

- (13) Brenda Byrne, Grain Farmers of Ontario (Added Item 6.1(a)(o))

(f) STAFF PRESENTATIONS (Item 8)

(i) Truck Route Master Plan Update (PED19073(c)) (City Wide) (Item 8.1)

Brian Hollingworth, Director Transportation Planning and Parking, and Omar Shams, Project Manager, Transportation Planning - New Initiatives, addressed the Committee with a presentation respecting Report PED19073(c), Truck Route Master Plan Update.

The staff presentation respecting Report PED19073(c), Truck Route Master Plan Update, were received.

Consideration of PED19073(c), Truck Route Master Plan Update, was DEFERRED until after the delegates for this matter have been heard.

For further disposition of this matter, refer to Item 1.

(g) PUBLIC HEARINGS / DELEGATIONS (Item 9)

The following Virtual Delegations respecting the Truck Route Master Plan, were received:

(i) Virtual Delegations:

- (1) Larissa Fenn, Hamilton Oshawa Port Authority (Added Item 9.2)
- (2) Lynda Lukasik, Environment Hamilton (Added Item 9.3)
- (3) Leah Avery (Added Item 9.4)
- (4) Robert Iszkula (Added Item 9.5)
- (5) Sean Burak (Added Item 9.6)
- (6) Geoffrey Knapper, Hamilton Industrial Environmental Organization (Added Item 9.7)
- (7) Kyle Reid, ArcelorMittal Dofasco (Added Item 9.8)
- (8) Cameron Kroetsch (Added Item 9.9)
- (9) Hugh Loomans, Sylvite Agri Services (Added Item 9.10)
- (10) Lak Shoan, Ontario Trucking Association (Added Item 9.11)
- (11) Gabe Pitura, Residents of Dickenson Road E. Committee member (Added Item 9.12)

(12) Alex Matheson (Added Item 9.1)

The following delegate was not present when called upon:

9.13 Brenda Byrne, Grain Farmers of Ontario

The Truck Route Sub-Committee recessed for 25 minutes until 1:25 pm.

For disposition of this matter, refer to Item 1.

(h) STAFF PRESENTATIONS (Item 8) (Continued)

(i) Truck Route Master Plan Update (PED19073(c)) (City Wide) (Item 8.1)

- (a) That “Alternative Five - Ring Road Concept with Positive Guidance Concept” as shown in Appendix "A" attached to Report PED19073(c) be adopted as the Recommended Truck Route Network;
- (b) That the Draft October 29, 2021 City of Hamilton Truck Route Master Plan (TRMP) Update, attached as Appendix "A" to Report PED19073(b) from November 29, 2021, be amended to reflect the Ring Road Concept with Positive Guidance Concept Recommended Truck Route Network;
- (c) That the General Manager of the Planning and Economic Development Department be authorized to file the City of Hamilton Truck Route Master Plan (TRMP) Update as amended with the Municipal Clerk for a minimum thirty-day public review period to formally complete the Class Environmental Assessment (EA) process;
- (d) That the Transportation Operations and Maintenance (TOM) Division develop a truck route signing implementation strategy and that the estimated cost of \$350 K for signage modifications and installations be funded from the Unallocated Capital Levy Reserve Account #108020;
- (e) That the Transportation Operations and Maintenance (TOM) Division prepare an amendment to the City of Hamilton Traffic By-law 01-215 for consideration by Council to incorporate the Recommendations within the Truck Route Master Plan (TRMP) Update;
- (f) That, where truck routes have been identified along various roads within the Recommended Truck Route Network (TRN) - Future Conditions, as presented in Appendix “A” attached to Report PED19073(b), that these roadways are planned and designed with

the appropriate roadway and pavement structure to support truck movement and reflect a Complete-Livable-Better Streets and Vision Zero approach;

- (g) That Hamilton Police Services (HPS) be requested to review and develop an enhanced commercial vehicle enforcement strategy in collaboration with Transportation Planning (TP) and Transportation Operation and Maintenance (TOM);
- (h) That Item ACI, respecting Public Works Report 21-016, Item 6 (PED19073(b)), staff to review the recommendations in PED19073(b) with prioritization given to the Terms of Reference ratified by Council, including an analysis that would permit a ring road approach for the Truck Route Master Plan Update and report back to the Truck Route Sub-committee, be identified as completed and removed from the Public Works Committee Outstanding Business List.

Additional recommendations (i) and (j), were added to the staff recommendations, as follows:

- (i) That staff be directed to develop a framework and associated criteria that can be used to evaluate changes to the approved Truck Route Network in order to inform future revisions to the truck route network; and***
- (j) That the criteria be presented to the Truck Route Sub-Committee by Q3 2022 with the results of the evaluation being completed no later than 2024.***

For disposition of this matter, refer to Item 1.

(i) ADJOURNMENT (Item 15)

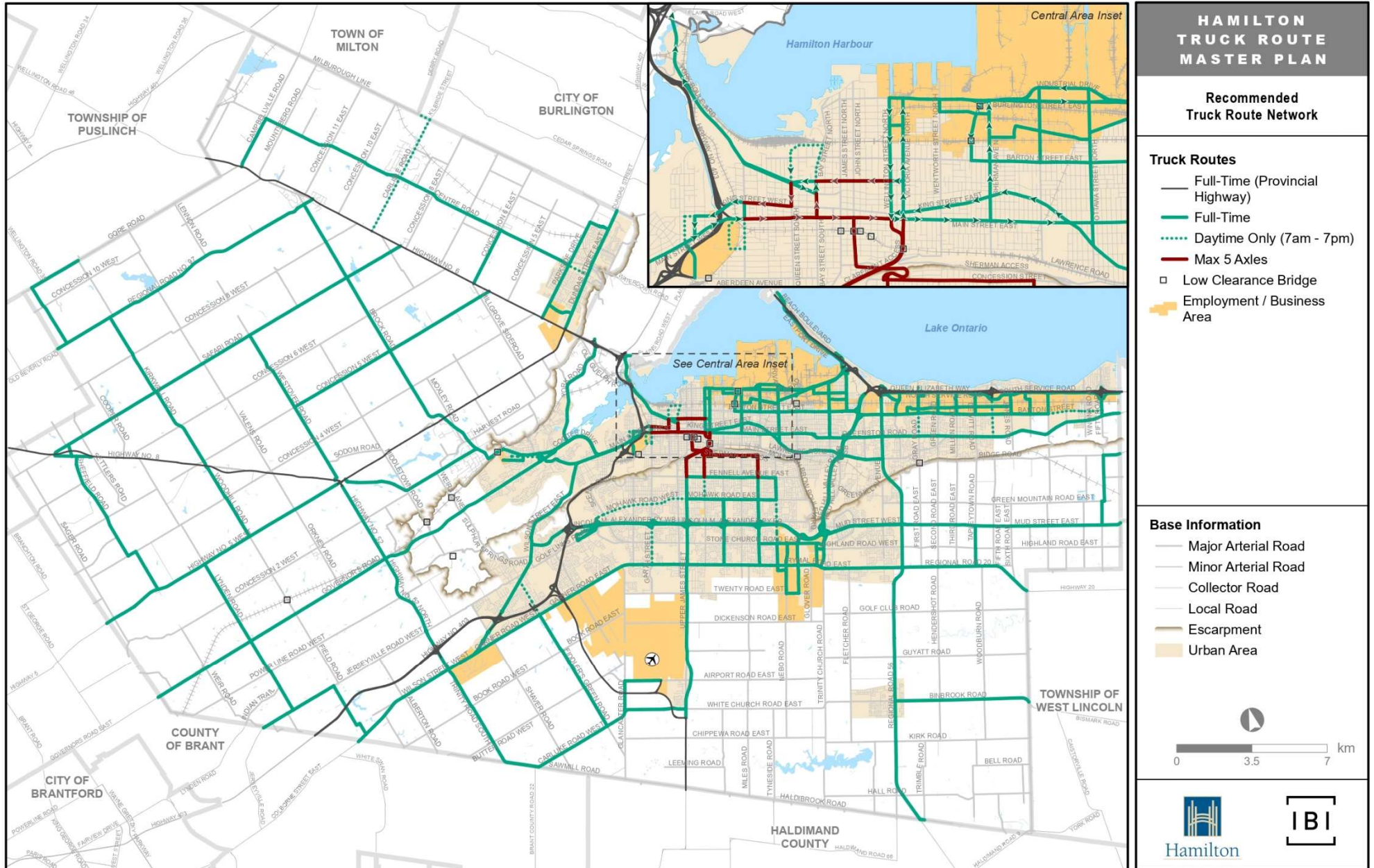
There being no further business, the Truck Route Sub-Committee adjourned at 2:51 p.m.

Respectfully submitted,

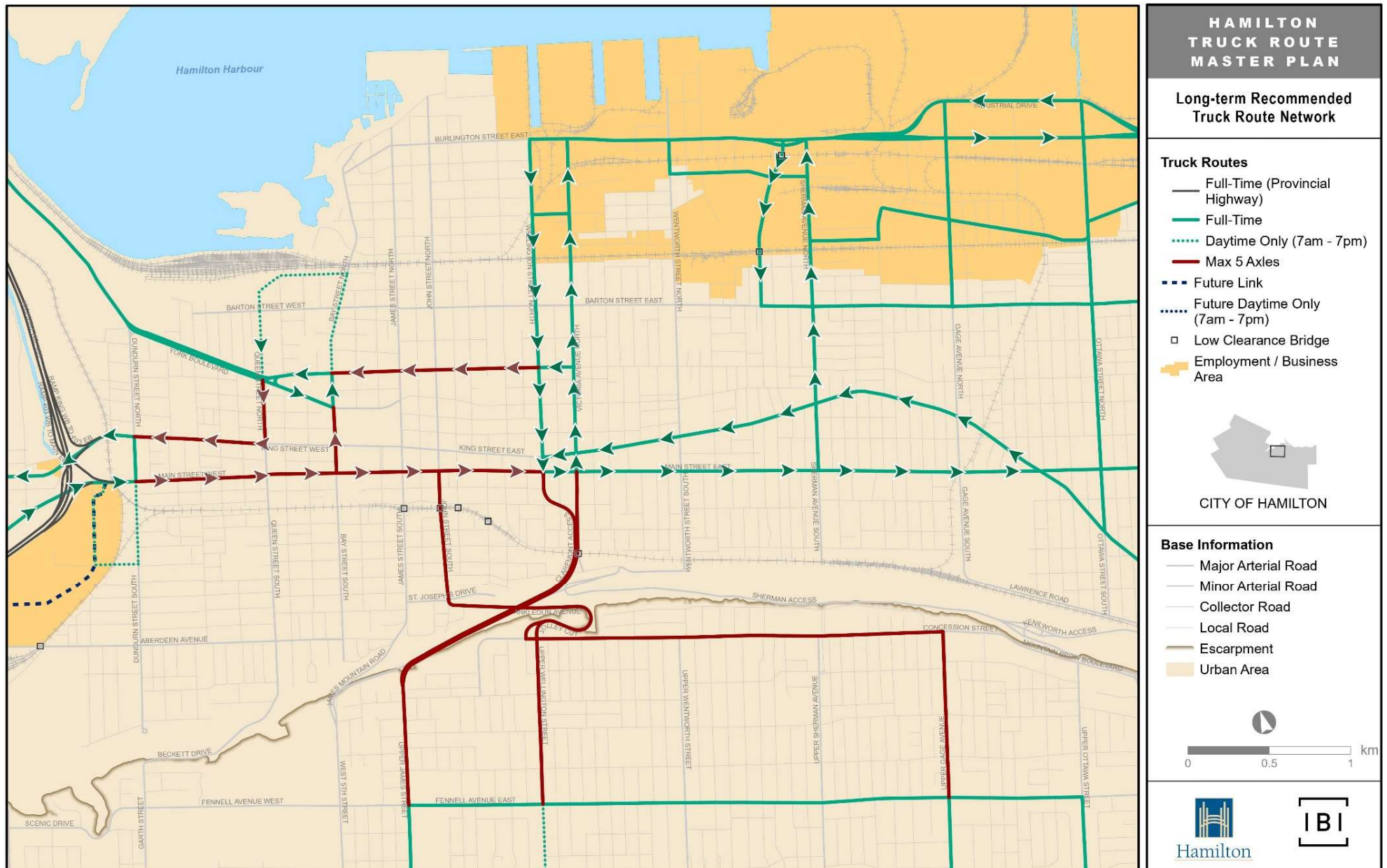
Councillor Farr, Chair
Truck Route Sub-Committee

Angela McRae
Legislative Coordinator
Office of the City Clerk

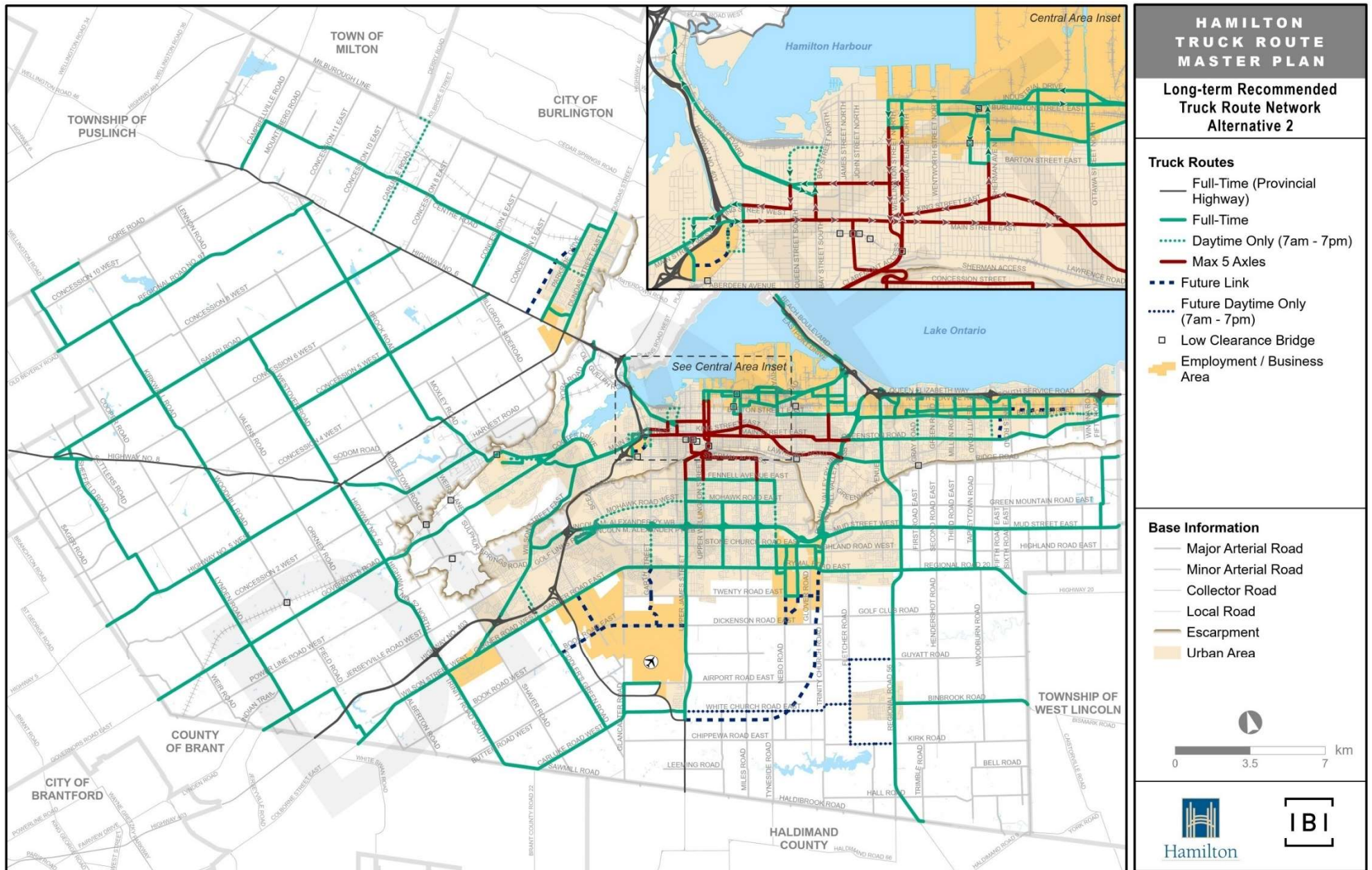
Alternative 1 – Draft Recommended Truck Route Network, as of November 29, 2021



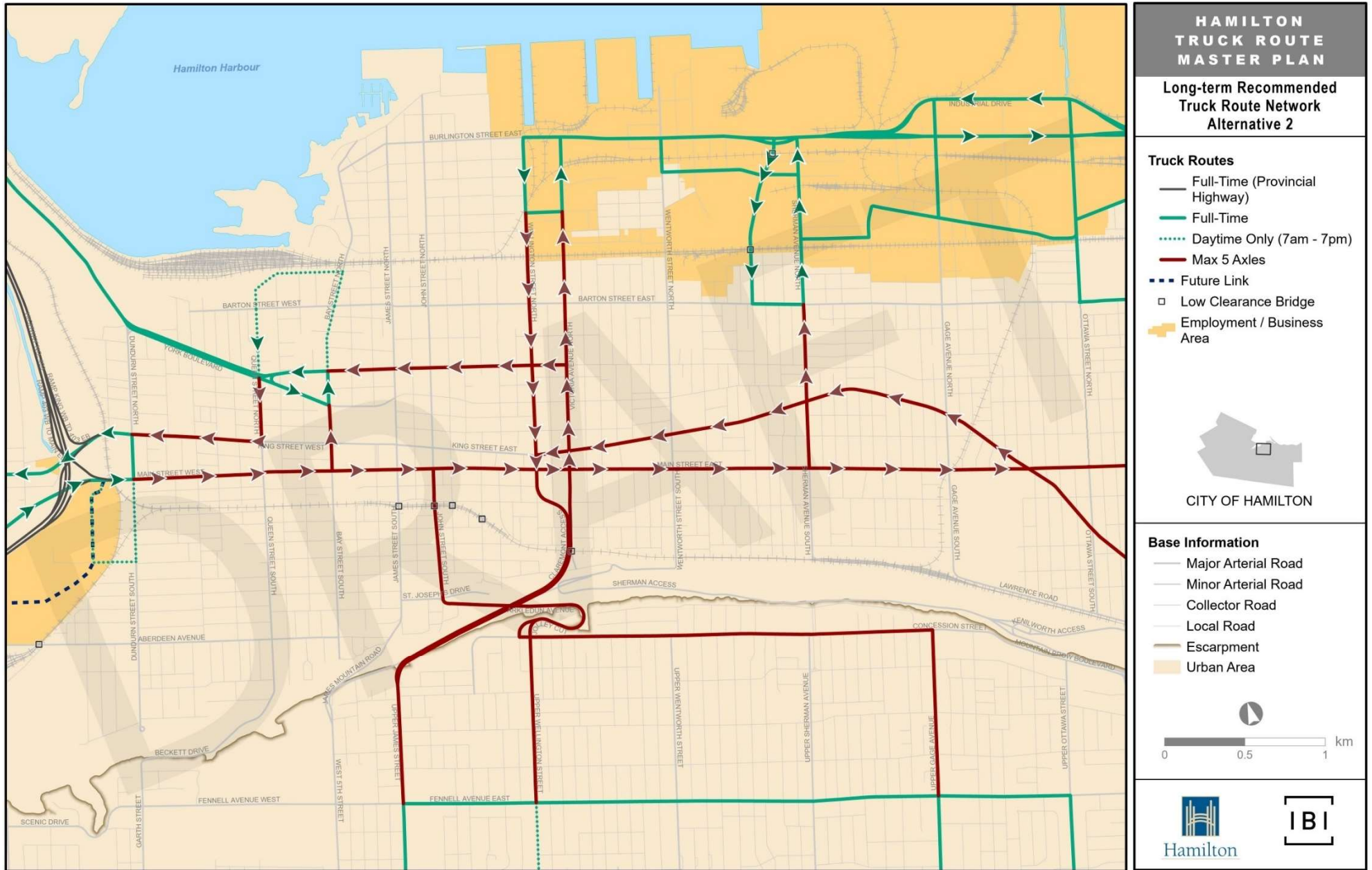
Alternative 1 - Central Area Inset



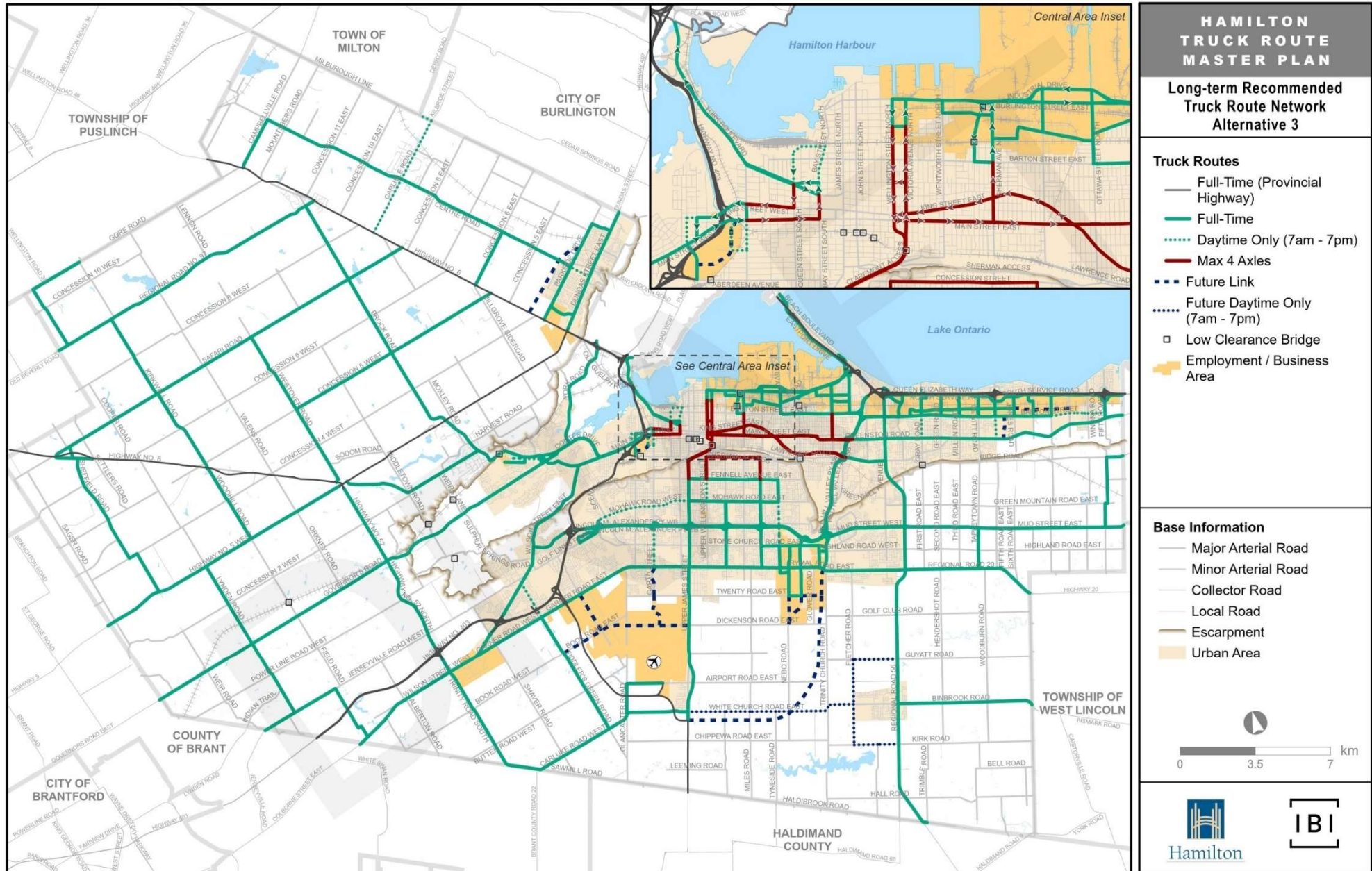
Alternative 2 – Expanded Restriction Area



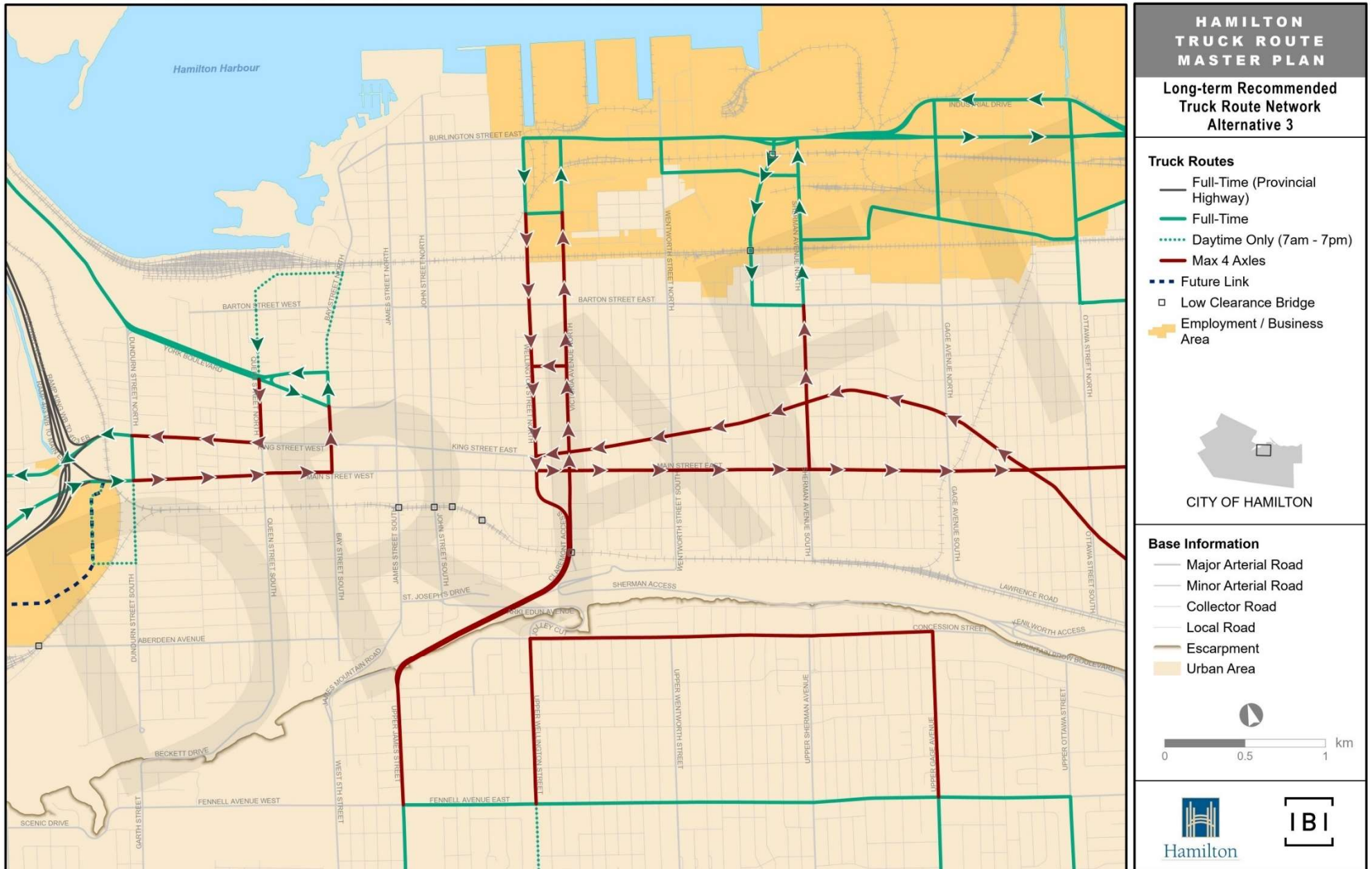
Alternative 2 - Central Area Inset



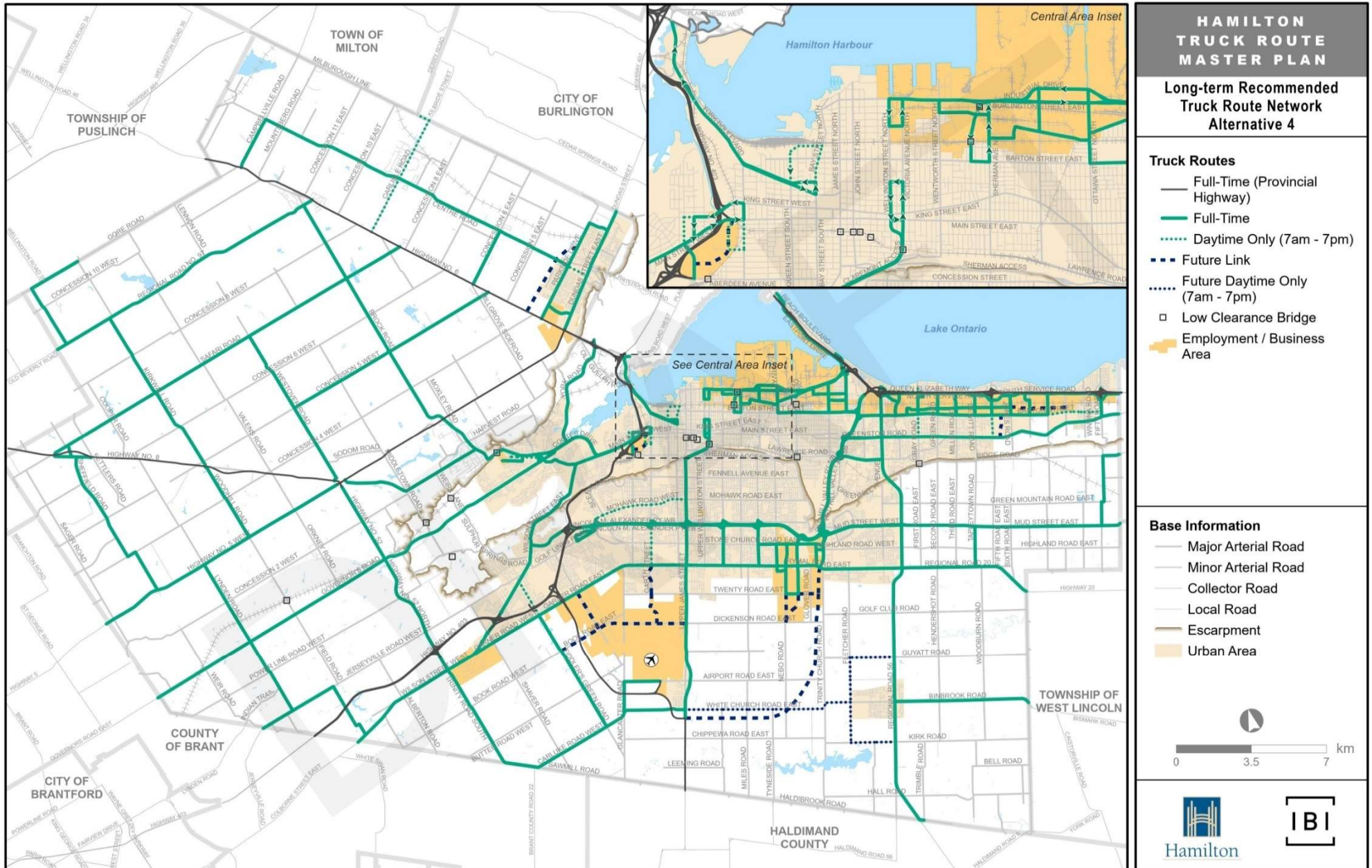
Alternative 3 – No Downtown Route Option



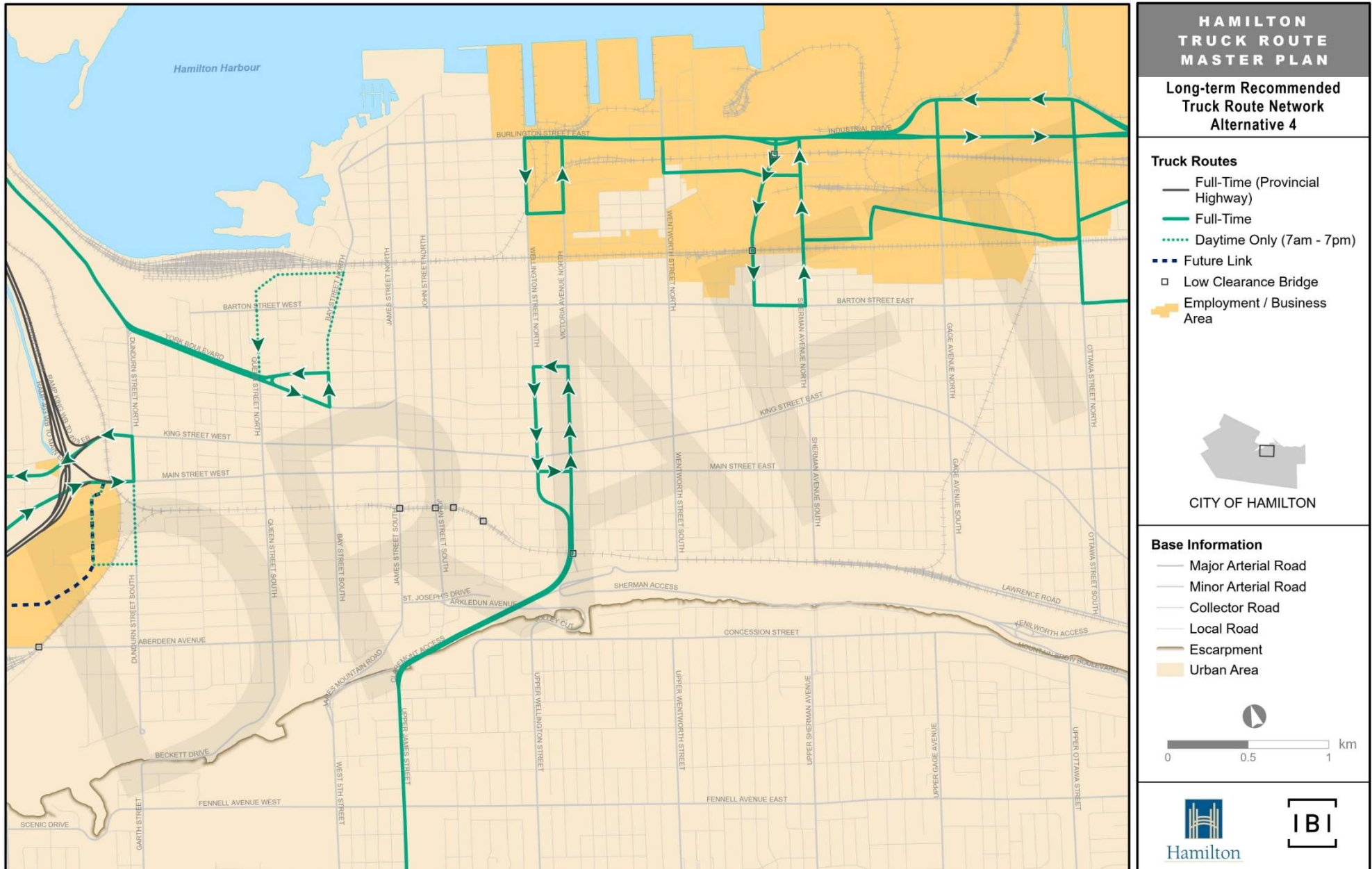
Alternative 3 – Central Area Inset



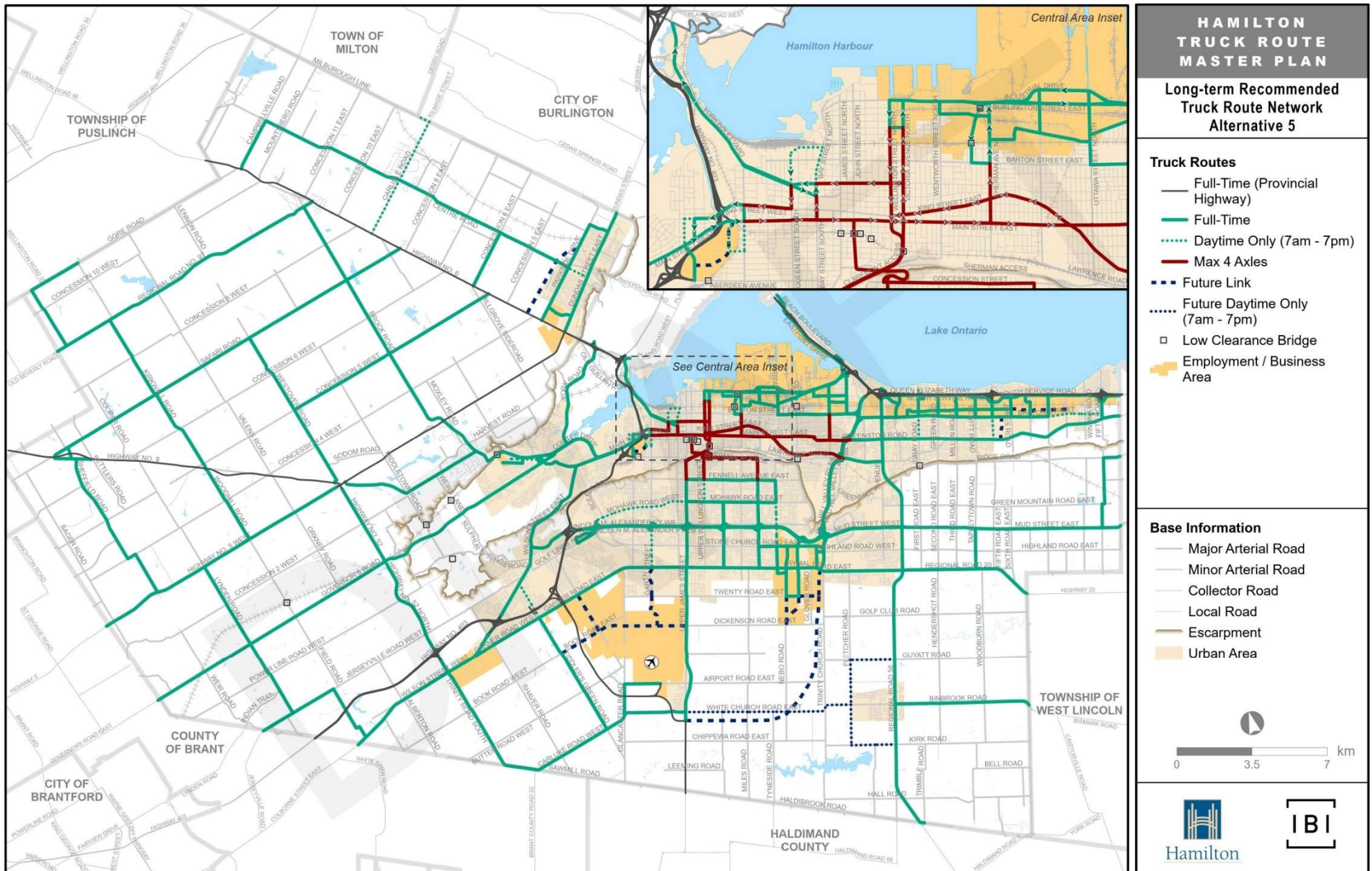
Alternative 4 – A Ring Road Concept with Shortest Path Routing



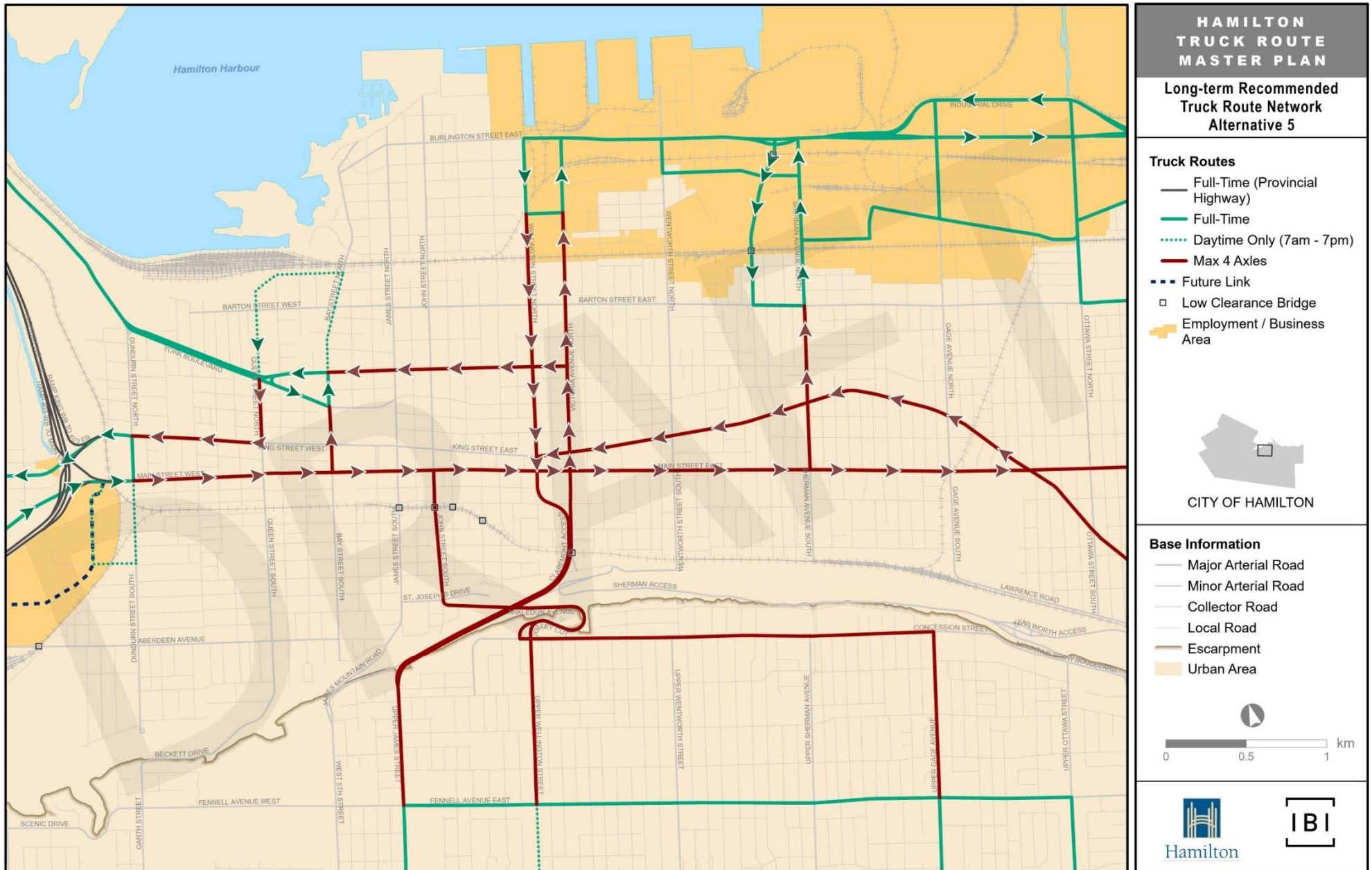
Alternative 4 – Central Area Inset



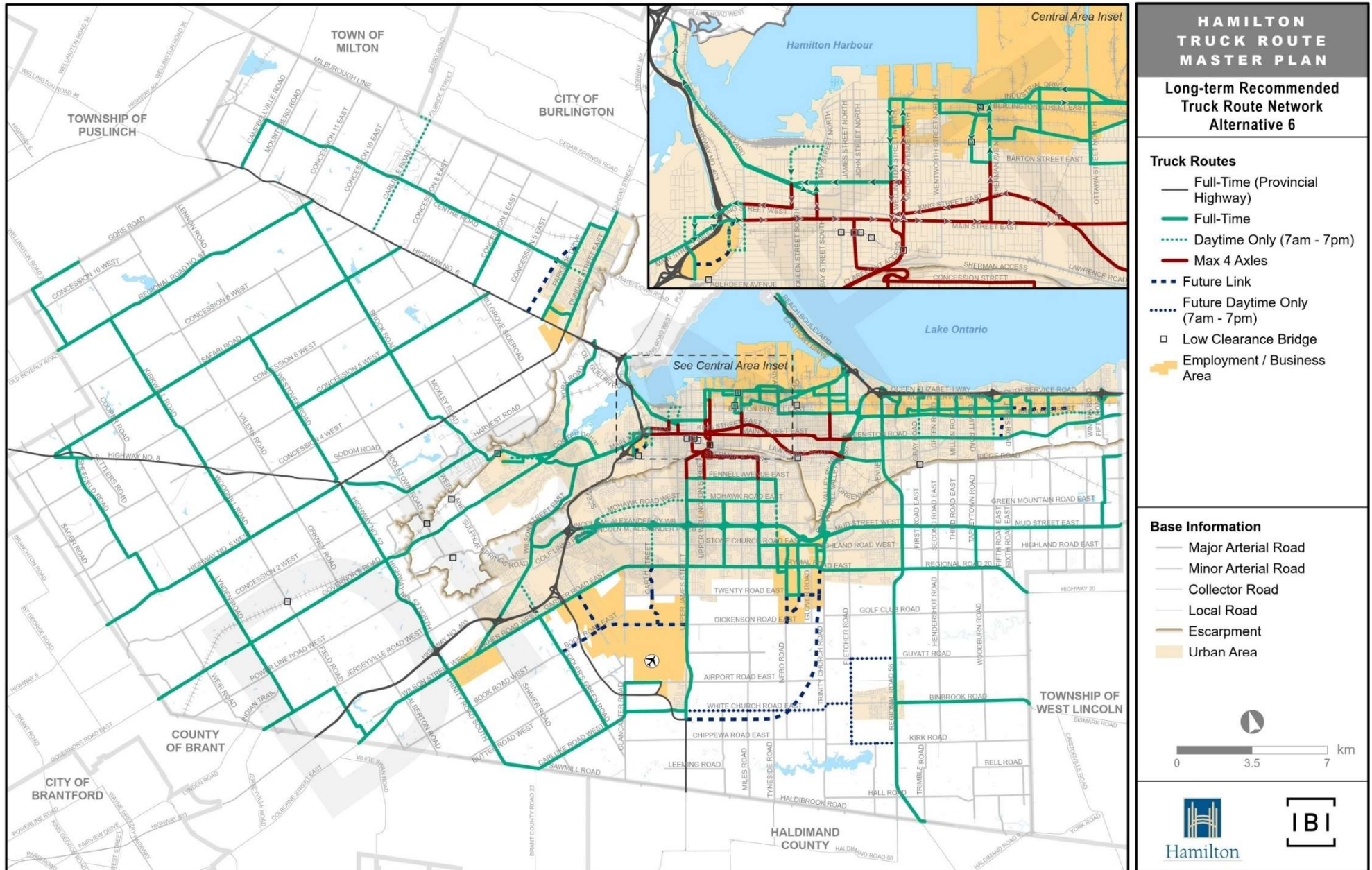
Alternative 5 - A Ring Road Concept with Positive Guidance



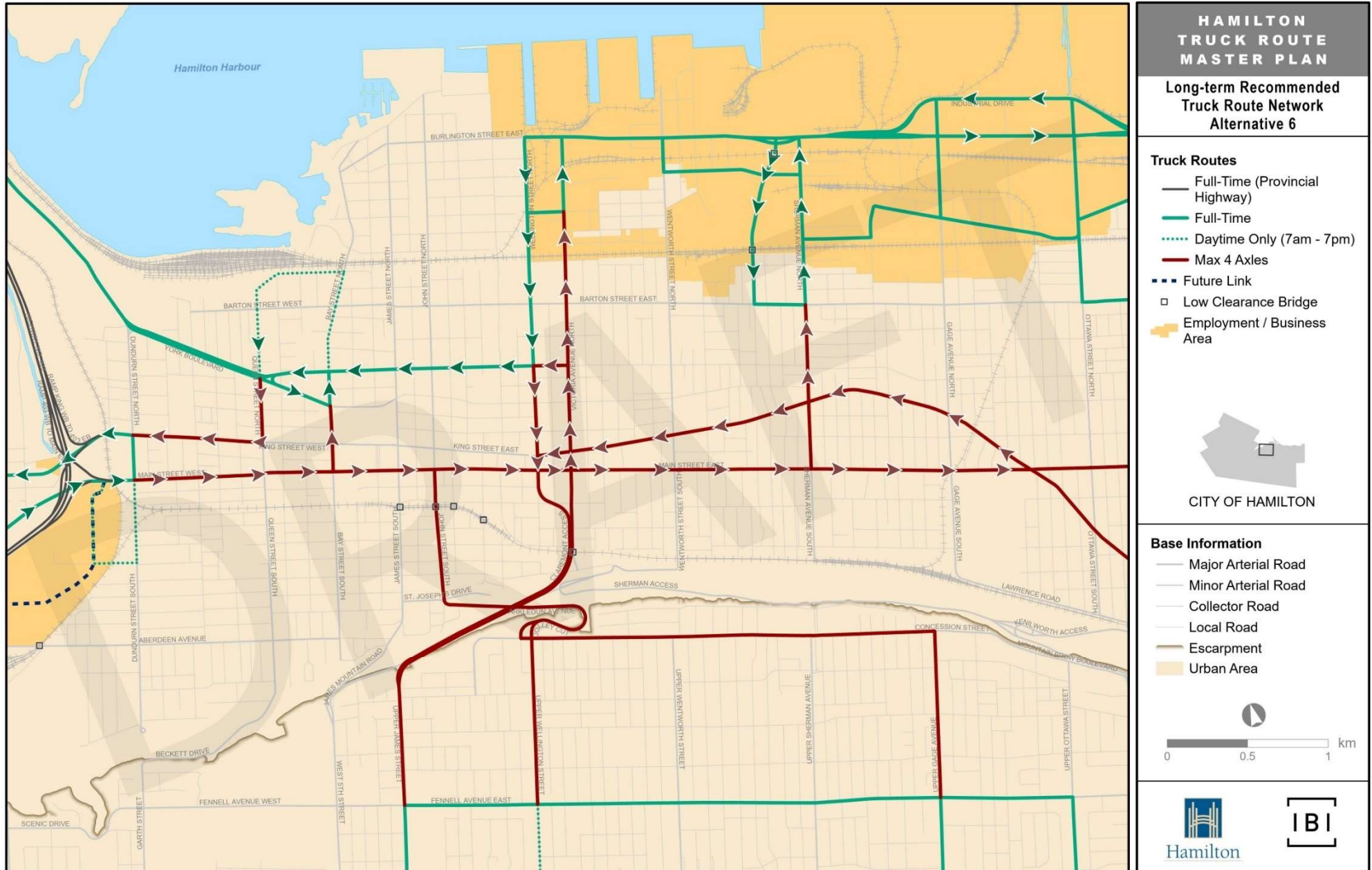
Alternative 5 – Central Area Inset



Alternative 6 – A Ring Road Concept with Positive Guidance and one Outbound Route to Highway 403



Alternative 6 – Central Area Inset



11.1

CITY OF HAMILTON

MOTION

Public Works Committee: April 4, 2022

MOVED BY COUNCILLOR T. JACKSON.....

SECONDED BY COUNCILLOR

Installation of Speed Cushions as a Traffic Calming Measure on Princeton Drive (Ward 6)

WHEREAS, residents are requesting the installation of speed cushions on Princeton Drive in Ward 6 to address roadway safety concerns as a result of speeding and cut-through traffic; and

WHEREAS, a petition was submitted by residents requesting the installation of speed cushions as a traffic calming measure.

THEREFORE, BE IT RESOLVED:

- (a) That Transportation and Operations Maintenance staff be authorized and directed to install 3 speed cushions as a traffic calming measure on Princeton Drive as part of the 2022 Traffic Calming Program’s spring application, as follows;
 - (i) between Sherwood Rise to Margate Avenue;
 - (ii) between Margate Avenue to Valecrest Avenue; and
 - (iii) between Valecrest Avenue to Donlea Drive.
- (b) That all costs associated with the installation of traffic calming measures at these locations be funded from Project ID 4031911606, to be completed under contract # C15-12-22 at an upset limit, including contingency, not to exceed \$21,000; and
- (c) That the Mayor and City Clerk be authorized and directed to execute any required agreement(s) and ancillary documents, with such terms and conditions in a form satisfactory to the City Solicitor.

CITY OF HAMILTON

NOTICE OF MOTION

Public Works Committee: April 4, 2022

MOVED BY COUNCILLOR N. NANN.....

Main Street East and King Street East (Delta) In-Service Road Safety Review, Hamilton (Ward 3)

WHEREAS, the City of Hamilton Vision Zero Action Plan 2019-2025 identifies that no loss of life is acceptable, and that traffic fatalities and injuries are preventable;

WHEREAS, ensuring the safety of vulnerable road users is a priority;

WHEREAS, on March 19, 2022 four people lost their lives, including three pedestrians, in a motor vehicle collision on King Street East near the delta intersection;

WHEREAS, Ward 3 residents have expressed safety concerns as pedestrians for this intersection; and

WHEREAS, the Transportation Operations & Maintenance Division is facilitating an in-service road safety review of the Main Street East and King Street East (delta) intersection to identify possible safety enhancements.

THEREFORE, BE IT RESOLVED:

- (a) That upon the conclusion of the Main Street East and King Street East in-service road safety review that the Transportation Operations & Maintenance Division report back to the Public Works Committee with the review’s findings inclusive of costs and a proposed implementation plan; and
- (b) That the Main Street East and King Street East in-service road safety review findings be shared with the City’s LRT office for consideration and to identify if any of the proposed safety enhancements could be incorporated into the redesign of the intersection.

CITY OF HAMILTON

NOTICE OF MOTION

Public Works Committee: April 4, 2022

MOVED BY COUNCILLOR J.P. DANKO.....

Main Street West at Dundurn Street South and King Street West at Dundurn Street South Intersection Road Safety Plan, Hamilton (Ward 1)

WHEREAS, the City of Hamilton Vision Zero Action Plan 2019-2025 identifies that no loss of life is acceptable, and that traffic fatalities and injuries are preventable;

WHEREAS, ensuring the safety of vulnerable road users is a priority;

WHEREAS, on March 30, 2022 a teenaged pedestrian was struck and critically injured in a collision at the intersection of Main Street West and Dundurn Street South;

WHEREAS, the intersections of Main Street West at Dundurn Street South and King Street West at Dundurn Street South are identified as intersections with a high frequency of collisions in the 2020 Annual Collision Report; and

WHEREAS, the Transportation Operations & Maintenance Division has conducted roadway safety video analytic examinations of the Main Street West at Dundurn Street South and King Street West at Dundurn Street South intersections in 2021 and is facilitating an in-service road safety review of both intersections jointly to identify possible safety enhancements.

THEREFORE, BE IT RESOLVED:

- (a) That upon the conclusion of the Main Street West at Dundurn Street South and King Street West at Dundurn Street South intersection road safety review that the Transportation Operations & Maintenance Division report back to the Public Works Committee with the review’s findings inclusive of costs and a proposed implementation plan; and
- (b) That the Main Street West at Dundurn Street South and King Street West at Dundurn Street South intersection road safety review findings be shared with the City’s LRT office for consideration and to identify if any of the proposed safety enhancements could be incorporated into the design of the LRT corridor, if applicable.

CITY OF HAMILTON

NOTICE OF M O T I O N

Public Works Committee: April 4, 2022

MOVED BY COUNCILLOR A. VANDERBEEK.....

Replacement of Deficient Sidewalk, Curbs and Driveway Approaches (Ward 1)

WHEREAS, the Transportation Operations & Maintenance Division, reviewed Sanders Boulevard, Pearl Street South, Kent Street, Breadalbane and several other streets in Ward 1 and determined that there are areas requiring sidewalk (1845 sq. m), curb (56 m) and/or driveway apron (152 m) repairs;

WHEREAS, the City of Hamilton is committed to creating safe neighbourhoods and vibrant communities.

THEREFORE, BE IT RESOLVED:

- (a) That removal and replacement of sidewalk, curb, driveway approaches at deficient areas on streets such as, but not limited to Sanders Boulevard, Pearl Street S, Kent Street, Breadalbane Street be approved to be completed under contract C15-31-19;
- (b) That concrete and asphalt repairs to be funded from the Ward 1 Capital Re-Investment Reserve Fund (#108051) at an upset limit, including contingency, not to exceed \$240,000, be approved; and
- (c) That the Mayor and City Clerk be authorized and directed to approve and execute any required agreement(s) and ancillary documents, with such terms and conditions in a form satisfactory to the City Solicitor.